



Ecological Impact Assessment

Land to the north of The Old Brickworks, Shoreham Road,
Henfield

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LIABILITIES:

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

The views and opinions 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

Purpose of the Report

- 1.1 This Ecological Impact Assessment (EcIA) evaluates the effects of the development of land to the north of The Old Brickworks, Shoreham Road, Henfield, BN5 9SE, hereafter referred to as the 'site'.
- 1.2 The results of The Ecology Partnership's surveys and desk study of the site and surrounding land are presented. These findings are assessed against the proposals for a housing development on the site to: identify and rank significant impacts, set out mitigation and compensation measures and the means to secure these, in essence the EcIA;
- Evaluates the baseline interest;
 - Identifies and rank significant impacts;
 - Sets out mitigation and compensation measures and the means to secure these;
 - Assess the significance of residual impacts;
 - Identifies enhancement measures; and
 - Sets out requirements for post-construction monitoring.

Description of the Project

- 1.3 The proposals for site are to redevelop the eastern and northern fields. Twelve new commercial units are planned, alongside their associated parking, access and landscaping. The westernmost field and a portion of the adjacent one are to be retained as green space for biodiversity net gain enhancement.
- 1.4 Supporting ecology documents submitted for the application are a Preliminary Ecological Appraisal (PEA: The Ecology Partnership 2024a), from the findings of which survey reports were produced for dormice (The Ecology Partnership 2024b); bats (The Ecology Partnership 2024c), and reptiles (The Ecology Partnership 2024d).

Site Description

- 1.5 The site is located on the western side of the A2037, south of the town of Henfield, and is approximately 3.27ha in size. The site is a series of horse grazed pasture fields, bordered by a mixture of scrub and treelines. It is set on the boundary of agricultural landscape to the north and west, and new and established industrial developments to the east and south with Shoreham Road running along the east boundary. The agricultural land includes both pasture and arable, with areas of woodland, scrub and mature hedgerows/treelines, as well as low-density rural residential settlements. The industrial developments have minimal landscaping within the sites and are predominantly surfaced with concrete and tarmac.
- 1.6 The aerial photograph (Figure 1) 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

Planning policy and legislation

- 1.7 The site was surveyed to assess its ecological value and to ensure the proposals were compliant with relevant planning policy and legislation. Policy guidance is provided by

the National Planning Policy Framework (NPPF 2023) as well as relevant planning policies from the Horsham District Planning Framework (2015). The Horsham District Planning Framework (2015) provides a framework for planning decisions in the borough. Policies relevant to biodiversity and environmental protection have been included below:

Horsham District Planning Framework:

- Policy 31 - Green Infrastructure and Biodiversity

- 1.8 It is also noted that a new Horsham District Local Plan 2023-2040 is currently under Regulation 19 review, prior to submission to the Secretary of State. This plan could come into effect this year and has separate policies which could provide a framework for planning decisions in the district:

Horsham District Local Plan 2023 – 40

- Strategic Policy 13 – The Natural Environment and Landscape Character
- Strategic Policy 14 – Countryside Protection
- Strategic Policy 17 – Green Infrastructure and Biodiversity

2.0 Methodology

Scope of the Assessment

- 2.1 The zone of influence of the development is defined as:
- The project red line, for effects on designations, habitats and species;
 - Adjacent habitat, considered by species, for mobile species with territories or foraging ranges that may overlap the site;
 - Designated sites which can be impacted through development activities; and
 - Undesignated priority (Section 41) habitats that may be sensitive receptors to increased recreational pressure or other impacts such as surface water pollution
- 2.2 The types of features considered in the assessment of effects, to meet legislative and policy requirements, are:
- Designated sites (European, national and local);
 - Protected species;
 - Habitats and species of principal importance (Section 41 list);
 - Hedgerows and woodland, where not of principal importance;

- Invasive species (Schedule 9 of Wildlife and Countryside Act); and,
- Habitats, where not of principal importance, that may function as wildlife corridors or stepping stones.

Desk Study

- 2.3 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 and 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 Hampshire Biological Information Centre (HBIC).
- 2.4 Prior ecology reports consulted were those produced as in support of this outline planning application:
- Preliminary Ecological Appraisal (The Ecology Partnership 2023a);
 - Dormouse surveys (The Ecology Partnership 2024b);
 - Bat Surveys (The Ecology Partnership 2024c);
 - Reptile surveys (The Ecology Partnership 2024d).

Field Surveys

UK Hab survey

- 2.5 An extended UK Hab survey was conducted on site by The Ecology Partnership on 28th November 2023, in order to inform a Preliminary Ecological Appraisal (PEA) for the site (The Ecology Partnership 2024a). The surveyors identified the habitats present, following the standard 'UK Hab' auditing method. The Ecology Partnership surveyed the site on foot and the existing habitats and land uses were recorded on an appropriately scaled map. In addition, the dominant plant species in each habitat were recorded. In addition, a search for evidence of protected species, assessment of the potential for the site to support protected species, and identification of Section 41 habitats, was also undertaken on site during the survey.
- 2.6 Grassland habitat assessments were not fully possible during the November visit, given the season, therefore an updated walkover of the site was undertaken on 22nd July 2024.

