the ecology partnership

Preliminary Ecological Appraisal
Land adjacent to Reef Way
Hailsham
East Sussex

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LIABILITIES:

Whilst every effort has been made to guarantee the accuracy of this report, it should be noted that living animals and plants are capable of migration/establishing and whilst such species may not have been located during the survey duration, their presence may be found on a site at a later date.

This report provides a snap shot of the species that were present at the time of the survey only and does not consider seasonal variation. Furthermore, where access is limited or the site supports habitats which are densely vegetated only dominant species maybe recorded.

The recommendations contained within this document are based on a reasonable timeframe between the completion of the survey and the commencement of any works. If there is any delay between the commencement of works that may conflict with timeframes laid out within this document, or have the potential to allow the ingress of protected species, a suitably qualified ecologist should be consulted.

It is the duty of care of the landowner/developer to act responsibly and comply with current environmental legislation if protected species are suspected or found prior to or during works.

1.0 Introduction

1.1 The Ecology Partnership was commissioned by Persimmon Homes to undertake a Preliminary Ecological Appraisal (PEA) of land adjacent to Reef Way, Hailsham, East Sussex.

1.2 This report presents the results of The Ecology Partnership's surveys in and around the site, which aims specifically to assess the site's potential to support protected species and protected habitats that may be affected by the proposed development. Potential mitigation measures and recommendations for the site are included within this report.

1.3 Section 2 of this report sets out the methodologies of the Ecology Partnership's surveys. In section 3, the results of the surveys are presented. Discussions and implications for development are found in section 4, including general site enhancements. Conclusions drawn from the report are presented in section 5.

Site Context and Status

1.4 The site is located on the northern edge of the current Burfield Valley development on the eastern edge of the town of Hailsham. The site currently comprises an area of semi-improved grassland and areas of dense bramble scrub. The aerial photograph (Figure 1) below shows the site and its immediate surroundings. The red line depicts the approximate site boundary and survey area.

Figure 1: Approximate location of the red line boundary

Description of Proposed Development

1.5 The current plans for the site involve the construction of a new detached houses with associated car parking and landscaping within the red line boundary.

Relevant Planning and Legislation

1.6 National and local planning policies may have an effect on the proposed development. The following paragraphs identify relevant planning policies and discuss these in the context of the site.

1.7 Under the Natural Environment and Rural Communities (NERC) Act (2006), *"Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity"*. In order to comply with this 'Biodiversity Duty', planning decisions must ensure that they adequately consider the potential ecological impacts of a proposed development.

1.8 In compliance with Section 41 of the NERC Act, the Secretary of State has published a list of species and habitats considered to be of principle importance for conserving biodiversity. These were known as BAP habitats and species. The UK BAP lists of priority species and habitats remain an important and valuable reference certainly at county levels. However, the UK Post 2010 Biodiversity Framework (published 2012) has succeeded BAP. It was produced by JNCC and Defra, on behalf of the Four Countries' Biodiversity Group (4CBG), through which the environment departments of all four governments in the UK work together to achieve the 'Aichi Biodiversity Targets' and the aims of the EU biodiversity strategy.

1.9 National policy guidance is provided by National Planning Policy Framework (NPPF), which sets out the Government's planning policies for England and how they should be applied. Section 11 of the document is entitled 'Conserving and Enhancing the Natural Environment'. This section highlights the following:

"The planning system should contribute to and enhance the natural and local environment by:

- *Protecting and enhancing valued landscapes, geological conservation interests and soils;*
- *Recognising the wider benefits of ecosystem services;*
- *Minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures."*

1.10 In addition to this, the following paragraphs are also considered to be relevant:

"In preparing plans to meet development needs, the aim should be to minimise pollution and other adverse effects on the local and natural environment. Plans should allocate land with the least environmental or amenity value, where consistent with other policies in this Framework."

"Planning policies and decisions should encourage the effective use of land by re-using land that has been previously developed (brownfield land), provided that it is not of high environmental value. Local planning authorities may continue to consider the case for setting a locally appropriate target for the use of brownfield land."

1.12 The site falls under the jurisdiction of Wealden District Council. The Wealden District Core Strategy Local Plan (February 2013) has several policies that may be pertinent to review in regard to nature conservation. Policies relevant to the development site are detailed below:

1.13 Policy WCS12 - Biodiversity

'In order to contribute to the biodiversity targets provided in the Sussex Biodiversity Action Plan the Council will prevent a net loss of biodiversity, ensure a comprehensive network of habitats, and work with partners to maximise opportunities to ensure habitats, biodiversity features and ecological networks are maintained, restored, enhanced and where possible created to achieve a net gain in biodiversity and sustain wildlife in both rural and urban areas. This will be achieved through the development and implementation of an integrated green network strategy.

In accordance with Planning Policy Statement 9, please see page 49 'Working with the South Downs National Park Authority' and the reference to publication of the NPPF and cancellation of a number of Planning Policy Statements and Guidance Notes, there may be exceptional circumstances when compensatory measures for a net loss of biodiversity is required. Appropriate compensatory measures will be required to contribute to Wealden's overall biodiversity resource, and may include enhancement of Wealden's Biodiversity Opportunity Areas and other relevant Biodiversity Action Plan habitats, so that there is overall no net loss of biodiversity.

In order to avoid the adverse effect on the integrity of the Ashdown Forest Special Protection Area and Special Area of Conservation it is the Council's intention to reduce the recreational impact of visitors resulting from new housing development within 7 kilometres of Ashdown Forest by creating an exclusion zone of 400 metres for net increases in dwellings in the Delivery and Site Allocations Development Plan Document and requiring provision of Suitable Alternative Natural Green Space and contributions to on-site visitor management measures as part of policies required as a result of development at SD1, SD8, SD9 and SD10 in the Strategic Sites Development Plan Document. Mitigation measures within 7 kilometres of Ashdown Forest for windfall development, including provision of Suitable Alternative Natural Green Space and on-site visitor management measures will be contained within the Delivery and Sites Allocation

Development Plan Document and will be associated with the implementation of the integrated green network strategy. In the meantime the Council will work with appropriate partners to identify Suitable Alternative Natural Green Space and on-site management measures at Ashdown Forest so that otherwise acceptable development is not prevented from coming forward by the absence of acceptable mitigation.

The Council will also undertake further investigation of the impacts of nitrogen deposition on the Ashdown Forest Special Area of Conservation so that its effects on development in the longer term can be more fully understood and mitigated if appropriate'

1.14 This report addresses the site in relation to nature conservation and wildlife and indeed to the local planning requirements as well as national planning and nature conservation legislation. The ecology surveys undertaken by The Ecology Partnership Ltd have been undertaken to ensure that the nature conservation value of the site has been characterised and local and national planning policies are addressed. The report has been produced with reference to current guidelines for preliminary ecological appraisal (CIEEM 2017) and in accordance with BS 42020:2013 Biodiversity – Code of Practise for Planning and Development.

