# Phase Five (Section D10 of Area 6), Heyford Park

# **Extended Phase I Habitat Survey**

On Behalf of: The Dorchester Group

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4 Acre Ecology Limited

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## 1. Executive Summary

- 1.1 Heyford Park is a former military base with the first buildings built in 1926 (Central Grid Reference SP 51432577), with various additions since then, especially when it was used as an American Air Base. This was decommissioned in 1994 and many of the buildings have been unoccupied since.
- 1.2 The site consists of a large complex building, surrounded by amenity grassland and hard-standing in the form of tennis courts, access roads and parking areas. The site has a number of mature trees across it.
- 1.3 Due to nearby records, and as a precautionary approach, a method statement for the works has been put forward to avoid death or injury to Great Crested Newts, as they could move across the site despite the lack of suitable foraging habitat.
- 1.4 The method statement will also protect any reptiles from death or injury in the highly unlikely event that they are present.
- 1.5 The buildings are regarded as having negligible potential for roosting bats due to their construction and lack of roosting features.
- 1.6 There is potential for nesting birds in the boundary trees. Works should avoid disturbance to nesting birds through timing or pre-works surveys.
- 1.7 No other protected or notable species were found on the site or are regarded as likely to use the common habitats found there.
- 1.8 A number of suggestions have been made to further enhance the site for wildlife.

#### 2. Introduction

#### **Background**

- 2.1 Heyford Park is the former RAF Base of Upper Heyford, Oxfordshire (Central Grid Reference SP 51432577). The base was originally built in 1926 and has had many additional buildings constructed up until the 1980s. The base was decommissioned in 1994 and many of the buildings have been empty since. However, the park has been increasingly used as a light industrial area around the former flying field, with occupied housing centrally to the south of Camp Road.
- 2.2 For the last ten years there have been plans to redevelop the site into mixed business and residential uses, divided roughly north and south of Camp Road, the majority of the housing to the south and most of the business areas to the north.
- 2.3 Planning permission is now being sought for a section of Area 6 (See Figure 1) in the north-east of the site where there are currently a number of light industrial units. Assessments of the buildings had been made in 2012, but no detailed Phase I survey has been undertaken recently.
- 2.4 Cherwell District Council require an Extended Phase I of the site to inform their planning decision, with particular reference to Great Crested Newts.
- 2.5 The Dorchester Group commissioned 4 Acre Ecology Limited on 19<sup>th</sup> August 2014 to undertake an Extended Phase I Habitat Survey to allow this report to be prepared.

## Aims and Objectives

2.6 The aim of the survey was to determine the ecological value of the site and to assess possible ecological constraints that may be present on the site, suggesting any further surveys or mitigation required, with the objective of informing the planning decision, whilst maintaining the conservation status of the area.

#### About the Author

- 2.7 Mark Satinet has been working in the field of Wildlife Conservation and Ecology since 1992. 13 years at the Wildlife Trusts working on wider countryside habitat and species projects provided a good background in habitat surveys, species identification, habitat management advice to landowners and dealing with the public and media. He became the County Mammal Recorder for Wiltshire in 2000 and set up the Wiltshire Mammal Group in 2005, maintaining his links with the Wildlife Trusts through this voluntary work. He also is a voluntary Bat Warden for Natural England and has been an active member of the Wiltshire Bat Group since 2001.
- 2.8 Since 2006 he has been a consultant ecologist, first as a senior ecologist at a multidisciplinary company for a year and then the principle ecologist running the ecology

team in a specialised ecological firm for a further four years. He is a full member of the Institute of Ecology and Environmental Management and a Chartered Environmentalist. He now owns and runs his own company, 4 Acre Ecology Limited. He holds disturbance licences for bats, Great Crested Newts, Dormice, Barn Owls and Shrews in both England and Wales, and has held development licences for Great Crested Newts, bats and Dormice.