Protected Species Surveys

- 2.7 As part of the PEA, a desk study and protected species assessment was conducted of the site, to identify the need for any further protected species surveys to ascertain the use of the site by these species, and recommend appropriate mitigation.
- 2.8 The site was thought to have potential to support the following protected species groups/species: bats, dormouse, GCN, breeding birds, and reptiles. Further survey work was considered unnecessary for breeding birds, due to the low-impact nature of the proposals to habitats likely to support them, meaning a suitable mitigation strategy would ensure their protection during works, and appropriate habitat creation post-develop would enable them to persist on site. A summary of the survey work completed is set out in the table below. Detailed survey methodologies are provided in the appended, referenced reports:

Table 1 Species surveys

Faunal Group	Survey Methodology	Date of Surveys	Guidance
Bats – tree inspection	As part of the Preliminary Roost Assessment, any trees likely to be removed by the scheme and supporting particular features likely to be of value to bats, such as splits, cracks, rot holes, coverings of ivy, peeling bark or similar, were recorded. The potential for the trees to support roosting bats has been assessed in accordance with the criteria set out in the Bat Conservation Trust guidelines (Collins, 2023)	22 nd July 2024	Bat Surveys – Good Practice Guidelines 4 th edition (Collins, 2023).
Bats – Tree emergence and Endoscopic Surveys	Dusk emergence surveys commenced at least 15 minutes before sunset until 2 hours after sunset, during which time, bats were identified and recorded. An infra-red camera was setup to observe the tree, supporting on surveyor, both equipped with Echometer Touch 2 Pro detectors. An endoscope and torch were used by a suitably qualified ecologist to inspect the cavities for signs of bat activity, to identify the full extent of the features, and to ascertain the conditions within them.	23 rd July 2024; 29 th August 2024; 19 th September 2024	Bat Surveys – Good Practice Guidelines 4 th edition (Collins, 2023).
Bat – activity surveys	NBW surveys were carried out once per season. At the start of the survey, the surveyors were stationed on potential flight lines close to potential roost sources for 30 minutes before	23 rd May 2024 23 rd July 2024 19 th September 2024	Bat Surveys – Good Practice Guidelines 4 th

	walking the predetermined transect route, during which bat flyovers and activity were recorded.		edition (Collins, 2023)
	Static Anabat detectors were placed out at two different points along the transect route and left to record for at least five nights each month.	24 th – 29 th April 2024 23 rd – 27 th May 2024 21 st – 25 th June 2024 17 th – 21 st July 2024 25 th – 29 th August 2024 19 th – 23 rd September 2024 16 th – 20 th October 2024	
Dormice	A total of 83 dormouse tubes were deployed within areas of suitable scrub habitat beneath the mature boundary treelines. Dormice checks were undertaken once a month from May to October 2024 and achieved a probability score of 36.52.	Setup – 28 th April 2024 23 rd May 21 st June 7 th July 29 th July 23 rd August 24 th September 16 th October	Bright <i>et al.</i> 2006
Reptiles	Approximately 70 mats were placed out and left to bed in for at least a month. These refugia were checked a total of seven times across the survey period within suitable weather for surveying reptiles. Any reptiles seen, were recorded including their species, sex and life-stage where possible.	Setup – 30 th April 2024 17 th May 24 th May 7 th June 14 th June 21 st June 1 st July 22 nd July	Froglife (1999) Gent and Gibson (1998).
GCN	All waterbodies in the surrounding area were subject to an eDNA survey to determine the presence or absence of great crested newts in each pond.	21 st June 2024	Biggs et al. 2014

Ecological Assessment Methodology

- 2.9 This assessment has been carried out with reference to the CIEEM *Guidelines for Ecological Impact Assessment* (EcIA) (CIEEM, 2018). The guidelines help in the determination of the baseline conditions, what features are important, what impacts significant and how to apply the mitigation hierarchy. The sequential application of the guidelines to this assessment are outlined in the following paragraphs.

Baseline condition

- 2.10 The baseline condition of the site is the situation documented in this report (section 3) from data (field surveys and desk study) gathered between November 2023 and October 2024.

Important ecological features

- 2.11 Important ecological features are those for which the decision maker (LPA or other regulator) needs the EcIA to help to assess the effects (negative, neutral or positive) and to guide the determination of the planning application. Important features are therefore generally defined by whether legislation or policy requires their consideration. For example, a European site within the zone of influence of the development is important and needs an assessment of effects. Similarly, at different levels, any legally protected species and any features such as wildlife corridors and section 41 species, with national or local policy support, are important features. Features that cannot be referenced to legislation and policy are generally not important and the next step of the EcIA (impact assessment) is not necessary. There may occasionally be situations where professional judgement and local expertise is relevant in defining local rarity as important, regardless of a lack of current legislative and planning support.
- 2.12 The CIEEM guidelines (2018) avoid rigid guidance on the levels of importance, which is often required within EIA, along with the level of magnitude of an effect, as one axis of an impact matrix. Sometimes a label of European, national or local importance may be obvious, for European sites, SSSIs and Local Wildlife Sites respectively. It is often less clear whether a small population of a Section 41 priority species or small extent of a Section 41 habitat should be of local or greater or less importance, as this may depend on data that does not exist on the distribution and abundance of the feature. Legally protected species can be important solely because of the need to meet legislation, or because they are also a feature of a County Wildlife Site or target of a local Biodiversity Action Plan. In these cases, the same species could warrant different levels of importance, possibly with different implications for what is reasonable mitigation or compensation, beyond legislative compliance.
- 2.13 This report follows CIEEM guidelines (2018) in not forcing features into a level of importance, but using ranked importance where possible. Sites are given three levels,

corresponding to their legislative and planning support: European, National and Local. Habitats and species, where not a qualifying feature of the hierarchy of sites, are simply referenced to the planning policy or legislation that supports their importance and where possible assessed from the extent, range or population size within zone of influence in relation to the extent, range or population size in the relevant administrative unit, for example LPA boundary or BAP boundary.

