**LAND AT WORSBOROUGH VIEW, PILLEY, BARNSLEY**

# ECOLOGICAL SURVEY AND ASSESSMENT

**(including a preliminary assessment under criterion Eco1 to Eco 4 of the Code for Sustainable Homes scheme)**

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**[ERAP Ltd ref: 2012_211]**

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## A SUMMARY

i. This Ecological Appraisal presents an assessment of the ecological, biodiversity and nature conservation status of land at Worsborough View, Pilley (hereafter referred to as the 'site'). An ecological survey was required in connection with proposals to develop the site to housing.

ii. The assessment presents the results of a desktop study and comprehensive walkover survey of the site carried out in October 2012. The scope of survey undertaken is sufficient to enable the identification and accurate assessment of any potential ecological constraints and opportunities for biodiversity associated with the development proposals.

iii. The ecological survey and evaluation have identified no significant wildlife interests or constraints that would affect the principle of development of the site. No designated sites, species-rich or significant habitats are present and no rare or uncommon plant species were recorded.

iv. No UK Biodiversity Action Plan (BAP) Priority Habitats/Habitats of Principal Importance or habitats listed on the Barnsley BAP are present at the site.

v. No evidence of protected species was detected within the site. No further survey or specific actions are necessary for the protection of wildlife prior to or during the construction phase.

vi. Where feasible and appropriate, opportunities to enhance the biodiversity and nature conservation value of the site have been identified, and proposals are outlined to sustain and add to biodiversity in conjunction with the development proposals. Recommendations comprise: -

   a. Use of native trees and shrubs and plant species known to be of value to wildlife in the landscape planting;

   b. Incorporating areas of landscape planting in a linear arrangement to improve habitat connectivity for use by wildlife through and around the residential area;

   c. Installation of four bird (Starling) boxes on suitable property elevations;

   d. Avoidance of use of peat-containing compost within the landscape planting; and,

   e. Lifting of plot boundary fences to create a 0.15 to 0.2 metre high gap at the base to ensure wildlife such as Hedgehog can continue to move through the developed site and feed within garden habitats.

vii. The measures outlined in Section 5 of this report work towards full compliance with the key principles of National Planning Policy Framework (NPPF), local planning policy and guidance provided in the UK Biodiversity Action Plan.

viii. Appendix 2 of this report provides a preliminary assessment of the proposals in accordance with criterion Eco1 to Eco4 of the Code for Sustainable Homes scheme.

ix. In conclusion, the proposed development at Worsborough View, Pilley is feasible and can be achieved with no significant adverse effects on ecologically valuable habitats or protected species. Implementation of the recommendations at **Section 5** aim to secure ecological enhancement and a net gain for wildlife/biodiversity associated with residential developments.

## 1.0 INTRODUCTION

1.1 ERAP Ltd (Consultant Ecologists) was commissioned by TPM Landscape on behalf of their client Bowker Sadler to carry out an ecological survey and assessment of the land at Worsborough View, Pilley in September 2012 (hereafter referred to as the 'site'). The Ordnance Survey grid reference at the centre of the Site is SE 3367 0061.

1.2 The ecological survey was required in connection with a planning application to develop the site for residential purposes.

1.3 The ecological survey will also contribute to the assessment of credits achievable under criterion Eco1 to Eco4 of the Code for Sustainable Homes (C4SH) scheme. A preliminary assessment is presented at **Appendix 2.**

1.4 The scope of ecological surveys undertaken in October 2012 comprised: -

a. A desktop study for known ecological records at the site and the local area;

b. An Extended Phase 1 Habitat Survey and assessment;

c. Survey and assessment of all habitats for statutorily protected species and other species including Badger, bat species, Great Crested Newt, Water Vole, bird species and invertebrates;

d. An assessment of the ecological value of the habitats within the site with the use of the National Vegetation Classification (NVC) and the Ratcliffe criteria (A Nature Conservation Review 1977);

e. The identification of any potential development constraints and the specification of the scope of mitigation and enhancement required in accordance with wildlife legislation, planning policy guidance and other relevant guidance; and,

f. Guidance in relation to the measures to be implemented to achieve biodiversity gain and ecological enhancement to comply with the principles of National Planning Policy Framework (NPPF 2012) and the Code for Sustainable Homes scheme.

## 2.0 METHOD OF SURVEY

### 2.1 Desktop Study

2.1.1 The following sources of information and ecological records were consulted for general information: -

1. MAgiC: A web-based interactive map which brings together geographic information on key environmental schemes and designations, including details of statutory nature conservation sites; and

2. National Biodiversity Network (NBN Gateway).

2.1.2 Barnsley Biological Records Centre (BBRC) was contacted and a request for known biological records within a 1 kilometre radius from the centre of the site was made.

## 2.2 Vegetation and Habitats

2.2.1 An Extended Phase 1 Habitat Survey of the site was carried out by Victoria Burrows B.Sc. (Hons), M.Sc. CEnv MIEEM on the 4th October 2012. The weather was dry, sunny and calm (Beaufort Scale 1) with temperature of 12°C at 9am. The weather conditions were suitable for a survey of this type.

2.2.2 A vegetation and habitat map was produced for the site and the immediate surrounding area on a scale of 1:750 (refer to **Figure 3,** appended). The mapping is based on the Joint Nature Conservation Committee Phase 1 Habitat Survey methodology (JNCC 2010) with minor adjustments to illustrate and examine the habitats with greater precision.

2.2.3 The principal and constant plant species within the site boundary were determined with estimates of the distribution, ground cover, abundance and constancy of individual species. The estimation of abundance was based on the DAFOR system where D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare, this being a widely used and accepted system employed by ecological surveyors.

2.2.4 All stands of vegetation and habitats were described and evaluated using the National Vegetation Classification (NVC). The NVC provides a systematic and comprehensive analysis of British vegetation and is widely used by Natural England and other wildlife organisations as well as ecological consultants to provide a scientific basis for the description and evaluation of habitats. The NVC provides a reliable framework for nature conservation and land-use planning.

2.2.5 Searches were made for uncommon, rare and statutorily protected plant species, those species listed as protected in the *Wildlife and Countryside Act 1981* and indicators of important and uncommon plant communities. All plant nomenclature follows Stace (1991).

2.2.6 Searches were carried out for the presence of invasive species, including those listed on the revised (April 2010) Schedule 9 of the *Wildlife and Countryside Act 1981* including Japanese Knotweed, Indian Balsam and Giant Hogweed.

## 2.3 Animal Life

***Badger***

2.3.1 A thorough search for Badger activity was carried out within the site. Private gardens were not accessed.

2.3.2 Evidence of Badger can be indicated by: -

a. 'D' shaped sett entrances at least 25cms wide and wider than they are high with large spoil mounds;
b. Discarded bedding at sett entrances (this includes grass and leaves);
c. Scratching posts on shrubs and trees close to a sett entrance;
d. The presence of Badger hairs which are coarse, up to 100mm long with a long black section and a white tip;
e. Dung pit latrines and footprints; and,
f. Trampled pathways through vegetation and beneath fences.

***Bat species***

*Buildings*

2.3.3 The five garages within the site were examined and accessed for their suitability for use by roosting bats. The assessment was carried out by Victoria Burrows (Natural England licence number 20120902 valid until 19th March 2013).