# 3. Methodology

#### Desk Study

- 3.1 A data search was commissioned from the Thames Valley Environmental Records
  Centre for the site and all land within 2km of the site. Biological Records Centres hold
  information regarding statutory designated sites, local nature reserves, sites of
  conservation interest, records of protected species and other species of conservation
  concern. However, this data cannot be considered fully comprehensive and therefore
  the absence of data, in response to a data search, does not imply that a species,
  important habitat or designation does not exist within that search area.
- 3.2 The Multi-Agency Geographical Information for the Countryside (MAGIC) website was also consulted to obtain any additional information and to determine if there were any sites designated for bats within 5km of the site boundary, or any designated sites within 2km. The land within 500m of the site was examined through aerial/satellite images and on-line mapping tools to identify any likely ponds that may support Great Crested Newts (GCNs) and the recent GCN survey report of these ponds referred to (Satinet, 2014). The NBN Gateway was consulted to ascertain the number of bat records within 5km of the site.
- 3.3 Past survey reports were consulted to provide detailed records for the site.

#### Field Survey

#### Extended Phase I Habitat Survey

- 3.4 An extended Phase I habitat survey (JNCC, 2010) was carried out across the site and up to 30m beyond its boundary to investigate the potential for badger setts. Phase I habitat survey is a standardised, rapid mapping technique for obtaining baseline ecological information over large areas of land. It uses standard habitat definitions for classifying areas of land based on the vegetation present. The technique was modified to provide more detail over a smaller area and give further consideration to the presence of fauna. The standard habitat definitions were used, with coarse grassland as an additional category to cover unmanaged, secondary grasslands that are species poor.
- 3.5 Easily identified higher plant species from each habitat type were recorded and their abundance was assessed on the DAFOR scale:
  - D Dominant (81-100% Cover)
  - A Abundant (61-80% Cover)
  - F Frequent (41-60% Cover)
  - O Occasional (21-40% Cover)
  - R Rare (1-20% Cover)

- 3.6 This scale is only representative of the area covered within each habitat type on the site and does not reflect national, regional or local abundances. As plant cover is stratified total percentage cover by adding up the scale can easily be greater than 100%. The names of all species follow the *National Biodiversity Network's Species Dictionary*.
- 3.7 The site was examined for badgers and evidence of bats, but no other specific faunal surveys were undertaken. However, incidental records were made and the habitats identified on site were evaluated for their potential to support species of conservation interest, including protected and Biodiversity Action Plan (BAP) Priority species.

# 4. Legislation and Planning Policy

- 4.1 There are a number of tiers of legislation protecting wildlife in England and Wales. The highest tier is for those species protected by European Legislation, such as the Dormouse, Great Crested Newt, Otter and all species of bat. These are known as European Protected Species (EPS), which gain their protection from the Conservation of Habitats and Species Regulations (Habitat Regulations) 2010, whereby under section 41 it is an offence to
  - deliberately capture, injure or kill an EPS
  - deliberately disturb or take/destroy the eggs of an EPS
  - damage or destroy a breeding site or resting place of an EPS
- 4.2 Nationally protected species are either fully protected (e.g. Water Vole) or partially protected (e.g. Adder or Smooth Newt) under the Wildlife and Countryside Act (WCA) 1981 and amendments, including the Countryside and Rights of Way Act (CRoW) 2000. Under the WCA it is an offence to:
  - intentionally kill, injure or take any wild bird, take or destroy any wild bird egg or take, damage or destroy any nest while it is in use or being built
  - intentionally or recklessly disturb any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or disturb dependent young of such a bird
  - intentionally or recklessly at any other time take, damage, destroy or otherwise interfere with any nest habitually used by any wild bird included in Schedule A1
  - intentionally or recklessly kill, injure or take from the wild or possess all or any part of a Schedule 5 species
  - intentionally or recklessly damage or destroy any structure or place which a schedule 5 species uses for shelter or protection, or disturb a schedule 5 species while it is occupying such a place
  - obstruct access to any structure or place which a schedule 5 species uses for shelter or protection
  - intentionally pick, uproot or destroy any wild plant included in Schedule 8
- 4.3 The CRoW Act 2000 added the term recklessly after intentionally in the Wildlife and Countryside Act 1981 and introduced a maximum custodial sentence of 6 months for offences.