Impact assessment

- 2.14 According to CIEEM guidelines (2018), the only essential purpose of impact assessment in EcIA is: *“to assess and report significant residual effects that remain after mitigation measures have been taken into account. However, it is good practice for the EcIA to make clear both the potential significant effects without mitigation and the residual significant effects following mitigation”*.
- 2.15 Impact assessment is required for each feature determined as important and not for other features. CIEEM guidelines (2018) advise that each impact assessment should consider, if possible, the different stages of a development (construction, operation and decommissioning) and that it should be characterised by the following:
- Positive or negative - whether the impact leads to an adverse, beneficial or neutral effect;
 - Extent – the spatial area over which the impact occurs;
 - Magnitude – change in, for example, the amount of habitat or the size of population;
 - Duration – both in relation to the life cycle of the ecological feature and of the life of the project;
 - Frequency and timing – for example, the number of disturbance incidents to birds and their timing in relation to the breeding cycle; and
 - Reversibility – if and at what timescale recovery is possible.
- 2.16 As with the assessment of importance, CIEEM 2018 does not encourage a classification of the magnitude of impacts on a scale of severity. Rather, the significance of each impact should be assessed as the quantity of a feature of importance impacted; for example, residual loss of 5% of the extent of woodland within a Local Wildlife Site or gain of 10% in the extent of a section 41 habitat (hedgerows) on the site.

Avoidance, mitigation, compensation and enhancement

- 2.17 CIEEM guidance (2018) recommends a mitigation hierarchy (Figure 2). Once important features and significant impacts are identified, the project design should be modified where possible to avoid significant impacts. If avoidance is not possible, mitigation then compensation should be sequentially considered. A residual impact is an impact that remains after mitigation but is documented here both before and after compensation, as mitigation, particularly if embedded in the design, is assumed to be delivered without input from the LPA or other regulator, whilst compensation may require planning conditions and have some uncertainty on which the regulator should deliberate. Enhancement is an activity that results in a net gain in biodiversity, generally for an important feature, “over and above” anything required for mitigation or compensation. The terms mitigation and compensation are not always clearly defined and there is difference of opinion on their definitions. This report follows the Information Paper on the subject developed in consultation with Natural England for HS2 (2017), from which this quote and illustration are taken:

“A clear distinction is made between the use of the terms ‘mitigation’ and ‘compensation’ reflecting the habitual use in ecological impact assessment of ‘mitigation’ to mean ‘measures taken to avoid or reduce negative impacts’, as separate from ‘compensation’ meaning ‘measures taken to make up for the loss of, or permanent damage to, biological resources through the provision of replacement areas’”

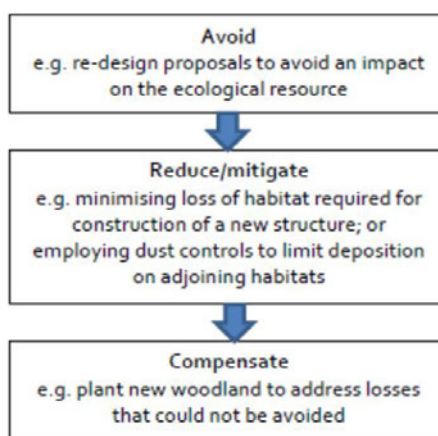


Figure 2: The mitigation hierarchy (from HS2 2017)

Limitations of the Assessment

- 2.18 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 several site visits, as such seasonal variations cannot be fully 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. However, the survey area was visited on a number of occasions over the optimal period, ensuring that detailed habitat information could be gathered. It is therefore considered that the survey work has allowed a robust assessment of habitats and botanical interest across the site.
- 2.19 The specific protected species surveys were undertaken at the appropriate time of year and during suitable weather conditions to an appropriate level of survey effort. Any specific limitations are noted in the relevant sections above or discussed in the results section.

3.0 Baseline Ecological Conditions

Desktop Study

Notable species

- 3.1. As part of the PEA a 2km data search was requested from the Hampshire Biological Information Centre (HBIC). The records included a number of priority species relevant to the site, more details on each of these species can be found within the PEA, however a summarised version is included in Table 2 below:

Table 2: Notable species records within 2km of the site in the last 10 years

Species group	Notable species	Distance of closest record
Invertebrates	Small heath (<i>Coenonympha pamphilus</i>)	395m
	Shimmering ruby-tail (<i>Chrysis fulgida</i>)	1.4km
	Scarce four-dot pin palp (<i>Bembidion quadripustulatum</i>)	340m
	Stag beetle (<i>Lucanus cervus</i>)	1.3km
	Dingy skipper (<i>Erynnis tages tages</i>)	1.9km
	Wall (<i>Lasiomata megera</i>)	585m
	White admiral (<i>Limenitis camilla</i>)	405m

	Brown hairstreak (<i>Thecla betulae</i>)	335m
	48 species of priority moth species	Within 2km
	Thin weblet (<i>Agyneta mollis</i>)	640m
	Broad groove-head spider (<i>Monocephalus castaneipes</i>)	800m
Reptiles and amphibians	Common toad (<i>Bufo bufo</i>)	500m
	Great Crested Newt (<i>Triturus cristatus</i>)	320m
	Grass snake (<i>Natrix natrix</i>)	440m
	Slow worm (<i>Anguis fragilis</i>)	530m
	Adder (<i>Vipera berus</i>)	1.2km
Bats	Common pipistrelle (<i>Pipistrellus pipistrellus</i>)	Within 2km
	Soprano pipistrelle (<i>Pipistrellus pygmaeus</i>)	Within 2km
	Brown long-eared (<i>Plecotus auritus</i>)	Within 2km
	Noctule (<i>Nyctalus noctua</i>)	Within 2km
	Serotine (<i>Eptesicus serotinus</i>)	Within 2km
	Daubenton's (<i>Myotis daubentonii</i>)	Within 2km
	Whiskered/Brandt's (<i>Myotis mystacinus/brandtii</i>)	Within 2km
	Natterer's (<i>Myotis nattereri</i>)	Within 2km
Other mammals	Western European hedgehog (<i>Erinaceus europaeus</i>)	340m
	Harvest mouse (<i>Micromys minutus</i>)	915m
	Polecat (<i>Mustela putorius</i>)	210m
Birds	White-tailed eagle (<i>Haliaeetus albicilla</i>)	Within 2km
	Red kite (<i>Milvus milvus</i>)	Within 2km
	White-fronted goose (<i>Anser albifrons</i>)	Within 2km
	Scaup (<i>Aythya marila</i>)	Within 2km
	Lapwing (<i>Vanellus vanellus</i>)	Within 2km
	Herring gull (<i>Larus argentatus</i>)	Within 2km
	Little egret (<i>Egretta garzetta</i>)	Within 2km
	Turtle dove (<i>Streptopelia turtur</i>)	Within 2km
	Kingfisher (<i>Alcedo atthis</i>)	Within 2km
	Cuckoo (<i>Cuculus canorus</i>)	Within 2km
	Merlin (<i>Falco columbarius</i>)	Within 2km
	Hobby (<i>Falco Subbuteo</i>)	Within 2km
	Cetti's warbler (<i>Cettia cetti</i>)	Within 2km
	Corn bunting (<i>Emberiza calandra</i>)	Within 2km
	Yellowhammer (<i>Emberiza citronella</i>)	Within 2km
	Reed bunting (<i>Emberiza schoeniclus</i>)	Within 2km
	Lesser redpoll (<i>Acanthis cabaret</i>)	Within 2km
	Hawfinch (<i>Coccothraustes coccothraustes</i>)	Within 2km

