



**Preliminary Ecological Appraisal –
Practice Range at Littlehampton Golf Course,
Littlehampton, BN17 5DL
(Grid Ref: TQ 025 013) – June 2017**



Conducted by EBS on behalf of Mathews Group.



Preliminary Ecological Appraisal

June 2017

Proposed Redesign of Practice Area – Preliminary Ecological Appraisal – Littlehampton Golf Course, Littlehampton, BN17 5DL (Grid Ref: TQ 025 013) – June 2017

June May 2017
Ref. EBS Littlehampton PR Rev 1

SUMMARY

This report presents the results of a Preliminary Ecological Appraisal that has been undertaken for features associated with the **Golf practice area at – Littlehampton Golf Club, Littlehampton, BN17 5DL (Grid Ref: TQ 025 013)**.

The area of interest currently consists of flat uninteresting amenity grassland bounded to its north, south and west by continuous scrub (*Ulex europaeus*). Poor quality trees are present on the north-western corner. The immediate area is surrounded by high maintenance golf course. Within 100m to the east and south, the site is bounded by West Beech LNR incorporating part of the Climping Beech SSSI on its southern boundary

The scope of survey and assessment has included consideration of: **a)** statutory and non-statutory designations; **b)** vegetation and plant species; **c)** protected species of fauna; and **d)** species and habitats of principal importance, as listed in Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

As summarised in Section 4, the results to date have shown that there are few ecological considerations, and that through thorough mitigation and compensation measures the development is viable.

1. INTRODUCTION

1.1 Overview

In June 2017, Environmental Business Solutions (EBS) was commissioned to undertake a Preliminary Ecological Appraisal of the golf practice area at – Littlehampton Golf Course, Littlehampton, BN17 5DL (Grid Ref: TQ 025 013).

The ecology work was requested due to a proposal to import soil so as to redesign the current practice into a more interesting landscape and to improve the biodiversity of the area by the creation of habitat corridors and native planting. Plans showing the proposed scheme were presented to EBS with the commission. For the purpose of the ecological appraisal and the preparation of this report a red-line boundary was used to denote the extent of the project (see Figure 2). Throughout this report, the land encompassed by the red-line is hereafter termed '**the Site**' or '**the Application Site**'.

1.2 Objectives

EBS identified the objectives of the preliminary ecological appraisal to be as follows:-

- Ascertain the presence or absence of statutory and non-statutory ecological designations within and around the red-line boundary of the Application Site.
- Investigate all vegetation and habitat types, in accord with the JNNC guidelines¹ and compile one or more plant species lists where appropriate.
- Identify any occurrences of rare and/or protected plant species and also any non-native invasive plant species as listed on Schedule 9 of the *Wildlife and Countryside Act 1981 (WCA 1981)*.
- Using aforementioned plant species lists, identify Phase 1 survey habitats and 'habitats of principal importance' under the NERC Act 2006.
- Undertake habitat appraisal for protected species such as: roosting, commuting & foraging bats; Badger; Water vole; Great crested newt and Schedule 1 birds, additionally with presence/absence survey work where appropriate and seasonally achievable.
- Undertake habitat appraisal and preliminary survey work in relation to other wildlife, such as breeding birds and 'species of principal importance' listed in the NERC Act 2006.
- From the survey results, identify any ecological concerns or constraints and any further survey requirements, plus provide preliminary feedback on appropriate mitigation and compensation measures to avoid impacts on protected species and other local wildlife.

Fig 1. Development Site in wider area.



Fig 2. Development in immediate area.



2. METHODOLOGIES

2.1 Personnel

The survey and assessment work has been led by **Mr Bill Gaudie BSc Hons (Wildlife Conservation) MCIEEM** and undertaken with the assistance of **Ms Kelly Hamer BSc Hons (Wildlife Conservation)**.

