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# Preliminary Ecological Appraisal (PEA)

# (Incorporating Extended Phase 1 Habitat Survey)

Report Prepared on behalf of Michael Leeder

For the site of the land adjacent to 23 Church End, Catworth, Cambridgeshire, PE28 0PB

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# Preliminary Ecological Appraisal (PEA)

**Background to Survey**

The client, Mr Michael Leeder has commissioned Arbtech Consulting Ltd. to undertake a Preliminary Ecological Appraisal [PEA] (incorporating an Extended Phase 1 Habitat Survey for the land adjacent to 23 Church End, Catworth, Cambridgeshire, PE28 0PB. The proposed plans involve erecting a dwelling and landscaping on the land.

The purpose of the survey was to establish the baseline ecological condition of the site and the potential zone of influence (on any ecological receptors that might be impacted upon) of the proposals; determine any further evaluations that might be necessary to evaluate the ecological condition (Phase II surveys); and make any general mitigation and enhancement recommendations that are appropriate.

**Summary of Recommendations**

If the PEA determines that the proposals will not impact upon habitat or species considered to be of nature conservation value (ecological receptors) then it is unlikely that any further evaluation will be necessary to achieve planning determination. However if it appears that the proposals do impact upon ecological receptors then further scientific investigation may be required and it is likely that some form of mitigation will need to be offered. Furthermore planning authorities are no under an obligation to seek enhancements (positive improvements) for biodiversity through the planning system.

**Taking into consideration the desk study and site survey findings, this report concludes that the proposed development poses no significant risk to ecological receptors.**

**Summary of Potential Mitigation, Potential Impact, Loss and Gain**

| Habitat/Species concerned | Potential impact/loss? | Potential mitigation required | Potential ecological gain? |
|---|---|---|---|
| Habitats | All species and habitats found are common and widespread, no rare or unusual plants or habitats were found. The works are not close enough to or large enough in scope to affect any statutory sites. | No further surveys. | The development plans include the mature Horse Chestnut at the south of the property, and propose to include native deciduous trees to the rear of the property. These will provide excellent bird nesting and foraging habitats. |
| Invertebrates | The tall ferns and grassland currently provide foraging grounds for invertebrates, however there is no extensive habitat for any *protected* invertebrates. | No Further Surveys | A bee house could be installed to the north border of the property. |
| Amphibians | There is also no suitable habitat on site for amphibian foraging. While the long grass does create amphibian refuges, there are no bodies of water on site or located within a 2km radius that could support a substantial amphibian community. | No further surveys. | |
| Badgers | No badger setts were found to be present on site. No other badger evidence, e.g. latrines, runs or hair were found to be present. | No further Surveys. | |
| Bats | There are no buildings or suitable trees on site, therefore nowhere that bats could roost. There are also no hedges or linear features that bats could be used for commuting. | No further Surveys. | |
| Barn Owl | There are no buildings or trees on site for barn owl roosting or nesting. The grassland and tall ferns found on site may support a | No further surveys | |

| | | | |
|---|---|---|---|
| | small mammal community. A small mammal run was found towards the north/rear of the property. However, the size of the plot itself makes it negligible that there are permanent foraging or refuge areas for small mammals. | | |
| Breeding Bird | There are several suitable trees located on site that could provide suitable nesting and foraging opportunities for birds. A Red Kite (*Milvus milvus)* was observed flying over the site at the time of the survey. | No further surveys.<br>Any works which affect the trees and shrubs on site could have an impact on nesting birds. Since all in-use bird's nests and their contents are protected from damage or destruction, any tree and shrub removal should be undertaken outside the period 1st March to 31st August.<br>If this time frame cannot be avoided, a close inspection of trees and shrubs to be removed should be undertaken prior to clearance. Work should not be carried out within 5.0m of any in-use nest and with an Ecological Clerk of Works present. | 2 Bird boxes could be installed on the retained trees to provide refuge. |
| Reptiles | The grassland, rubble and discarded metal sheets found on the site can provide suitable habitat for reptiles. The site has good access to further suitable habitat towards the north of the plot. No reptiles or evidence of reptiles were found during the survey and there is no documented local reptile community. | No further surveys.<br>The following mitigation is recommended to prevent harm to any reptiles that may happen to be present within the development area, as five species are known to live in the area.<br>Pre-Development Clearing<br>a) Before any development, the ground flora in the vicinity of the building site or access roads will be strimmed down to 500mm. Any reptiles that are found should be placed outside of the development area by a suitably experienced ecologist.<br>b) Rest period of at least 4-6 hours<br>c) Strimming of remaining flora to ground level, to be maintained for the duration of the | |

| | | | |
|---|---|---|---|
| | | development.<br>d) If at any other point reptiles are recorded, operations should cease immediately until further advice has been sought from the ecologist. | |
| Other Terrestrial Mammals | No evidence of any other protected mammal was found. | No further surveys. | |
| Problematic Species | None Found | No further surveys. | |

## 1.0 The Company and Contact Information

Established in 2005, Arbtech Consulting Limited provides arboricultural and ecological consultancy services in respect to planning and development, throughout the UK.