2.3.4 The inspection involved the use of a high powered torch (LED Lenser P14) and a video borescope (Sentient) was used to inspect features in more detail and to search behind timber barge boards for bats and evidence of use by bats.

*Trees*

2.3.5 There are no trees within the site.

***Water Vole***

2.3.6 There are no ditches or watercourses within or adjacent to the site. No habitats suitable for the support of Water Vole are present. The presence of this species within the site is reasonably discounted.

***Great Crested Newt and amphibians***

2.3.7 No ponds are present in the site.

2.3.8 In accordance with the current Natural England guidance outlined in document WML-A14-2 dated March 2011 all ponds within an unobstructed 250 metres of a site should be surveyed/assessed for their potential presence to support Great Crested Newts.

2.3.9 Examination of maps and aerial photographs has confirmed that there are no ponds within an unobstructed 250 metre radius from the site. The presence of Great Crested Newt and habitats used by Great Crested Newt within the site is reasonably discounted.

***Bird species***

2.3.10 Bird species observed during the walkover were recorded. All habitats were assessed for their value to support breeding birds.

## 2.4 Survey Limitations

2.4.1 The survey was carried out at an appropriate time of year. The whole site was easily accessed.

2.4.2 No survey limitations were encountered.

## 2.5 Evaluation Methodology

2.5.1 The habitats, vegetation and animal life were evaluated with reference to standard nature conservation criteria as described by Ratcliffe (1977) and the Nature Conservancy Council (1989). These are: size (extent); diversity; naturalness; rarity; fragility; typicality; recorded history; position in an ecological or geographical unit; potential value and intrinsic appeal.

2.5.2 Government advice on wildlife, as set out in the National Planning Policy Framework (NPPF) has been taken into consideration. The UK and Barnsley Biodiversity Action Plans (BAPs) have been taken into account in the evaluation of the site.

## 3.0 RESULTS/REPORT OF SURVEY

### 3.1 Desktop Study

***Designated Sites***

3.1.1 The site has no statutory or non-statutory designation.

3.1.2 There are no statutory designated nature conservation sites within 1 kilometre radius from the site.

3.1.3 Rockley Woods is a 69.3 hectare Local Wildlife Site (Natural Heritage Site Barnsley (NHS (B))) which lies 650 metres to the north of the site boundary, refer to **Figure 1**. Rockley Woods NHS(B) comprises a series of woodlands spreading westwards from the M1, just north of Junction 36. The NHS(B) contains replanted ancient woodland with some areas of ancient woodland.

3.1.4 Potter Holes Plantation is a 8.45 hectare mature woodland which lies 680 metres to the south-east of the site boundary. The plantation is a candidate NHS(B) and a Local Nature Reserve. The plantation is described as '*semi-ancient woodland developed in and around old bell-pits, plus newer, planted woodland adjacent on a reclaimed colliery site'*.

***Protected and Notable Species***

3.1.5 No protected or notable species are reported for the site. Protected and notable species are reported within a 1 kilometre radius of the centre of the site, and are presented at **Table A**.

***Table A:*** *Protected and Notable Species within 1 kilometre of the site.*

| | |
|---|---|
| Bird | Skylark (UK BAP),<br>Bullfinch (UK BAP),<br>Dunnock (UK BAP),<br>House Sparrow (UK BAP),<br>Lapwing (UK BAP),<br>Lesser Spotted Woodpecker (UK BAP),<br>Song Thrush (UK BAP),<br>Starling (UK BAP),<br>Willow Tit (UK BAP) |
| Terrestrial Mammal | Badger (Schedule 6 Wildlife & Countryside Act 1981),<br>Bats (European Protected Species) including Leisler's Bat (European Protected Species), Soprano Pipistrelle (European Protected Species), Noctule (European Protected Species), Whiskered Bat (European Protected Species)<br>Hedgehog (UK BAP) |

3.1.6 The presence of protected, UK BAP Priority Species and Barnsley BAP Priority Species within a 1 kilometre radius of the centre of the site is recognised in this report and the site has been evaluated for its habitat suitability in respect of these species.

## 3.2 Vegetation and Habitats

*General Description*

3.2.1 The site covers an area of 0.3 hectares and is located to the south of Worsborough View. (refer to **Figure 2**).

3.2.2 The site comprises an irregularly shaped level area of managed amenity grassland surrounded by existing residential houses. The site is used for recreation and dog walking. A plan illustrating the site boundary in the context of the surroundings is presented at **Figure 2.**

3.2.3 The western area of the site is covered with asphalt hard-standing providing vehicular access to a row of pre-fabricated garages.

*Amenity grassland*

3.2.4 Short mown amenity grassland occupies the majority of the site. Constant species throughout the grassland comprise abundant Perennial Rye-grass (*Lolium perenne*) with frequent Cock's-foot (*Dactylis glomerata*), Dandelion (*Taraxacum officinale*) and Broad-leaved Dock (*Rumex obtusifolius*), refer to **Photo 1,** below.

3.2.5 Other associates comprise White Clover (*Trifolium repens*), Creeping Buttercup (*Ranunculus repens*), Daisy (*Bellis perennis*), Great Plantain (*Plantago major*) and Common Mouse-ear (*Cerastium fontanum*). A plant species list is appended at **Table 1.**



***Photo 1:*** *Amenity grassland within the site (facing south-east)*

3.2.6 The grassland is representative of the OV23 Perennial Rye-grass-Cock's-foot community of the NVC; this community is described as 'ubiquitous through the British lowlands' (Rodwell 2000) and is characteristic of playing fields.

3.2.7 For the purposes of the C4SH assessment 2300m$^2$ of the site is occupied by a habitat type typically supporting 7 species, refer to **Table 1**.

*Asphalt Hard-standing*

3.2.8 The area of asphalt covered hard-standing in the western area of the site is mostly devoid of vegetation with the exception of less disturbed areas where Annual Meadow-grass (*Poa annua*), Greater Plantain, Pineappleweed (*Matricaria discoidea*) and White Clover have colonised to form the OV21 Annual Meadow-grass-Greater Plantain community of the NVC; this community is described as 'universally distributed through the lowlands' (Rodwell 2000) and is associated with urban recreation areas.

*Boundary Features*

3.2.9 There are no trees or shrubs within the site.

3.2.10 The northern boundary parallel to the Worsborough View pavement is marked by a timber post and vertical slate fence.

3.2.11 The boundaries to the east, west and south where the site meets existing rear gardens are marked by various timber fences, privet and conifer hedgerows, refer to **Figure 3.**

3.2.12 A single Silver Birch (*Betula pendula*) tree overhangs the site on the north-western boundary, refer to **Figure 3.**

*Invasive Species*

3.2.13 No Japanese Knotweed, Indian Balsam or Giant Hogweed or other species listed on Schedule 9 of the *Wildlife and Countryside Act 1981* was detected within the site or on the site boundaries during the course of this survey in October 2012.

*Habitats in the Wider Area*

3.2.14 As detailed on **Figures 2 and 3,** appended, the land around the site is occupied by existing housing and associated garden habitats.

## 3.3 Animal Life

*Badger*

3.3.1 No evidence of Badger activity was recorded within site.

3.3.2 Owing to the presence of existing housing and roads the site has no connectivity to habitats in the wider area, including the woodlands at Potter Holes Plantation and Rockley Woods which may be used by Badger.