Mr Gaudie is Principal Ecologist at EBS and holds Natural England class survey licenses (**class licence registration number 20158032**) in respect of Great crested newt (**WML CL08 Level 1**) and bats (**WML CL18 - Bat Survey Level 2**). He is an experienced consultant with a wide skill base in respect of ecological surveying and assessment, including habitat identification, detection of protected faunal species, assessment of potential impacts in accord with CIEEM Guidance on EcIA's and also the design and implementation of mitigation, compensation and habitat enhancement schemes.

Ms Kelly Hamer is an Assistant Ecologist at EBS, with a degree in Wildlife Conservation. She has good ecological surveying and assessment skills, including habitat identification and detection of protected faunal species

2.2 Desk Study & Data Search

Desk study:

A range of desk and internet based resources were used to obtain background information prior to attending the Site. Ordnance Survey Maps (www.ordnancesurvey.co.uk) and Google Earth 5 (<http://earth.google.co.uk>) for aerial photographs, including historic photographs in the case of Google Earth.

- Multi-Agency Geographic Information for the Countryside (MAGIC) collaborative database website (<http://magic.defra.gov.uk/MagicMap.aspx>), for information on key environmental schemes and statutory designations.
- Natural England webpages (<http://www.sssi.naturalengland.org.uk/Special/sssi/search.cfm>) for citations providing details about Sites of Special Scientific Interest (SSSIs).
- Natural England webpages (<http://www.sssi.naturalengland.org.uk/Special/sssi/search.cfm>) for citations providing details about Local Nature Reserves (LNRs).
- The JNCC website for details about the classification of UK Biodiversity Action Plan (BAP) priority species and habitats (<http://jncc.defra.gov.uk/page-5705>).

Data search:

Sussex Biodiversity Records Centre (SxBRC) was contacted for information on a) any statutory and non-statutory site designations (i.e. sites of regional/local importance including information on their name, their location and the basis for their designation), b) protected species, c) rare/notable species, d) Priority Species/Species of Conservation Concern as identified in the UK Biodiversity

Action Plan, e) ancient woodland, f) conservation verges and g) Regionally Important Geological / Geomorphological Sites within 2 kilometres of the Site. See Appendix 1 for further details.

2.3 Date(s), Weather Conditions & Any Limitations

Walkover surveys were undertaken on 3rd and 25th June 2017. No access or visibility limitations were encountered. The weather was mainly dry, with temperatures ranging from 16 - 23°C.

The seasonal timing of the survey was limited for recording breeding birds and many flying invertebrates (butterflies, bees and dragonflies) but habitat appraisal was used as a means of determining suitability and potential value for such wildlife. Similarly, habitat appraisal was applied to determine the Site's suitability and potential for the support of bats.

2.4 Vegetation & Habitats

An Extended Phase 1 Habitat Survey was carried out throughout the Application Site and surrounding area as the basis for the assessment. The Phase 1 Habitat Survey is a standardised method used to record habitat types and characteristic vegetation, as set out in the "*Handbook for Phase 1 Habitat Survey – a technique for Environmental Audit*" published by the *Joint Nature Conservation Committee (JNCC 2003)*. The methodology is 'Extended' through the additional recording of specific features indicating the presence, or likely presence, of protected species or other species of nature conservation significance.

Plant species lists were compiled where appropriate and the Site and survey area was searched for uncommon plant species, plant species listed as protected in the *Wildlife and Countryside Act 1981 (WCA 1981)*, plants listed as 'Priority Species' in the former UK Biodiversity Action Plan (UK BAP) and comparably 'species of principal importance', as listed under Section 41 of the extant NERC Act.

Searches were carried out for the presence of invasive species, as covered by Section 14 and listed on Schedule 9 in the *WCA 1981* (as amended) (Schedule 9 as updated April 2010). This legislation makes it illegal to cause the species to spread in the wild, whether by dispersal of seed, fragments of plants or root systems.