Tel 01244 660558

@ email@arbtech.co.uk

Web www.arbtech.co.uk

## 2.0 The Surveyor

The surveyor and principal author of this report is Lauren Fear BSc (Hons).

## 3.0 Protected Species Licenses

Bats

Accredited Agent of Chris Formaggia BSc (Joint Hons), CBiol, CEnv, MBS, MCIEEM, RAFVR

England: under CLS01073

## 4.0 The Client

The client is Mr. Michael Leeder of CHQ Architects.

## 5.0 The Site of Proposed Development

The client is preparing a planning application erect a dwelling on the land adjacent to 23 Church End, Catworth, Cambridgeshire, PE28 0PB.

## 6.0 The Survey Brief

The client commissioned Arbtech Consulting Ltd to undertake a PEA in accordance with current guideline standards[1].The PEA includes an extended Phase 1 Habitat Survey that has been conducted in accordance with the technique outlined in the Joint Nature Conservation Committee ("JNCC") Handbook for Phase 1 Habitat Survey a technique for environmental audit (2010).

## 7.0 Controls

This survey provides a 'snap-shot' of the assessed habitat and wildlife value of the site at the time of survey only and may require further survey effort to provide robust, scientifically valid evidence of species likely-absence.

Shelf-life – there is a lack of clarity about the period for which a PEA is accepted as being valid. Common practice dictates that most planning authorities will accept a survey report that is less than two years old (from the date of the field survey). Older surveys are likely to have to be refreshed by a further visit and report update.

## 8.0 Data Searches

A 2km Data Search has been carried out to determine any sites of nature conservation importance in the area and to reveal any existing biological records for the search area.

The full data search is provided in Appendix X. Please note that the data search is to be treated as **CONFIDENTIAL and is not suitable for release onto public registers**. It should be removed from any documentation transferred onto publicly accessible registers. The data search is provided in full for officer verification purposes and should not be shared with officers not involved in the consent determination.

[1] CIEEM 2012. Guidelines for Preliminary Ecological Appraisal. http://www.cieem.net/data/files/Resource_Library/Technical_Guidance_Series/GPEA/GPEA_April_2013.pdf
British Standard BS42020: Biodiversity – Code of Practice for Planning and Development

## 9.0 Date of the Survey

27th May 2015.

## 10.0 Seasonality

The normal survey window for undertaking this type of evaluation is between mid-March and mid-October (south)/1st April and 30th September (north).

This survey was conducted within the normal survey window.

## 11.0 Informative

Table 1: Summary of Pertinent Legislation and Planning Policy Relevant to the Protection of Bats in the UK

| Location of Site | Transposing EC Habitats Directive | Other Relevant Legislation | Planning Policy |
|---|---|---|---|
| England | Conservation of Habitats and Species Regulations 2010. | Wildlife and Countryside Act 1981 as amended.<br>Countrywide and Rights of Way Act 2000.<br>Natural Environment and Rural Communities Act 2006. | National Planning Policy Framework ("NPPF"). |
| Wales | Conservation of Habitats and Species Regulations 2010. | Wildlife and Countryside Act 1981 as amended.<br>Countrywide and Rights of Way Act 2000.<br>Natural Environment and Rural Communities Act 2006. | Technical Advice Note ("TAN") 5. |
| Scotland | Conservation (Natural Habitat & c.) Regulations 1994 as amended. | Wildlife and Countryside Act 1981 as amended.<br>The Nature conservation (Scotland) Act 2004. | National Planning Policy Guidance ("NPPG") 14 and Planning Advice Note ("PAN") 60. |

A summary of legislation relevant to individual species can be found at Appendix IV.

## 12.0 The Survey Methodology

In order to fully assess the potential value of habitats at the site, the surveyor has employed widely accepted national standards set out in the JNCC (2010) publication Handbook for Phase 1 Habitat Survey: a technique for environmental audit.

The report includes for a Phase 1 Habitat Map (found at Appendix I), in addition to a full species list and target notes (found at Appendix II.)

Inspections make use of binoculars and cameras where appropriate.

1. The survey is performed during daylight hours.The site was surveyed on 27th May 2015. The site was visited and the vegetation was mapped onto an Ordnance Survey Mastermap using standard colour codes for the ninety plus specified habitat types as defined in the JNCC guidelines. The surrounding land was similarly mapped but third-party land was only accessed were open and is assessed on the basis of what could be viewed from publically accessible areas.
2. Target notes were made for particular areas of interest and annotated onto the map.
3. An ecological “walkover” survey of the site was also conducted. The survey looks for direct and indirect evidenced (through sightings or field signs) of protected species and speculates on likely presence based upon habitat type and quality.

