

Report : Preliminary Ecological Appraisal:
Land at Post Office Lane, Post Office Lane, Carno, Caersws SY17 5LL

Reference : PH/2607/21.1

Date : 9 September 2021

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Planning application : Powys County Council
21/1121/FUL
Erection of four dwellings with associated parking areas

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The information, data, evidence, advice and opinions which I have prepared and provided is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. I confirm that the opinions expressed are my true and professional bona fide opinions.

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Preliminary Ecological Appraisal:
Land at Post Office Lane,
Post Office Lane, Carno, Caersws SY17 5LL.

1. Introduction

In August 2021 Star Ecology was commissioned to carry out a Preliminary Ecological Appraisal to inform a proposed development site known as 'Land at Post Office Lane'.

The proposed development is for the construction of four dwellings and associated parking areas.

Full details of the proposed development may be obtained from Philip Humphreys Architects and/or by viewing documents submitted to Powys County Council to inform Planning Application 21/1121/FUL.

From this point forward, the proposed development site 'Land at Post Office Lane' is referred to as 'The Site'.

The Site is approximately 665m² (0.06 hectare) in size and is situated at approximate National Grid Reference (NGR) 296370, 296420.

On 25 August 2021, The Site was subject to a habitat survey using the UK Habitat Classification method⁽¹⁾, and The Site and its immediate environs were surveyed for physical evidence of protected fauna.

An assessment was made of the likelihood of protected fauna being present on The Site and the surrounding landscape.

The survey was carried out during fine weather conditions with good visibility.

Dr. R. M. Jones, experienced field biologist, surveyor, Natural Resources Wales licensed bat worker (Licence number S088947/1) and Natural Resources Wales licensed newt worker (Licence number S088980/1) carried out the assessment/survey.

A photographic record of The Site is provided in Appendix 1.

2. Designated Wildlife Sites

A search for designated wildlife sites within 2km of The Site was carried out using the Multi-Agency Geographic Information Centre (MAGIC) (<http://magic.gov.uk>).

There are no designated wildlife sites within 2km of The Site.

3. Historical Biodiversity Record Search

A search of historical biodiversity records within the vicinity of The Site was not commissioned.

Considering the nature, scale and location of the proposed development; the constraint of not carrying out an historical biodiversity record search is considered negligible.

4. Site Description and Habitat

The Site is a small rectangular parcel of land situated in the village of Carno and is immediately neighboured by:

- a domestic property at the northeast;
- a vehicle parking area and domestic properties at the southeast;
- part of the A470 highway and a maintained (mown grass) verge at the southwest; and,
- part of the Post Office Lane highway and domestic properties at the northwest.

The River Carno flows roughly northwest-to-southeast approximately 90m northeast of The Site.

A minor watercourse, a tributary of the River Carno, flows roughly southwest-to-northeast approximately 90m east of The Site.

The Site appears to have (formerly) been a domestic garden, or similar.

On the date of survey, The Site contained recently excavated trenches and spoil heaps (from the excavated material). It appeared likely that the trenches had recently been created for the purposes of an archaeological survey, or similar.

Some tree stumps and cord wood were present within The Site, indicating that some semi-mature and mature trees had previously grown within The Site. Tree species present were Birch (*Betula* sp.), Cherry (*Prunus avium* sp./var.), Spruce (*Picea* sp./var.) and Sycamore (*Acer pseudoplatanus*).

Areas of ground that were not excavated or covered in spoil contained the probable remnants of an overgrown/abandoned domestic garden (or similar), including:

- Cherry suckers/saplings
- Common Ash (*Fraxinus excelsior*) suckers
- Common Nettle (*Urtica dioica*)
- Cow Parsley (*Anthriscus sylvestris*)
- Ground-elder (*Aegopodium podagraria*)
- Hazel (*Corylus avellana*) suckers
- Hedge Bindweed (*Calystegia sepium*)
- Holly (*Ilex aquifolium*) suckers
- Ivy (*Hedera helix*)
- Raspberry (*Rubus idaeus*) canes
- Sycamore saplings

An area of remnant (damaged) concrete paving slabs is present within the southwest area of The Site, adjacent to the (existing) vehicle and pedestrian access.

The northeast boundary of The Site is formed by an intact timber-post and timber-panel fence and an intact native species rich hedge. The hedge is approximately 4m high, appears to be annually side-trimmed, only, and is dominated by Hawthorn (*Crataegus monogyna*). Common Yew (*Taxus baccata*), Hazel, Holly, Sycamore and Variegated Holly (*Ilex aquifolium* var.) are also present.

