APPENDIX 1
Building descriptions

PLANNING DESIGN ENVIRONMENT

MACCLESFIELD OLD ROAD
BUXTON
ECOLOGICAL ASSESSMENT

TEP Report Ref: 4132.01.002
November 2015

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DRAWINGS

1.0 EXECUTIVE SUMMARY

1.1 Persimmon Homes propose to create a residential development at a site off Macclesfield Old Road, Buxton.

1.2 TEP was commissioned in October 2015 by Persimmon Homes Limited to undertake an ecological assessment of a site off Macclesfield Old Road, Buxton and the immediate surrounds. The site is centred at grid reference SK 036 723, within the rural area of Buxton, Derbyshire.

1.3 The site predominantly comprises mown amenity grassland, with areas of hard standing, bare ground and ephemeral, five buildings, scattered broadleaved and conifer trees, modified neutral grassland, scattered scrub, introduced shrub, tall ruderal vegetation. It is presently predominantly used as residential.

1.4 The buildings on site range from negligible to high potential for roosting bats. There are no trees on site with the potential to support roosting bats. A number of trees on site are assessed as category 1 and 2. Further surveys of the buildings and trees for bats prior to demolition of the buildings and felling of the trees will be required. For the buildings three dusk or dawn surveys between mid-May and August will be required and three dawn surveys of the trees between mid-May and September. If bats are found a license form Natural England will be required to permit demolition of buildings or felling of trees.

1.5 A number of protected sites are within 1km of the site. These sites include Goyt Valley SSSI, Leek Moors, Pooles Cavern and Grim Low Wood SSSI, Peak District Moors (South Pennine Moors Phase 1) SPA and the South Pennine Moors SAC. The potential impacts on these sites are dealt with in report TEP Ref 4132.01.001.

1.6 For the wildlife sites within 1km of the site measures will need to be taken to prevent debris and runoff from entering these sites during the development works.

1.7 One invasive species is present on site. The cotoneaster that is on site must be removed dug up and bagged, making sure no berries or vegetative material is left on site. The cotoneaster must then be sent to a landfill site that deals with controlled waste.

1.8 The trees and shrubs provide suitable nesting bird habitat so replacement nesting opportunities will need to be provided if any of this habitat is removed for the development. In addition, all vegetation clearance works should be undertaken outside the nesting bird season (March to August inclusive). If this is not possible, a nesting bird check by a suitably qualified ecologist will be required a maximum of 24 hours in advance of works to confirm no active nests are present at that time.

1.9 No evidence of water vole, otter and white clawed crayfish was found during the water vole survey of the River Wyre in 2013.

1.10 No evidence of any protected species was noted during the phase 1 habitat survey and, due to regular public disturbance within the site, no other protected or notable species are considered likely to be present.

1.11 Measures to be taken to provide enhance for wildlife on site.

1.12 The assessment concludes that there are no other ecological constraints to the proposed development at this time. The findings of this assessment remain valid for a period of one year.

2.0 INTRODUCTION

2.1 TEP was commissioned in October 2015 by Persimmon Homes Limited to undertake an ecological assessment of a site off Macclesfield Old Road, Buxton and the immediate surrounds. The site is centred at grid reference SK 036 723, within the rural area of Buxton, Derbyshire.

2.2 A residential development is proposed. The proposals are for the demolition of an existing dwelling and outbuilding, and the erection of 15 dwellings, access and associated works.

2.3 The following tasks were completed in June and July 2015 to inform the assessment:

- Desktop study;
- Extended Phase 1 Habitat survey;
- Ground-based assessment of trees for bat roosting potential;
- External and internal assessment of buildings for bat roosting potential.