Any occurrences of 'Priority Habitat' (as listed in the former UK BAP) and comparably 'habitats of principal importance' (as listed under Section 41 of the extant NERC Act) were noted. Where possible, the plant species lists were also used to identify National Vegetation Classification (NVC) communities (*Rodwell, J. S. Volumes 1 – 5, 1991 – 2000*), as the NVC provides a systematic and comprehensive analysis of British vegetation.

2.5 Fauna

2.5.1 Bat Species

UK bat species are provided full legal protection under Schedule 5 (Section 9) of the *WCA 1981 (as amended)* and under *The Conservation of Habitats and Species Regulations 2010 (the Regulations 2010)*, making them European Protected Species. In combination this legislation makes it illegal to intentionally kill, injure, harm or disturb bats and illegal to damage, disturb or obstruct access to bat roosts.

During the Extended Phase 1 Survey, all features at the Site and on adjacent land were preliminarily assessed for their *habitat suitability* and *potential* to support roosting, hibernating, foraging and commuting bats.

Habitat appraisal was also used as the basis of an assessment of potential value for active foraging and commuting bats.

2.5.2 Badger

Badgers (*Meles meles*) and their setts are protected under the *Protection of Badgers Act 1992*. This legislation makes it illegal to kill, injure or take Badgers or to interfere with a Badger sett, with the *Act* defining ‘a sett’ as being “any structure or place which displays signs indicating current use by a Badger”.

The land of the Application Site and at least a 30m radius around it (the zone of influence in relation to Badger) was searched for evidence of Badgers (where accessible), with the aim of identifying any combination of the following field signs:

- Sett holes, wider than high, often with spoil heaps in front, sometimes also with discarded bedding;
- Disturbed ground and small holes from foraging activity;
- Trampled dispersal pathways and breach points under boundary fences;
- Distinctive hairs, snagged on fences etc. or found at sett entrances;
- Dung pits/ latrines;
- Characteristically shaped footprints;
- Scratching at the base of trees etc

2.5.3 Birds

Wild birds, their nests and their eggs are protected under Part 1 of the *WCA 1981*, which makes it illegal to kill or injure a bird and to destroy its eggs or its nest whilst it is in use or being built. Game birds are an exception and are protected under the separate *Game Acts*, which fully protect them during the close season. In addition, certain bird species (such as Barn owl and Kingfisher) are specially protected under Schedule 1 of the *WCA 1981 (as amended)*, making it illegal to disturb these birds and their young at the nest.

When discussing the conservation status of wild birds, an important reference used in this report has been the ‘red’, ‘amber’ and ‘green’ status lists presented in the document titled *Birds of Conservation Concern 3 (BoCC3)* (<http://www.bto.org/sites/default/files/u12/bocc3.pdf>).

All visible and audible birds were recorded during the survey and habitats on Site were assessed for their *potential value* for nesting, roosting, feeding, and wintering birds, as indicated by the amount of shelter and species diversity amongst the shrubs, trees and grassland habitats. No specific breeding or wintering bird survey work was undertaken.

2.5.4 Great Crested Newt & Other Amphibians

The Great Crested Newt (GCN) (*Triturus cristatus*) is provided full legal protection under Schedule 5 (section 9) of the *WCA 1981 (as amended)* and under *the Regulations 2010*, making it a European Protected Species. The legislation makes it illegal to intentionally kill, injure, harm or disturb Great Crested Newts (GCNs) and illegal to damage, destroy or obstruct access to any place used by sheltering or breeding GCNs.

Whilst GCNs breed in water, they forage, shelter and hibernate on land, typically within 250m of the breeding pond but sometimes up to 500m from the pond. Where planning proposals entail disturbance of land within range of GCN breeding ponds there is therefore a risk of killing, injury and/or habitat loss, which would contravene the legislation that protects them. This makes it a legal requirement to consider GCNs in relation to planning proposals, both in terms of aquatic habitat and terrestrial habitat.