	Linnet (<i>Linaria cannabina</i>)	Within 2km
	Bullfinch (<i>Pyrrhula pyrrhula</i>)	Within 2km
	Grasshopper warbler (<i>Locustella naevia</i>)	Within 2km
	Bluethroat (<i>Luscinia svecia</i>)	Within 2km
	Marsh tit (<i>poecile palustris</i>)	Within 2km
	House sparrow (<i>Passer domesticus</i>)	Within 2km
	Dunnock (<i>Prunella modularis</i>)	Within 2km
	Firecrest (<i>Regulus ignicapilla</i>)	Within 2km
	Starling (<i>Sturnus vulgaris</i>)	Within 2km
	Song thrush (<i>Turdus philomelos</i>)	Within 2km
	Wryneck (<i>Jynx torquilla</i>)	Within 2km
	Short-eared owl (<i>Asio flammeus</i>)	Within 2km
	Barn owl (<i>Tyto alba</i>)	Within 2km

Statutory Sites

- 3.2. The site itself is not designated for its ecological importance or for its nature conservation value. There are no internationally designated statutory sites within 15km, however the site does fall within the North Sussex Water Resource Zone for the Arun Valley Ramsar, Special Area of Conservation (SAC) and Special Protection Area (SPA) located c. 15.7km west of the site. This is designated for supporting a nationally significant population of Berwick's sawn Cygnus *columbianus bewickii*, as well as being used regularly by over 20,000 waterfowl, supporting Annex II species: Ramshorn snail *Anisus vorticulus* (primary reason), and internationally important populations of gadwall *Anas strepera*, and shoveler *Anas clypeata*.
- 3.3. There was one nationally designated site within 2km of the site boundary; Tottington Wood Local Nature Reserve (LNR) is located approximately 1.3km south of the site.
- 3.4. There are six non-statutory sites within 2km of the site boundary, these are all Local Wildlife Sites (LWS's):
- Oreham Common LWS, located approximately 280m east of site;
 - Hoe Wood LWS, located approximately 310m south of site;
 - Broadmare Common LWS, located approximately 450m north of site;
 - Henfield Common LWS, located approximately 970m north of site;
 - Tottington Wood LWS, located approximately 1.3km south of site;

- River Adur Water Meadows and Wyckham Wood LWS, located approximately 1.5km west of site.

Notable offsite habitats

3.5. There were five notable or priority habitats identified within 2km of site (Figure 3), including:

- Deciduous woodland, the nearest of which was located directly south;
- Ancient and semi-natural woodland, the nearest of which was located 90m south-east;
- Traditional orchard, the nearest of which was located approximately 247m west;
- Coastal and floodplain grazing marsh, the nearest of which was located approximately 615m south-west of site;
- Lowland fen, located approximately 1.88km south-west of site.



Figure 4: Ancient and semi-natural woodland (vertical hatches), deciduous woodland (forest green), coastal floodplain and grazing marsh (light blue), traditional orchard (lighter green), and lowland fens (red/pink), within 2km of the site.

Baseline habitats on the site

3.6. The site was subjected to a UK Hab survey as part of a preliminary ecological appraisal undertaken on the 22nd November 2023. The findings are summarised below and are described in full detail in the accompanying PEA (The Ecology Partnership 2024a).

- 3.7. The site is dominated by pasture grassland, surrounded by grown out hedgerows which have formed mixed scrub, with some mature trees across the north-south field divide and within scrub boundaries.
- 3.8. No habitats on site were considered to meet the criteria for priority habitat, however, the ecologically valuable lines of trees around the perimeter of the fields were deemed to be of significant value as green corridors. None of the remaining habitats on site have sufficient inherent ecological value, and as such is not required to be assessed at EcIA level.



Figure 4. Habitat map for the site.

Table 4: Habitats and Level of Importance

Habitat type	Description	Level of importance
Modified grassland	The two northern fields on site were modified grassland. These had an extremely short sward (c. 2-3cm), due to grazing by horses. It appears likely that these fields were where the horses were most frequently pastured, given the proximity to the house/stables and more permanent horse amenities in place. The characteristic species here were dominated by perennial rye grass, with abundant creeping bent white clover, and silverweed, with occasional annual meadow grass, timothy, creeping buttercup, scentless mayweed, and marsh cudweed.	Site