*Bat species*

*Garages 1 – 5*

3.3.3 Garages 1 to 5 are of a similar construction and comprise single storey pre-fabricated buildings with flat corrugated sheet material roofs, refer to **Photo 2,** below.



***Photo 2**: Pre-fabricated Garages*

3.3.4 An inspection of the external elevations did not detect any bat droppings on the elevation walls or ground. Timber barge boards are present at the roof edges but all area tightly fitted against the rough-cast concrete wall; no opportunities for bat access are present.

3.3.5 The garages are assessed to have negligible value for use by roosting bats.

3.3.6 Bats, particularly Pipistrelle species which are commonly associated with residential areas, are likely to forage over the site. The site does not contain any trees, woodland, species-rich grassland or open water which would be more favourable for the attraction of an abundance of foraging bats and a diversity of species.

***Bird species***

3.3.7 A flock of 30 Starling, a UK BAP Priority Species/Species of Principal Importance was feeding at the amenity grassland on the survey date.

3.3.8 None of the habitats within the site are suitable for use by nesting birds.

***Hedgehog***

3.3.9 The amenity grassland may be used by visiting Hedgehog, a UK BAP Priority Species/Species of Principal Importance. The presence of Hedgehog has been taken into consideration in the recommendations at **Section 5.3.**

***Reptile Species***

3.3.10 Owing to the isolated position of the site, presence of surrounding built development and the short mown condition of the grassland the presence of reptile species at this site is reasonably discounted.

## 4.0 EVALUATION AND ASSESSMENT

### 4.1 Designated Sites

4.1.1 The development of the site will have no direct or adverse effect on any designated nature conservation sites.

### 4.2 Vegetation and Habitats

4.2.1 None of the habitats within the site is species-rich or of significant interest in terms of the plant species composition. None of the habitats present are representative of semi-natural habitat. The NVC communities present are typical of the geographical area and conditions present.

4.2.2 No habitats at the site are representative of UK Biodiversity Action Plan (BAP) Priority Habitats/Habitats of Principal Importance or are listed on the Barnsley BAP.

4.2.3 No invasive plant species were detected at the site.

### 4.3 Animal Life

4.3.1 No evidence of protected species was identified within the site.

4.3.2 Appropriate survey has been carried out and supporting information is presented in this ecological appraisal to discount reasonably any significant effects on protected species and their habitats

4.3.3 The habitats within and around the site are suitable for use by feeding and sheltering Hedgehog, a UK BAP Priority Species and bird species of Priority Species status such as House Sparrow and Starling. The measures recommended in **Section 5** will ensure habitats favourable for the continued use by these species are conserved at the site.

### 4.4 Assessment

4.4.1 In consideration of the development proposals no significant ecological constraints have been identified.

4.4.2 For the purposes of the Code for Sustainable Homes assessment the Site and Construction Zone are of *low ecological value*.

4.4.3 Provided the measures detailed in Section 5 below are implemented it is considered that the proposals will have *no significant adverse effect* on habitats or wildlife of significant ecological interest.

4.4.4 The paragraphs in **Section 5,** below describe the mandatory and precautionary measures to be applied prior to and during site construction and operation to ensure compliance with all wildlife legislation, Natural England guidance, Section 11 of the National Planning Policy Framework (NPPF), local planning policy and best practice.

4.4.5 Where possible, opportunities for biodiversity gain by habitat creation have been identified and recommended. The recommendations aim to ensure a net gain in features for biodiversity in accordance with the guidance in the NPPF.

4.4.6 The recommendations described in Section 5 are qualified in terms of 'key' recommendations and 'additional' recommendations on **Figure 4** and **Appendix 2** so that they may be considered in accordance with Eco 2 of the C4SH assessment, which requires that all key recommendations are implemented, and 30% of all additional recommendations are implemented.

## 5.0 RECOMMENDATIONS

### 5.1 Nesting Birds

***Timing of Works***

5.1.1 None of the habitats at the site are suitable for use by nesting birds; there are no timing restrictions on the commencement of site clearance and commencement of construction operations.

***Habitat Creation***

5.1.2 To provide habitat for use by nesting Starling and House Sparrow, both UK BAP Priority Species associated with residential areas in proximity to arable farmland as occurs at this site, it is recommended that five Starling boxes are installed on suitable property elevations.

5.1.3 The Starling boxes should be sited at eaves height and face away from prevailing weather. Siting the boxes above windows or doorways should be avoided to minimise nuisances caused by droppings when the boxes are occupied. A suitable Starling box is illustrated at **Insert 1.**



***Insert 1**: Example of a Startling box (www.nhbs.com)*

### 5.2 Habitat Creation, Landscape Planting and Ecological Enhancement

5.2.1 The NPPF and local planning policy requires the promotion of opportunities for the incorporation of beneficial biodiversity within the design of a development. Opportunities to enhance the ecological and biodiversity value of the residential site are detailed below

5.2.2 The following recommendations have been incorporated into the landscape planting scheme prepared by TPM Landscape (drawing reference 1612/02 rev A). This plan is reproduced and presented at **Figure 4.**

***Planting within streetscape habitats***

5.2.3 In an article published by Land (2004) which detailed the results of transect surveys of garden habitats and the abundance and diversity of bird species present, trees were confirmed to be important features for birds within street landscapes. The importance of the trees was indicated in the field study as the highest percentage of registrations of birds was recorded in gardens with trees. The article demonstrated the importance of the provision of a range of features within residential areas for the attraction of bird species. At this site it is recommended that small native trees are incorporated into the street landscape planting and gardens of the properties.

5.2.4 It is advised that trees which support blossom and fruit which will attract insects are incorporated into the landscape planting this will aim to encourage foraging bats and birds. suitable species comprise: -

| | |
|---|---|
| *Amelanchier canadensis* | |
| *Crataegus monogyna* | Hawthorn |
| *Ilex aquifolium* | Holly |
| *Malus* sp. | Crab Apple |
| *Prunus* sp. | Cherry species |
| *Prunus spinosa* | Blackthorn |
| *Pyris* sp. | Pear species |
| *Sorbus aucuparia* | Rowan |
| *Ulmus glabra* | Wych Elm |

***Planting within gardens***

5.2.5 To maximise the biodiversity value of the garden habitats the plant species selection to be used in the front gardens will comprise species known to be of value and benefit to wildlife, particularly invertebrates, such as: -

| | | |
|---|---|---|
| *Lavandula* | Lavender | Attractive to feeding Bumblebees |
| *Pyracantha* | Firethorn | Produces berries in autumn for attraction of feeding birds |
| *Berberis* | Berberis | Produces berries in autumn for attraction of feeding birds |
| *Ceanothus* | Californian Lilac | Attractive to feeding Bumblebees |
| *Hebe* | Hebe | Attractive to feeding Bumblebees and other invertebrates |
| *Mahonia* | Mahonia | Early flowering species provides a source of nectar for queen bumblebees |
| *Syringa* | Lilac | Attractive to feeding Bumblebees |
| *Rosemarinus* | Rosemary | Attractive to feeding Bumblebees |

***Management and Maintenance***

5.2.6 To ensure the successful establishment of all landscape planting and to promote the long-term conservation of habitats for the attraction of wildlife it is recommended that a long-term management and maintenance plan is prepared for the landscape planting within the site that lies outside the residential gardens.