## 13.0 Protected Taxa Habitat Potential

Table 2: Species potential defined by integrating national guidelines e.g. Hundt 2012

| | |
|---|---|
| **Confirmed** | Species are found to be present during the survey.<br>Evidence of species' activity is found to be present during the survey. |
| **High** | Buildings, trees or other structures with features of particular significance for use by protected species e.g. nesting habitat, roosting opportunities, ponds.<br>Habitat of high quality for foraging e.g. broadleaved woodland, tree-lined watercourses and grazed parkland.<br>Site is connected with the wider landscape by strong linear features that would be used by commuting species e.g. river and or stream valleys and hedgerows.<br>Site is close to known locations of records for protected species. |
| **Medium** | Several potential habitat opportunities in buildings, trees or other structures.<br>Habitat could be used for foraging e.g. trees, shrub, grassland or water.<br>Site is connected with the wider landscape by linear features that could be used by commuting species e.g. lines of trees and scrub or linked back gardens. |
| **Low** | A small number of less significant habitat opportunities.<br>Isolated habitat for foraging e.g. a lone tree or patch of scrub.<br>An isolated site not connected by prominent linear landscape features. |
| **Negligible** | No suitable habitats observed. |

Table 2 (above) presents a scale continuum against which the significance of habitat value and opportunities for protected species at the site can be graded. By referring to this continuum and using their expert judgment, surveyors classify features such as habitats, buildings etc. as representing low, medium, high value or confirmed presence.

## 14.0 Survey Results

Table 3: Desk study results, habitats and species recorded on site

<table>
<tr>
<td>Desk Study Records</td>
<td>
The survey preparation has been informed by the use of a desk study utilising: - aerial images from Google Earth, MAGIC and other freely available information e.g. Natural England’s nature on the map website, and OS Opendata 2010 using grid reference TL09037338 and postcode PE28 0PB.<br><br>
There are non-statutory sites within 1km of the survey site.<br><br>
A 2km radius biological data search for designated sites and protected species was requested from the Cambridgeshire & Peterborough Environmental Records Centre (CPERC) and the results can be found below:
<table>
<tr><th>Site Name</th><th>Designation</th><th>Grid Ref</th><th>Area (ha)</th><th>Reasons for designation</th></tr>
<tr><td>Little Catworth Meadow</td><td>Site of special Scientific Interest (SSSI)</td><td>TL103727</td><td>5.24</td><td>A herb-rich grassland surrounded by mature hedgerows. The grassland is of a calcareous loam type which is scarce in Britain. It holds a variety of grasses and herbs including green-winged orchid Orchis morio and adders-tongue fern Ophioglossum vulgatum.</td></tr>
<tr><td>Track Southwest of Catworth Gorse</td><td>County Wildlife Sites</td><td>TL1073</td><td>0.48</td><td>The site qualifies as CWS because it supports frequent numbers of at least 8 neutral grassland indicator species and because it supports at least 0.05ha of MG5 Crested Dog's-tail - Black Knapweed grassland.</td></tr>
</table>
</td>
</tr>
</table>

**Species:**

| Common Name | Taxon Name |
|---|---|
| Brown Long-eared Bat | *Plecotus auritus* |
| Common Frog | *Rana temporaria* |
| Common Pipistrelle | *Pipistrellus pipistrellus* |
| European Otter | *Lutra lutra* |
| Eurosian Badger | *Meles meles* |
| Great Crested Newt | *Triturus cristatus* |
| Red Kite | *Milvus milvus* |
| Short-Eared Owl | *Asio flammeus* |

Local Environment

**Site Location:**

The site is located on the outskirts of a rural village in Catworth, surrounded by cultivated fields and scattered woodland areas. The land backs onto a large open field to the north-east.

Weather conditions at time of survey:

Temperature: 17˚C.

Cloud Cover: 60%.

Precipitation: none.

Wind: 2/8.

| Habitats | Description of Features | |
|---|---|---|
| B2 Neutral Grassland | Neutral, Unimproved Grassland covers a large proportion of the area on this site. The ground is bare in places, bricks and rubbles are scattered throughout this habitat. Dominant species include; Dandelion (*Taraxacum* sp.), Perennial Rye-Grass (*Lolium perenne*), Creeping Thsitle (*Cirsium arvense*) and Wood Crane's-bill (*Geranium sylvaticum*) and Meadow Buttercups (*Ranunculus acris*). | |
| C1 Bracken | Located towards the middle of the plot, Bracken (*Pteridium aquilinum*) is found as a dominate plant in a tall herb area, as well as forming an understory for the scattered trees located towards the north of the plot. | |
| C3 Other Tall Herb and Fern Ruderal | Tall herb sections are found along all the boundaries of the plot, excepting the southern entrance area. The dominant plant species found here are Perennial Rye-Grass (*Lolium perenne*), Creeping Soft-Grass (*Holcus mollis*), Stinging Nettle (*Urtica dioica*) and Pignut (*Conopodium majus*). | |
| J4 Bare Ground | An area of gravel forms a small patch of land at the southern entrance to the plot. | |
| J5 Other Habitat | There are several large trees found on the plot. Namely the Horse Chestnut (*Aesculus hippocastanum*) found at the southern end of the site. This tree is included in future development plans. There are Pivet trees (*Ligustrum vulgare*) located along the western boundary, and to the rear/northern end there are established trees including Hawthorn (*Crataegus monogyna)* and Sycamore (*Acer pseudoplatanus*) varieties. | |
| **Species** | **Species potential defined in Table 2.** | **Description of features suitable to support a population OR external habitat connectivity to the site** |
| Invertebrates | Negligible | The tall ferns and grassland currently provide foraging grounds for invertebrates, however there is no extensive habitat for any *protected* invertebrates. |
| Amphibian | Negligible | There is also no suitable habitat on site for amphibian foraging. While the long grass does create amphibian refuges, there are no bodies of water on site or located within a 2km radius that could support a substantial amphibian community. |
| Badger | Negligible | No badger setts were found to be present on site. No other badger evidence, e.g. latrines, runs or hair were found to be present. |