The southwest boundary is formed by an intact timber-post, pig-netting wire and plain-strand wire fence and an intact species hedge. The hedge is approximately 4-6m high and does not appear to be maintained. The hedge is dominated by Hawthorn with some Holly. It appears that the hedge has historically been planted; the plants are evenly spaced and Holly is regularly spaced amongst the Hawthorn.

The northeast-end and middle part of the northwest boundary is formed by an intact species rich hedge. The hedge is approximately 4m high, appears to be annually side-trimmed, only, and is dominated by Hawthorn (*Crataegus monogyna*). Cherry, Common Ash, Holly, Purple-leaved Hazel (*Corylus maxima* 'Purpurea') and Sycamore are also present.

The southwest-end of the northwest boundary is formed by a gateway and a section of intact species rich hedge that appears to have recently been trimmed. The section of hedge is approximately 1.5m high and is dominated by Hawthorn. Some Bramble (*Rubus fruticosus* agg.) and Common Ash is present.

5. Badger

5.1 Legislation

Badgers (*Meles meles*) and their setts are protected by the Protection of Badgers Act 1992. Under this legislation it is illegal to:

- wilfully kill, injure or take, or attempt to kill, injure or take, a Badger;
- cruelly ill-treating a Badger, digging for Badgers, using Badger tongs, using a firearm other than the type specified under the exceptions within the Act;
- interfere with a Badger sett by damaging, destroying, obstructing, causing a dog to enter a sett, disturbing an occupied sett - either by intent or by negligence;
- sell or offer for sale a live Badger, having possession or control of a live Badger;
- mark, attach a ring, tag, or other marking device to a Badger.

A Natural Resources Wales Badger Disturbance Licence may be required for development works affecting Badgers.

5.2 Consideration

No evidence of Badger was found on The Site or within approximately 50m of surveyor accessible land. Considering the location and habitat of The Site; it is not considered likely that Badger would be present on or within the immediate environs of The Site. Therefore, Badger do not impose a constraint on the proposed development.

6. Bat

6.1 Legislation

All bat species (*Rhinolophidae* and *Vespertilionidae*) are protected under the Wildlife and Countryside Act 1981, the Countryside and Rights of Way Act 2000 and the Conservation of Habitats and Species Regulations 2017 (as amended).

Under the Conservation of Habitats and Species Regulations 2017 legislation it is illegal to:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats. This includes in particular, disturbance in a way any such which is likely to (i) impair their ability to survive, breed or reproduce, or to rear or nurture their young; (ii) impair their ability to hibernate or migrate; or (iii) to affect significantly the local distribution or abundance of the species to which they belong;
- damage or destroy a breeding site or resting place of a bat;
- to be in possession or control, to keep, transport, to sell or exchange, or to offer for sale or exchange, any live or dead bat, or any part of, or anything derived from such a wild animal.

Under the Wildlife and Countryside Act 1981, it is illegal to:

- intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection.
- intentionally or recklessly obstruct access to any structure or place which a bat uses for shelter or protection.

A bat resting place may be a structure a bat uses for breeding, resting, shelter or protection. Resting place sites are protected whether or not bats are in occupation, as they may be re-used by bats.

Eight species of bat are listed as 'priority species' under Schedule 7 of the Environment (Wales) Act 2016.

A European Protected Species (EPS) Development Licence from Natural Resources Wales may be required for development works triggering Conservation of Habitats and Species Regulations 2017 offences against bats.

6.2 Consideration

There is no potential bat roost habitat on The Site.

It is probable that bats may use The Site and its immediate environs for commuting and/or foraging purposes.

External Lighting:

In order to negate the (potential) impact of the development on commuting and foraging bats: should it be proposed that external lighting be installed as part of the development – an External Lighting Plan will need to be compiled.

Recommendations are contained in Appendix 2.

7. Dormouse

7.1 Legislation

The Common or Hazel Dormouse (*Muscardinus avellanarius*) is protected under the Wildlife and Countryside Act 1981, the Countryside and Rights of Way Act 2000 and the Conservation of Habitats and Species Regulations 2017 .