Also, although the Common toad (*Bufo bufo*) is not afforded comparable legal protection to the GCN, it is regarded as a material consideration for planning applications because it is listed as a ‘priority species’ in the former UK BAP and a ‘species of principal importance’ in Section 41 of NERC Act 2006.

Appraisal work in relation to GCNs, Common toad and the Application Site was therefore conducted as outlined below;

A 1:25,000 scale Ordnance Survey map and aerial photographs from Google Earth and Bing Maps were checked for any evidence of ponds within 250m unobstructed dispersal range of the Site, additionally with extension to a 500m search radius if a high density of ponds was present. Where any water-bodies were identified, their approximate sizes and their distances from the red-line boundary were recorded. An indication of the land-use and structure throughout the intervening terrestrial habitat was also recorded.

Results from the data search with SxBRC were then called upon, to identify any known occurrences of GCN and/or Common toad within a 250m to 500m radius from the Application Site. Where any records of GCN or toad presence were identified, these were to be studied and cross-referenced against the information about pond locations: this overview and desk-study work would then form the basis of survey and assessment work in the field.

2.5.5 Water Vole

Water voles (*Arvicola amphibious*) and their habitat are provided full legal protection under Schedule 5 (Section 9) of the *WCA 1981* (as amended), which makes it illegal to intentionally kill, injure or take Water voles and to damage, disturb or destroy their 'place of shelter', i.e. their habitat.

Water voles are characteristically associated with a range of aquatic habitat types, including ponds, field drains, reservoirs, wetlands and rivers.

Prior to attending the Application Site an Ordnance Survey map and aerial photographs were checked for evidence of water courses and water bodies within or adjoining the Site.

Habitat appraisal was then additionally implemented during the walkover survey and any water features identified during the searches were then assessed as to whether they would require detailed presence / absence survey work at a more suitable time of year.

2.5.6 Otter

In England and Wales Otters (*Lutra lutra*) are protected under Section 9(4)(b) and (c) and (5) of the *WCA 1981* and they are fully protected under *the Regulations 2010*. Collectively, this makes it illegal to deliberately or intentionally capture, injure, kill, harm or disturb Otter and illegal to damage, destroy or obstruct access to an Otter holt.

Otters will utilise a wide range of aquatic habitat types, including large ponds, drainage channels, reservoirs, wetlands and rivers.

Prior to attending the Application Site an Ordnance Survey map and aerial photographs were checked for evidence of such water features within or close to the Site. The objective was to determine whether or not detailed presence/absence survey work for Otter was required.

2.5.7 Reptiles

All native British reptiles are provided partial legal protection against intentional killing and injury under Schedule 5 (Section 9) of the *WCA 1981* (as amended). In addition, Sand lizard (*Lacerta agilis*) and Smooth snake (*Coronella austriaca*) are fully protected under the *WCA 1981* (as amended) and under *the Regulations 2010*.

The data search and desk study results were assessed to identify any recorded evidence within a 2.0km surrounding radius with records showing Common Lizard, Sand Lizard and Slow Worm present within 1km.

Therefore the habitats throughout the Application Site were assessed for their suitability and potential to support reptiles. The aim was to determine whether or not refugia and basking searches would be required in the future.

2.5.8 Other Wildlife

Habitat appraisal was applied in respect of Dormouse (*Muscardinus avellanarius*), Brown hare (*Lepus europaeus*) and Hedgehog (*Erinaceus europaeus*), which are both UK BAP priority species and NERC Act 'species of principal importance'.

Consideration of invertebrates was also implemented, largely with reference to the data search results, coupled with habitat appraisal within the red-line boundary. This focussed on any invertebrate species with the statuses of UK BAP priority species, NERC Act 'species of principal importance' and/or Calderdale BAP priority species.

Any evidence of other wildlife occurrences was to be noted during the survey, including species such as Red fox, Weasel, Stoat, Rabbit and rodents. This was simply to provide a more comprehensive baseline understanding of the Site's ecology: all such species have no notable conservation status.