- 4.4 The Natural Environment and Rural Communities Act 2006 (NERC) made provision about bodies concerned with the natural environment and rural communities and in connection with wildlife, sites of special scientific interest, National Parks and the Broads. Section 41 established a list of the living organisms and types of habitat which in the Secretary of State's opinion are of principal importance for the purpose of conserving biodiversity. This is known as the UK Biodiversity Action Plan (BAP) list.
- 4.5 Under the Protection of Badgers Act 1992 it is an offence to wilfully kill, injure or take a Badger and damage, destroy or obstruct a badger sett, cause a dog to enter a Badger sett or disturb a badger while it is occupying a sett.
- 4.6 The National Planning Policy Framework (NPPF) published in March 2012 states that "in assessing and determining development proposals, local planning authorities should apply the presumption in favour of sustainable development" and "opportunities to incorporate biodiversity in and around developments should be encouraged".
- 4.7 In general terms the NPPF states that the planning system should contribute to and enhance the natural and local environment by:
  - protecting and enhancing valued landscapes, geological conservation interests and soils:
  - recognising the wider benefits of ecosystem services;
  - minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.
- 4.8 However, the "presumption in favour of sustainable development does not apply where development requiring appropriate assessment under the Birds or Habitats Directives is being considered, planned or determined", but "development proposals where the primary objective is to conserve or enhance biodiversity should be permitted".

#### 5. Results

#### Desk Study

- 5.1 The data search from the local Biological Records Centre has been summarised in the tables below, with Table 1 showing the sites of wildlife interest, Table 2 the areas of ancient woodland and Table 3 the species of conservation interest.
- 5.2 137 species records exist within 2km of the site, but only those that are legally protected or appear on national or local BAP lists are shown. No European and nationally designated sites were identified, but one locally classified site is located within 2km. No protected sites designated for bats were identified within 5km.

Table 1. Sites of Wildlife Interest

Site Name	Grid Ref.	Area (ha)	Distance from Site	Direction from site	Description
European Importance					
-	-	-	-	-	-
National Importance					
-	-	-	-	-	-
Local Importance					
Upper Heyford Airfield LWS	SP 519269	63	700m	NNE	The old airbase at Upper Heyford includes a very large area of grassland which ranges in diversity and includes some species-rich areas which are strongly calcareous in character. Due to the distance from the site and the perimeter fencing around the flying field there are no envisaged impacts on this by the development.

LWS = Local Wildlife Site CTA = Conservation Target area

Table 2. Ancient or Semi-Ancient Woodland

Site Name	Grid Ref.	Area (ha)	Distance from Site	Direction from site	Description
Kennel Copse	SP518237	1.95	1.51km	NE	Ancient semi-natural woodland. Due to the distance from the site beyond the flying field, there are no envisaged impacts on this by the development.

Table 3. Species of Wildlife Interest

Species	European Protected	Nationally Protected	UK BAP	NERC	No. of Records	Suitable Habitat on-site
Amphibians & Reptiles						
Common Frog	No	Yes	No	No	2	No
Common Toad	No	Yes	Yes	Yes	1	No
Great Crested Newt	Yes	Yes	Yes	Yes	13	No
Palmate Newt	No	Yes	No	No	1	No
Smooth Newt	No	Yes	No	No	1	No
Birds						
Common Grasshopper Warbler	No	No	Yes	Yes	1	No
Corn Bunting	No	No	Yes	Yes	4	No
Eurasian Curlew	No	No	Yes	Yes	1	No
Eurasian Tree Sparrow	No	No	Yes	Yes	2	Yes
Grey Partridge	No	No	Yes	Yes	1	No
Hoope	No	Yes	No	No	1	No
Lapwing	No	No	Yes	Yes	2	No
Linnet	No	No	Yes	Yes	1	Yes
Peregrine Falcon	Yes	Yes	No	No	1	No
Red Kite	Yes	Yes	No	No	1	No
Reed Bunting	No	No	Yes	Yes	1	No
Skylark	No	No	Yes	Yes	2	No
Song Thrush	No	No	Yes	Yes	1	Yes
Spotted Flycatcher	No	No	Yes	Yes	1	No
Whimbrel	No	Yes	No	No	1	No
Yellowhammer	No	No	Yes	Yes	1	No
Yellow Wagtail	No	No	Yes	Yes	1	No
Invertebrates						
Adonis Blue	No	Yes	No	No	1	No
Cinnabar	No	No	Yes	Yes	1	No
Dingy Skipper	No	No	Yes	Yes	8	No
Grizzled Skipper	No	No	Yes	Yes	16	No
Small Blue	No	No	Yes	Yes	7	No
Small Heath	No	No	Yes	Yes	39	No
Wall	No	No	Yes	Yes	5	No
Plants						
Bluebell	No	Yes	No	No	3	No
Terrestrial Mammal						
Brown Long-eared Bat	Yes	Yes	No	No	1	No
Common Pipistrelle Bat	Yes	Yes	No	No	1	No