2.0 Methodology

Desktop Study

2.1 A desktop study search was completed using an internet-based mapping service (www.magic.gov.uk) for statutory designated sites and an internet-based aerial mapping service (maps.google.co.uk) was used to understand the habitats present in and around the survey area including identifying habitat linkages and features (ponds, woodlands etc.) within the wider landscape. Records for the site and local area (up to 2km) were purchased from the Sussex Biodiversity Records Centre.

Preliminary Ecological Appraisal

2.2 A Preliminary Ecological Appraisal (PEA) was undertaken on Friday 6th April 2018 by Senior Ecologist Tom Rothero BSc (Hons) MSc MCIEEM. The surveyors identified habitats present following the standard 'Phase 1 habitat survey' auditing method developed by the Joint Nature Conservancy Council (JNCC). The site was surveyed on foot and existing habitats and land uses were recorded on an appropriately scaled map (JNCC, 2010). Additionally, dominant plant species in each habitat was recorded, as was any evidence of protected species.

Badger Survey

2.3 A badger survey was undertaken at the site to assess if badgers were using the area and if any setts were located on or within 30m of the site that may constrain development. The evaluation of badger activity was based on methodology developed for the National Survey of Badgers (Creswell *et al.*, 1990) and includes searching for badger field signs such as setts, badger pathways, tracks (pawprints), dung piles with latrines, badger hairs and feeding signs such as snuffle holes.

2.4 During the survey, all habitats potentially suitable for badgers were systematically examined for evidence of badger activity including:

- Setts: several sett types may be present within a social group territory, ranging from a single hole to numerous interconnecting tunnels. Setts can be categorised into main, annexe, subsidiary and outlier (Wilson *et al*., 1997).
- Latrine sites: badgers characteristically deposit dung in pits, which may be located along the boundaries and within the social group territory. These sites serve as means of inter- and intra-group communication.
- Paths and runs: well used routes between setts and/or foraging areas. Often used by generations of badgers.
- Snuffle holes: areas of disturbed vegetation often formed by badgers foraging for ground dwelling invertebrates such as earthworms and larvae and the underground storage organs of plants.
- Hair: often found among spoil and bedding outside entrances to setts or snagged on fences (such as barbwire) along well-used runs.

- Footprints: easily distinguishable from other large mammal species. Often found along paths and runs or in spoil outside sett entrances.

Tree Assessment for Bats

2.5 Trees on site were assessed for their potential to support roosting bats. Bats can use trees to rest, give birth, raise young and/or hibernate. The trees were assessed visually for evidence of bats as well as for features that increase the likelihood of roosting bats, such as the following:

- Woodpecker holes, natural cracks and rot holes in trunks and branches;
- Frost cracks;
- Trunk and branch splits;
- Hollow sections of trunk and branches;
- Loose bark;
- Cavities beneath old root buttresses and coppice stools;
- Dense epicormic growth;
- Dense ivy cover.

2.6 Veteran trees typically exhibit many of these features and should usually be regarded as sites with clear potential, but any tree possessing one or more such feature, may host bats. Any tree species can be suitable but oak and beech often seem to be the preferred options. However, bats rarely restrict themselves to one tree. They change their roost sites frequently, sometimes every two to three days, looking for small differences in temperature and humidity

2.7 Roosts of bats in trees may be identified from the following field signs:

- Black stains beneath cracks, splits and other features where bat droppings have fallen;
- Dark marks at entrance points where bats have rubbed against the wood and left natural body oils;
- Feeding remains beneath roosts, such as insect wings;
- Chattering of bats;
- Bat droppings under access points;

- Scratch marks around a feature (cavity or split) caused by bat claws;
- Urine stains below the entrance or end of split;
- Large roosts or regularly used sites may produce an odour;
- Flies around the entrance, attracted by the smell of guano.

2.8 Trees which may be affected by arboricultural work should also be assessed, and may be categorised to relate the value of their features to recommended actions (Table 1). This approach allows trees to be graded according to their potential to support bat roosts. Trees may be assessed as having the potential to support bats (from an individual to a larger roost) even if no bats have been found.

Table 1: Protocol for visual inspection of trees to assess their value to bats - taken from Table 4.1 within the 'Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd edition' (Bat Conservation Trust 2016)

Suitability	Roosting habitat description
Negligible	Negligible habitat features on-site likely to be used by roosting bats.
Low	A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	A tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status.
High	A tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

Habitat Suitability for GCNs

2.9 Habitat surveys were carried out to assess the potential of the site to hold great crested newts (*Triturus cristatus*). Before visiting site, searches on Google Maps and Magic Maps were carried out to assess the habitat types in the wider landscape. On site, surveyors looked for the presence of factors that would increase the suitability of the site for great crested newts (GCNs) such as:

- The presence of suitable breeding place (water bodies) on site and within 500m of the site in the wider landscape;
- Habitat connectivity between ponds (if present) in the wider landscape and on site;
- The condition of the ponds whether there were factors that would render them unsuitable for GCNs such as fish;
- Land uses surrounding the site that may affect the potential of the site to hold GCNs such as agriculture;
- Type of suitable habitat on site such as scrub/grassland mosaic;
- Patches of woodland in the wider landscape that can provide terrestrial habitat;
- Any barriers between known populations of GCNs such as motorways and roads;
- Hibernation features on site for GCNs such as log and rubble piles.

Habitat Suitability for Reptiles

2.10 Habitat surveys were carried out to assess the potential of the site to hold populations of reptile species. This involved looking for the presence of factors that would increase the suitability of the site for reptiles such as:

- Scrub and grassland (long sward) mosaic across the site;
- Features that can be potential hibernation sites for common reptiles such as log piles;
- Grass tussocks within the grassland that can act as shelter and burrowing sites;
- Water bodies or damp places on site (grass snakes);
- Compost heaps or decaying vegetation (slow worms);
- Features that can act as refugia on the ground such as disused roofing felt.

Other Protected Species

2.11 The site was also inspected for indications of the presence of other protected species, as follows:

- Relevant habitat for dormice such as dense deciduous woodland, coppice and thick shrubbery
- The presence of ditches for water voles

- The presence of fresh water stream/rivers for otters
- Suitable nesting places for birds
- Other potential protected species

Limitations

2.12 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no single investigation could ensure the complete characterisation and prediction of the natural environment. The site was visited over the period of one site visit, as such seasonal variations cannot be observed and potentially only a selection of all species that potentially occur within the site have been recorded. Therefore, the survey provides a general assessment of potential nature conservation value of the site and does not include a definitive plant species list.

2.13 The protected species assessment provides a preliminary view of the likelihood of protected species occurring on site, based on the suitability of the habitat and any direct evidence on site. It should not be taken as providing a full and definitive survey of any protected species group. The assessment is only valid for the time when the survey was carried out. Additional surveys may be recommended if, on the basis of this assessment, it is considered reasonably likely that protected species may be present.