2.4 The objectives of this report are to:

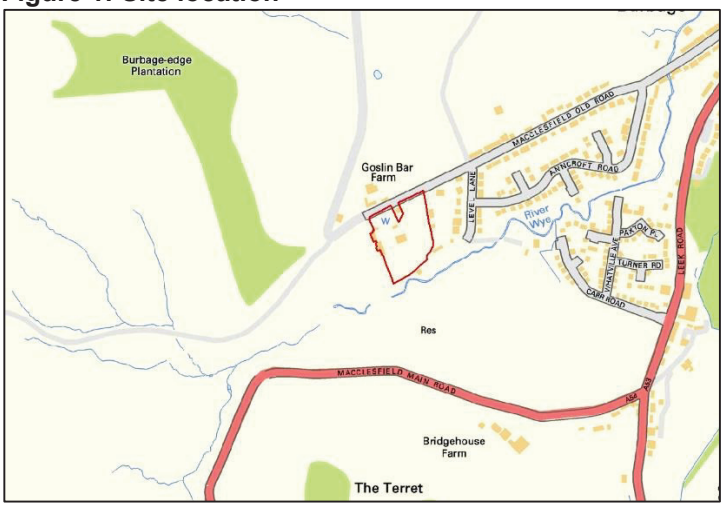
- Detail the methods and results of the above surveys;
- Identify features of ecological value within the site and within the wider zone of influence and therein any potential constraints for the proposed redevelopment of the site;
- Provide recommendations to avoid or, where this is not possible, mitigate potential impacts and thereby maintain net value.

Site Description

2.5 The site is located off Macclesfield Old Road, Buxton, Derbyshire. Macclesfield Old Road borders the northern boundary of the site and residential development borders the east boundary of the site. Largely pasture land with occasional dwellings lie beyond the west and south site boundaries. The River Wyre is south of the site.

2.6 The central grid reference of the proposed development site is SK 036 723. The site redline boundary is identified in Figure 1. The survey area and site context is shown in Figure 1.

Figure 1: Site location



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3.0 METHODS

Desktop Study

3.1 Designated sites and protected and notable habitats and species within 1km of the site were identified by reviewing publically available information and records obtained from the local record centre, as listed in Table 1.

3.2 Species records can provide a useful indication of the species present within the search area, although the absence of a given species from the dataset cannot be taken to represent actual absence.

3.3 Relevant policies from the local plan(s) relating to biodiversity were also identified.

Table 1: Ecological data sources

Source	Description
Multi-Agency Geographic Information for the Countryside (MAGIC) Map	Designated sites and priority habitats
Derbyshire Wildlife Trust (Nlg Ecology Limited – Records obtained 2013)	Designated sites and protected species records
Where's the Path	Satellite and OS imagery
Google Maps	Satellite imagery
Section 41 Natural Environment and Rural Communities Act (NERC) 2006	Habitats and species of principal importance for the conservation of biodiversity
Derbyshire Biodiversity Action Plan	Species of biodiversity importance within Derbyshire
Derbyshire Ornithological Society (TEP - Records obtained 2015)	Bird records

Source	Description
Derbyshire Wildlife Trust (TEP - Records obtained 2015)	Protected species records

Phase 1 Habitat Survey

3.4 A Phase 1 Habitat survey was completed by John Crowder on 29th October 2015. The survey was completed according to the standard Phase 1 Habitat survey method (JNCC, 2010). Incidental evidence of protected or invasive species was noted during the survey. The site was also assessed for its potential to support protected species. During the survey the weather was overcast with heavy rain.

Fauna

3.5 During the habitat survey, the habitats present were assessed for their potential to support species of conservation concern, particularly statutorily protected species, Section 41 or Local BAP priority species.

3.6 An external and internal inspection of the buildings and a ground inspection of the trees were undertaken on 29th October 2015 by licensed bat ecologist John Crowder (Natural England class licence 2015-10700-CLS-CLS). This inspection was undertaken in accordance with the current Bat Conservation Trust (BCT) guidelines (2012), assessing the site and immediate surrounding habitat for its potential to support roosting, foraging and commuting bats. The inspection was carried out from ground level with the aid of binoculars and involved inspecting the trees and buildings for field signs and bat roosting potential.