NB: Protection under the Bern or Bonn convention has not been classed as European, only those protected under the Habitats Regulations 2010. Generic national protection (e.g. all nesting wild birds) is not included in this table, only specific species protection.

- 5.3 Eight water bodies were located during the desk survey on the wider Heyford Park and Flying Field within 500m of the site. In addition there are five water bodies present outside of Heyford Park, on land at Letchmere Farm to the East.
- 5.4 All of these have been surveyed for GCNs in 2014 (Satinet, 2014), all the Heyford Park ones in 2012, 2010, 2007 and 2005. GCNs were present in Water Body 1 during each survey, in Water Body 2 in 2007 and 2010 only (none breeding), in Water Body 3 in 2005 and 2007 only, in Water Body A only in 2007, (a single juvenile), in Water Body B in 2007, 2010 and 2012.

5.5	For the Letchmere farm site GCNs were not found in the three water bodies closest to the site (LE1, LE2 and LE3), but were found in LE 4 (4 GCNs) and LE5 (15 GCNs), 235m and 260m east respectively. Both of these water bodies had breeding confirmed.

#### Field Survey

#### **Habitats**

- 5.6 The field survey was undertaken on 19<sup>th</sup> August 2014 by an experienced ecologist. The weather conditions were dry, no cloud and a temperature of 8.0 degrees centigrade with no wind. The results are summarised on the Phase I map (Figure 1) but the following habitats were identified during the survey:
  - Buildings
  - Hard-standing
  - Amenity Grassland
  - Scattered Scrub
  - Standard Trees

#### **Buildings**

- 5.7 Buildings occupy around 23.1% of the site, consisting of buildings 32 to 35 and smaller structures numbered 2X, 3X and 4X, plus UH44 and some smaller sheds.
- 5.8 Buildings 32 to 35 are large hanger style buildings with a single corrugated metal skin walls and roofs. These are 4.5m to the eaves and 6.5m to the apex (See Figure 1). Internally they are open form the concrete floors to the unlined, uninsulated roofs above.
- 5.9 They have been used as light industrial units until recently, but are currently empty. Units 32 and 33 have small flat roofed single storey extensions at the front as reception areas to the main buildings. Neither of these have roof spaces.
- 5.10 Buildings 2X, 3X and 4X are all single storey refrigeration units that have not been used for a long time and have open doors, but no windows. Internally they are still insulated with padded silver-faced material that offers no crevices.
- 5.11 Building UH44 is an old electric sub-station, while the remaining scattered sheds to the west and north of the main buildings are all single storey huts and shed for electrical installations.

#### **Hard Standing**

5.12 Hard-standing occupies around 54.7% of the site, consisting of mainly tarmac roads and parking areas, plus a concrete apron around the main buildings (32 to 35). These

areas are generally well maintained, but there is a small amount of vegetation encroaching onto this on the eastern boundary.

#### **Amenity Grassland**

- 5.13 This forms around 17.1% of the site, consisting of small areas around buildings 32-35, but with a larger strip between Buildings 34 and 35, but the majority of the amenity grassland is well mown lawn to the south-east of the site beneath the standard trees.
- 5.14 Perennial Rye Grass is abundant throughout, with frequent Red Fescue, Yellow Oat Grass and Creeping Buttercup, occasional White Clover and Ribwort Plantain, plus rare occurrences of Self-heal, Tormentil, Cat's Ear and Bird's foot Trefoil. This appears to be mown regularly and maintained as short grass. However, there is much moss in this, especially below the trees.
- 5.15 There is a small patch of grassland that has not been mown recently in the north-east corner of the site. This has become long and also contains Common Nettle, Willowherb and Spear Thistle.