| | | |
|---|---|---|
| Bat | Negligible | There are no buildings or suitable trees on site, therefore nowhere that bats could roost. There are also no hedges or linear features that bats could be used for commuting. |
| Barn Owl | Negligible | There are no buildings or trees on site for barn owl roosting or nesting. The grassland and tall ferns found on site may support a small mammal community. A small mammal run was found towards the north/rear of the property. However, the size of the plot itself makes it negligible that there are permanent foraging or refuge areas for small mammals. |
| Bird | Low | There are several suitable trees located on site that could provide suitable nesting and foraging opportunities for birds. A Red Kite (*Milvus milvus)* was observed flying over the site at the time of the survey. |
| Other terrestrial mammals e.g. otter, water vole | Negligible | No evidence of any other protected mammal was found. |
| Reptile | Low | The grassland, rubble and discarded metal sheets found on the site can provide suitable habitat for reptiles. The site has good access to further suitable habitat towards the north of the plot. No reptiles or evidence of reptiles were found during the survey and there is no documented local reptile community. |
| Problematic Species | Negligible | None Found |

A Phase 1 map can be found at Appendix I illustrating the habitats.

Table 4: Summary of Impacts

| Habitat/Species concerned | Potential impact/loss? |
|---|---|
| Invertebrates | None foreseen from current development plans. |
| Amphibian | None foreseen from current development plans. |
| Badger | None foreseen from current development plans. |
| Bat | None foreseen from current development plans. |
| Barn Owl | None foreseen from current development plans. |

| | |
|---|---|
| Bird | There may be a direct loss of refuges and foraging habitat for birds. This needs to be taken into account in future development plans. |
| Other terrestrial mammals e.g. otter, water vole | None foreseen from current development plans. |
| Reptile | There is a very slight chance of reptiles on the site and hence a low chance of direct harm to reptiles during development. There are no long term impacts on the reptile community expected. |
| Problematic Species | None foreseen from current development plans. |

## 15.0 Conclusions and Recommendations

The NPPF and ODPM Circular 06/05 require that planning decisions are based on complete and timely ecological information. Further, it is required by Natural England's 'Standing Advice' that protected species information must be available before a decision can be made.

Following this guidance, it is highly unlikely that the local planning authority will defer the provision of further protected species survey work as a condition of any planning consent.

At this time we have no reason to believe the local planning authority will consider that this level of survey will provide them with inadequate information or lacks scientific robustness. On occasion though, it can become necessary to perform further surveys even after planning consent is given, where there are extenuating circumstances e.g. if protected species or habitats are found at a later date.

However, separately to mitigating and compensating for unavoidable ecological impacts, government has made it clear through the NPPF and circular 06/05 that development requires the enhancement of the quantity and quality of biodiversity and habitat.

Where the local planning authority is minded to grant consent for the proposed development, some basic and cost effective forms of ecological enhancement could be adequately secured through the use of an appropriately worded condition. Suggestions for such measures are referred to below, in Table 4.

Table 5: Conclusions and Recommendations

| Species/Habitats | Species potential defined in Table 2. | Conclusions | Recommendations | Enhancements under NPPF and Circular 06/05 |
|---|---|---|---|---|
| Habitats | Negligible | All species and habitats found are common and widespread, no rare or unusual plants or habitats were found. The works are not close enough to or large enough in scope to affect any statutory sites. | No further surveys. | The development plans include the mature Horse Chestnut at the south of the property, and propose to include native deciduous trees to the rear of the property. These will provide excellent bird nesting and foraging habitats. |
| Invertebrates | Negligible | The tall ferns and grassland currently provide foraging grounds for invertebrates, however there is no extensive habitat for any *protected* invertebrates. | No Further Surveys | A bee house could be installed to the north border of the property. |
| Amphibian | Negligible | There is also no suitable habitat on site for amphibian foraging. While the long grass does create amphibian refuges, there are no bodies of water on site or located within a 2km radius that could support a substantial amphibian community. | No further surveys. | |
| Badger | Negligible | No badger setts were found to be present on site. No other badger evidence, e.g. latrines, runs or hair were found to be present. | No further Surveys. | |
| Bats | Negligible | There are no buildings or suitable trees on site, therefore nowhere that bats could roost. There are also no hedges or linear features that bats could be used for commuting. | No further Surveys. | |
| Barn Owl | Negligible | There are no buildings or trees on site for barn owl roosting or nesting. The grassland and tall ferns found on site may support a small mammal community. A small mammal run was found towards the north/rear of the property. | No further surveys | |