3.7 The buildings were evaluated for their potential value to support roosting bats, applying the criteria described in Table 2, as defined by the Bat Conservation Trust (BCT) 'Bat Surveys: Good Practice Guidelines' (2012).

Table 2: Bat Potential Building Categories (based on BCT, 2012)

<table>
<tr><th>Potential Roost Value</th><th colspan="2">Criteria</th></tr>
<tr><td>Confirmed</td><td colspan="2">Bats or evidence of bats found present.</td></tr>
<tr><td>High</td><td>Several of the following features:</td><td rowspan="2">Pre – 20th century buildings. Agricultural buildings of traditional brick, stone or timber construction. Large unobstructed flying spaces. Roof warmed by sun, in particular south facing roofs without shade. Large roof timbers with gaps at joints (e.g. mortise joints), cracks and holes. Numerous access points for bats to fly into. Buildings near woodland and/or water. Low levels of disturbance. Buildings are generally poorly maintained providing access points for bats into roof structures or crevices in bridges, but at the same time not too draughty, wet or cool.</td></tr>
<tr><td>Moderate</td><td>Some of the following features:</td></tr>
</table>

Potential Roost Value	Criteria
Low	Modern/intact buildings with few potential access points for bats. Brick buildings often with pitched slate or tile roofs but may have small or cluttered roof space. Flat roofed buildings with weatherboards or similar feature at the eaves with potential bat access behind or into building. Cooler, shaded, light or draughty voids. Buildings often lacking connectivity to woodland or areas of water.
Negligible	Flat roof structures lacking weatherboards, hanging slates or cladding. Modern/intact buildings with no bat access points. Lacking connectivity to any woodland or areas of water. High levels of regular disturbance. High levels of internal/external lighting. Buildings in very poor condition such that internal spaces are not weatherproof, being exposed to high levels of light, wind and/or rain.

3.8 The following features in trees can potentially provide roosting opportunities for bats:

- Old woodpecker holes;
- Splits or rot holes in trunk, bough or large branches;
- Holes formed by two boughs or branches growing in contact;
- Loose or lifting bark;
- A covering of dense latticed creeper, usually ivy (*Hedera helix*);
- Dense epicormic growth.

The criteria for tree roost assessment are listed in Table 3, as defined by the Bat Conservation Trust (BCT) 'Bat Surveys: Good Practice Guidelines' (2012).

Table 3: Tree roost assessment criteria

Potential Roost Value	Criteria
Confirmed	A tree where positive signs are found; e.g. emerging bats, droppings found or pre-emergence sounds heard;
Category 1*	Potential to support larger roosts and is situated in or near good foraging habitat or near a good commuting route leading to such habitat;
Category 1	A tree that has definite features of potential for roosting bats, supporting fewer suitable features than Category 1* trees (above) or with potential for use by single bats but are less than ideal in some way, for example, may have cluttered access;
Category 2	A tree that has no obvious potential, although the tree is of a size and age that elevated surveys may result in cracks or crevices being found; or the tree supports some features that may have limited potential to support bats
Category 3	A tree that has no potential to support roosting bats.

Limitations

3.9 There were no limitations to the Phase 1 habitat surveys as they were undertaken during the optimum period between April and October. During the daytime bat survey of the buildings on site, two of the buildings had restricted access due to structural condition of both buildings. No evening surveys could be undertaken as the bat surveys were undertaken in October which is outside of the optimum survey period for dusk and dawn bat surveys.

4.0 RESULTS

Desktop Study

4.1 A summary of the results of the desktop study are set out below. Full desktop results, including maps of designated sites within 1km of the site boundary, are found in Appendix 1. The results come from desktop records for both protected sites and species gained from the Derbyshire Wildlife Trust by Nlg Ecology Limited in 2013. TEP also obtained records for protected sites and species in 2015.