Under the Conservation of Habitats and Species Regulations 2017 legislation it is illegal to:

- deliberately capture, injure or kill a Dormouse;
- deliberately disturb Dormice. This includes in particular, disturbance in a way any such which is likely to (i) impair their ability to survive, breed or reproduce, or to rear or nurture their young; (ii) impair their ability to hibernate or migrate; or (iii) to affect significantly the local distribution or abundance of the species to which they belong
- damage or destroy a breeding site or resting place of a Dormouse;
- to be in possession or control, to keep, transport, to sell or exchange, or to offer for sale or exchange, any live or dead Dormouse, or any part of, or anything derived from such a wild animal.

Under the Wildlife and Countryside Act 1981, it is illegal to:

- intentionally or recklessly disturb a Dormouse while it is occupying a structure or place which it uses for shelter or protection.
- intentionally or recklessly obstruct access to any structure or place which a Dormouse uses for shelter or protection.

A Dormouse resting place may be a structure a Dormouse uses for breeding, resting, shelter or protection. Resting place sites are protected whether or not Dormice are in occupation, as they may be re-used by Dormice.

Dormouse are listed as 'priority species' under Schedule 7 of the Environment (Wales) Act 2016.

A European Protected Species (EPS) Development Licence from Natural Resources Wales may be required for development works triggering Conservation of Habitats and Species Regulations 2017 offences against Dormice.

7.2 Consideration

There is no potential Dormouse habitat on, bounding or within the immediate vicinity of The Site. No evidence of Dormouse was present on The Site or within approximately 50m of surveyor accessible land.

Dormouse do not impose a constraint on the proposed development.

8. Great Crested Newt

8.1 Legislation

Great crested newt (*Triturus cristatus*) are protected under the Wildlife and Countryside Act 1981, the Countryside and Rights of Way Act 2000 and the Conservation of Habitats and Species Regulations 2017 .

Under the Conservation of Habitats and Species Regulations 2017 legislation it is illegal to:

- deliberately capture, injure or kill a Great crested newt;
- deliberately disturb Great crested newt. This includes in particular, disturbance in a way any such which is likely to (i) impair their ability to survive, breed or reproduce, or to rear or nurture their young; (ii) impair their ability to hibernate or migrate; or (iii) to affect significantly the local distribution or abundance of the species to which they belong
- damage or destroy a breeding site or resting place of a Great crested newt;
- to be in possession or control, to keep, transport, to sell or exchange, or to offer for sale or exchange, any live or dead Great crested newt, or any part of, or anything derived from such a wild animal.

Under the Wildlife and Countryside Act 1981, it is illegal to:

- intentionally or recklessly disturb a Great crested newt while it is occupying a structure or place which it uses for shelter or protection.
- intentionally or recklessly obstruct access to any structure or place which a Great crested newt uses for shelter or protection.

A European Protected Species (EPS) Development Licence from Natural Resources Wales will be required for development works triggering Conservation of Habitats and Species Regulations 2017 offences against Great crested newt.

Great crested newt are listed as 'priority species' within the Powys Biodiversity Action Plan.

8.2 Consideration

There are no known or mapped ponds within 250m of The Site.

Great crested newt do not impose a constraint on the proposed development.

9. Hedgehog

9.1 Legislation and policy

(European) Hedgehog (*Erinaceus europaeus*) are:

listed on Appendix III of the Bern Convention.

protected from harm under Schedule 6 of the Wildlife and Countryside Act 1981.

are listed as a 'priority species' under Schedule 7 of the Environment (Wales) Act 2016.

listed as 'vulnerable to extinction' on International Union for the Conservation of Nature's Red List for British Mammals.

9.2 Consideration

It is not thought likely that The Site would be used by Hedgehog for breeding/nesting. However, The Site may be used by Hedgehog for commuting and/or foraging.

Mitigation measures will be required to ensure that Hedgehog are not killed or injured by development work.

Mitigation measures for Hedgehog, suitable for the proposed development, are provided in Appendix 3.

10. Otter

10.1 Legislation

Otter (*Lutra lutra*) are protected under the Wildlife and Countryside Act 1981, the Countryside and Rights of Way Act 2000 and the Conservation of Habitats and Species Regulations 2017 (as amended).

Under the Conservation of Habitats and Species Regulations 2017 (as amended) legislation it is illegal to:

- deliberately capture, injure or kill an Otter;
- deliberately disturb Otter. This includes in particular, disturbance in a way any such which is likely to (i) impair their ability to survive, breed or reproduce, or to rear or nurture their young; (ii) impair their ability to hibernate or migrate; or (iii) to affect significantly the local distribution or abundance of the species to which they belong
- damage or destroy a breeding site or resting place of an Otter;
- to be in possession or control, to keep, transport, to sell or exchange, or to offer for sale or exchange, any live or dead Otter, or any part of, or anything derived from such a wild animal.