## 5.3 Habitat Connectivity and Hedgehog

*Linear Landscaping*

5.3.1 The landscape planting described above should be incorporated into a linear arrangement to improve habitat connectivity for use by wildlife through and around the residential area, refer to **Figure 4**.

*Hedgehog*

5.3.2 To encourage use of the residential gardens by Hedgehog it is recommended that plot boundary fences are lifted in local sections by approximately 0.15 to 0.20 metres above ground.

5.3.3 This action will ensure the development site does not fragment habitats suitable for use by Hedgehog.

## 5.4 Consideration of the Code for Sustainable Homes scheme

5.4.1 A preliminary assessment of the Site under the Code for Sustainable Homes (C4SH) criteria Eco 1 to Eco 4 is presented at **Appendix 2.**

5.7.2 Based on the assessment presented in this report it is concluded that the following credits are achievable under the C4SH scheme.

***Table A:*** *Summary of C4SH credits*

| Criterion | Credits Available | Credits Achievable | Notes/Prerequisites |
|---|---|---|---|
| **Eco 1** | 1 | 1 | Submission of this Ecological Survey and Assessment report and **Appendix 2** |
| **Eco 2** | 1 | 1 | Submission of **Appendix 2** detailing all key and additional recommendations made by the Ecologist.<br><br>Evidence to demonstrate compliance/implementation. |
| **Eco3** | 1 | 1 | As the site has been classed to be of *low ecological value* this credit can be award by default. |
| **Eco4** | 4 | 1 | Implementation of the recommended landscape schedule as prepared by TPM Landscape (Drawing 1612/02 Rev A) with input from ERAP Ltd (Consultant Ecologists). |
| **TOTAL** | **7** | **4** | |

# 6.0 REFERENCES


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## 7.0 APPENDIX 1: TABLES AND FIGURES

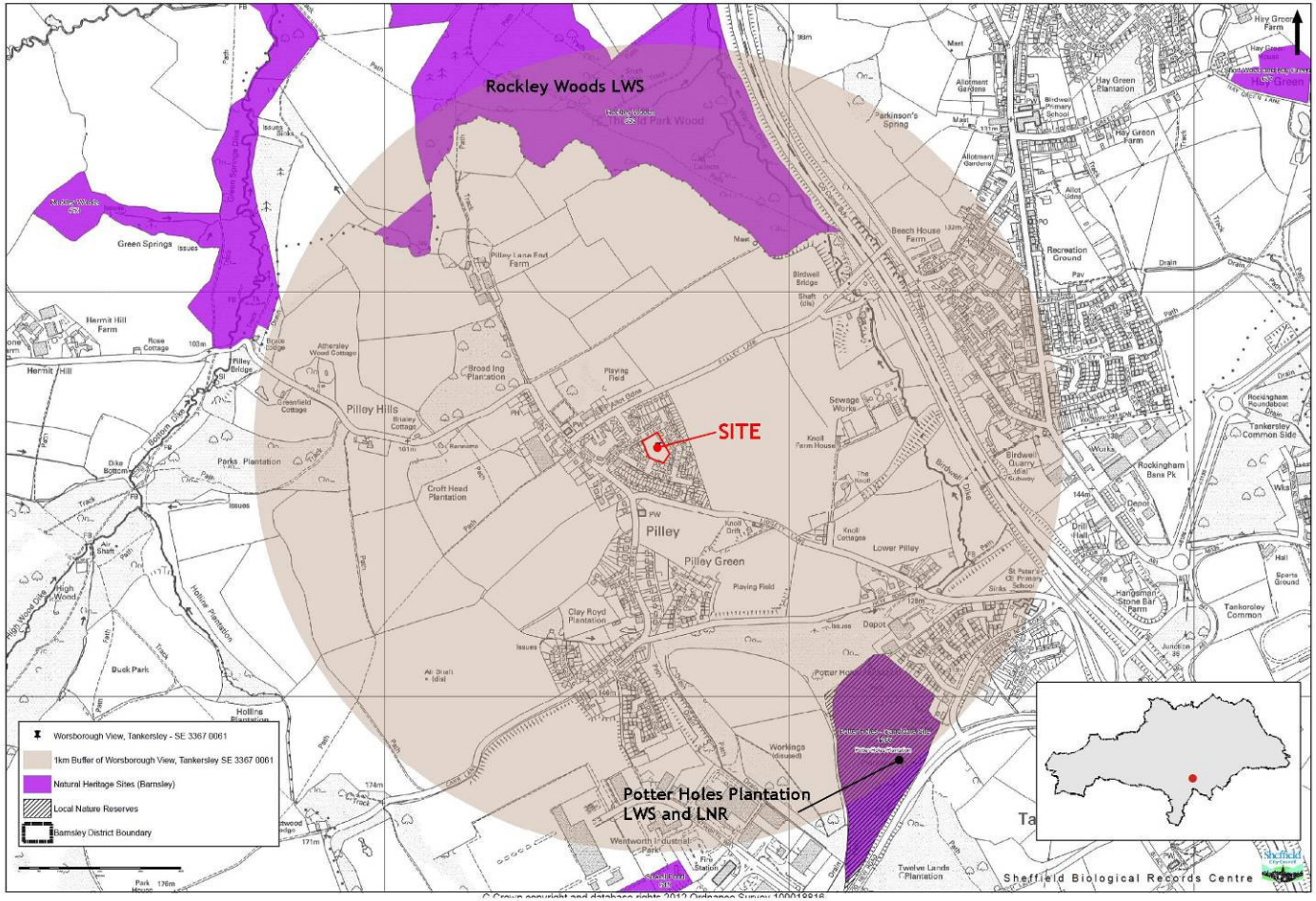
**TABLE 1:** Plant species list for the amenity grassland and asphalt hard-standing.

| Scientific Name | Common Name | Frequency[1] | Abundance | Species considered to contribute to the typical habitat type |
|---|---|---|---|---|
| *Artemisia vulgaris* | Common Mugwort | VL | <1% | |
| *Bellis perennis* | Daisy | O | <1% | |
| *Cardamine pratensis* | Cuckooflower | VLF | <1% | |
| *Cerastium fontanum* | Common Mouse-ear | O | <1% | |
| *Cirsium arvense* | Creeping Thistle | VL | <1% | |
| *Cirsium vulgare* | Spear thistle | VL | <1% | |
| *Dactylis glomerata* | Cock's-foot | LF* | 5% | ✓ |
| *Festuca rubra* | Red Fescue | VLA | <1% | |
| *Galium aparine* | Cleavers | VLF | <1% | |
| *Hordeum murinum* | Wall Barley | VLF | <1% | |
| *Lolium perenne* | Perennial Rye-grass | A* | 50% | ✓ |
| *Matricaria discoidea* | Pineappleweed | VLF | <1% | |
| *Plantago lanceolata* | Ribwort Plantain | O | <1% | |
| *Plantago major* | Greater Plantain | LF | <1 | |
| *Poa annua* | Annual Meadow-grass | A/LF | 20% | ✓ |
| *Ranunculus repens* | Creeping Buttercup | LF | 2% | ✓ |
| *Rumex obtusifolius* | Broad-leaved Dock | LF* | 2% | ✓ |
| *Senecio jacobaea* | Common Ragwort | O | <1% | |
| *Senecio vulgaris* | Groundsel | VLF | <1% | |
| *Taraxacum officinale* agg. | Dandelion | F* | 2% | ✓ |
| *Tripolium pratense* | Red Clover | VL | <1% | |
| *Tripolium repens* | White Clover | LF | 5% | ✓ |
| *Urtica dioica* | Common Nettle | VLA | <1% | |
| | | **Typical no. of plant species in the habitat type =** | | **7 species** |