#### **Scattered Scrub**

- 5.16 Scattered scrub occupies less than 5.1% of the site, with a clumps of Buddleia, Bramble, exotic shrubs and Ash saplings growing along the eastern boundary, with similar patches to the north of the main buildings.
- 5.17 In addition, there is a small area on the western boundary around the electrical substation which is dominated by hawthorn formed from some outgrown hedges.

#### Standard Trees

- 5.18 Standard trees cover an additional 4.9% of the site, overshadowing small areas of the other habitats.
- 5.19 There are two lines of outgrown Leylandii hedges, now reaching 12m in height. One is along the eastern boundary of the site adjacent to building 35 and the other to the south of the buildings, forming a line between the tarmac hard-standing and the amenity grassland.
- 5.20 The latter amenity grassland has semi-mature trees above it, but with the lower branches removed to form a parkland type area. The trees consist of Hornbeam, Cherry, Ash, Horse Chestnut and Sycamore.

#### Fauna Species

5.21 No particular fauna species were noted during the survey visit.

#### 6. Discussion

#### Sites

6.1 There are no European or nationally designated sites within 2km of the site, and none designated for bats within 5km. There is one site of local importance identified within 2km of the site, but this is considered not to be impacted due to the small scale of development on an already developed area, as long as the proposed pet fencing around the flying field perimeter is installed to protect the important area of ground nesting birds.

#### **Habitats**

6.2 The habitats on site are the result of human activity and are classified as semi-natural at best. These are easily replaceable, being of very little value for protected and notable species. The best habitat available on-site is the standard trees and the scattered scrub. This provides potential nesting sites for birds and some limited habitat for invertebrates. Therefore impacts are expected to be negligible if disturbance of birds whilst nesting is avoided (See the bird section below).

#### **Species**

#### **Amphibians**

- 6.3 There is one record of a Common Frog, one of a Common Toad, one of a Palmate Newt, one of a Smooth Newt and 13 of Great Crested Newt (GCN) within 2km of the site. From other surveys on the wider site and airfield (Satinet, 2012 and 2014) it is known that there is a large population of GCNs at the western end of the airfield (62 Records), and a medium meta-population in the Letchmere ponds to the east of the site (10 Records).
- 6.4 Most of the ponds are beyond 250m of the site, but nine ponds lie within 250m of the site. Of these, three in the Letchmere Farm complex (LE1, LE2 and LE3) have no evidence of GCN presence.
- 6.5 Water Body 2 (70m south-west) had a single GCN in it in 2007 and again in 2010, but none in 2012 or 2014 and has now been drained and removed. Water body A (5m north) had a juvenile GCN present in 2007, likely to have been washed there, with no other records during the other four surveys of it. Therefore there can be a good degree of certainty in the likely absent result of the most recent surveys of these water bodies.
- 6.6 Similarly Water Body 3 (245m west of the site) had two GCNs present in 2005 and 2007, but none since. Water Body B had no records from 2005 and 2014, but a low number in 2007, 2010 and 2012 (6, 5 and 1), but no evidence of breeding.

- 6.7 Water Body 1 can be classed as a breeding pond with records from each of the five surveys. This lies 225m to the north-east of the site. Finally Water Body LE4 has a low population of breeding GCNs from the 2014 survey, lying 235m to the east of the site.
- 6.8 However, the main habitat on site is hard standing, in the form of roads, paths and car parks, followed by buildings. Both these habitats have no value for GCNs and would have a negligible impact if removed. The amenity grassland, forming the greater part of the remaining habitat, also offers poor habitat for GCNs. Only the areas of dense scrub provide potential habitat for GCNs, and this is very sparse and isolated by the buildings, hard-standing and amenity grassland and well over 250m from any of the Water Bodies on the flying field or Letchmere Farm.
- 6.9 With regard to the very limited habitat on-site for GCNs there is no need for a European Protected Species licence to conduct the works as an offence is highly unlikely when the data is fed into the GCN Risk Assessment (NE, 2012). However, as GCNs may travel across the site in low numbers, a precautionary approach should be taken to the works.
- 6.10 Therefore, the works will be conducted under a working method statement to minimise the likelihood of harming GCNs if present in the sub-optimal habitat present on the site.