Under the Wildlife and Countryside Act 1981, it is illegal to:

- intentionally or recklessly disturb a Otter while it is occupying a structure or place which it uses for shelter or protection.
- intentionally or recklessly obstruct access to any structure or place which an Otter uses for shelter or protection.

Otter are listed as a 'priority species' under Schedule 7 of the Environment (Wales) Act 2016.

A European Protected Species (EPS) Development Licence from Natural Resources Wales will be required for development works triggering Conservation of Habitats and Species Regulations 2017 offences against Otter.

10.2 Consideration

Parts of the River Carno and a minor watercourse (a tributary of the River Carno) are situated within 100m of The Site. Otter may be present on the River Carno and the minor watercourse. Domestic properties and (parts of) intensively managed agricultural fields are situated between The Site and the River Carno and the minor watercourse.

The Site does not provide Otter habitat and Otter do not impose a constraint on the proposed development.

11. Polecat

11.1 Legislation and policy

(European) Polecat (*Mustela putorius*) are:

protected from harm under Schedule 6 of the Wildlife and Countryside Act 1981.

protected from trapping or capture under Schedule 6 of the Conservation of Habitats and Species Regulations 2017.

are listed as a 'priority species' under Schedule 7 of the Environment (Wales) Act 2016.

11.2 Consideration

The Site does not contain habitat suitable for Polecat to use for breeding/nesting purposes.

No evidence of Polecat was present on The Site or within its immediate environs.

Polecat do not impose a constraint on the proposed development.

12. Reptile

12.1 Legislation

Four reptile species, Adder (*Vipera berus*), Grass snake (*Natrix helvetica*), Slow-worm (*Anguis fragilis*) and Common Lizard (*Lacerta vivipara*), have protection under the Wildlife and Countryside Act 1981.

Their inclusion on Schedule 5 of the Wildlife and Countryside Act 1981 gives 'partial protection' (i.e. only parts of section 9 apply). In addition to restrictions with respect to trade (prohibition of sale and advertising for sale, etc.) they are also protected from intentional killing or injury.

All reptile species are listed as 'priority species' under Schedule 7 of the Environment (Wales) Act 2016.

12.2 Consideration

The current habitat of The Site is not suitable to support reptile. No evidence of reptile was found on The Site.

Reptile do not impose a constraint on the proposed development.

13. Small Breeding Bird

13.1 Legislation

Nesting birds are protected by the Wildlife and Countryside Act 1981.

Under the Wildlife and Countryside Act 1981, all birds are protected while breeding. It is an offence, with certain exceptions to:

intentionally kill, injure or take any wild bird;

intentionally take, damage or destroy the nest of any wild bird while it is in use or being built;

intentionally take or destroy the egg of any wild bird.

13.2 Consideration

Vegetation bounding The Site provides bird nesting habitat.

Should the proposed development be carried out mitigation for Small Breeding Birds should be adhered to.

Mitigation for Small Breeding Birds is contained in Appendix 4.

14. Water vole

14.1 Legislation

Water vole (*Arvicola amphibius*) are protected under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000).

Under this legislation, it is illegal to:

- intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection;
- intentionally or recklessly disturb Water voles whilst occupying a structure or place used for that purpose;
- intentionally kill, injure or take Water voles;
- possess or control live or dead Water voles or derivatives;
- sell water voles or offer or expose for sale or transport for sale;
- publish or cause to be published any advertisement which conveys the buying or selling of Water voles.

14.2 Consideration

The Site does not provide Water vole habitat. The River Carno and the nearby minor watercourse may support Water vole. However, should Water vole be present, the River Carno and the minor water course are too far from The Site to be of concern.

Water vole do not impose a constraint on the proposed development.

15. Assessment Synopsis

There are no designated wildlife sites within 2km of The Site.

The habitat of The Site is of very low ecological value.

However:

- The Site may be used by bats for commuting and/or foraging purposes. Should external lighting be proposed (as part of the proposed development); an external lighting scheme sensitive to bats should be designed. Details to inform an external lighting scheme are contained in Appendix 2.
- Hedgehog may use The Site for commuting and/or foraging. Should the proposed development receive approval; mitigation for Hedgehog - provided in Appendix 3 - should be adhered to.
- Vegetation bounding The Site provides Small Breeding Bird nesting habitat. Should the proposed development receive approval; mitigation for Small Breeding Bird - provided in Appendix 4 - should be adhered to.