Other neutral grassland	All of the southern fields were classified as other neutral grassland. The sward was, again, shortened significantly by grazing, although not as significantly as in the northern fields. The grassland was slightly tussocky in places, with hard and soft rush apparent, indicating seasonal wetness in parts of the fields. The western most field had the longest sward and was evidently grazed the least out of the whole site. The characteristic species of these field included dominant Yorkshire fog, with abundant meadow foxtail, and common bent, frequent sweet vernal grass, creeping buttercup, creeping bent, red fescue, and occasional greater bird's-foot trefoil, hard rush, common fleabane, white clover, meadow buttercup, and marsh foxtail.	Site
Mixed scrub	Mixed scrub dominated by hawthorn and blackthorn, with occasional goat willow, hazel, field maple, elder, and crab apple surrounded the pasture fields on almost all sides. These occasional extended into the understorey of the lines of mature trees, and appeared to have grown out of historic hedgerow borders through lack of management. These were densest along all borders of the south-western field, the western border of the northern fields and along the roadside on the eastern edge of site.	Site
Ecologically valuable line of trees	Mature lines of trees were present along the boundaries of the three fields on site. These were dominated by mature pedunculate oak, with occasional ash, field maples and willows.	Local

Species and species groups on site

Bats

- 3.9. Following the tree inspections and subsequent endoscopic and emergence/re-entry surveys it was confirmed that roosting bats were likely absent from the trees to be impacted by the development (The Ecology Partnership, 2024c).
- 3.10. The tree lines and scrub around the perimeter of the site provided suitable foraging opportunities and commuting links to the surrounding landscape for bats. The grassland on site, whilst species-poor, still offers some minor value for foraging. The site was generally considered to be of 'low' habitat suitability of foraging and commuting bats, owing to lack of extensive woodland or other high value foraging habitat in the local area.
- 3.11. Activity surveys found common pipistrelle to be the most frequently recorded species on site, with lower numbers of soprano pipistrelles, serotine and brown long-eared bats, and rare occurrences of myotis species and noctules (The Ecology Partnership, 2024c). However, it should be noted that common pipistrelles were still only found in relatively low numbers.
- 3.12. Two Anabat Express static recording devices were deployed across the site in April, May, June, July, August, September, and October, for five consecutive days each. In total 2,085

bat passes were recorded during the automated surveys, comprising a total of at least 8 species: common pipistrelle, soprano pipistrelle, *Myotis* spp., noctule, Leisler's bat *Nyctalus leisleri*, brown long-eared *Plecotus auritus*, and serotine *Eptesicus serotinus*, in addition to individuals which could only be identified as 'big bats'. The activity on site was dominated by soprano pipistrelle, making up approximately 60.14% of the registrations, with a peak average passes per night of c.20. The majority of the remaining activity was dominated by common pipistrelle (c.7 passes/night peak average), *Myotis* spp. (c.6 passes/night peak average), and noctule (c.2 passes/night peak average). Calls of other species were minimal and only accounted for 1.73% of all calls., with an average of 0.06 - 0.29 passes per night.

- 3.13. Overall, the bat assemblage utilising the site for commuting/foraging was considered to be of 'Site' value only.

[REDACTED]

[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Reptiles

- 3.15. The boundary scrub was of high suitability for reptiles. On completion of the reptile survey, it was confirmed that the site supported a low slow worm population (The Ecology Partnership 2024d). This population is considered to be of no more than 'Site' value.

Dormouse

- 3.16. Dormouse surveys carried out between May and October 2024 did not record presence of any dormouse (The Ecology Partnership 2024b). There are also no records of dormouse within 2km of the site boundary. Given all of the above survey evidence, it is considered

that dormice are likely to be absent from the site, and therefore they are scoped out of this assessment.

Great crested newts

- 3.17. Ponds 2 and 3, located 270m and 280m from the proposed works area on site, tested positive for the presence of GCN (The Ecology Partnership 2024e). There were no ponds on site and the terrestrial habitat was limited in suitability with short-sward grazed grassland dominating the construction area. As such it is considered unlikely GCN are present on site, however, presence of low numbers of individuals in the edge habitat cannot be discounted. If present, these would be considered to be of **Site** value.

Breeding birds

- 3.18. Nesting birds are likely to be using the scrub, and trees on site. However, due to the size of the site and a lack of high value habitats and features within the majority of the site, it is considered that the breeding bird assemblage on site is likely to be of importance at '**Site**' level only.

Hedgehog

- 3.19. The scrub edge along the boundaries of the site was suitable to support hedgehog. This species are likely to be utilising the edge habitat on site for foraging. Due to the size of the site, any population of hedgehog on site is likely to be of importance up to '**Site**' level.

Invertebrates

- 3.20. Due to the relatively small extent of the site and low botanical diversity of the grassland, it is considered likely that the invertebrate assemblage on site is unlikely to exceed '**Site**' value. As such, it is considered that invertebrates are not required to be assessed at EcIA level.

Future baseline

- 3.21. Future baseline conditions are conditions which would be likely to arise if present conditions continue and a change of land use through the planning system does not occur. The habitats on site are unlikely to change in the future, if current grazing regimes are continued.

3.22. Table 5 summarises the findings of these surveys and assesses the level of importance for each notable species/species group:

Table 5: Summary table of faunal groups surveyed & present on the site & levels of importance

Faunal Group/Species	Description	Level of importance
Bats – roosting	Following the tree inspections and subsequent endoscopic and emergence/re-entry surveys it was confirmed that roosting bats were likely absent from all trees on site to be affected by the works. However, they may utilise trees outside the works area that were not surveyed.	Site
Bats – foraging and commuting	The activity surveys found the site to only support relatively low numbers of bats with the most frequently recorded species being common and soprano pipistrelles. Six species were recorded overall, however the majority were only recorded in very low numbers. The edge habitats on site may form part of a network of foraging and commuting habitat for bats across the landscape. However, high value foraging habitat is greater in the surrounding local area, and, as such, the site itself is of low value for commuting/foraging bats.	Site
Reptiles	The boundary scrub was of high suitability for reptiles. On completion of the reptile survey, it was confirmed that the site supported a low slow worm population	Site (legislative implications)
Breeding Birds	Breeding birds are likely to be using the trees and scrub on site as well as the buildings for nesting purposes.	Site (legislative implications)
Hedgehog	Grass margins and boundary scrub on site was considered suitable to support hedgehog.	Site
Invertebrates	Abundant nectar resources are available in parts of the site, however, the poor botanical diversity and relatively small size of the site likely limits the overall value of this assemblage.	Site

4.0 Description of the Proposed Development

4.1 The proposals for site are to redevelop the eastern and northern fields. Twelve new commercial units are planned, alongside their associated parking, access and landscaping. The westernmost field and a portion of the adjacent one are to be retained as green space for biodiversity net gain enhancement.