#### Bats

- 6.11 There are no sites designated for bats within 5km of the site, and only two records of bats within 2km, of Common Pipistrelle and a Brown Long-eared bat. This is a low number of records, but is probably due to the lack of recording.
- 6.12 Extensive surveys on the main Park to the west and south of the building has shown that there are low levels of roosting Pipistrelle and brown Long-eared bats there (Satinet, 2012). This is mirrored in Building 74 itself, with five roof spaces containing Brown Long-eared dropping and a further two containing Pipistrelle droppings.
- 6.13 However, the buildings on-site are all regarded as having negligible potential for roosting bats due to their construction and lack of suitable crevices for roosting.
- 6.14 Therefore bats are not considered a constraint to the development.

#### Badger

6.15 There are no records of Badger within 2km of the site, but past surveys of Heyford Park indicate that the closest sett lies at Chilgrove Drive over 500m to the east of the Site. There is no evidence of Badgers on the site, with no setts identified. Only the amenity grassland could be used by Badgers to forage in, but there was no evidence of snuffle holes or tracks on the site.

6.16 Therefore, Badgers are considered absent from the site and are not regarded as a constraint to development.

#### <u>Birds</u>

- 6.17 There are a number of records of protected and BAP birds in the area, such as Skylark, Yellowhammer and Tree Sparrow, however the habitats on-site are much poorer than on the Flying Field LWS, where the main of the records come from, so few of these species are expected on site. No nests were identified during the survey in the trees, although it is likely that some of the trees and scrub are used to nest in.
- 6.18 All breeding birds are protected by law. Therefore any tree or scrub removal should avoid the bird nesting season of March to August, or if this is not possible an ecologist should check the vegetation to be removed for nesting birds. If a nest is found it and 5m of habitat around it should be left undisturbed until the young have fledged before removal.
- 6.19 Prior to the nesting season, the building could be netted where Pigeons usually nest to prevent them nesting here. Otherwise the same method as above should be followed for works to the building.
- 6.20 Enhancements to the site for breeding birds have been considered as part of the management plan for the wider site.

#### Dormouse

- 6.21 There are no records of Dormice within 2km of the site and there is no habitat on-site for them.
- 6.22 Dormice are likely absent from the site and are not considered a constraint to the development.

#### **Invertebrates**

- 6.23 There are 78 records of BAP butterfly and moth species within 2km of the site, mainly associated with the Flying Field LWS. However, the habitats found on site are limited, common and easily replaced, so it is expected that the invertebrate species present will reflect this.
- 6.24 Invertebrates are not regarded as a constraint to the development.

#### Otter

6.25 There no records of Otter within 2km of the site and there is no habitat for them on or near to the site. Therefore, Otters are considered absent from the site and are not considered a constraint to the development.

#### Reptiles

- 6.26 There are no records of reptiles within 2km of the site and past surveys on the flying field and the south-east of Heyford Park found no reptiles present. An update of this survey determined Common Lizards (1) to be present 600m to the north-east on the flying field. The habitats present on-site are deemed unsuitable for reptiles.
- 6.27 Therefore, reptiles are considered absent from the site and are not a constraint to the development.

#### Water Voles

6.28 There are no records of Water Voles within 2km of the site and no habitat is present on-site for them. They are deemed absent from the site, so Water Voles are not considered a constraint to the development.

### 7. Further Surveys, Recommendations and Enhancements

#### Further Surveys

7.1 No further surveys are required.

#### Recommendations

- 7.2 Scrub and tree removal/surgery will be carried out outside the bird nesting period, which is March to August. If this is not possible an ecologist will check the habitat to be removed for active birds' nests. If nests are found they will be left in place, with suitable surrounding habitat (e.g. 5m of surrounding hedgerow), until the birds have fledged before its removal.
- 7.3 Native plants will be used in any planting schemes for the site.
- 7.4 As there is a small chance that GCNs may cross the site on suitably mild and wet nights, the demolition and construction works should be carried out under a precautionary method statement, which is detailed below.