2.6 Evaluation Methods

Although the UK Biodiversity Action Plan (BAP) was succeeded by 'The Post-2010 Biodiversity Framework' in July 2012, evaluation of habitats and fauna with reference to the old UK BAP lists of 'priority habitats' and 'priority species' still proves helpful in qualifying their 'value'. The lists of priority habitats and species presented in the former UK BAP also form the basis of list of '*habitats and species of principal importance*' presented in Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act, which came into force on 1st Oct 2006. This requires the Secretary of State to regard such habitats and species as conservation priorities under the UK Post-2010 Biodiversity Framework.

Furthermore, local BAP lists are important for identifying species and habitats that are notable on a countywide basis (rather than nationally).

Resultantly, throughout this report there remains reference to UK and Local BAP priority species and habitats. There is also reference to habitats of principal importance and species of principal importance, in accord with Section 41 of the NERC Act 2006.

3. RESULTS

3.1 Desk Study & Data Search

3.1.1 Designations

The Application Site is centered at grid reference TQ 025 013.

The following Designated Sites are within 100m of the Site.

- Climping Beech SSSI
- West Beech Local Nature Reserve (LNR)

Further Sites are noted within 1km of the proposed development

- The Site forms part of Littlehampton Golf Course & Atherington Beech Local Wildlife Site (LWS).
- Climping Sand Dund System Local Geological Site (LGS).

3.1.2 Protected & Priority Species

The data search, provided by SxBRC, reveals evidence of the known presence of a range of protected species within 2.0km radius of the Application Site. No protected species are noted within the Site or in the immediate area. The species accounted for in the search are summarised in the list below with the nearest occurrence noted. See Box 1 for summary of findings.

- Amphibians:

No Great Crested Newts have been noted within 1km of the Site. No ponds are noted within 250m of the Site.

- Badgers:

Badger records did not form part of the report.

- Reptiles:

There are records of Sand lizard, common lizard and slow worm within 1km of the site. Both common and sand lizard are known to be present within 100m of the site.

- Water Vole:

Water vole are noted within 1km of the Site. There is no suitable water bodies within or adjacent the Site to support either.

Box 1. Summary of findings SxBRC –2017

**Ecological Data Search SxBRC/16/840 - Summary Report**

An ecological data search was carried out for land at Littlehampton Golf Course on behalf of Janet Gorst (Environmental Business Solutions) on 16/03/2017.

The following datasets were consulted for this report:

	Requested	Radius/buffer size
Designated sites, habitats & ownership maps	Yes	2km
Protected, designated and invasive species	Yes	2km

Summary of results**Sites and habitats**

Statutory sites	1 SSSI / 1 LNR
Non-statutory sites	1 LWS / 1 LGS / 2 Notable Road Verges
Section 41 habitats	7 habitats
Ancient and/or ghyll woodland	None present

Protected and designated species

International designations	69 species	2,168 records
National designations	156 species	6,343 records
Other designations	356 species	15,230 records
Total	390 species	15,767 records
Invasive non-native	32 species	147 records

The report is compiled using data held by Sussex Biodiversity Record Centre (SxBRC) at the time of the request. SxBRC does not hold comprehensive species data for all areas. Even where data are held, a lack of records for a species in a defined geographical area does not necessarily mean that the species does not occur there – the area may simply not have been surveyed.

This summary page may be published.
The full report and maps may not be published or otherwise shared.

The data search report is valid until 16/03/2018 for the site named above.

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3.2 Vegetation & Habitats

3.2.1 Location & Surroundings

The Application Site is located in a coastal area west of the town of Littlehampton, Sussex (Grid Ref: TQ 024 013). The immediate surrounding areas consist of a mixture of open countryside, coastal and small towns with associated infrastructure. The river Arun runs north – south along the eastern border.