4.2 TEP undertook a water vole, white clawed crayfish and otter survey of the River Wye that is south of the site.

Designated Sites

4.3 The Goyt Valley Site of Special Scientific Interest (SSSI) is 30m west of the site and the Leek Moors SSSI is 317m west from the site. Both of these sites are designated for flora and habitats and also form part of the Peak District Moors (South Pennine Moors phase 1) SPA and the South Pennine Moors SAC. Pooles Cavern and Grim Low Wood SSSI is 702m east from the site and is also designated for its flora and habitats.

4.4 The proposed housing development lies 20m from the Peak District Moors (South Pennine Moors Phase 1) SPA and the South Pennine Moors SAC.

4.5 The Peak District Moors (South Pennine Moors phase 1) SPA is designated for supporting a number of breeding Annex 1 bird species including merlin, golden plover, short-eared owl, peregrine and dunlin. The South Pennine Moors SAC is designated for containing a number of Annex 1 habitats including European dry heaths, blanket bogs, old sessile oak woodlands, Northern Atlantic wet heaths and transition mires and quaking bogs.

4.6 There are a number of Derbyshire Local Wildlife sites within 1km of the site. Burbage Edge Plantation is located 600m north of the site. Grin Quarry Tip is located 700m east of the site. Grin Low Grassland is located 900m east of the site. Cutting Area H is located 900m east. Annacroft meadows and Stream is adjacent to the south boundary of the site.

Protected Habitats

4.7 There are no habitats of principal importance under Section 41 of the NERC Act 2006 (S41) located within the site itself, or the boundaries of the site.

Protected Species Records

4.8 There is pre-existing information indicating that bats have previously roosted in some of the buildings on site. Records from Nlg Ecology Limited reveal common pipistrelle *Pipistrellus pipistrellus* roosting in building 1 and myotis sp (whiskered *Myotis*

mystacinus /brandts *Myotis brandti*) in building 5 during evening surveys in 2008. Droppings of common pipistrelle and possibly brown long eared bats were found during daytime surveys in building 1 in 2012.

4.9 There are no records of amphibians, reptiles, white clawed crayfish, river lamprey or bullhead on site or within the 1km search buffer of the site.

4.10 There are records of water vole and otter within 1km of the site. The record for otter *Lutra lutra* is 500m east of the site and was recorded in 2008. The record for water vole *Arvicola amphibius* is 700m north east of the site and was recorded in 1997. There are three records for badger *Meles meles* within 1km of the site between the years 1997 and 1998.

4.11 There are several records of Schedule 1, Birds of Conservation Concern and S41 species within 1km of the site, including:

- golden plover (*Pluvialis apricaria*)
- short eared owl (*Asio flammeus*)
- merlin (*Falco columbarius*)
- peregrine (*Falco peregrinus*)

Extended Phase 1 Habitat Survey

4.12 The habitats present are illustrated in drawing G4132.01.001 and comprise.

- Scattered broadleaved trees;
- Scattered conifer trees;
- Species poor modified neutral grassland;
- Tall ruderal;
- Amenity grassland;
- Introduced shrub;
- Scattered scrub;
- Ephemeral/short perennial;
- Bare ground;
- Hardstanding;
- Buildings;
- Rubble pile; and
- Dry stone wall.

Scattered broadleaved and conifer trees

4.13 A number of scattered broadleaved trees are throughout the site. A number are associated with the access track in the north east of the site. The trees include beech *Fagus sylvatica*, sycamore *Acer pseudoplatanus* and Leyland Cyprus *Leylandii*.

Species poor modified neutral grassland

4.14 A strip of species poor modified neutral grassland lines both sides of the access track in the north east of the site. The grassland is dominated by tussocks of cocksfoot *Dactylis glomerata.*

Tall ruderal

4.15 Large areas of the site, the north and west and the south and east are dominated by tall ruderal. Rosebay willowherb *Chamerion angustifolium* is the dominant species with nettle *Urtica dioica* also occurring. Soft rush *Juncus effusus* and bracken *Pteridium aquilinum* also occasionally occur.