| | | | | |
|---|---|---|---|---|
| | | However, the size of the plot itself makes it negligible that there are permanent foraging or refuge areas for small mammals. | | |
| Bird | Low | There are several suitable trees located on site that could provide suitable nesting and foraging opportunities for birds. A Red Kite (*Milvus milvus)* was observed flying over the site at the time of the survey. | No further surveys.<br>Any works which affect the trees and shrubs on site could have an impact on nesting birds. Since all in-use bird's nests and their contents are protected from damage or destruction, any tree and shrub removal should be undertaken outside the period 1st March to 31st August.<br>If this time frame cannot be avoided, a close inspection of trees and shrubs to be removed should be undertaken prior to clearance. Work should not be carried out within 5.0m of any in-use nest and with an Ecological Clerk of Works present. | 2 Bird boxes could be installed on the retained trees to provide refuge. |
| Other mammals | Negligible | No evidence of any other protected mammal was found. | No further surveys. | |
| Reptiles | Low | The grassland, rubble and discarded metal sheets found on the site can provide suitable habitat for reptiles. The site has good access to further suitable habitat towards the north of the plot. No reptiles or evidence of reptiles were found during the survey and there is no documented local reptile community. | No further surveys.<br>The following mitigation is recommended to prevent harm to any reptiles that may happen to be present within the development area, as five species are known to | |

| | | | | |
|---|---|---|---|---|
| | | | live in the area.<br>Pre-Development Clearing<br>a) Before any development, the ground flora in the vicinity of the building site or access roads will be strimmed down to 500mm. Any reptiles that are found should be placed outside of the development area by a suitably experienced ecologist.<br>b) Rest period of at least 4-6 hours<br>c) Strimming of remaining flora to ground level, to be maintained for the duration of the development.<br>d) If at any other point reptiles are recorded, operations should cease immediately until further advice has been sought from the ecologist. | |
| Problematic Species | | None Found | No further surveys. | |

## 16.0 Bibliography

Hundt L (2012) Bat Surveys: Good Practice Guidelines, 2nd edition, Bat Conservation Trust ISBN-13: 9781872745985

http://www.bats.org.uk/publications_detail.php/1127/bat_surveys_good_practice_guidelines_2nd_edition

Joint Nature Conservation Committee (2010). Handbook for Phase 1 habitat survey a technique for environmental audit.

Ben Averis (2013) Plants and Habitats. Swallowtail Print Ltd.

Natural England (2007). Badgers and Development a Guide to Best Practice and Licensing. Natural England. Bristol.

National Planning Policy Framework, 2012
http://www.communities.gov.uk/publications/planningandbuilding/nppf

Paul Edgar, Jim Foster and John Baker (2010). Reptile Habitat Management Handbook. Amphibian and Reptile Conservation, Bournemouth

Tom Langton, Catherine Beckett and Jim Foster (2001). Great Crested Newt Conservation Handbook. Froglife. Suffolk.

## 17.0 Document Production and Approval Record

| Status | Issue | Surveyor | Date |
|---|---|---|---|
| Draft | 1 | Lauren Fear | 27/05/2015 |
| Proofed | | | |
| | | | |
| | | | |

## 18.0 Limitations

Arbtech Consulting Ltd has prepared this report for the sole use of the above named Client or his agents in accordance with our General Terms and Conditions, under which our services are performed. It is expressly stated that no other warranty, expressed or implied, is made as to the professional advice included in this Report or any other services provided by us. This report may not be relied upon by any other party without the prior and express written agreement of Arbtech Consulting Limited. The assessments made assume that the sites and facilities will continue to be used for their current purpose without significant change. The conclusions and recommendations contained in this report may be based in part or whole upon information provided by third parties, which has not been independently verified by Arbtech Consulting Limited.

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## Appendix I Phase 1 Habitat Map



## Appendix II Species

| Common Name | Scientific Binomial |
|---|---|
| Creeping Soft-Grass | *(Holcus mollis)* |
| Hawthorn | *(Crataegus monogyna)* |
| Horse Chestnut | *(Aesculus hippocastanum)* |
| Pivet trees | *(Ligustrum vulgare)* |
| Bracken | *(Pteridium aquilinum)* |
| Creeping Soft-Grass | *(Holcus mollis)* |
| Creeping Thistle | *(Cirsium arvense)* |
| Dandelion | *(Taraxacum sp.)* |
| Meadow Buttercups | *(Ranunculus acris)* |
| Perennial Rye-Grass | *(Lolium perenne)* |
| Pignut | *(Conopodium majus).* |
| Stinging Nettle | *(Urtica dioica)* |
| Stinging Nettle | *(Urtica dioica)* |
| Sycamore | *(Acer pseudoplatanus)* |
| Wood Crane's-bill | *(Geranium sylvaticum)* |

## Appendix III Site Photos



Figure 1: The survey site from the access road, looking towards the North-East.



Figure 2: The mature Horse Chestnut tree (*Aesculus hippocastanum*) at the southern boundary of the site, as pictured from the access road.



Figure 3: The survey site facing the access road; facing south.



Figure 4: A close up of the discarded metal sheets found on site.



Figure 5: The northern boundary of the site, illustrating bare ground, tall herbs, bracken and mature tree habitats.

