Ecological Appraisal

Proposed New Supermarket

Puckeridge, Ware, Hertfordshire

14 February 2023

ENVIRONMENTAL AND
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encon associates

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Executive Summary

This ecological appraisal report details the potential ecological effects of the proposed development of a new small supermarket in Puckeridge, Ware, Hertfordshire.

The site currently contains an existing petrol station and shop. The site contains limited vegetation, although a strip non-native planting is present on one boundary. The site is unlikely to support protected species, but surveys are required to confirm the status of bats on the site, and buildings and vegetation could be used by nesting birds.

Loss of the habitats would not have a significant ecological effect. Mitigation measures are required to avoid disturbing nesting birds and specific mitigation would be required if bats are found on the site. A wildlife-friendly lighting scheme is also recommended.

The development presents opportunities for ecological enhancements including planting of a new native-species hedgerow and the installation of bird nesting boxes.

The proposals would result in no net change in biodiversity on the site, as calculated for habitat units using the BNG methodology. However, there is the opportunity for a significant gain in hedgerow units (up to 234.73%) if a native-species hedgerow is planted on the site.

Provided all of the recommended surveys and mitigation measures are implemented, the development would comply with relevant nature conservation legislation and planning policy.

1.0 Introduction

1.1 *Background*

This document details the ecological effects of the proposed construction of a new small ASDA supermarket on Cambridge Road, Puckeridge, Ware, Hertfordshire (see Figure 1.1 for the site location). In December 2022, Encon Associates were instructed by Tim Blake to undertake an Ecological Appraisal survey of the site in order to provide information regarding the ecology of the site and inform plans for its redevelopment.

1.2 *Brief Description of the Proposed Works*

The proposals entail the clearance of the site including the demolition of all the existing buildings, followed by the construction of a new small supermarket with associated access and car parking.

1.3 *Scope*

This document aims to assess the likely ecological effects of the proposed development. The scope of this Ecological Assessment is to:

- Identify any potential biophysical changes as a result of the proposed development.
- Identify and provide a valuation of features of ecological interest on a site (such as habitats and protected species) and recommend further surveys should they be necessary.
- Assess the likely ecological effects of the development against relevant legislation and policy.
- Recommend avoidance and/or mitigation measures that are likely to be required to reduce the ecological impact of the proposals.

If no further surveys are recommended, this report can serve as full assessment of the ecological effects of the development in support of any planning application.

1.4 *Relevant Legislation*

1.4.1 *The Wildlife & Countryside Act*

The Wildlife & Countryside Act 1981 (as amended) (1) is the primary piece of legislation by which biodiversity in the UK is protected. The most relevant areas of the Act to development related activities are:

- The identification and subsequent protection of Sites of Special Scientific Interest (SSSIs), which prohibits damaging activities
- The protection of certain species listed in Schedule 5, which prohibits killing, injury, disturbance, damage and/or destruction of breeding sites and/or resting places and sale (it should be noted that all parts of this protection do not apply to all Scheduled species)
- The protection of wild birds and their nests, which prohibits damage or destruction of nests whilst in use. Species listed in Schedule 1 of the act receive additional protection from disturbance whilst they are building a nest or are near a nest containing eggs or young. It also prohibits the disturbance of dependent young.
- Measures to prevent the spread of invasive plant species.

1.4.2 *The Conservation of Habitats and Species Regulations*

The Conservation of Habitats and Species Regulations 2017 (known as the 'Habitats Regulations') (2), pass two EEC Directives into UK law. The Regulations protect sites and species deemed to be of conservation importance across Europe. The most relevant parts of the Regulations to development related activities are:

- The protection of Special Protection Areas (SPAs) and Special Areas of Conservation (SACs)
- The protection of species listed within Schedule 2 of the Regulations, which prohibits killing, injury, disturbance, damage and/or destruction of breeding sites and/or resting places and sale, this confers some level of habitat protection.

In order for activities that would be likely to result in a breach of species protection under the regulations to legally take place, a European Protected Species (EPS) mitigation licence must first be obtained from Natural England.

1.4.3 *The Protection of Badgers Act*

The Protection of Badgers Act 1992 (3), deals solely with the protection of badgers *Meles meles* in the UK. It prohibits killing, injuring or taking badgers, damaging, destroying or otherwise interfering with a badger sett, disturbing an occupied badger sett and sale of badgers.