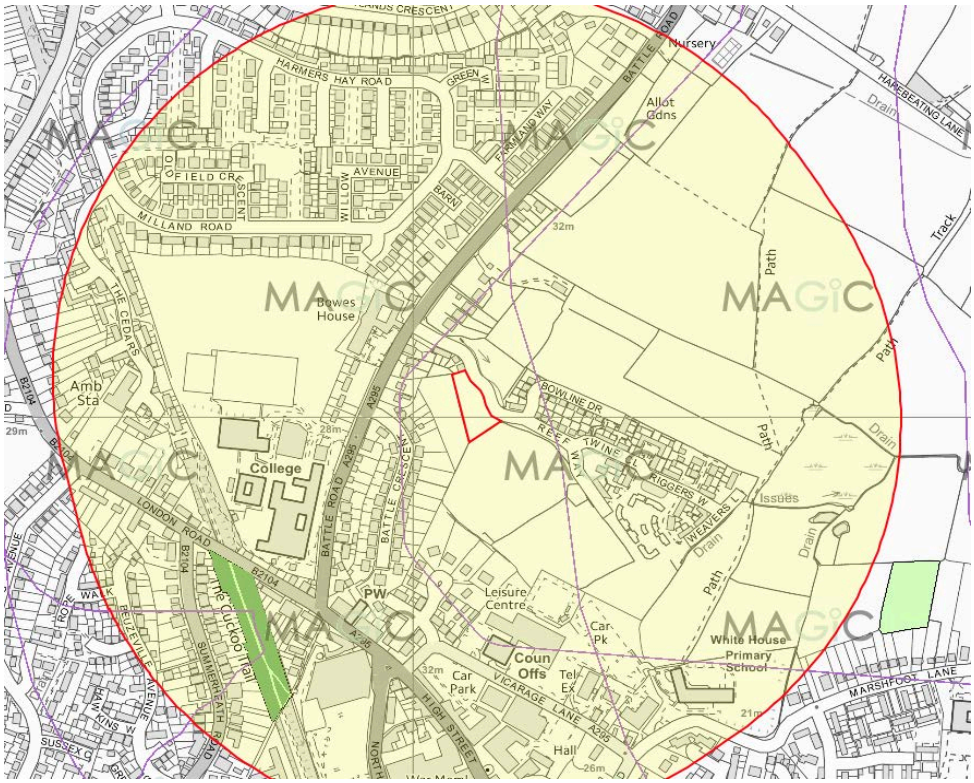
3.0 Results

Desktop Study

3.1 The site does not fall within or adjacent to any nationally or internationally designated sites, although one designated site does lie within 2km of the site:

- Pevensey Levels SAC SSSI Ramsar – approximately 1km east of the site.

3.2 The site itself does supports a habitat of importance which is a hedgerow running along the southern boundary. Further Priority Habitats are present within 500m of the site include: deciduous woodland and traditional orchard. (Figure 2).



"Map produced by MAGIC on [09/04/18]. © Crown Copyright and database rights [2017]. Ordnance Survey 100022861. Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGIC is a snapshot of information that is being maintained or continually updated by the originating organisation. Please refer to the documentation for details, as information may be illustrative or representative rather than definitive at this stage".

Figure 2: Priority Habitats: deciduous woodland (dark green) and traditional orchard (light green) within 500m of the red line boundary.

3.3 A 2km radius data search was requested from the Sussex Biodiversity Records Centre (SxBRC). Notable protected species from this search are outlined below (Table 2). Only records from within the last ten years have been included.

Table 2: Notable species recorded within 2km of site

Taxon Name	Common Name	Designation	Date of Latest Record	No. of Records
Triturus cristatus	Great crested newt	Hab Dir A2 NP, Hab Dir A4 Hab Reg Sch2, WCA Sch5 Sec9.4b, WCA Sch5 Sec9.4c, WCA Sch5	30/06/2017	92

		Sec9.5a, NERC S41 UK BAP Priority		
Arvicola amphibius	European water vole	WCA Sch5 Sec9.4a, WCA Sch5 Sec9.4b, WCA Sch5 Sec9.4c, NERC S41 UK BAP Priority Sussex Rare	03/06/2007	2
Erinaceus europaeus	West European hedgehog	NERC S41 UK BAP Priority	20/11/2017	26
Muscardinus avellanarius	Hazel Dormouse	Hab Dir A4 Hab Reg Sch2, WCA Sch5 Sec9.4b, WCA Sch5 Sec9.4c, WCA Sch5 Sec9.5a, NERC S41 UK BAP Priority	27/10/2016	7
Anguis fragilis	Slow Worm	WCA Sch5 Sec9.1, WCA Sch5 Sec9.5a, NERC S41 UK BAP Priority	04/07/2016	82
Natrix natrix	Grass snake	NERC S41 UK BAP Priority	04/10/2015	31
Vipera berus	Adder	WCA Sch5 Sec9.1, WCA Sch5 Sec9.5a, NERC S41 UK BAP Priority	2011	2
Zootoca vivipara	Common lizard	WCA Sch5 Sec9.1, WCA Sch5 Sec9.5a, NERC S41 UK BAP Priority	21/06/2013	22
Eptesicus serotinus	Serotine Bat	Hab Dir A4 Hab Reg Sch2, WCA Sch5 Sec9.4b, WCA Sch5 Sec9.4c, WCA Sch5 Sec9.5a	06/01/2011	4
Myotis bechsteinii	Bechstein's Bat	Hab Dir A2 NP, Hab Dir A4 Hab Reg Sch2, WCA Sch5 Sec9.4b, WCA Sch5 Sec9.4c, WCA Sch5	05/01/2006	1

		Sec9.5a, NERC S41 UK BAP Priority, RedList Global post2001 NT		
Myotis daubentonii	Daubenton's Bat	Hab Dir A4 Hab Reg Sch2, WCA Sch5 Sec9.4b, WCA Sch5 Sec9.4c, WCA Sch5 Sec9.5a	24/01/2014	2
Myotis mystacinus	Whiskered Bat	Hab Dir A4 Hab Reg Sch2, WCA Sch5 Sec9.4b, WCA Sch5 Sec9.4c, WCA Sch5 Sec9.5a	08/01/2012	1
Myotis brandtii	Brandt's Bat	Hab Dir A4 Hab Reg Sch2, WCA Sch5 Sec9.4b, WCA Sch5 Sec9.4c, WCA Sch5 Sec9.5a	08/12/2013	1
Myotis nattereri	Natterer's Bat	Hab Dir A4 Hab Reg Sch2, WCA Sch5 Sec9.4b, WCA Sch5 Sec9.4c, WCA Sch5 Sec9.5a	09/01/2011	4
Nyctalus leisleri	Lesser noctule	Hab Dir A4 Hab Reg Sch2, WCA Sch5 Sec9.4b, WCA Sch5 Sec9.4c, WCA Sch5 Sec9.5a	08/07/2013	1
Nyctalus noctula	Noctule Bat	Hab Dir A4 Hab Reg Sch2, WCA Sch5 Sec9.4b, WCA Sch5 Sec9.4c, WCA Sch5 Sec9.5a UK BAP Priority	07/01/2011	5
Pipistrellus nathusii	Nathusius's pipistrelle	Hab Dir A4 Hab Reg Sch2, WCA Sch5 Sec9.4b, WCA Sch5 Sec9.4c, WCA Sch5 Sec9.5a	2011	1
Pipistrellus pipistrellus	Common pipistrelle	Hab Dir A4 Hab Reg Sch2, WCA Sch5 Sec9.4b, WCA Sch5 Sec9.4c, WCA Sch5 Sec9.5a UK BAP Priority	27/07/2017	397
Pipistrellus pygmaeus	Soprano pipistrelle	Hab Dir A4 Hab Reg Sch2, WCA Sch5 Sec9.4b, WCA Sch5 Sec9.4c, WCA Sch5 Sec9.5a UK BAP Priority	09/09/2015	1
Plecotus auritus	Brown Long-eared Bat	Hab Dir A4 Hab Reg Sch2, WCA Sch5 Sec9.4b, WCA Sch5 Sec9.4c, WCA Sch5 Sec9.5a UK BAP Priority	27/09/2016	2