#### Method Statement

- 7.5 The footprint of the development should be maintained in its current condition, of hard standing interspersed by small areas of tightly mown amenity grassland until the development is started. This will prevent habitat developing for GCNs, which would then encourage them into the development footprint.
- 7.6 The contractors will be given a tool-box talk before works commence. This will describe the legal protection for GCNs, what they look like, what action should be taken if any are found and have the method statement explained to them clearly.
- 7.7 Ground-works will only take place in daylight hours when Great Crested Newts will not be moving around, as GCNs are nocturnal.
- 7.8 Materials should be stored on pallets or tarpaulin sheeting to prevent the creation of habitat suitable for GCNs to shelter in within 500m of Water Body 1.
- 7.9 All construction vehicles should access the site via the existing road system and remain on the hard standing and working footprint.
- 7.10 Excavations should be filled in as soon as possible after they are made. Excavations should be made when required, in a phased order, rather than all at the start of the development, to minimise the time holes are exposed for.
- 7.11 Any trenches, if left open, should always have ramps placed in them to allow GCNs and other wildlife to climb out of the trench if they fall into it.

7.12 Any excavated holes should be checked for GCNs if left open overnight. Any GCNs found should be moved to the nearest suitable habitat by a licensed ecologist.

#### **Enhancements**

- A management plan has been written to encourage biodiversity enhancements to the wider site.
- Eight bird boxes could be erected around the site in the standard trees to improve nesting opportunities for small passerines.
- The new building should retain over-hanging eaves to give shelter for nesting birds, such as House Martins and Swallows. For Swallows, they prefer to nest on a ledge under cover, so a 75-100mm wide horizontal ledge should be provided just beneath the overhang in selected places.
- Provision of integrated bat boxes within each of the housing blocks has been made under the management plan and under the EPS Licence for the site.

# 8. Figures

Figure 1: Phase I Plan

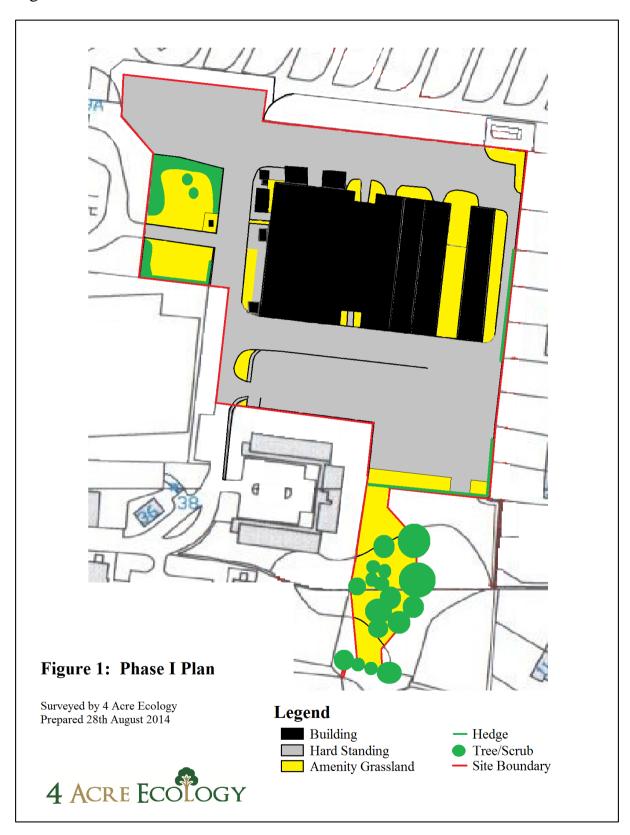


Figure 2: Site Images



1. Northern end of site and buildings



2. Southern end of buildings



3. Main car park south of buildings



4. Interior of a refrigeration unit



 $5.\,$  Amenity grassland between buildings 34 and  $35\,$ 



6. Leylandii on the eastern boundary



7. Leylandii dividing car park from amenity grassland



8. Isolated scrub around buildings

#### 9. References

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