1.4.4 *The Natural Environment and Rural Communities Act*

The Natural Environment and Rural Communities (NERC) Act 2006 (4) requires that public bodies to have regard to the conservation of biodiversity. This means that Planning Authorities must consider biodiversity when reaching planning decisions. Section 41 of the act lists habitats and species that are conservation priorities in England.

1.4.5 *The Environment Act*

The recently passed Environment Act 2021 (5) will have many implications for the protection of nature conservation in a development context but will require secondary legislation before many measures are implemented. However, in some local authority

areas, planning authorities are having regard to aspects of the Environment Act, such as Biodiversity Net Gain (BNG), when making planning decisions.

1.5 *Planning Policy*

1.5.1 *National planning policy*

Government policy with respect to the protection of biodiversity is laid out in the National Planning Policy Framework (NPPF) (6). This places an onus on development to minimise impacts to biodiversity and where possible to provide net biodiversity gain. The NPPF provides guidance to Local Authorities in how to conserve and enhance biodiversity through local Planning Policies and when assessing planning applications.

1.5.2 *Local planning policy*

At a local level, planning policy for East Herts is contained within the *East Herts District Plan 2018* (7):

- Policy NE1 *International, National and Locally Designated Nature Conservation Sites* protects designated sites of conservation value.
- Policy NE2 *Sites or Features of Nature Conservation Interest (Non-Designated)* requires development proposals to achieve a net gain in biodiversity, to apply the mitigation hierarchy and to incorporate ecologically beneficial planting into developments.
- Policy NE3 *Species and Habitats* requires the submission of evidence of the ecological effects of proposals. It also requires development to seek to enhance biodiversity; protects woodland, trees and hedgerows, local biodiversity sites, NERC Act Section 41 habitats and species; and requires in the integration of bird and bat boxes into new buildings.

- Policy NE4 *Green Infrastructure* protects the green infrastructure network across the district.

The full text of relevant policies is contained within Appendix 1.

1.5.3 *Other nature conservation policy*

Biodiversity Action Plans (BAPs) were the UK's response to the 1992 Convention on Biological Diversity. The UKBAP described the biodiversity of the UK and contained Action Plans for the most threatened habitats and species. It was implemented at a local level through regional and local BAPs. Whilst the UKBAP has expired, BAPs are still used at a more local level in some areas and species and habitats which were previously priorities within the UKBAP are now listed as Species of Principal Importance within Section 41 of the NERC Act 2006 (4). The site lies in the area covered by the *Hertfordshire Biodiversity Action Plan 2012* (HBAP, 8).