Summary of Previous Ecological Work at Burfield Valley

3.4 The Burfield Valley site as a whole has been subject to extensive ecological works over the past 10 years. The site still has two EPS mitigation licences running on it:

- Great crested newt – EPSM2010-2692 – 11/07/2011 to 31/07/2021
- Hazel dormouse – EPSM2010-2693 – 01/09/2011 to 30/09/2021

3.5 These licences are discussed further within the relevant sections for these species within the discussion section of this report.

Phase 1 Habitat Survey – April 2018

3.6 The site was dominated by an area of neutral semi-improved grassland divided into a mown and rank sections. A mature hedgerow with mature trees present marks the southern boundary and sections of dense scrub run along the fenced western boundary. Reef way marked the eastern boundary of the site with a new build house present along the northern boundary.

Neutral Semi-improved Grassland

3.7 The area of grassland onsite was split into two. The eastern half was managed and had a short sward at the time of the survey and the western half exhibited a long sward and tussocky composition. The grassland was dominated by species ground such as: Yorkshire fog (*Holcus lanatus*), cock's foot (*Dactylis glomerata*) and perennial rye grass (*Lolium perenne*), spear thistle (*Cirsium vulgare*), bristly oxtongue (*Helminthotheca echioides*), ragwort (*Senecio jacobea*), common nettle (*Urtica dioica*), common daisy (*Bellis perennis*), creeping cinquefoil (*Potentilla reptans*), ribwort plantain (*Platago lanceolata*), common sorrel (*Rumex acetosa*), celandine (*Ranunculus spp*), creeping buttercup (*Ranunculus repens*), meadow buttercup (*Ranunculus acris*) and dandelion (*Taraxacum agg.*)

Hedgerows

3.8 There was a section of hedgerow present along the southern boundary of the site. Species included blackthorn (*Prunus spinosa*), bramble (*Rubus fruticosus*), field maple

(*Acer campestre*), holly (*Ilex aquifolium*), pedunculate oak (*Quercus robur*), ash (*Fraxinus excelsior*), sycamore (*Acer pseudoplatanus*) and hawthorn (*Crataegus monogyna*).

Protected Species

Bats

Tree Assessment for Bats

3.9 There were three mature trees present on the site boundary that were considered to have low potential for roosting bat species. Details can be found in table 3 below.

Table 3: Trees Assessment for Potential Roosting Features (PRFs)

Tree Reference	Tree description	Bat roosting potential	Further Surveys Required if Tree to be Felled
T1 - Ash	Dense ivy cover around the main stem. No obvious holes or cracks visible from ground level.	**Low potential**	None
T2 - Sycamore	Dense ivy cover around the main stem. No obvious holes or cracks visible from ground level.	**Low potential**	None
T3 - Sycamore	Dense ivy cover around the main stem. No obvious holes or cracks visible from ground level.	**Low potential**	None

Foraging and Commuting Habitats for Bats

3.10 The site is small in area (approx. 0.3ha) and located on the edge of a residential housing estate and adjacent to the main access road into the estate, which are both well lit with street lighting at night. It is considered that the habitats on site are unlikely to be a significant area for foraging or commuting bat species. The mature trees along the southern boundary hedgerow may provide site level interest for bats.

Badgers

3.11 No evidence of conclusive badger activity was identified on the site on the day of survey. No active setts, latrine pits or digging activity was present.

Great Crested Newts

3.12 There are two ponds present within 250m of the site and a further seven ponds over 250m but within 500m of the site. The location of the ponds is shown below in figure 4 and further information of the ponds can be found below in table 4.