4.2 Embedded **Avoidance/Mitigation** measures incorporated into the submitted site layout include:

- The retention and protection of the majority of boundary habitat along the field boundaries, to avoid impacts on birds, bats, reptiles, and hedgehog in these areas.

5.0 Assessment of Effects as well as Avoidance and Mitigation Measures

5.1 The impact assessment is for the development as described above, including the proposed site layout plan (See Appendix 1). The assessment does not separate construction and operation impacts, solely assessing effects on important features that would result from the final layout. Residual impacts are those after mitigation and before compensation, which is considered in this section.

5.2 Features within the red line that require an impact assessment are those determined as important in section 3, namely;

- Boundary scrub / mature trees (wildlife corridor)
- Bats (roosts and foraging and commuting habitat)
- Reptiles
- GCN
- Breeding birds, and,
- Hedgehog.

5.3 Important features outside the redline boundary, but within the zone of influence are:

- Arun Valley SPA;
- Tottington Wood LNR;
- Five LWS within 2km of the site.

Boundary scrub / mature tree lines (wildlife corridor)

5.4 A 23m section of linear scrub and line of small trees will be lost along the southern boundary of the site to facilitate access to the site. A 20m section of small trees and scrub will be lost from the central tree line to allow vehicular access from the south of the site in the north. A 57m section of mostly scrub and a line of three trees, will be lost along the western boundary of the northern field, as a result of level changes associated with the new building to the east of this feature. However, all remaining boundary vegetation is being retained. As such, it is considered that the proposals will result in a **minor adverse effect** on the function of the boundary scrub as a wildlife corridor.

Bats (roosts)

- 5.5 No bat roosts will be lost as a result of the development. A single small tree assessed as containing PRF-I features will be lost. It is recommended this tree is subject to soft felling and that a suitable bat box is established on a nearby retained mature tree prior to its loss. As such, it is considered that there will be a **neutral effect** for roosting bats.

Bats (foraging and commuting)

- 5.6 The site is relatively small in size, with features of main interest for commuting and foraging restricted to the boundary scrub and trees, which was confirmed in the observations of bats during the activity transects. The development would result in the permanent loss of three section of linear scrub and trees measuring, 20m, 23m and 57m in length. In the absence of compensatory commuting habitat this would result in a partial severance of the commuting features on site used by low numbers of common bat species. A sensitive lighting strategy should be prepared to reduce the impact of any artificial lighting on bat commuting and foraging habitat, as recommended within the Bat Activity report (The Ecology Partnership 2024c).
- 5.7 If a sensitive lighting strategy is enacted, this will reduce the impacts of foraging/commuting bats, however, there will still be a **minor adverse effect** for small numbers of common species of foraging and commuting bats, owing to loss of commuting habitat. As such, further compensatory measures are required.

Reptiles

- 5.8 The grassland within the construction area is largely short sward and heavily grazed offering habitat of little value to reptiles, however low numbers of slow worm were recorded in the boundary scrub. Proposals will result in the loss three sections of linear scrub measuring, 20m, 23m and 57m in length. However, an extensive area of taller sward grassland and scrub will be retained in the west of the site. Without mitigation this would result in a minor negative effect on the reptile population on site, as low numbers of individual could be harmed or killed during ground clearance works in the short-term and have lost a small areas of suitable habitat in the long-term. To avoid harm to individual reptiles and mitigate for the loss of habitat within the site, sensitive clearance

methods will be undertaken as detailed in the reptile report (The Ecology Partnership, 2023d).

- 5.9 Whilst this will mitigate any short-term physical impacts to individuals that would otherwise occur during habitat clearance works on site, without sufficient compensatory offsite habitat, there will still be a **minor negative effect** on the reptile population in the long-term. As such, further compensatory measures are required.

GCN

- 5.10 GCN are known to be present in the local area, however, were considered unlikely to be present on site (The Ecology Partnership, 2023e). The optimal habitat for GCN was restricted largely to the site boundaries, the mature mixed scrub along the southern boundary. The majority of habitat loss will be attributed to the loss of heavily grazed short-sward grassland within the interior of the site, however small sections of boundary scrub will also be removed. Construction impacts will be mitigated through reasonable avoidance measures (RAMs), as detailed in the GCN report.
- 5.11 On the basis that these RAMs will be adhered to during vegetation clearance the development would result in a **neutral effect**, with regards to the potential GCN which may infrequently use the site.

Breeding birds

- 5.12 The legislative protection afforded active nests, birds and their eggs and young will be met through the clearance of vegetation outside of the breeding season or after a nesting bird check by a suitably qualified ecologist. The development will result in a temporary loss of suitable nesting habitat provided by small number of trees, and scrub. It is not considered that these habitats are likely to support significant numbers of breeding birds or species of significance
- 5.13 It is considered that the temporary loss of nesting bird habitat will result in a **minor negative effect of site importance**, and further compensation is required.

Hedgehog

- 5.14 Due to the removal of small sections of scrub on site, there will be a temporary loss of some hedgehog habitat, and without mitigation, potential for harm to come to hedgehogs on

site. As such, sensitive clearance and Reasonable Avoidance Measures (RAMs) are considered the most appropriate and proportionate approach to avoid any immediate harm to hedgehog. Scrub habitat within the development footprint should be cut in two stages: first to 150mm, followed by a check by an ecologist, and then a second cut down to ground level. Any log and brash piles should be removed carefully by hand in order to prevent harm to any hedgehog which could be found here. These would be placed in the retained areas of edge scrub, away from the works area. This would be undertaken under ecological supervision in two stage cuts during the active season for hedgehog (April - October weather dependent).