Appendix IV Summary of Legislation for Various Species

**Conservation Status of British Bats**

The general consensus in Britain and Europe is that virtually all bat species are declining and vulnerable. Our understanding of population status is poor as there is very little historical data for most bat species. Certain species, such as the horseshoe bats, are better understood and have well documented contractions in range and population size.

Given this general picture of decline in UK Government within the UK Biodiversity Action Plan has designated five species of bats as priority species (greater and lesser horseshoe bats, barbastelle, Bechstein's and pipistrelle). These plans provide an action pathway whereby the maintenance and restoration of the former populations levels are investigated.

**Legal Status of British Bats**

Given the above position all British bats as well as their breeding sites and resting places enjoy national and international protection.

All bat species in the UK are fully protected under the Wildlife and Countryside Act 1981 (as amended) through inclusion in Schedule 5. All bats are also listed on Annex IV (and some on Annex II) of the EC Habitats Directive giving further, European protection. Taken together the act and Conservation of Habitats and Species Regulations 2010* make it an offence to; intentionally or deliberately kill, injure or capture (take) bats;

- Deliberately disturb bats (whether in a roost or not);
- Damage, destroy or obstruct access to bat roosts;
- Possess or transport a bat or any part of a bat, unless acquired legally;
- Sell, barter or exchange bats, or parts of bats

The legislation although not strictly affording protection to foraging grounds does protect roost sites. Bat roosts are protected at all times of the year whether or not bats are present. Any disturbance of a roost due to development must be licenced.

**the regulations that delivered by the UK's commitments to the Habitats Directive*.

**Breeding birds**

All nesting birds are protected under the Wildlife and Countryside Act (as amended) 1981, which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. Furthermore a number of birds enjoy further protection under that Act and are listed on Schedule 1 of the Act. These further protected birds are also protected from disturbance and it may be necessary to operate "no-go" buffer zones around such nests – typically out to 100m.

Planning policy guidance on the treatment of species identified as priorities under the biodiversity action programme suggests that local authorities should take measures to protect

the habitats of these species from further decline through policies in local development documents and should ensure that they are protected from the adverse effects of development, where appropriate, by using planning conditions or obligations. The conservation of these species should be promoted through the incorporation of beneficial biodiversity designs within developments.

Bats

All 18 species of bat common in the UK (17 known to be breeding) are fully protected under the Wildlife and Countryside Act (as amended) 1981 through inclusion in Schedule V of the Act. All bat species in the UKare also included in Schedule II of the Habitats Regulations 2010 which transpose Annex II of the Council Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora ("EC Habitats Directive") which defines European protected species of animals.

Bats species are afforded further protection by the Countryside and Rights of Way Act 2000; and the Natural Environment and Rural Communities Act 2006.

This combined legislation makes it an offence to:

Intentionally or deliberately kill, injure or capture bats.

Deliberately disturb bats, whether at roost or not.

Damage, destroy or obstruct access to bat roosts.

Possess or transport bats, unless acquired legally.

Sell, barter or exchange bats.

A bat roost is defined by the Bat Conservation Trust publication Bat Surveys—Good Practice Guidelines 2nd Edition as "the resting place of a bat" (BCT 2012). Generally however, the word roost is interpreted as "any structure or place, which any wild bat uses for shelter or protection."

Bats tend to re-use the same roosts; therefore legal opinion is guided by recent case law precedents[2], that a roost is protected whether or not the bats are present at the time. This can include for summer roosts, used for breeding; or winter roosts, used for hibernating.

Common Birds

All common wild birds are protected under The Wildlife and Countryside Act 1981.

This legislation makes it an offence to:

Kill, injure or take wild birds.

[2] Internet search for e.g. the Woolley case (R. Simon Woolley v. Cheshire East Borough Council) and see here: http://www.naturalengland.org.uk/Images/WoolleyVsCheshireEastBC_tcm6-12832.pdf

Take, damage or destroy the nest of wild birds while it is in use or being built.

Take or destroy the eggs of wild birds.

Certain rare breeding birds are listed on Schedule I of The Wildlife and Countryside Act 1981. Under this legislation they are afforded the same protection as common wild birds and are also protected against disturbance whilst building a nest or on or near a nest containing eggs and or unfledged young e.g. Barn Owl Tyto alba.

Reptiles

There are six species of reptiles in Great Britain (Edgar et al. 2010) and four of these are commonly found; the grass snake Natrix natrix, adder Viper aberus, common lizard Zootoca vivipara and slow worm Anguis fragilis ("common reptiles.")

All native British species of reptiles are legally protected through their in Schedule V of the Wildlife and Countryside Act 1981. As such, all species are protected from deliberate killing or injury. Therefore, where development is permitted, and there will be a significant change in land use, a reasonable effort must be undertaken to avoid committing an offence. The same act makes the trading of native reptile species a criminal offence without appropriate licensing.

Two species of reptile; the smooth snake Coronella austriaca and sand lizard Lacerta agilis, are further protected through their inclusion in Schedule II of the Habitats Regulations 2010 which transposes Annex II of the Council Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora ("EC Habitats Directive"), which defines European protected species of animals ("rare reptiles.")

This legislation makes it an offence to:

Intentionally or deliberately kill, injure common and rare reptiles.

Deliberately disturb or capture rare reptiles.