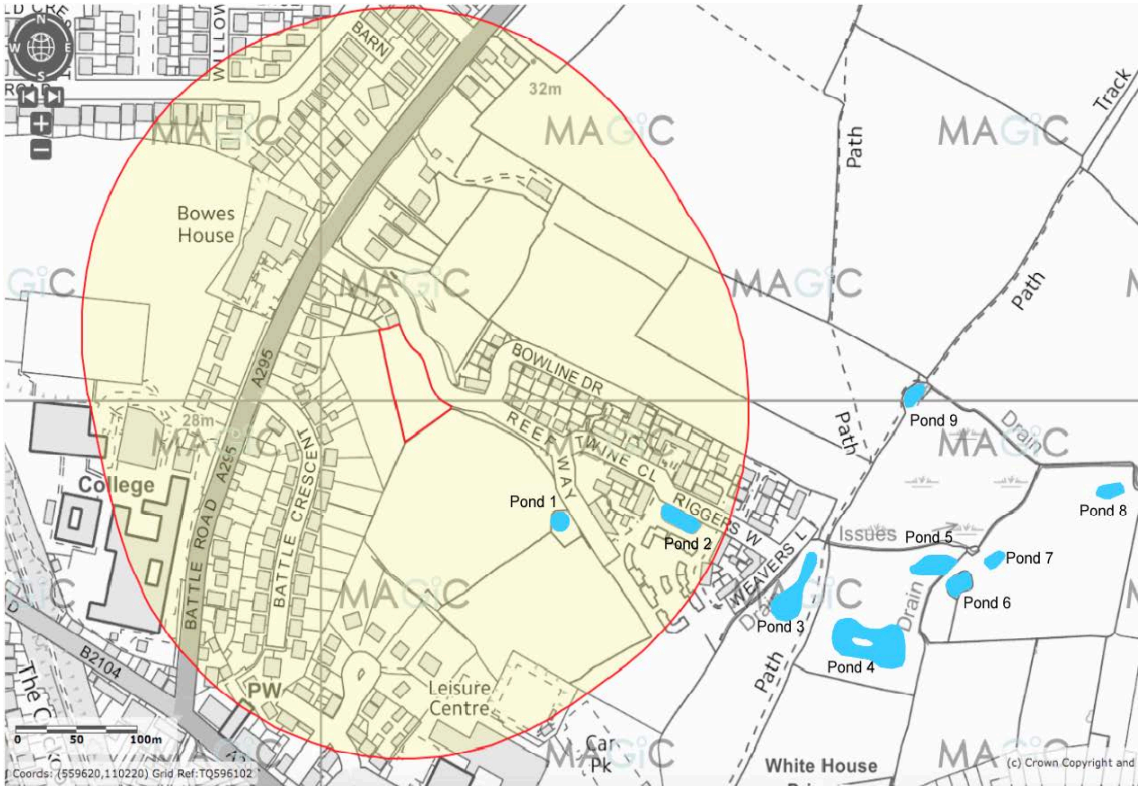


Figure 4: Location of water-bodies within 250m of the red line boundary

Table 4: Pond Information Summary

Pond Ref	HSI Score	GCN Presence	Last Surveyed	Distance From Site (m)
Pond 1	Excellent	Yes – peak count of 2 adults	2016	125m
Pond 2	-	GCN were translocated out of this pond as part of the mitigation licence to enable the Burfield Valley development	Unknown	207m
Pond 3	Excellent	Yes – peak count of 18 adults	2016	310m
Pond 4	Excellent	Yes – peak count of 2 adults	2016	370m
Pond 5	Below Average	No	2016	415m
Pond 6	Below Average	Yes – peak count of 1 adults	2016	450m
Pond 7	Poor	Yes – peak count of 3 adults	2016	465m
Pond 8	Poor	Yes – Peak count of 1 adults	2016	545m

Pond 9	Good	Yes – Peak count of 5 adults	2014	380m

- 2016 surveys carried out by Amec Foster Wheeler Environment & Infrastructure UK Ltd
- 2014 surveys carried out by The Ecology Partnership Ltd

3.13 The results from the 2016 surveys suggest that there is a medium sized population of GCN present within 500m of the site. At the time of the PEA survey there was no herptile exclusion-fencing present around the site boundary and habitats within the site boundary were considered to be suitable for supporting GCN during their terrestrial phase.

Hazel Dormice

3.14 The hedgerow along the southern boundary and the dense bramble scrub along the western boundary of the site are considered to be suitable for supporting hazel dormice due to the species present, which act as food sources.

3.15 The hedgerow and scrub habitats around the wider Burfield Valley site are known to support hazel dormice and as such development of this site was carried out under a mitigation licence from Natural England. There is a dormouse bridge present connecting the south-eastern corner of the site to the eastern side of Reef Way.

Reptiles

3.16 The area of rank semi-improved grassland bordered by dense scrub on site is considered likely to support common reptile species such as slowworm. This habitat is considered to be optimal habitat for such species offering cover from predation and foraging opportunities.

Other Species

3.17 The scrub, hedgerows and trees onsite are considered likely to support nesting bird species. The breeding season for most bird species in the UK runs from March to September inclusive.

3.18 The site did not supported habitats, which were considered to be suitable for other protected species such as otters. The small section of ditch at the southern end of the site was not considered likely to support water voles.

4.0 Discussion

Designated sites

4.1 The proposals do not fall within or adjacent to any national or international statutory designations, however three such sites are present within the locality of the site. The Pevensey Levels SAC, SSSI and Ramsar site lies approximately 1km south east of the site boundary.

4.2 In Great Britain the Habitats Regulations implement the requirements of the Habitats Directive. The Regulations aim to protect sites in the UK that have rare or important habitats and species, such as the Pevensey Levels SAC, in order to safeguard biodiversity. Under these Regulations, the LPA have a duty to assess whether there is a risk of any plan or proposal having a significant impact on the integrity of the designated sites in question.

4.3 The main concern when considering the impacts that new developments will have on protected sites, including SACs is that of increased visitor pressure. The development in question is and extension to and existing multi unit housing development that will include six new dwellings; therefore there will be a net increase in population in the local area. This, therefore, may increase visitors to the designated site and will therefore have an indirect impact on the site through increased visitor pressure. Further indirect impacts, such as water pollution and water runoff, also need to be considered as part of the scheme. Changes in water levels and water quality could have a significant impact on the qualifying species present on site. As such, these issues must also be assessed in terms of indirect impacts. However it is considered that as the development is an add on to an existing development these issues have already been addressed.

4.4 The information provided in this document is required to assist and inform Wealden District Council LPA who are the competent authority and who need to identify if an

AA is required for this development. They need to initially determine that the proposed development is not likely to have a significant effect on the SAC or the other designations alone or in combination with other developments.

Habitats

4.5 The habitats on site are common and widespread throughout the local area and the UK as a whole. The site comprised predominantly of neutral semi-improved grassland, which has ecological value at site level only. The most ecologically valuable habitats on site is the hedgerow edge and mature trees along the southern boundary.

4.6 The development will be predominantly built on the grassland areas and the mature trees and hedgerow will be retained and incorporated into the development.

4.7 Local policy WCS12 (Biodiversity) states that developments should aim to protect and enhance existing habitats and try to achieve a net gain in biodiversity. The new development will be built on the area of grassland, with the bramble scrub along the western boundary to be removed. Enhancements, discussed below, will be included within the master plan. It is recommended that enhancements included the widening of hedgerows and the increase in native species use. Other enhancements should include the planting of native species within landscaping. It is considered that such enhancements will lead to a net gain in biodiversity post-development.

4.8 Policy WCS13 (Green Infrastructure) outlines the need to protect and enhance green infrastructure which maintains and improves biodiversity. The hedgerow edge on the southern site boundary will be retained and enhanced as part of the plans maintaining connectivity around the wider Burfield Valley site.

Protected Species

Bats

Trees

4.9 There were three mature trees present within the southern site boundary at the time of the survey considered to have some potential for supporting roosting bat species. T1, T2 and T3 were all considered to have low potential for supporting roosting bats species due to a lack or low frequency of PRFs. No further surveys are recommended for these trees.

Foraging and Commuting Habitats

4.10 The site is small in area and adjacent to well to a residential development and main access road. It is considered unlikely that the site supports habitats that would be used by a significant number of foraging or commuting bat species.

4.11 According to Bat Conservation Trust guidelines, it is important that proportionality is employed when recommending further survey work for bat species on a proposed development site. As stated within section 8.2.7 of the latest survey guidelines (2016), the following points need to be taken into account with regard to planning activity surveys:

- Likelihood of bats being present;
- Likely species concerned;
- Number of individuals;
- Type of habitat affected;
- Predicted impacts of the proposed development on bats;
- Type and scale of proposed development.

4.12 It is considered likely that bats use the site for opportunistic foraging, in particular along the southern boundary which is well vegetated. These features are to be largely retained in the majority and therefore the foraging corridors are to be retained. The site is small in size and lies within and adajcent to previous developed areas and does not feature good connectivity to any extensive areas of more suitable habitat, it is therefore considered likely a small number of common species such as common pipistrelle may use the site to

commute across. While it is possible rarer species may use the site on occasion, no known roosts lie proximate to the site and it is considered the loss of semi-improved grassland and scrub will not significantly impact the foraging potential on site.