- 5.15 If this method is adhered to, direct harm to hedgehog will be avoided, however loss of a small area of suitable habitat will still take place, therefore a **minor negative effect of site importance** would be anticipated in the absence of compensation.

Arun Valley SAC, SPA, & Ramsar

- 5.16 This statutory designated site comprises a series of open wetland habitats, designated as an SPA for its nationally significant population of Berwick's Swan, as an SAC for supporting Annex II Species Ramshorn snail, and as a Ramsar site for its value to important wetland invertebrate, ditch flora, and waterfowl assemblages. The closest of these fragments is located 16km to the west. As such, no direct negative impacts would be anticipated from construction, and individually the site would not result in significant long-term impacts on this site. However, within mitigation, the operational phase could contribute to the recognised significant cumulative effects of water extraction on this site, as the site is located within SNWSZ.
- 5.17 It is understood that the scheme will be designed to maximise rainwater and grey water harvesting and recycling. Water use on site is expected to be limited to small volumes for the toilets and sinks for each unit, which will only be used by small numbers of employees. As such, it is likely that sufficient rain/grey water harvesting and recycling will be enough to cover the minimal water need for the site and ensure net-water neutrality. However, if this is found not to be achievable, offsetting would need to be pursued. On this basis, this would result in a **neutral effect** on this designation.

Tottington Wood LNR

- 5.18 There is one national statutory designated site located within 2km of the site: Tottington Wood LNR. This is located approximately 1.3km south of site. Due to the non-residential nature of the development and distance from this site, it is determined that the development would result in **no residual effect** on the LNR..

Various non-statutory designated sites

- 5.19 The site does not form part of a non-statutory designation, however, a total of five non-statutory designations are present within 2km of the site. The closest of these is Oreham Common LWS. Due to the non-residential nature of the development and distance from this site, it is determined that the development would result in **no residual effect** on non-statutory designated sites.

6.0 Cumulative Impacts

- 6.1 Only three significant future developments have been identified in the surrounding area. These are reviewed below and the location of these additional housing developments in relation to the application area are shown in Figure 6.

DC/23/0189 - Sandgate Nursery West End Lane Henfield West Sussex BN5 9RD - Registered

- 6.2 Located 1.8km to north-west: Outline application for erection of a continuing care retirement community of up to 72 units of accommodation (Use Class C2) and up to 10 starter homes (Use Class C3) with associated community facilities including medical centre and on-site laundry and catering facilities, with access, infrastructure, open space, landscaping and associated works (all matters reserved except for access). Ecological Impact Assessment by The Ecology Partnership concluded no significant residual effects on protected species, or statutory or non-statutory sites, with the exception of water neutrality, as mitigation measures have not yet been confirmed acceptable by Natural England.

DC/24/1538 - Land To The South of Furners Lane Henfield West Sussex - Registered

- 6.3 Located 1.3km to north: Application for erection of 29 dwellings with associated landscaping, open space, parking and creation of new vehicular access. Ecology Assessment by Sam Watson Ecology concluded no significant effects on statutory or non-statutory sites, or protected species as a result of the development and a measurable

biodiversity net-gain of 15.44%. However, mitigation measures for water neutrality have not yet been confirmed acceptable by Natural England.

EIA/24/0004 EIA Screening Request for the Land to the East of Charlwood Drive, Henfield

- 6.4 Located 1.6km to north: EIA Screening request submitted in September 2024 for a potential future application for 200 dwellings with associated landscaping and public open space. No Ecology information has been presented to date.



Figure 6: Location of relevant potential future housing development

- 6.5 Assuming that all recommended ecological mitigation and compensation recommended in the ecology reports for both site is adhered to, and water neutrality can be achieved, a cumulative impact from the developments would be insignificant.

7.0 Compensation

- 7.1 It is recommended that the compensation methods, outlined below, are secured as part of conditions for the planning application if approved. In this development, compensation covers the loss of habitat for reptiles, GCN, birds, bats, and hedgehogs, as a result of the minor loss of scrub and trees. Compensation addresses the loss of habitat, which could not

be avoided through the development plans, which needs to provide a minimum area of commercial floorspace.

Bats (Foraging and commuting)

- 7.2 As part of the landscaping strategy a planting scheme will be developed to ensure that there is connectivity maintained across the site, with new planting compensating for minor fragmentation caused by the development. It is considered as long as recommended mitigation such as a sensitive lighting scheme and compensatory measures with the planting of additional trees and scrub, then there will be **no residual effect**.

Reptiles and GCN

- 7.3 In order to compensate for the small loss of reptile and GCN habitat within the site, a greater extent of new scrub and wildflower grassland will be established along the site boundaries and all habitats within the western area of the site will be enhanced and managed for wildlife. This will include creation of hibernacula, and a small pond within the attenuation basin. On this basis, there will be **no residual effect** on reptiles and GCN.

Breeding birds

- 7.4 New tree/shrub planting and bird boxes included within the development will compensate for the minor loss of nesting and foraging habitat, result in a net gain of suitable breeding and foraging habitat for bird species post development. As such, there will be **no residual effect**.

Hedgehog

- 7.5 Loss of any potentially suitable hedgehog habitat during the remediation process will be compensated for by new scrub planting, and the installation of log piles and hedgehog shelters in suitable areas throughout edge of the site. As such, **no residual effect** to hedgehogs are anticipated.

8.0 Enhancement

- 8.1 The following enhancements are proposed to be incorporated into the site design, which go beyond compensation:
- Provision of additional bat boxes on trees and buildings;

- Landscaping strategy includes additional SUDS attenuation basin which will be designed for wildlife, creating new pond habitat, not previously on site.
- Long-term management of created communal habitats to benefit wildlife.