[1]**Key to DAFOR**: D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare, V=Very, L=Local and *denotes a constant species

Nature Conservation Sites - 1km Buffer of Worsborough View, Tankersley - SE 3367 0061

Date: 28/09/2012




**Project Name:**
Land at Worsborough View, Pilley

**Title:**
Plan to illustrate site and designated Local Wildlife Sites in the local area.

| Scale: | Drawing No. | Date: |
|---|---|---|
| NTS | Figure 1 | October 2012 |

| Central Grid Ref: | Reference No. |
|---|---|
| SE 3367 0061 | ERAP Ltd 2012/211 |

ERAP Ltd
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49a Manor Lane, Penwortham, Preston, Lancashire, PR1 0TA.
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Website: www.erap.co.uk



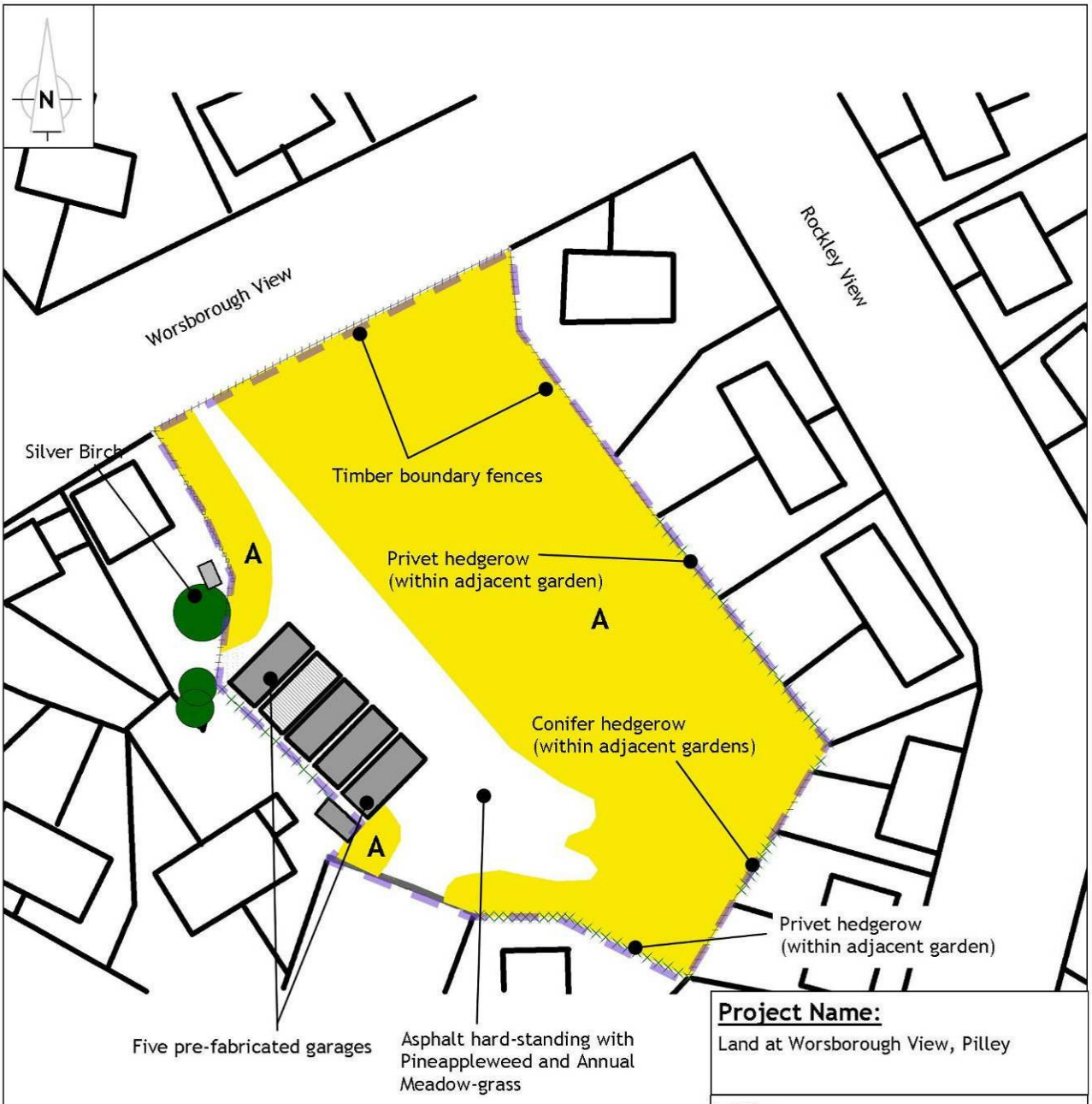

**Project Name:**
Land at Worsborough View, Pilley

**Title:**
Google Earth Image to Show Site and Surrounds

| Scale: | Drawing No. | Date: |
|---|---|---|
| NTS | Figure 2 | October 2012 |

| Central Grid Ref: | Reference No. |
|---|---|
| SE 3367 0061 | ERAP Ltd 2012/211 |

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Website: www.erap.co.uk




**Project Name:**
Land at Worsborough View, Pilley

**Title:**
Phase 1 Habitat and Vegetation Map

**Key to Map Symbols:**

| | | | | | |
|---|---|---|---|---|---|
| A | Amenity grassland | | Fence | | Wall |
| | Building | | Shrub | | Site boundary |
| | Ruderal vegetation | | Tree | | |
| | Bare ground | | | | |

| Scale: | Drawing No. | Date: |
|---|---|---|
| 1:750@A4 | Figure 3 | October 2012 |

| Central Grid Ref: | Reference No. |
|---|---|
| SE 3367 0061 | ERAP Ltd 2012/211 |