4.13 Transect surveys are not considered to be necessary. Provided development maintains a sensitive lighting scheme incorporated into the masterplan and that trees and hedgerow along the southern boundary are incorporated into the master plan, it is considered the impacts upon bat commuting and foraging routes would be relatively negligible.

Recommendations and Enhancements for Bat Species

4.14 It is recommended that a sensitive lighting scheme is conditioned as part of the permission. Lighting can be detrimental to roosting, foraging and commuting bats. Any new lighting on site should only be installed if there is a significant need and must be directed away from the hedgerow along the southern boundary order to maintain 'dark corridors'. Lighting should also be aimed away from any potential roosting sites such as bat boxes/tubes. Lighting should be hooded or baffled to ensure minimal light spillage. Lamps of greater than 2000 lumens (150W) must not be installed. Low-pressure sodium lamps or high-pressure sodium should be used instead of mercury or metal halide lamps where glass glazing is preferred due to its UV filtration characteristics.

4.15 Bat tubes could also be incorporated into the structure of the new buildings (Figure 4 below) providing good opportunities for crevice-dwelling species such as pipistrelles. The opening of the bat box/tube will be the only section visible and they are designed so that they require little to no maintenance. Several of these tubes can be established in a row together providing a good-sized roost space. The bat tubes should be inserted as high up as possible in the brickwork. Habibat, in association with the Bat Conservation Trust, provide a range of boxes which are unfaced for render or designed to match the brickwork of the building.

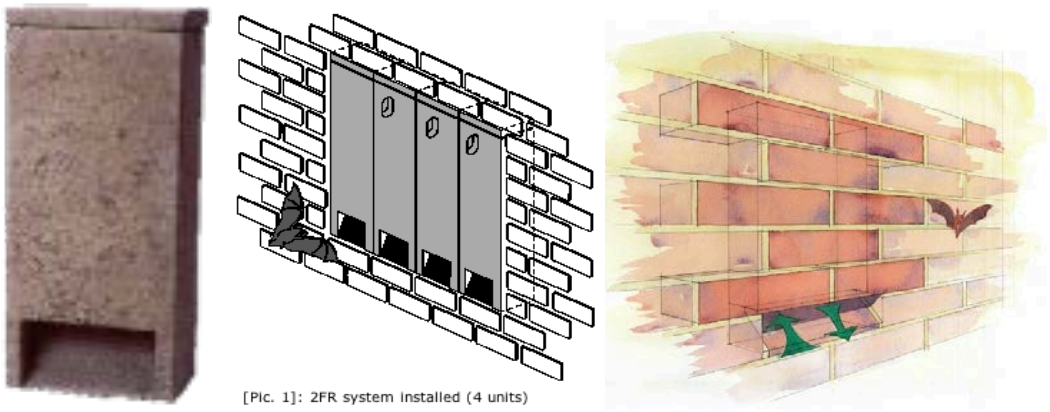


Figure 4: Bat tubes incorporated into the wall of a building to provide roosting space

4.16 An alternative could be to install bat boxes on the mature trees present on the southern boundary. Recommended boxes include:

- Schwegler 2F Bat Box – These boxes are attractive to small bats such as pipistrelles and long-eared bats and can be hung on trees (Figure 5).
- Schwegler 2FN Bat Box – This is slightly larger than the 2F and provides opportunities for the larger bats such as noctules. These should be hung on mature trees.
- Schwegler 1FD Bat Box - This box has been designed specifically for smaller bats and provides opportunities as a maternity roost .

Figure 5: Schwegler 2F (left) and 1FD (right) bat boxes

4.17 Incorporating specially designed bat boxes into the design can enhance the habitat on site for bats. Suitable bat boxes include a variety of wooden bat boxes, such as an improved cavity box, a double chamber bat box and other wood based varieties.

Schwegler boxes have been recommended as these are long-lasting and require no maintenance.

Badgers

4.18 No conclusive evidence of badger activity was recorded on site at the time of the survey. No latrines, digging or holes were present.

Great Crested Newts

4.19 A medium population of GCN is known to be present within 500m of the site and 1 potential breeding ponds are present within 250m of the site with no barriers to dispersal. The habitats on site include scrub, hedgerows and rank tussocky grassland, all habitats that provide opportunities for GCN during their terrestrial phase.

4.20 The total site area is approximately 0.3ha and the closest breeding pond is located 125m south of the site. When this data is input into the Natural England Rapid Risk Assessment tool it gives a result of "Green: Offence Highly Unlikely". This is shown below in figure 6.

Component	**Likely effect** (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	Notional offence probability score
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	0.1 - 0.5 ha lost or damaged	0.1
Land >250m from any breeding pond(s)	0.1 - 0.5 ha lost or damaged	0.005
Individual great crested newts	No effect	0
	Maximum:	0.1
Rapid risk assessment result:	**GREEN: OFFENCE HIGHLY UNLIKELY**	

Guidance on risk assessment result categories

"Green: offence highly unlikely" indicates that the development activities are of such a type, scale and location that it is highly unlikely any offence would be committed should the development proceed. Therefore, no licence would be required. However, bearing in mind that this is a generic assessment, you should carefully examine your specific plans to ensure this is a sound conclusion, and take precautions (see **Non-licensed avoidance measures tool**) to avoid offences if appropriate. It is likely that any residual offences would have negligible impact on conservation status, and enforcement of such breaches is unlikely to be in the public interest.

Figure 6. Natural England Rapid Risk Assessment Tool

4.21 The Burfield Valley site was carried out under a Natural England EPS mitigation licence for GCN. The eastern half of this subject site fell within the area translocated for GCN. However, as it stands there is not a functioning herptile exclusion fence in place around the site boundaries and so there is nothing from stopping GCN from the adjacent ponds entering the site boundaries. The results from the above rapid risk assessment tool would suggest that development within the site would not be likely to cause an offence. This may allow the development to be undertaken using non-licenced avoidance measures. It is recommended that any work on site be undertaken under a method statement agreed with the LPA and under ecological supervision.

Hazel Dormice

4.22 The areas of scrub and hedgerows on site area considered to be suitable for supporting hazel dormice due to the potential food sources present.

4.23 Hazel dormice are known to be present within the hedgerows around the wider Burfield Valley site and as such the development was undertaken under a Natural England EPS mitigation licence for this species. This licence however did not cover phase 5 of the development, where the subject site is located.

4.24 The wider Burfield Valley site was subject to dormouse monitoring works as part of the original licence works in 2015. The monitoring survey showed that there has indeed been a population decline of dormice across the site from a peak count of 1 individual to 0 individuals found during the 2015 survey.

4.25 It is considered that the southern hedgerow and mature tree features along the southern boundary of the site should be retained and enhanced as part of any development on site and maintain connectivity with the dormouse bridge that spans Reef Way at the south eastern corner of the site.