Damage, destroy or obstruct access to rare reptile habitat.

Possess or transport a rare reptile or any part of a rare reptile, unless acquired legally.

Sell, barter or exchange common and rare reptiles.

Rare reptile species occupy only highly restricted ranges in the extreme south east of costal England, with isolated populations of sand lizard in e.g. costal Wales and Cornwall. Smooth snake populations are isolated to lowland heaths in e.g. Surrey, Hampshire, Dorest and West Sussex.

Badgers

Badgers Meles meles are vulnerable to baiting, hunting and the detrimental impacts of development on their habitat. Both the badger and its habitat are protected under The Protection of Badgers Act 1992, Schedule V of the Wildlife and Countryside Act 1981, and Appendix III of the Bern Convention 1979.

This legislation makes it an offence to:

Kill, injure, take or possess a badger.

Interfere with, damage or destroy a badger sett including e.g. obstruct access to a badger sett.

Cruelly treat or harm a badger.

Disturb a badger in a sett.

Penalties for offences are documented (NE 2010) as fines of up to £5,000 and imprisonment for each illegal sett interference or damage or death to a badger.

Great Crested Newts

Populations of great crested newts Triturus cristatus declined considerably in the late twentieth century (Langton et al. 2001) due to the intensification of agriculture. They require ponds with good water quality and as they spend most of their life on land these ponds must be surrounded by high quality terrestrial habitat.

Great crested newts are listed in both Annex IV of the EC Habitats Directive and in Schedule V of the Wildlife and Countryside Act 1981.

GCN are afforded further protection by the Countryside and Rights of Way Act 2000; and the Natural Environment and Rural Communities Act 2006.

This combined legislation makes it an offence to:

Deliberately kill, injure or capture a great crested newt.

Deliberately disturb a great crested newt.

Damage, destroy or obstruct access to a structure used for shelter or protection by a great crested newt.

Possess or transport a great crested newt.

Appendix V

European Protected Species

| **Species** | **Type** |
|---|---|
| Horseshoe Bats | All |
| Typical bats | All |
| Large blue butterfly | *Felis silvestris* |
| Dolphins, porpoises and whales | All |
| Dormouse | *Muscardinus avellanarius* |
| Sand lizard | *Lacerta agilis* |
| Great Crested Newt | *Triturus cristatus* |
| Otter | *Lutra lutra* |
| Smooth snake | *Coronella austriaca* |
| Sturgeon fish | *Acipenser sturio* |
| Natterjack toad | *Bufo calamita* |
| Marine turtles | *Caretta spp, Lepidochelys kempii, Eretmochelys imbricate, Dermochelys coriacea* |
| Shore dock | *Rumex rupestris* |
| Killarney fern | *Trichomanes speciosum* |
| Early gentian | *Gentianella angelica* |
| Lady's slipper | *Cypripedium calceolus* |
| Creeping marshwort | *Apium repens* |
| Slender naiad | *Najas flexilis* |
| Fen Orchid | Liparis loeselii |
| Floating-leaved water plantain | *Luronium natans* |
| Yellow marsh saxifrage | *Saxifraga hirculus* |

Nationally Protected Species

| **Species - Schedule 5 of the Wildlife and Countryside Act 1981** | **Latin Name** |
|---|---|
| Adder 1 | *Vipera berus* |
| Allis Shad2 | *Alosa alosa* |
| Anemone, Ivell's Sea | *Edwardsia ivelli* |
| Anemone, Starlet Sea | *Nematosella vectensis* |
| Apus | *Triops cancriformis* |
| Bats, Horseshoe (all species) | *Rhinolophidae* |
| Bats, Typical (all species) | *Vespertilionidae* |
| Beetle | *Graphoderus zonatus* |
| Beetle | *Hypebaeus flavipes* |
| Beetle | *Parcymus aeneus* |
| Beetle, Lesser Silver Water | *Hydrochara caraboides* |
| Beetle, Mire Pill3 | *Curimopsis nigrita* |
| Beetle, Rainbow Leaf | *Chrysolina cerealis* |
| Beetle, Stag4 | *Lucanus cervus* |
| Beetle, Violet Click | *Limoniscus violaceus* |