Appendix 1 presents a labelled vegetation and habitat map of the Application Site and immediate surrounding area, as prepared using an aerial photograph (© Google Earth), overlaid with illustration and labels to convey the results from the walkover ecological survey and assessment work. The red-line boundary denotes the Application Site. The survey has extended beyond the red-line boundary, to encompass a wider zone of influence, as determined by professional judgement.

3.2.2 Features within and immediately adjacent to the red-line boundary

Descriptions of habitat features and vegetation types within the red-line boundary of the proposed Application Site are provided in the following paragraphs.

Scrub:

Continuous scrub dominated by gorse (*Ulex europaeus*), bramble (*Rubus fruticosus*), Hawthorn (*Crataegus monogyna*), Ground Ivy (*Glechoma hederacea*) with occasional nettle (*Urtica dioica*) are found on the northern, southern and western boundaries of the site.

Fig 3. Continuous Scrub area -.northern boundary



Fig 4. Continuous Scrub area -southern boundary



Amenity Grassland:

The majority of the site consists of amenity grassland, currently used for golf practice. Close mown. Dominated by Perennial Rye-grass (*Lolium perenne* ssp) with frequent Clover (*Trifolium repens*), Daisy (*Bellis perennis*), Dandelion (*Taraxacum agg*) and Sorrel (*Rumex acetosa*). Patches of dock (*Rumex spp*), Common Poppy (*Papaver rhoeas*) and Opium Poppy (*Papaver spp*) are also present along rough edges.

Fig 5. Amenity grassland used for golf practice with adjacent scrub.



Trees:

A small group of Goat Willow trees are found in the north-west corner of the Site. Trees are scrubby and not suitable for bat roosts.

Fig 6. Tree Group.



Standing Water:

There is no standing water within the development boundary or within 250m.

Running Water:

There is no running water within the development boundary.

Table 1: A plant species list for the amenity grassland / scrub areas		
Species common name	Species Latin name	Distributi
Grasses & herbaceous plants		
Annual meadow-grass	<i>Poa annua</i>	LF
Gorse	<i>Ulex europaeus</i>	D
Bramble	<i>Rubus fruticosus</i>	D
Goat Willow	<i>Salix caprea</i>	D
Elder	<i>Sambuc nigra</i>	L
Broad-leaved dock	<i>Rumex obtusifolius</i>	O / VLF
Common nettle	<i>Urtica dioica</i>	LF
Common sorrel	<i>Rumex acetosa</i>	VL
Creeping buttercup	<i>Ranunculus repens</i>	VLF
Field horsetail	<i>Equisetum arvense</i>	VLF
Perennial rye-grass	<i>Lolium perenne</i>	D
Hawthorn	<i>Crataegus monogyna</i>	O
Red fescue	<i>Festuca rubra</i>	O / LF
Rough meadow-grass	<i>Poa trivialis</i>	O / LF
Soft-brome	<i>Bromus hordeaceus</i>	F / LD
Spear thistle	<i>Cirsium vulgare</i>	VL
Dandelion	<i>Taraxacum agg</i>	LF
Common Poppy	<i>Papaver rhoeas</i>	LF
Opium Poppy	<i>Papaver spp</i>	LF
Daisy	<i>Bellis perennis</i>	LF
Ground Ivy	<i>Glechoma hederacea</i>	D
White Clover	<i>Trifolium repens</i>	A
Key: D = Dominant; A = Abundant; F = Frequent; O = Occasional; R = Rare; L = Locally, v = very, * = constant throughout		

3.3 Fauna

3.3.1 Bats

There are no large mature trees or buildings within the site boundary. No trees or buildings suitable for bat roosts were noted on or adjacent the site.

This indicates that Bat species do not require further consideration.

3.3.2 Badger

No signs of badger activity or setts were noted within the red line boundary. No habitat suitable for badger setts was noted within the redline boundary or within 30m of the boundary.