The post-development ecological value of The Site (and its immediate environs) may be enhanced by the installation and/or creation of wildlife habitat, as described in Section 16.

16. Biodiversity Enhancement

16.1 Planning Policy

16.1.1 National Planning Policy Framework

Paragraph 174 of the National Planning Policy Framework (2021) states:

"Planning policies and decisions should contribute to and enhance the natural and local environment by:

- a) ... protecting and enhancing ... sites of biodiversity ... value ...
- d) ... minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks ..."

Paragraph 179 of the National Planning Policy Framework (2021) states:

"To protect and enhance biodiversity ... plans should:

- a) ... safeguard components of local wildlife-rich habitats and wider ecological networks ...
- b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity"

Paragraph 180 of the National Planning Policy Framework (2021) states:

- d) ... opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate."

16.1.2 Planning Policy Wales

Section 6 of Planning Policy Wales (adopted December 2018) states:

- 6.4.22 "The presence of a species protected under European or UK legislation, or under Section 7 of the Environment (Wales) Act 2016 is a material consideration when a planning authority is considering a development proposal which, if carried out, would be likely to result in disturbance or harm to the species or its habitat and to ensure that the range and population of the species is sustained."
- 6.4.24 "Trees, woodlands, copses and hedgerows are of great importance for biodiversity. They are important connecting habitats for resilient ecological networks and make a valuable wider contribution to landscape character, sense of place, air quality, recreation and local climate moderation."
- 6.4.25 "Planning authorities should protect trees, hedgerows, groups of trees and areas of woodland where they have ecological value, contribute to the character or amenity of a particular locality, or perform a beneficial and identified green infrastructure function."
- 6.4.27 "The protection and planting of trees and hedgerows should be delivered, where appropriate, through locally-specific strategies and policies, through imposing conditions when granting planning permission ..."

16.1.3 Environment (Wales) Act 2016

Section 6 of the Environment (Wales) Act (2016) states:

"A public authority must seek to maintain and enhance biodiversity in the exercise of functions in relation to Wales, and in so doing promote the resilience of ecosystems, so far as consistent with the proper exercise of those functions".

16.2 Bat

To encourage bats to reside within Post Office Lane property in the future: it is recommended that woodcrete (or similar) purpose-made bat roost boxes are installed.

Ideally Bat Boxes should be positioned in areas of low future disturbance and Bat Boxes should be installed more than 4m height above the ground.

It is recommended that a minimum of two purpose-made bat roost boxes (such as the Schwegler 1FF Bat Box and the Schwegler 1FD Bat Box, or similar alternatives) are installed on trees within the vicinity of The Site.

16.3 Small Breeding Bird

In order to encourage wildlife to reside on The Site, or within its immediate surrounds, in the future it is recommended that a minimum number of:

- one generic bird species nest box (e.g. Schwegler 1B Bird Nest Box);
- one Tit nest box (e.g. Schwegler 2M woodcrete Bird Box)
- one generic bird species open-fronted nest box (e.g. Schwegler 2H woodcrete open fronted nest box); and,
- one predator protected nest box (e.g. Schwegler 3SV with Predator Protection Bird Nest Box)

(or similar alternatives) be installed on trees on and/or in the vicinity of The Site.

16.4 Wildlife Hedge and/or Tree Planting

New hedgerows may be planted and/or existing hedgerows supplementary planted. Recommendations are provided in Section 16.4.1.

Open spaces to be created within the proposed development may be planted with fruit trees.

Recommendations are provided in Section 16.4.2.

16.4.1 Hedgerow/shrub planting

Open spaces may be planted with shrubs to provide shelter and foraging areas for wildlife. Ideally, a minimum of four species of shrub should be planted.

Native species of local provenance are preferred. Ideally, potted stock should be in non-peat compost.