**Scale Bar:**
0m 25m

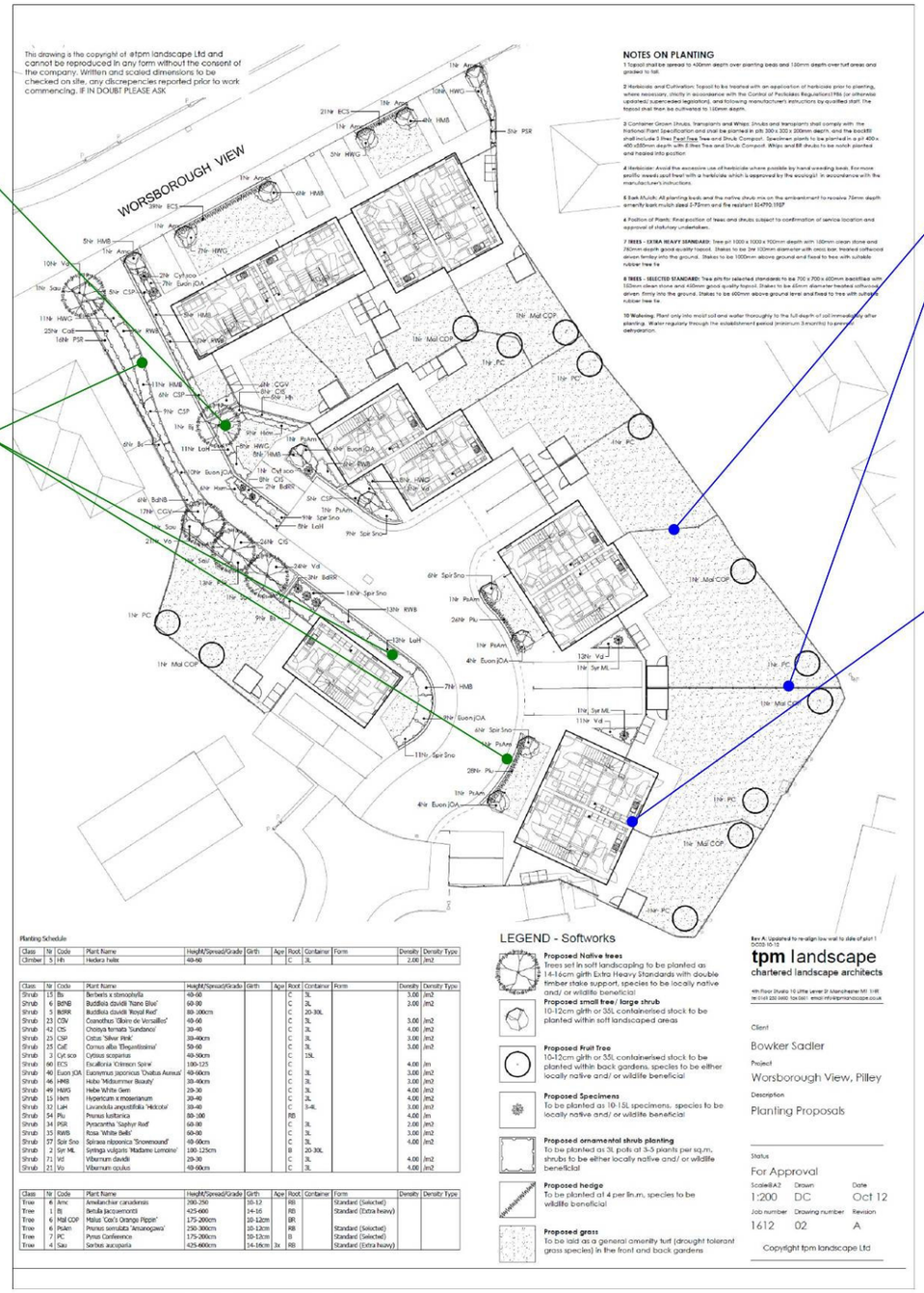
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***KEY RECOMMENDATION A: Landscape planting using native species and species known to be of value for the attraction of wildlife.***

The landscape planting at this site will comprise: -

Standard native trees;
Native shrubs; and,
Garden planting using species known to be value for the attraction of wildlife.

***KEY RECOMMENDATION B: Planting in a linear arrangement to enhance habitat connectivity through the residential area***




***ADDITIONAL RECOMMENDATION C: Gaps beneath the fences***

The fencing to be used between the individual house plots should be raised from the ground level to create a gap of between 0.15 and 0.20metres. This will ensure that the movement of wildlife such as Hedgehog (a UK BAP Priority Species) is not impeded between gardens.

***ADDITIONAL RECOMMENDATION D: Installation of Starling boxes***

To provide habitat for use by nesting Starling and House Sparrow, both UK BAP Priority Species associated with residential areas in proximity to arable farmland as occurs at this site, it is recommended that five Starling boxes are installed on suitable property elevations.

The Starling boxes should be sited at eaves height and face away from prevailing weather. Siting the boxes above windows or doorways should be avoided to minimise nuisances caused by droppings when the boxes are occupied.

***ADDITIONAL RECOMMENDATION E: Use of peat-free compost.***

The use of peat free compost in the landscape planting is recommended to assist the conservation of valuable peatlands for biodiversity and as carbon sinks.

**NOTE: To achieve credits under Eco2 all key recommendations and 30% of the additional recommendations must be implemented.**

Plan extracted from Drawing 1612/02 Rev A prepared by TPM Landscape

**Project Name:**

Worsborough View, Pilley

**Title:** Plan to illustrate all KEY and ADDITIONAL recommendations for biodiversity

| Scale: | Drawing No. | Date: |
|---|---|---|
| NTS | Figure 4 | Oct 2012 |

**Reference No.** ERAP Ltd 2012_211

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## 8.0 APPENDIX 2: Preliminary Code for Sustainable Homes Assessment

### Ecology Report Template

Please read the following before completing the report:

- This report template is to be used by Suitably Qualified Ecologist's providing reports which address Ecology 1, 2, 3 and 4 issues. It as a mandatory requirement that this document is completed in a Code for Sustainable Homes submission of evidence (C4SH 2007 p 187).
- The appointed, licensed Code assessor is to pass this document to the appointed ecologist who conducted/ will conduct the ecology work.
- The appointed ecologist is to complete all sections of this report and return it completed with all relevant documentation in the Appendix to the assessor.
- An ecologist may have been appointed to carry out ecological site surveys and to produce an ecology report without being aware that a Code assessment has been, or is to be conducted. In this instance, the ecologist should fill in the relevant details required for the Code in this report template.
- The assessor is to use this report in conjunction with the latest version of the relevant Code Guidance and information provided by the developer / client, to carry out the assessment for the Ecology Category issues stated above.
- There are 6 sections (sections A - F) in this document.
- Section A1 requires contact details for the ecologist and developer / client; section A2 requires the development details.
- Section B1 determines whether the appointed ecologist is 'suitably qualified' (under the Code); and if not, section B2 determines whether the report has been verified by an ecologist who is 'suitably qualified'.
- Section C determines whether the findings of the report have been based on data collected from site surveys conducted at appropriate times of the year to determine whether different species are evident.

  (Note: If 'No' is recorded for either Section B or C then the contents of the ecology report cannot be used to determine compliance with the Code requirements).
- Section D provides the assessor with the necessary information to base the assessment on for the various Ecology credits.
- Section E provides details of the documentation / information to be included within the appendix of this guidance.
- Section F requires the signature of the appointed ecologist who has completed this document.

## Section A1: Contact Details

**Ecologist's Details**

Company name: ERAP Ltd (Consultant Ecologists)

Company address: 49a Manor Lane, Penwortham, Preston, Lancashire, PR1 0TA

Contact name: Victoria Burrows

Contact telephone number: 01772 750502

Ecology Report Reference: ERAP Ltd_2012_211_Worsborough View, Pilley_Ecological Survey_October 2012

**Developer / Client Details**

Company name: Bowker Sadler

Company address: TBC

Contact name: TBC

Contact telephone number: TBC

## Section A2: Development Details

BRE Reference Number: TBC

Client Reference Number: TBC

Development Name: Worsborough View, Pilley

Development Address: Worsborough View, Pilley, near Barnsley, South Yorkshire

## Section B1: Suitably Qualified Ecologist's Qualifications

Do you hold a degree (or equivalent qualification, e.g. N/SVQ level 5) in ecology or related subject?