This indicates that badgers do not require further consideration.

3.3.3 Birds

There is potential for low numbers of shrub-nesting species to occur within the Site, but in the context of the habitat availability in the wider surrounding area, this does not merit further consideration aside from standard protection measures during the breeding season.

3.3.4 Great Crested Newt & Other Amphibians

No ponds will be affected by the development and no ponds were noted within 250m of the site, so it is highly improbable that GCN will migrate to the Site.

This indicates that GCN and other amphibians do not require further consideration.

3.3.5 Water Vole

Habitat assessment within the red-line boundary indicates that no suitable habitat is present.

This indicates that the Water vole does not require further consideration.

3.3.6 Otter

Habitat assessment within the red-line boundary indicates that no suitable habitat is present.

This indicates that the Otter does not require further consideration.

3.3.7 Reptiles

Good reptile habitat is found to the immediate south and limited suitable foraging, resting and basking habitat is to be found at the edges of the scrub areas. Common lizards are known to have bred on the golf course and Sand lizards known to breed in the sand dunes to the south. However; the Site is isolated from these habitats by high maintenance short mown grass (Golf course fairways) and would not easily be colonised by reptile species.

*It is judged that further surveys are not required **but precautionary consideration of reptiles is advisable.***

3.3.8 Other Wildlife

Habitat within the red-line boundary is unsuitable for Dormice and Brown Hare. and Hedgehog, so these species do not warrant further consideration.

4. EVALUATION, RECOMMENDATIONS & LOSSES/GAINS

4.1 EVALUATION

The results from the desk study and walkover surveys, have identified what ecological features do and don't require further survey, assessment and/or consideration in relation to proposals for the Application Site.

In summary, it is evaluated that the following ecological features and/or species *will require* further consideration:

- Trees = Although all trees within the boundary are classified as poor, any lost to the development are to be replaced with native species suitable to the area.
- Breeding birds = A combination of mitigation and compensation must be prescribed where any significant negative impacts are predicted.
- Reptiles = Since habitat appraisal indicates there is some habitat suitability on Site and that reptiles are known to be present in the wider area there is possibility of reptile occurrence at the Site, *it is judged mitigation consideration of reptiles is therefore necessary.*

By comparison, it is judged that the following ecological features and/or species *do not require* further consideration:

- Statutory/non-statutory sites of ecological interest: = Due to size of the project and the isolation of the Site to designated sites no other sites are thought to be affected by the proposals.
- Great crested newt and other amphibians = There are no water-features that provide potential habitat value for breeding GCN and other amphibians. So GCN does not require further consideration

- Badgers = There is no suitable habitat for Badger setts within 30m of the site. So Badgers do not require further consideration.
- Bats = The preliminary daylight survey work has indicated *there will be no need for further investigation into bat activity at the Site.*
- Water vole = There is no habitat value for this species within the red-line boundary. *There is no potential for Water vole, so it can be excluded from the impact assessment.*
- Otter = There is no aquatic habitat value for this species within the Site. *This indicates there is no reasonable likelihood of occurrence.*
- Other wildlife = There is no reasonable likelihood of Dormice, Brown hare or Hedgehog being present, thus *these species can be discounted from the impact assessment.*

4.2 Recommendations

There should be an aim to achieve positive long-term impacts, as well as mitigating any predicted negative impacts. Suggestions of important considerations and opportunities are presented below.

- Reptiles: Any scrub clearance should be conducted only after a hand search for reptiles has taken place by a suitably qualified ecologist.
- Birds: Any planting scheme should include the introduction of shrubs and fruit trees. No scrub or tree works are to take place during the breeding bird season. If this is not possible, then a full breeding bird survey must be conducted immediately prior to works commencing. This survey should be supervised by an appropriately qualified ecologist.
- Wildlife corridors: Fences that meet with the ground, are barriers to animal movement, so it is advisable that any new perimeter fences are to have a 5 – 10cm gap between their bases and the ground. Provision of shelter is also a key factor associated with wildlife corridors: this will include provision of suitable shrub and tree planting comprising of native species, optimally of local provenance and complementary to the species and habitats that are already present in the surrounding area.