4.26 Due to the decline in the dormouse population on site it is not considered that the vegetation removal required for development would require an update to the EPS

licence. The scrub on site should be removed using reasonable avoidance measures under a method statement agreed with the LPA and ecological watching briefs.

Reptile Species

4.27 The area of rank tussocky grassland present on site is considered to be optimal habitat for supporting common reptile species and reptile species are known to be present within the wider site. The area of the suitable habitat is approximately 0.13ha and so it is considered a reptile presence/likely absence survey should be undertaken to ascertain the presence on reptile species. Then appropriate mitigation can be devised.

Breeding Birds

4.28 Breeding birds are likely to use the trees, scrub and hedgerow on site for nesting. Any tree felling or vegetation removal should be carried outside of the breeding bird season (March-September inclusive) or immediately after a nesting bird check by a suitably qualified ecologist. If active nests are identified, works in the vicinity of the nest must cease until the birds have fledged the nest.

4.29 Nest boxes could be installed to provide new nesting opportunities for birds. These can be hung on the surrounding mature trees post-development. Recommended boxes include:

- Schwegler 1N Deep Nest Box – gives added nest protection from predators;
- Schwegler 1B Bird Box – general purpose bird box, suitable for many species.

Other Species

4.30 The site is considered to be unsuitable for otters and water voles due to the lack of suitable habitat on site.

General Site Enhancements

4.31 Enhancement opportunities on a small site such as this are minimal. Shrubs could be planted within the newly landscaped garden areas and can include native species such as dogwood (*Cornus sanguinea*), guelder rose (*Virburnum opulus*), wild privet (*Ligustrum vulgare*) and box (*Buxus sempervirens*).

4.32 Planting around any available wall/fence space on the new buildings and rear garden areas could also provide excellent habitat opportunities on the vertical plane, particularly invertebrates, which in turn provide a food source for other species such as birds or bats. A combination of species could include clematis (*Clematis montana*), old man's beard (*Clematis vitalba*), jasmine (*Jasminum officinale*), honeysuckle (*Lonicera perichlymenum*), field rose (*Rosa arvensis*) and climbing hydrangea (*Hydrangea petiolaris*).

4.33 Herbaceous plants and bulbs could also be planted at the base of the retained trees to attract bees, butterflies and other insects as well as providing ground cover for smaller animals. Seeds that are tolerant of semi-shade and are suitable for sowing beneath newly planted or established hedges should be used. The following species can include the mix:

- Yarrow (*Achillea millefolium*)
- Agrimony (*Agrimonia eupatoria*)
- Garlic mustard (*Alliaria petiolata*)
- Common knapweed (*Centurea nigra*)
- Wild basil (*Clinopodium vulgare*)
- Hedge bedstraw (*Galium album*)
- Wood avens (*Geum urbanum*)
- Oxeye daisy (*Leucanthemum vulgare*)
- Ribwort plantain (*Plantago lanceolata*)
- Cowslip (*Primula veris*)
- Selfheal (*Prunella vulgaris*)
- Red campion (*Silene dioica*)
- Bladder campion (*Silene vulgaris*)
- Hedge woundwort (*Stachus sylyatica*)
- Upright hedge parsley (*Torilis japonica*)
- Tufted vetch (*Vicia cracca*)

5.0 Impact Assessment

5.1 This section of the report forms an EcIA (Ecological Impact Assessment) and is designed to quantify and evaluate the potential impacts of the development on habitats and species present on site, or within the local area.

Methodology

5.2 The approach to this assessment accords with guidance presented within the CIEEM Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM 2016). The guidelines recommend the following approach to EcIA:

- Identification of the ecological features on site, both habitats and species, from baseline surveys;
- Identification of the works on site, both during construction and operation that are likely to have impacts on ecological features (habitats and species);
- Identification of the zone of influence;
- Evaluation of the ecological receptors likely to be affected;
- Identification of impacts, for example positive or negative, on receptors and assess their significance;
- Incorporation of mitigation measures to reduce potential impacts;
- Review assessment in light of mitigation of negative impacts;
- Assessment of cumulative impacts;
- Assessment of residual effects and the potential need for compensation for negative effects which remain significant after mitigation.

5.3 Receptors are defined as a feature affected by an impact and may have negligible value for nature conservation or it may have value at site, local, county, national, or international level. Impacts on ecology assessed by (a) determining the level of important/sensitivity of the receptor, for example national, county, or local; (b) determining the type, magnitude and timescale of the impact; and then (c) using this information on the receptor and impact to determine the significance of the impact: descried as major, moderate, or minor significant, or of negligible significance.

5.4 In essence, an EcIA assesses the activities associated with a proposed scheme that are likely to generate changes, within identified zone of influences, on identified ecological features and receptors. The proposals are subsequently reviewed, and iteration undertaken to include enhancements and mitigation to reduce negative impacts.

Assessment

5.5 The habitats on site offer some opportunities for wildlife but these are considered to be limited given the relatively small size of the site. The habitats present are widespread and common throughout the local area and the UK as a whole. The redevelopment of the site will not isolate or fragment nearby habitats and will not impact upon landscape connectivity. Therefore, it is considered that the proposals will have negligible ecological impact and enhancements recommended would increase the ecological value of the site post-development.

5.6 In combination, the development has been allocated and is a small extension to an existing area of recent development. Therefore implications on the wider habitats and any designated sites have already been assessed. In combination impacts on any protected species have largely been addressed through comprehensive mitigation measures and EPS licensing.

6.0 Conclusions

6.1 The habitats present on site are considered to be common and widespread throughout the UK. The habitats on site considered to be of some ecological value are the southern boundary hedgerows and the mature trees present.

6.2 Three of the trees present on site were considered to have low suitability for supporting roosting bat species. Further dusk emergence and dawn re-entry surveys are not considered to be necessary for these trees.

6.3 There is a known medium popultaion of GCN within 500m of the site. The wider Burfield Valley site is still under a valid Natural England EPS Mitigation licence for this species. The closest pond to the site in 125m south if the site. This distance combined

with the small area of the site resulted in a Natural England Rapid Risk Assessment result of "Green: Offence Highly Unlikely". It is considered that development could take place on site without amendments to the existing GCN licence as long as reasonalbe avoidance measures are implemented within a method statement agreed with the LPA.

6.4 The scrub and hedgerow on site are considered to be suitable for supporting hazel dormice. The hedgerows around the wider Burfield site were known to support hazel dormice and as such the site is still under a valid Natural England EPS Mitigation licence for this species. A monitoring survey carried out in 2015 revealed that the population of dormice has decreased from a peak count of 1 individual to 0. It is considered that development on site could take places following reasonable avoidance measures and a method statement agreed with the LPA.

6.5 The area of rank semi-improved grassland on site is considered to be optimal habitat for supporting common reptile species. It is recommended that a reptile presence/likely absence survey be undertaken to ascertain the presence of reptile species on site.