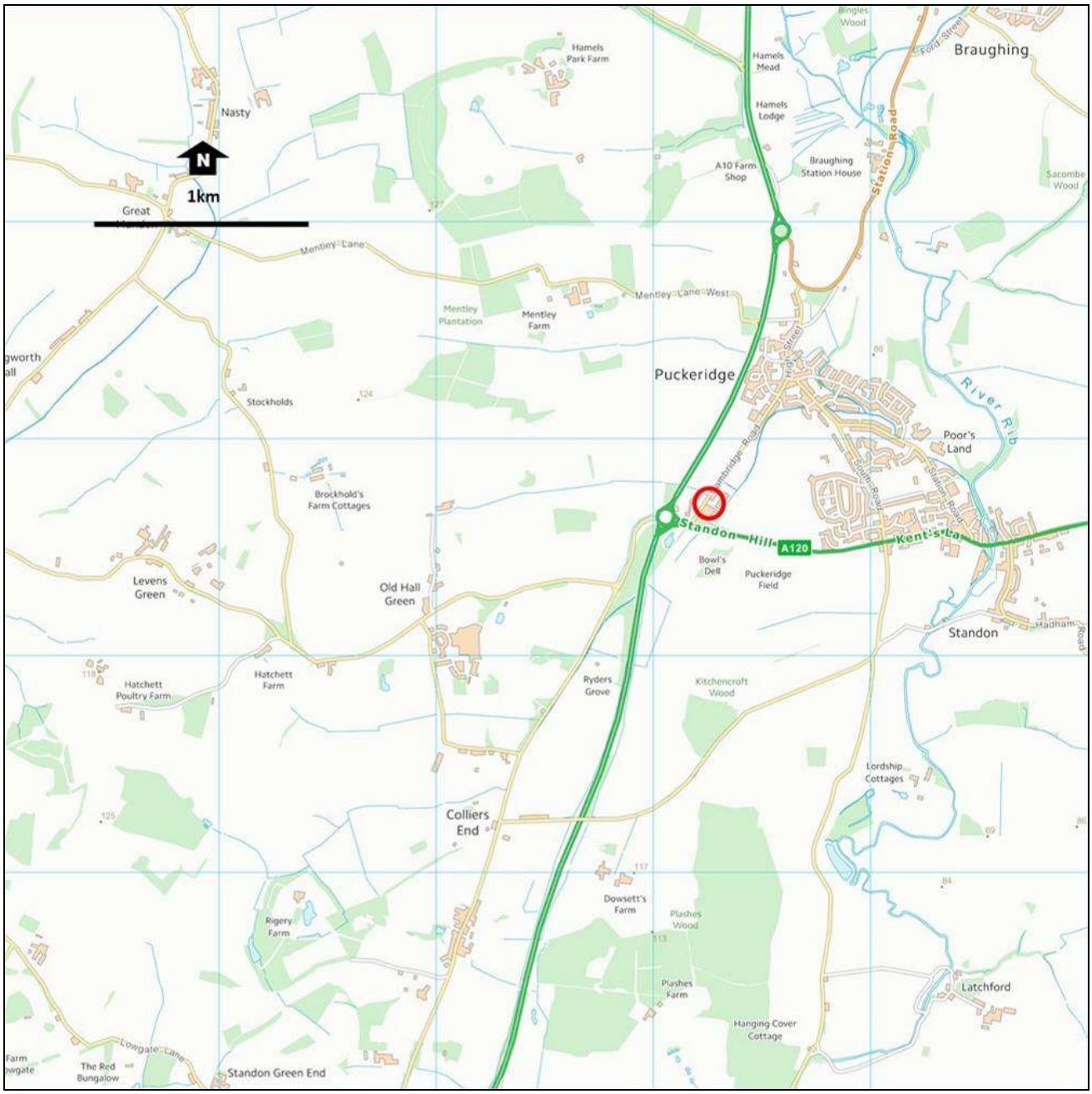

Figure 1.1: ***Site location.*** *Contains Ordnance Survey data © Crown copyright and database right 2018.*

2.0 Methodology

2.1 *Desk Study Methodology*

Available online resources such as the MAGIC (Multi-Agency Geographical Information for the Countryside) and NBN (National Biodiversity Network) websites were interrogated for relevant information, including statutory designated sites within 5km of the site. In addition, records of protected sites and protected and/or notable species from within 1km of the site was requested from the Hertfordshire Environmental Records Centre (HERC).

2.2 *Field Survey Methodology*

The survey was carried out by Dr Liam Russell CEcol MCIEEM for and on behalf of Encon Associates Ltd on 6 December 2022. The survey followed CIEEM's Preliminary Ecological Appraisal guidance (9). The survey consisted of a site walkover (loosely based on the "Phase 1" methodology (10), modified to suit the situation) with all accessible areas of the site and adjacent land (where relevant) covered. The habitats present were generally described, with attention paid to their potential to support protected species. A general search for evidence of protected species was also undertaken.

An assessment of the suitability of the buildings for roosting bats was undertaken in accordance with best practice guidance (11). The external surfaces of the buildings were searched for evidence that bats may be using, or previously have used, the building for roosting. A systematic search of the building was made for evidence of use by bats, particularly droppings. This included searching the walls and ground, especially below potential access points. Any potential roosting features and access/egress points were noted. The immediate surrounding habitat was also appraised for potential bat roosting,

commuting or foraging value. None of the buildings were accessed internally during the survey.

2.3 *Assessment Methodology*

2.3.1 *Introduction*

The methodology for the assessment of the likely ecological effects of the proposed development is based on the principles of CIEEM's *Guidelines for Ecological Assessment in the UK, 2nd Edition* (12). Although this assessment does not constitute a formal Ecological/ Environmental Impact Assessment, the CIEEM guidelines provide a useful framework for assessing ecological impacts at any level.