4.3 LOSSES

Only areas of low ecological value that are species poor will be lost.

4.4 GAINS

Although the areas affected by the development are deemed to be ecologically poor, they do contain some value and help support various

fauna. It is therefore envisaged that small areas of the development shall be set-aside for the creation of various habitats such as low maintenance grassed areas and scrub.

5.0 CONCLUSIONS

The site as a whole has little ecological value, the areas concerned within this report are species poor and of low biodiversity value. It is thought that no protected species listed under the Wildlife and Countryside act 1981, schedule 1 (birds), schedule 5 (animals) and schedule 6 (plants) are present on land proposed for redevelopment and none are thought to be affected by the proposed development. Any disturbance could be adequately compensated for, creating an opportunity to improve the ecological value of the site in compliance with the National Planning Policy Framework (NPPF).

It is therefore envisaged that if the above recommendations in mitigation and compensation are followed, then the site as a whole will be greatly improved. The proposed planting will create habitat corridors which in turn will improve not only the site but the areas surrounding and further afield.

It is the opinion of EBS that by complying with the above recommendations and the proposals outlined in the associated Planning Statement, the development could deliver a net biodiversity gain to the area.



**Bill Gaudie,
BSc hons (Wildlife Conservation), MCIEEM
ECOLOGICAL CONSULTANT**

6.0 REFERENCES

- BSI (30 April 2012) BS5837: 2012 Trees in relation to design, demolition and construction
- Department for Communities and Local Government (March 2012) National Planning Policy Framework.
- Entwistle, A. C. et al. (2001) Habitat Management for Bats. JNCC.
- Google Earth 5 <http://earth.google.co.uk>
- Joint Nature Conservation Committee. (2003). Handbook for Phase 1 Habitat Survey – a technique for Environmental Audit. Joint Nature Conservancy Committee. Peterborough.
- Joint Nature Conservation Committee (JNCC) UK BAP Priority Species.
<http://jncc.defra.gov.uk/page-5717>
- Joint Nature Conservation Committee (JNCC) UK BAP Priority Habitats.
<http://jncc.defra.gov.uk/page-5718>
- Marchant, J.H. (1983) Common Birds Census instructions. British Trust for Ornithology (BTO), Tring.
- Multi-agency Geographical Information for the Countryside (MAGIC) (2000).
<http://magic.defra.gov.uk/website/magic/>
- Mitchell-Jones, A. J. Bat Mitigation Guidelines. Jan 2004. English Nature.
- Mitchell-Jones, A. J. & McLeish, A. P. The Bat Workers' Manual. 3rd ed. 2004. JNCC.
- National Biodiversity Network Gateway (2000) www.nbn.co.uk
- Office of the Deputy Prime Minister (August 2005) Government Circular: Biodiversity and Geological Conservation, Statutory Obligations and their Impact within the Planning System. H.M.S.O., London.
- Parsons, K. et al. Bat Surveys. Good Practice Guidelines – 2nd Edition. Bat Conservation Trust. 2012.
- Rodwell, J. S. (ed.) (1991). British Plant Communities. Volume 1. Woodlands and Scrub. Cambridge University Press.
- Rodwell, J. S. (ed.) (1992) British Plant Communities. Volume 3. Grasslands and Montane Communities. Cambridge University Press.
- RSPB website. <http://www.rspb.org.uk>
- Stace, C. A. (1991). New Flora of the British Isles. Cambridge University Press, Cambridge.
- The UK Biodiversity Steering Group Report. Volume 2. Action Plans. H.M.S.O. (1995), London.
- The Conservation of Habitats and Species Regulations 2010
- Wildlife and Countryside Act (1981). H.M.S.O., London.