6.6 Nesting birds are likely to use the trees, scrub and hedgerows on site. It is recommended that felling or clearance works on site be undertaken outside of the breeding bird season (March-September inclusive) or immediately after a nesting bird check by a suitably qualified ecologist.

6.7 The site is not considered to be constrained by other protected species, such as badgers, otters and water voles. No further survey work for these species is required.

6.8 Recommendations for enhancements have been made within this report, aimed at improving the ecological value of the site post-development.

7.0 References

Bat Conservation Trust., (2016)., *Bat Surveys – Good Practice Guidelines*. Bat Conservation Trust, London.

Bright, P., Morris, P. & Mitchell-Jones, T., (2006)., *The dormouse conservation handbook (Second edition)*. English Nature, Peterborough.

Creswell, P., Harris, S. & Jeffies, D.J., (1990)., *The history, distribution status and habitat requirements of the badger in Britain.* Nature Conservancy Council, Peterborough.

Joint Nature Conservation Committee., (2010)., *Handbook for Phase 1 habitat survey – a techniques for environmental audit.* JNCC, Peterborough.

Natural England., (2001)., *Great Crested Newt Mitigation Guidelines.* Natural England, Peterborough.

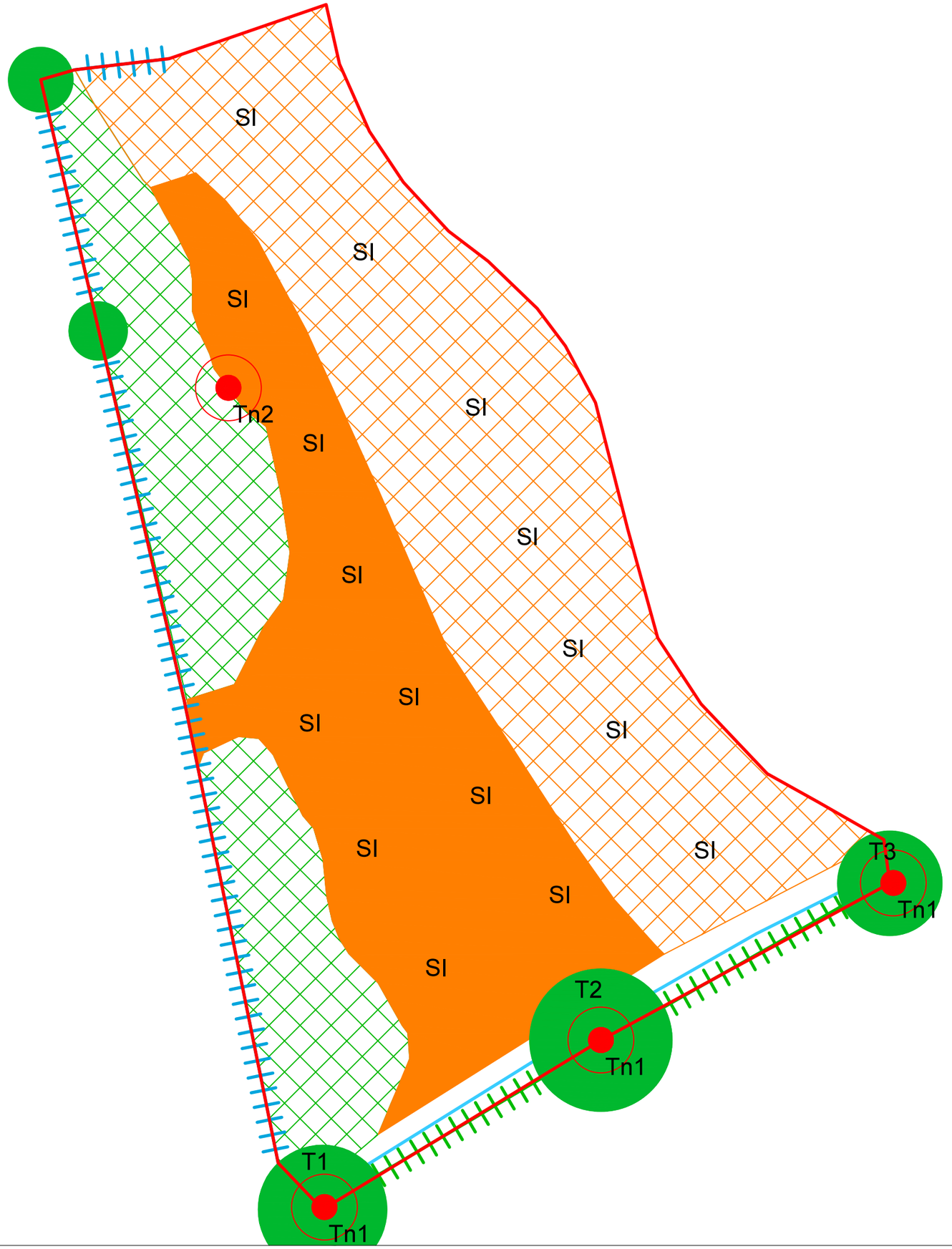
Natural England., (2011)., *Badgers and Development: A guide to best practice and licensing*. Natural England, Bristol.

Internet resources:

Google Maps: www.google.co.uk/maps

Magic Interactive Map: www.magic.gov.uk

Appendix 1: Phase 1 Habitat Map



Key

- SI — Rank Neutral Semi-improved Grassland
- SI — Mown Neutral Semi-improved Grassland
- Dense Scrub
- Mature Tree
- Hedgerow
- Ditch
- Site Boundary
- Tn1 — Low Potential Bat Tree
- Tn2 — Mammal Path

Site: Land at Adjacent to Reef Way

Client: Persimmon Homes South East

Drawing: TR

Drawing Date: April 2018

Drawing Title: Habitat Map

the ecology partnership

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Appendix 2: Photographs

Photograph 1: View north across the site – mown semi-improved grassland bordering Reef Way	
Photograph 2: Long sward tussocky grassland	
Photograph 3: T2 – Mature sycamore tree with low roosting bat potential	
Photograph 4: Southern boundary hedgerow	

Photograph 5: Dense scrub on site	
Photograph 6: A view south across the site	
Photograph 7: Dormouse bridge spanning Reef Way – located at the south eastern corner of the site	

Appendix 3: Biodiversity Records

Ecological Data Search SxBRC/17/772 - Summary Report

An ecological data search was carried out for land at Burfield Valley, Hailsham on behalf of Tom Rothero (The Ecology Partnership) on 05/03/2018.

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 SAC / 1 Ramsar / 1 SSSI
Non-statutory sites	1 Notable Road Verge
Section 41 habitats	4 habitats
Ancient and/or ghyll woodland	Present

Protected and designated species

International designations	41 species	390 records
National designations	131 species	1,934 records
Other designations	221 species	2,541 records
Total	**251 species**	**2,898 records**
Invasive non-native	31 species	210 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 05/03/2019 for the site named above.

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Date: 15/05/18