2.3.2 *Valuation*

Features of ecological interest are valued on a geographic scale. Value is assigned on the basis of legal protection, national and local biodiversity policy and cultural and/or social significance.

2.3.3 *Identification of Potential Ecological Impacts in Absence of Mitigation*

A development may have ecological effects beyond its site boundaries, therefore the CIEEM guidelines require that the 'zone of influence' be identified. Due to the relatively small size of this development, for the majority of ecological features, the zone of influence is considered unlikely to extend beyond the footprint of the works and immediately adjacent habitat.

Without mitigation, the proposed development may result in the following biophysical changes during construction and/or operation:

- Loss of and damage to habitats within or adjacent to the footprint of the development and construction zone.
- Any loss or damage of habitats could result in death and/or injury to protected species should they be present.
- Disturbance of immediately adjacent habitats and any wildlife using them during construction.

2.4 *Limitations*

This survey comprised a single walkover. As such it is only possible to gain a snapshot of the ecology of the site and it is possible that some seasonal species could be missed. However, given the location of the site, its history and the habitat types present, it is considered highly unlikely that any species or ecological features of significance would be missed.

The ecology of a site can change quickly over time. Therefore, this survey is considered valid for two years from the date of the report.

3.0 Ecological Baseline

3.1 *Site Context*

The site is located in the village of Puckeridge, approximately 9.5km west of Bishop's Stortford in Hertfordshire (see Figure 1.1 for location). This is within the South Suffolk and North Essex Clayland National Character Area (NCA). This area includes parts of Suffolk, Essex, Hertfordshire and Cambridgeshire. It is an ancient landscape of wooded arable countryside. The overall character is of a gently undulating, chalky boulder clay plateau, the undulations being caused by the numerous small-scale river valleys that dissect the plateau. There is a complex network of old species-rich hedgerows, ancient woods and parklands, meadows with streams and rivers that flow eastwards. The widespread moderately fertile, chalky clay soils give the vegetation a calcareous character. Semi-natural habitats of particular importance include sparsely scattered, small lowland meadows and ancient woodlands. These include Hatfield Forest and Bradfield Woods, which are important for rare species including the dormouse *Muscardinus avellanarius*, nightingale *Luscinia megarhynchos* and stag beetle *Lucanus cervus*, as well as being among the richest in the country for flowering plants such as bluebells. Parts of the river valley floors contain pasture and willow pollards, which contribute an uncommon pastoral quality. Mosaics of valley floor habitats such as grazing marsh, fen and wet woodland support EPS including great crested newt *Triturus cristatus*, otter *Lutra lutra* and pipistrelle *Pipistrellus* spp. bats, as well as the rare black poplar *Populus nigra* (13).

The proposed development site is located on the southwest corner of Puckeridge. The village is located within a broadly agricultural area and is surrounded by large arable fields with a network of hedges and small woods. The site is set within a southern extension to

the village and is surrounded by residential development, although farmland and other non-developed land is present nearby.

3.2 *Protected Sites*

3.2.1 *Statutory sites*

Plashes Wood SSSI is located approximately 1.4km to the south of the site. This is a species diverse pedunculate oak/hornbeam *Quercus rober/Carpinus betulus* woodland with a rich ground flora. The development site does fall within a SSSI Impact Risk Zone; however, the development does not fall into any of the categories considered to present a potential risk to the SSSI.

3.2.2 *Non-statutory sites*

Four non-statutory Local Wildlife Sites (LWS) are present within the search area:

- King's Wood LWS lies approximately 820m to the northwest of the site, beyond the A10. This is an ancient semi-natural woodland and is also listed within the Ancient Woodland Inventory.
- Broadfield Spring LWS is located approximately 510m to the west, across the A10. It is an ancient semi-natural woodland.
- Kitchencroft Wood LWS is located approximately 870m south of the site and is an ancient semi-natural woodland which is also listed within the Ancient Woodland Inventory.
- Puckeridge Lime Kiln LWS is located 790m to the north of the site and is designated due to the presence of protected species.