| | |
|---|---|
| Burbot | *Lota lota* |
| Butterfly, Northern Brown Argus | *Aricia artaxerxes* |
| Butterfly, Adonis Blue6 | *Lysandra bellargus* |
| Butterfly, Chalkhill Blue7 | *Lysandra coridon* |
| Butterfly, Silver-studded Blue8 | *Plebejus argus* |
| Butterfly, Small Blue9 | *Cupido minimus* |
| Butterfly, Large Copper | *Lycaena dispar* |
| Butterfly, Purple Emperor10 | *Apatura iris* |
| Butterfly, Duke of Burgundy Fritillary11 | *Hamearis lucina* |
| Butterfly, Glanville Fritillary12 | *Melitaea cinxia* |
| Butterfly, Heath Fritillary | *Mellicta athalia* |
| Butterfly, High Brown Fritillary | *Argynnis adippe* |
| Butterfly, Marsh Fritillary13 | *Eurodryas aurinia* |
| Butterfly, Pearl-bordered Fritillary14 | *Boloria euphrosyne* |
| Butterfly, Black Hairstreak15 | *Strymonidia pruni* |
| Butterfly, Brown Hairstreak16 | *Thecla betulae* |
| Butterfly, White Letter Hairstreak17 | *Stymonida w-album* |
| Butterfly, Large Heath18 | *Coenonympha tullia* |
| Butterfly, Large Blue | *Maculinea arion* |
| Butterfly, Mountain Ringlet19 | *Erebia epiphron* |
| Butterfly, Chequered Skipper20 | *Carterocephalus palaemon* |
| Butterfly, Lulworth Skipper21 | *Thymelicus acteon* |
| Butterfly, Silver Spotted Skipper22 | *Hesperia comma* |
| Butterfly, Swallowtail | *Papilio machaon* |
| Butterfly, Large tortoiseshell23 | *Nymphalis polychloros* |
| Butterfly, Wood White24 | *Leptidea sinapis* |
| Cat, Wild | *Felis silverstris* |
| Cicada, New Forest | *Cicadetta montana* |

| | |
|---|---|
| Crayfish, Atlantic Stream (White-clawed)25 | *Austropotamobius pallipes* |
| Cricket, Field | *Gryllus campestris* |
| Cricket, Mole | *Gryllotalpa gryllotalpa* |
| Damselfly, Southern | *Coenagrion mercuriale* |
| Dolphin, Bottle-nosed | *Tursiops truncatus* |
| Dolphin, Common | *Delphinus delphis* |
| Dormouse | *Muscardinus avellanarius* |
| Dragonfly, Norfolk Aeshna | *Aeshna isosceles* |
| Frog, Common26 | *Rana temporaria* |
| Goby, Couch's | *Gobius couchii* |
| Goby, Giant | *Gobius cobitis* |
| Grasshopper, Wart-biter | *Decticus verrucivorus* |
| Hatchet Shell, Northern | *Thyasira gouldi* |
| Hydroid, Marine | *Clavopsella navis* |
| Lagoon Snail | *Paludinella littorina* |
| Lagoon Snail, De Folin's | *Caecum armoricum* |
| Lagoon Worm, Tentacled | *Alkmaria romijni* |
| Leech, Medicinal | *Hirudo medicinalis* |
| Lizard, Sand | *Lacerta agilis* |
| Lizard, Viviparous27 | *Lacerta vivipara* |
| Marten, Pine | *Martes martes* |
| Mat, Trembling Sea | *Victorella pavida* |
| Moth, Barberry Carpet | *Pareulype berberata* |
| Moth, Black-veined | *Siona lineata* |
| Moth, Essex Emerald | *Thetidia smaragdaria* |
| Moth, Fiery Clearwing | *Bembecia chrysidiformis* |
| Moth, Fisher's Estuarine | *Gortyna borelii* |
| Moth, New Forest Burnet | *Zygaena viciae* |

| | |
|---|---|
| Moth, Reddish Buff | *Acosmetia caliginosa* |
| Moth, Sussex Emerald | *Thalera fimbrialis* |
| Mussel, Fan28 | *Atrina fragilis* |
| Mussel, Freshwater Pearl | *Margaritifera margaritifera* |
| Newt, Great Crested | *Triturus cristatus* |
| Newt, Palmate | *Triturus helveticus* |
| Newt, Smooth | *Triturus vulgaris* |
| Otter, Common | *Lutra lutra* |
| Porpoise, Harbour | *Phocaena phocaena* |
| Sandworm, Lagoon | *Armandia cirrhosa* |
| Sea Fan, Pink31 | *Eunicella verrucosa* |
| Sea horse, Short-snouted32 | *Hippocampus hippocampus* |
| Sea horse, Spiny33 | *Hippocampus gutulattus* |
| Sea Slug, Lagoon | *Tenellia adspersa* |
| Shad, Twaite34 | *Alosa fallax* |
| Shark, Basking | *Cetorhinus maximus* |
| Shark, Angel35 | *Squatina squatina* |
| Shrimp, Fairy | *Chirocephalus diaphanus* |
| Shrimp, Lagoon Sand | *Gammarus insensiblis* |
| Slow-worm36 | *Anguis fragilis* |
| Snail, Glutinous | *Myxas glutinosa* |
| Snail, Roman37 | *Helix pomatia* |
| Snail, Sandbowl | *Catinella arenaria* |
| Snake, Grass38 | *Natrix helvetica* |
| Snake, Smooth | *Coronella austriaca* |
| Spider, Fen Raft | *Dolomedes plantarius* |
| Spider, Ladybird | *Eresus niger* |
| Squirrel, Red | *Sciurus vulgaris* |

| | |
|---|---|
| Sturgeon | Acipenser sturio |
| Toad, Common39 | *Bufo bufo* |
| Toad, Natterjack | *Bufo calamita* |
| Turtles, Marine (all species) | *Dermochelyidae* and *Cheloniidae* |
| Vendace | Coregonus albula |
| Vole, Water | Arvicola terrestris |
| Walrus | Odebenus rosmarus |
| Whale (all species) | Cetacea |
| Whitefish | Coregonus lavaretus |