Yes ☒ No ☐

*If Yes, please provide details*

Victoria Burrows B.Sc. (Hons), M.Sc. CEnv MIEEM:

In 2000, I obtained a first class degree (B.Sc. (Hons)) in Environmental Biology from The University of Manchester and have since (2001) gained a distinction in an M.Sc. entitled 'Ecological and Environmental Sciences' at Lancaster University.

Are you a practising ecologist with a minimum of 3 years relevant experience within the last 5 years?
*Relevant experience must clearly demonstrate a practical understanding of factors affecting ecology in relation to construction and the built environment and will include acting in an advisory capacity to provide recommendations for ecological protection, enhancement and mitigation measures, e.g. ecological impact assessments.*

Yes ☒ No ☐

*If Yes, please provide details*

I have been employed as an Ecologist at ERAP Ltd for over 12 years.

I have previously carried out ecological assessments to contribute the BREEAM rating at over 30 projects including a new fire station, several commercial business parks and university accommodation. I have also provided the relevant information for the assessment of over 25 EcoHome/Code for Sustainable Homes sites.

Are you bound by a professional code of conduct and subject to peer review*?
*A full member of one of the following organisations will be deemed suitable: Chartered Institution of Water and Environmental Management (CIWEM); Institute of Ecology and Environmental Management (IEEM); Institute of Environmental Management and Assessment (IEMA); Landscape Institute (LI).*

Yes ☒ No ☐

*If Yes, please provide details*: ……

In 2005, I upgraded from an Associate to a Full Member of the Institute of Ecology and Environmental Management.

In May 2009 I qualified for and achieved Chartered Environmentalist (CEnv) status.

**Peer review is defined as the process employed by a professional body to demonstrate that potential or current full members maintain a standard of knowledge and experience required to ensure compliance with a code of conduct and professional ethics.*

Note: If the answer to any question in Section B1 is 'No' then the ecologist writing the report does not meet the requirements of a *Suitably Qualified Ecologist* under the Code. The ecology report therefore cannot be used in the Code assessment unless it is verified by a 'Suitably Qualified Ecologist'. If this is the case, proceed to Section B2.

If the ecologist does meet the requirements of a *Suitably Qualified Ecologist*, proceed to Section C.

## Section B2: Report Verification

If the appointed ecologist does not meet the requirements of a *Suitably Qualified Ecologist*, the report must be verified by an individual who does meet these requirements. Otherwise the ecology report cannot be used in the Code assessment.

1. The person who verifies the report must provide written confirmation that they meet the requirements of a Suitably Qualified Ecologist in accordance with Section B1 above.

2. Details on verifying an ecology report for a Code assessment:
   - The individual verifying the report must provide written confirmation that they comply with the definition of a Suitably Qualified Ecologist (as detailed above in Section B1).
   - The individual verifying the report must confirm in writing they have read and reviewed the report and found it to:
     - represent sound industry practice
     - report and recommend correctly, truthfully, and objectively
     - be appropriate given the local site conditions and scope of works proposed
     - avoid invalid, biased, and exaggerated statements.

Written confirmation from the third party verifier on all the points detailed under 1 and 2 above (for Section B2) must be included in the Appendix to this report (see Section E).

## Section C: Site Survey

Have the findings of the ecology report been based on data collected from a site survey(s)?

Yes ☒ No ☐

If yes, please provide details to confirm this (e.g. date(s) and scope of site survey(s))

The site was visited on the 4th October 2012 by Victoria Burrows B.Sc. (Hons), M.Sc. CEnv MIEEM.

The survey was undertaken *prior to* any construction works.

**Vegetation and Habitats**

An Extended Phase 1 Habitat Survey of the Site was carried out in accordance with the JNCC methods (JNCC 2010).

All stands of vegetation and habitats were described and evaluated using the National Vegetation Classification (NVC). The NVC provides a systematic and comprehensive analysis of British vegetation and is widely used by Natural England and other wildlife organisations as well as ecological consultants to provide a scientific basis for the description and evaluation of habitats. The NVC provides a reliable framework for nature conservation and land-use planning.

Searches were made for uncommon, rare and statutorily protected plant species, those species listed as protected in the *Wildlife and Countryside Act 1981* and indicators of important and uncommon plant communities. All plant nomenclature follows Stace (1991).

Searches were carried out for the presence of invasive species, including those listed on Schedule 9 of the *Wildlife and Countryside Act 1981*, namely Japanese Knotweed and Giant Hogweed.

**Wildlife and Protected Species**

All wildlife present within the Site on the survey date was recorded and all habitats were assessed for their suitability for the support of wildlife including protected species (Badger, bats, amphibians), bird species and invertebrates.

**Survey Limitations**

No survey limitations or access difficulties were encountered (refer to section 2.4 of the Ecological Survey and Assessment report (ERAP Ltd October 2012)).

Note: If 'No' has been answered to Question 1 of Section C the ecology report cannot be used to determine compliance with the requirements of the relevant Code credits.
On what date did/ will initial site preparation works commence? / /

Note: If the site survey was carried out after initial site preparation works commenced, the ecology report cannot be used to determine compliance with the requirements of the relevant Code credits.
Note to Suitably Qualified Ecologist and the Code assessor: The contents of the ecology report must be representative of the site's existing ecology immediately prior to the commencement of initial site preparation works.

## Section D: Details from the Site Survey

**Eco 1 Ecological Value of Site**
Is the construction zone of low or insignificant ecological value?
*The construction zone includes any land used for buildings, hard standing, landscaping, site access and any other land where construction work is carried out (or land being disturbed in any way), plus a 3 metre boundary in either direction around these areas. It also includes any areas used for temporary site storage and buildings.*

Yes ☒ No ☐

If yes, is there any land outside the construction zone but inside the development site of ecological value?.

Yes ☐ No ☒

Please give details:

If yes, is it possible for all areas / features of ecological value to remain undisturbed by the construction works?

Yes ☒ No ☐

**Eco 2 Ecological Enhancement**
Has the developer / client required you to provide advice and recommendations for enhancing site ecology?

Yes ☒ No ☐

If yes, please provide a brief statement outlining all of your KEY recommendations*:

The key recommendations detailed below and have taken into account the geographical position of the site, the layout of the development site, the habitats in the local area and observations made during the site visit in October 2012. The key recommendations are those considered to be most suitable and beneficial to wildlife at this site.

**Key Recommendations**

*a.* ***Key Recommendation a: Landscape planting using native species and species known to be of value for the attraction of wildlife.***

**Refer to Section 5.2 of the Ecological Survey and Assessment report (ERAP Ltd October 2012) and Figure 4**

The landscape planting at this site will comprise: -

Standard native trees;
Native shrubs; and,
Garden planting using species known to be value for the attraction of wildlife.

*b.* ***Key Recommendation b: Planting in a linear arrangement to enhance habitat connectivity through the residential area***

**Refer to Section 5.3 of the Ecological Survey and Assessment report (ERAP Ltd October 2012) and Figure 4.**

If yes, please provide a brief statement outlining all of your ADDITIONAL recommendations*.

In order to achieve the 30% status, at least one of the ADDITIONAL recommendations detailed below should be carried out. The recommendations below are in accord with the urban location of the site, the layout of the housing development and the wildlife known to be present in the local area.