9.0 Monitoring

9.1 Ecological clerk of works tasks will be required during site clearance, to ensure that sensitive clearance measures for GCN, reptiles, birds, and hedgehog is adhered to, as well as implementation of the conditions, and to check that there is no change in the baseline that may alter the implementation of the development. All details of monitoring and mitigation measures during site preparation and construction would be detailed within a Construction Environmental Management Plan (CEMP).

9.2 All habitats and ecological features on site will be monitored, maintained, and managed for biodiversity in the long-term, including those within the receptor site. Full details of monitoring, maintenance, and management measures would be detailed within a Habitat Management and Monitoring Plan (HMMP).

10.0 Summary and conclusions

10.1 The business park development at land to the North of Old Brickworks, Henfield results in a change of land use of c3.27ha of horse grazed pasture, creating 1.3ha of new commercial buildings and associated road access and parking and creation of 0.8ha of new peripheral green infrastructure. The remaining 1.54ha of existing habitat will be retained or enhanced for wildlife. Table 6 (below) summarises the effects on important features and how mitigation and compensation have been applied.

Baseline ecology and effects

10.2 The baseline features evaluated as important (through site designation, legislative protection or priority status on NERC Act 2006 Section 41 lists), so needing an assessment of effects, are as follows.

On site:

- Linear scrub and tree lines (Wildlife corridor)
- Bats (roosts and foraging and commuting habitat);
- Reptiles;

- GCN;
- Breeding birds; and,
- Hedgehog

Off site:

- Arun Valley SAC/SPA/Ramsar
- Tottington Wood LNR
- Five non-statutory sites within 2km

Mitigation, compensation and enhancement

10.3 Embedded mitigation includes the following:

- The layout protects and maintains majority of the existing mature linear boundary habitats, as well as tall-sward grassland and scrub in the west of the site.

10.4 Non-embedded mitigation which should be secured as part of any planning permission and are as follows:

- Sensitive lighting scheme for bats.
- Recommended working practices and timings of works will also provide mitigation for potential protected species on site, to be detailed within a CEMP.
- Water neutrality measures such as rain/greywater recycling, or through offsetting.

10.5 Residual impacts are removed through compensation, which should be secured as part of any planning permission and are as follows.

- Planting of new hedgerow, scrub, and native trees, to ensure that replacement habitat is provided which in turn will provide habitat for reptiles, GCN, foraging and commuting bats, and breeding birds.
- Provision of bird, bat and hedgehog nesting/roosting opportunities.

10.6 Enhancements should be secured by condition including:

- Landscaping strategy includes additional SUDS basins which will be designed for wildlife, creating new wetland habitat, not previously on site.
- Long-term management of created habitats, as well as retained and enhanced habitats in the west of the site to benefit wildlife, to be detailed within a HMMP or LEMP.

- 10.7 Monitoring will include an ecological clerk of works at construction phase and monitoring to ensure implementation of the conditions and to check that there is no change in the baseline that may alter the implementation of the development. All newly created habitats will be monitored and maintained in the long-term to ensure their biodiversity value, to be detailed within a HMMP/LEMP document and secured through Section 106 agreement.

Table 6: Effects of the development

Feature	Effect type and magnitude	Mitigation and residual effect	Compensation	Residual effect	Enhancement/ biodiversity gain
Designated sites					
Arun Valley SAC/SPA/Ramsar	Negative (minor), Cumulative negatives effects from increased water extraction within the SNWSZ.	Neutral, Use of sufficient rainwater harvesting, and offsetting any remaining deficit to ensure water neutrality.	None	Neutral	None
LNR	Neutral	None	None	Neutral	None
Non-statutory designations within 2km	Neutral	None	None	Neutral	None
Priority/important habitats					
Mature linear boundary scrub	Negative (minor) Site level Permanent loss of three small sections of linear scrub and trees.	Negative (minor) Site level None	Creating new boundaries of linear scrub and species-rich hedgerows around the edge of the development.	Neutral	None
Priority and protected species					
Bats (roosts)	Negative (minor) Loss of tree with PRF-I features of value to roosting bats.	Negative (minor)	Provision of two bat boxes on retained boundary trees near to the tree to be lost.	Neutral	Provision of additional bat boxes throughout the site
Bats (foraging)	Negative (minor), Site level Potential negatives effects from artificial light, and severance of commuting habitat	Negative (minor), Site level Sensitive lighting scheme	Creating new boundaries of linear scrub and species-rich hedgerows around the edge of the development.	Neutral	None

Reptiles/GCN	Negative (minor) site level Loss of individuals and permanent loss of largely sub-optimal habitat and small area of optimal habitat.	Neutral RAMs under supervision of an ecological clerk of works.	Creating new boundaries of linear scrub and species-rich hedgerows around the edge of the development.	Neutral	Enhancing scrub and grassland in the west of the site and creating hibernacula
Breeding birds (active nests, all species)	Negative (minor) site level Damage to active nests and loss of habitat	Neutral Site clearance works timing outside of breeding bird season or under ecological supervision.	Planting of replacement habitat Use of bird boxes throughout the site	Neutral	None
Hedgehog	Negative (major) Loss of individuals and permanent loss of habitat	Negative (minor) Site clearance works timing outside of hibernation period and under a sensitive method of works.	New scrub planting and use of hedgehog shelters around site boundary.	Neutral	None

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The Ecology Partnership (2024a) Land to the north of the Old Brickworks, Henfield - *Preliminary Ecological Appraisal*

The Ecology Partnership (2024b) Land to the North of the Old Brickworks, Shoreham Road - *Dormouse Survey Report*

The Ecology Partnership (2024c) Land to the North of the Old Brickworks, Shoreham Road, Henfield- *Bat Survey Report*

The Ecology Partnership (2024d) Land at the Old Brickworks, Henfield – *Reptile Presence/ Likely Absence Survey Report*

The Ecology Partnership (2024e) *Land to the north of the Old Brickworks, Henfield- eDNA report*

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