Favourable native plant species that may be incorporated in hedgerow boundaries and/or shrubberies include:

Common English Name	Scientific Name
Blackthorn	<i>Prunus spinosa</i>
Common Beech	<i>Fagus sylvatica</i>
Dogwood	<i>Cornus sanguinea</i>
Field Maple	<i>Acer campestre</i>
Field Rose	<i>Rosa arvensis</i>
Guelder Rose	<i>Viburnum Opulus</i>
Hawthorn	<i>Crataegus monogyna</i>
Hazel	<i>Corylus Avellana</i>
Honeysuckle	<i>Lonicera periclymenum</i>
Oak	<i>Quercus robur/ petraea</i>
Rowan	<i>Sorbus aucuparia</i>
Spindle	<i>Euonymus europaeus</i>
Wayfaring Tree	<i>Viburnum lantana</i>

16.4.2 Standard/Fruit Trees

New native tree planting within (public) open spaces and/or along (retained) boundaries may encourage wildlife to forage on The Site. Trees may be half-standard or standard size. Standard trees provide instant habitat for birds and insects. Species should be those that provide a good mast crop (i.e. seeds), and ideally a mixture of species should be planted. Tree stakes should be low (maximum 0.60 metres above ground), at an angle to avoid roots, and removed in year three. The fecundity of trees should be monitored and dead and/or damaged plants suitably replaced.

Ideally, a minimum of three tree species should be planted. Favourable tree species include:

Common English Name	Scientific Name
Apple	<i>Malus sp.</i>
Bird Cherry	<i>Prunus padus</i>
Cherry	<i>Prunus var.</i>
Cobnut / Filbert	<i>Corylus var.</i>
Crab-apple	<i>Malus sylvestris</i>
Damson	<i>Prunus var.</i>
Mountain Ash	<i>Sorbus aucuparia</i>
Mulberry	<i>Morus nigra</i>
Pear	<i>Pyrus sp.</i>
Plum / Greengage	<i>Prunus var.</i>
Silver Birch	<i>Betula pendula</i>
Small-leafed Lime	<i>Tilia cordata</i>
Walnut	<i>Juglans regia</i>
Wild Cherry	<i>Prunus avium</i>

17. Reference

- (1): Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020). UK Habitat Classification – Habitat Definitions V1.1 at <http://ukhab.org>

Appendix 1 – Survey Photographs



Photograph 1.
View within the northeast boundary (right).
Looking northwest from southeast.



Photograph 2.
View of part of the northeast area.
Looking north from south.



Photograph 3.
View within the southeast boundary (right).
Looking northeast from southwest.



Photograph 4.
View within the southwest boundary (left).
Looking northwest from southeast.



Photograph 5.

Left: part of the southwest-end of the northwest boundary.
Centre and right: southwest side of the southwest boundary.
Looking east from west.



Photograph 6.

Left: northwest side of the northwest boundary.
Right: part of the southwest side of the southwest boundary.
Looking northeast from southwest.



Photograph 7.
View within the northwest boundary (right).
Looking southeast from northwest.



Photograph 8.
View of the southwest area.
Looking southwest from northeast.

Appendix 2 – External Lighting

In order to avoid any unnecessary disturbance to bats in the future, any external lighting to be installed on The Site should:

- use Light emitting diodes (LED) luminaries
- have a warm white spectrum <2700° Kelvin (degrees colour temperature)
- have peak wavelengths higher than 550nm
- be set on motion-sensors
- use short duration (e.g. one minute) timers
- not be in the vicinity of, or shine towards, boundary vegetation

Appendix 3 – Mitigation for Hedgehog

Excavations and ground-works

Excavated footings, post-holes, pipe trenches etc. will need to be filled on the same day as they are opened.

Should the time between excavation and filling of foundations or trenches need to be extended, due to unforeseen circumstances, it will be necessary to prevent any chance of Hedgehog, or other wildlife, becoming trapped in excavations.

This may be achieved by:

Covers:

Covering the excavations with ply-board sheeting or similar, ensuring a good seal between the bottom edge of the board and firm ground substrate.

Ramps:

Should it not be possible to cover all excavations, wooden boards (or similar) will be placed extending from the bottom of excavations to the surrounding surface.

Should Hedgehog, or small mammals, become trapped in excavations, these 'ramps' may potentially allow Hedgehog, and small mammals, a method of escaping on their own accord.

Each morning; excavations should be inspected for the presence of Hedgehog. Should Hedgehog be present, they should be removed from the excavation and, if they are healthy, released within suitable habitat, away from the development site.

Appendix 4 – Mitigation for Small Breeding Bird

Vegetation clearance may only be carried out when no nesting birds are present i.e. between 1st October and 1st March.

Should it be required that vegetation clearance takes place within the bird breeding season, a survey should be carried out by a suitably qualified ecologist to ascertain whether breeding birds are present or not; should no breeding birds be present, it may be possible for vegetation clearance work to commence.