*c.* ***Additional Recommendation c: Gaps beneath the fences***

**Refer to Section 5.3 of the Ecological Survey and Assessment report (ERAP Ltd October 2012) and Figure 4.**

The fencing to be used between the individual house plots should be raised from the ground level to create a gap of between 0.15 and 0.20metres. This will ensure that the movement of wildlife such as Hedgehog (a UK BAP Priority Species) is not impeded between gardens.

*d.* ***Additional Recommendation d: Installation of Starling boxes***

**Refer to Section 5.1 of the Ecological Survey and Assessment report (ERAP Ltd October 2012) and Figure 4.**

To provide habitat for use by nesting Starling and House Sparrow, both UK BAP Priority Species associated with residential areas in proximity to arable farmland as occurs at this site, it is recommended that five Starling boxes are installed on suitable property elevations.

The Starling boxes should be sited at eaves height and face away from prevailing weather. Siting the boxes above windows or doorways should be avoided to minimise nuisances caused by droppings when the boxes are occupied.

*e.* ***Additional Recommendation e: Use of peat-free compost in the planting***

The use of peat free compost in the landscape planting is recommended to assist the conservation of valuable peatlands for biodiversity and as carbon sinks.

- Peat bogs cover just 3% of the world's surface but they store twice as much carbon as all the world's forests combined.
- Healthy peat absorbs and stores carbon, by destroying peat bogs carbon dioxide is released.
- Due to erosion and pollution, bogs in northern Britain could be leaking as much carbon each year as 400,000 family cars. (Manchester University).
- The main users of peat in the UK are amateur gardeners, in fact they use 2/3 of the 3.4 million cubic metres extracted per year.
- 94% of the UK lowland peat bogs have already been lost. Half of the UK's soil carbon is in its Peatlands.
- 65% of all peat used in the UK is imported from other countries – causing yet further emissions through transportation.

** The client / developer will be required to adopt / implement all KEY recommendations and 30% of ADDITIONAL recommendations.*

**Eco 3 Protection of Ecological Features**

Note: Eco 3 looks at protecting all existing features / areas of ecological value on the site and boundary area. If a feature of ecological value is to be removed as part of the development works, e.g. site clearance, then this credit cannot be achieved. If you have deemed the whole development

site to be of poor ecological value then there will be no features of ecological value to protect. If the construction zone is of low ecological value but the wider site is not, give protection measures here. If there is an area(s) or feature(s) of low or insignificant ecological value you wish to advise be retained and enhanced / improved, e.g. a species-poor hedgerow to a species-rich hedgerow, then full details of this advice should be entered as a recommendation under *Eco 2 Ecological Enhancement*.

Are there any existing features/ areas of ecological value on the site or at the boundary of the site?

Yes ☐ No ☒

If yes, please provide a brief statement outlining the advice/ recommendations given for protecting all existing features and areas of ecological value:

Are any ecological features to be relocated on the site?

Yes ☐ No ☒

If yes, please provide a brief statement outlining the reasons for relocation and recommendations for protecting the ecological features:

**Eco 4 Change of Ecological Value of Site**

Are you able to provide the following information for before and after construction: habitat types and an estimate of the number of floral species present per habitat type (based on appropriate censusing techniques and confirmed planting regimes)?

Yes ☒ No ☐

If yes, please provide the following information:

a. A brief description of the landscape and habitats surrounding the development site

The site and the Construction Zone comprise an area of managed amenity grassland and asphalt hard-standing.

**Refer to Section 3.2 and Figures 2-3 of the Ecological Survey and Assessment report (ERAP Ltd October 2012)**

b. The total site area *(this will be the same both before and after development):* *2985*$m^2$

c. Provide details of the site before development in the table below:

| Habitat Type* | Area of habitat type ($m^2$) | Number of species per habitat type |
|---|---|---|
| Asphalt hard-standing | 685 | 0 |
| Amenity grassland | 2300 | 7 (refer to **Table 1** of the Ecological Survey and Assessment report (ERAP Ltd October 2012)) |

d. Provide details of the site after development in the table below:

| Habitat Type* | Area of habitat type ($m^2$) | Number of species per habitat type |
|---|---|---|
| Buildings, hard-standing and gardens | 2781 | 0 |
| Landscape planting in accordance with TPM Landscape plan 1612/02 A prepared with input from ERAP Ltd | 204 | 19 (only native species and species known to be of value to wildlife have been counted) |

** Habitat types will include natural areas, e.g. various grasslands and woodlands; as well as areas of the built environment, e.g. buildings, hard landscaping. The area of each habitat type when added together must always equal the total area of the development site.*

**Note:** Areas were provided by TPM Landscape. This is a pre-planning preliminary assessment and the areas and species schedule may be subject to change.

Has your client / developer requested you to carry out the calculation for Eco 4 Change in Ecological Value of Site? *The calculation must be carried out in line with the methodology provided in the most current version of the Code Guidance.*

Yes ☒ No ☐

If yes, please complete the tables below:

**Calculation of the Ecological Value of the Site Before Development**

| Plot Type | Area of Plot Type [$m^2$] | | Species [No.] (from Table 2 or a SQE*) | | Species x Area of Plot Type |
|---|---|---|---|---|---|
| Asphalt hard-standing | 685 | X | 0 | = | 0 |
| Amenity grassland | 2300 | X | 7 | = | 16100 |
| (1) Total site area = | **2985** | | | (2) Total = | **16100** |
| | | | | **Species before development =** Total species x area of plot type / Total site area = (2)/(1) = | **5.39** |

**Calculation of the Ecological Value of the Site After Development**

| Plot Type | Area of Plot Type [$m^3$] | | Species [No.] (from Table 2 or a SQE*) | | Species x Area of Plot Type |
|---|---|---|---|---|---|
| Buildings, hard-standing and gardens | 2781 | X | 0 | = | 0 |
| Landscape planting in accordance with TPM Landscape plan 1612/02 A prepared with input from ERAP Ltd | 204 | X | 19 | = | 3876 |
| (1) Total site area = | **2985** | | | (2) Total = | **3876** |
| | | | | **Species after development =** Total species x area of plot type / Total site area = (2)/(1) = | **1.29** |

* SQE = Suitably Qualified Ecologist

Total area of site and areas of landscape planting development was supplied by TPM Landscape

**Species Change = 1.29 - 5.39 = -4.1 1 credit is achievable.**

## Section E: Appendix

The required documentation to be included within the appendix of this guidance document will include: the ecology report; written confirmation from the verifier of the ecology report (where necessary); and any supplementary documentation, e.g. ecologist's curriculum vitae; maps, plans, drawings, letters / emails of correspondence, etc. Please include these details along with the appropriate reference to each document in the table below:

| Document | Reference |
|---|---|
| Ecological Survey and Assessment Report | ERAP Ltd 2012_211_(October 2012) Land at Worsborough View, Pilley *Ecological Survey and Assessment report* |
| Landscape Planting Proposals | TPM Drawing 1612 02 A |
| | |
| | |
| | |
| | |

## Section F: Signature of Validation

I confirm that the information provided in this document is truthful and accurate at the time of completion.

Name of ecologist: Victoria Burrows B.Sc. (Hons), M.Sc. CEnv MIEEM



Signature of ecologist: Date 10/10/2012