3.2.3 *Protected sites within the Zone of Influence*

It is possible for ecologically sensitive sites to be affected by development within their vicinity. However, all the sites identified here are considered to be outside of the zone of influence of the proposed development. They do not fall within the site or directly adjacent to it and therefore, no direct impacts in terms of habitat loss, damage or disturbance will occur. The development does not fall within a category that may pose a risk to the nearest SSSI. As they are considered to be outside of the zone of influence, these sites are not addressed further within this report.

3.3 *Description of Habitats Within the Zone of Influence*

3.3.1 *Introduction*

This site is an existing in use petrol filling station, including a forecourt with a small pay booth, it also includes a former residential premises, currently in use as an antiques shop (photo 1).

3.3.2 *Habitats*

The entire site is hard-surfaced with the exception of a narrow strip of ornamental planting on the southern boundary (target note 1, photo 2). This has been neglected and mostly overgrown with ivy *Hedera helix*, although a yucca *Yucca* sp. remains. This is overhung by an adjacent hornbeam *Carpinus betulus* tree (target note 2), and a number of self-set saplings are colonising the area, along with species such as dandelion *Taraxacum officianale* agg., wood avens *Geum urbanum*, nettle *Urtica dioica,* sycamore *Acer pseudoplatanus* saplings and cock's-foot *Dactylis glomerata.*

A number of weed species are present in the hard-surfaced areas including wood avens, nettle, dandelion, ivy and hornbeam saplings.

3.3.3 *Buildings*

The forecourt area is dominated by a metal canopy over the pumps (target note 3, photo 1). This also covers a small wooden shed-style payment booth.

The main building on the site is a former residential property that is now in use as an antiques shop (target note 4, photo 3). This two-storey building appears to date from the late 18th to early 19th century and is of rendered brick construction with a clay tiled roof. It has a brick-built single storey extension to the south (target note 5), which has a flat, bitumen felt-covered roof. This has another, smaller extension of similar construction to the south (photo 4). The smaller extension has wooden bargeboards around the roof. The main part of the building adjoins a large warehouse-type building to the east. The building is in generally good condition although some cracks are present in the walls. Gaps were noted around lead flashing at the rear, and where it joins to the adjacent warehouse (photo 5) and ivy covers the corner of the extension (photo 3).

A small collection of outbuildings is present at the northern edge of the site (target note 6, photo 6) which contains a wooden shed, a red-brick shed with a pitched roof and a larger red-brick shed with a flat roof. This area is partially overgrown by an ornamental garden shrub.

3.3.4 *UKHabs definitions*

Habitats present on the site have been classified in accordance with UKHabs definitions (14), this system is used to evaluate habitats for BNG calculations using the Natural England/Defra methodology (15).

Most of the site is classified as u1b *Developed land; sealed surface*, including u1b5 *Buildings*. The ornamental planting on the southern boundary is classified as a *non-native hedge*.

3.4 *Protected or Notable Species*

3.4.1 *Introduction*

HERC returned a large number of records of protected or notable species from within the search area. Due to the entirely developed nature of the site, and its small size, many of these were for species that would be unlikely to occur in the habitats present on the site. For example, there were a large number of records of farmland bird such as yellowhammer *Emberiza citrinella*, skylark *Alauda arvensis* and grey partridge *Perdix perdix*, associated with arable farmland around the village. Due to the nature of the habitats present, there is limited potential for protected species to be present on the site. However, species which could be found within the zone of influence are considered below.

3.4.2 *Bats*

HERC returned over 750 records of bats from within the search area, including several roosts. Species recorded include common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus,* Nathusius' pipistrelle *Pipistrellus nathusii* (as well as other unidentified pipistrelle bats), noctule *Nyctalus noctula*, Leisler's bat *Nyctalus leisleri,* serotine *Eptesicus serotinus,* Daubenton's bat *Myotis daubentonii,* Natterer's bat *Myotis nattereri,* whiskered bat *Myotis mystanicus* (and other unidentified *Myotis* bats), and brown long-eared bat *Plecotus auritus*. Many of these records are associated with an important hibernation roost within the village.

The main building on the site has some potential for roosting bats. Potential roost features or access points were limited, although the gaps around flashing to the rear of the building, and the gaps between the buildings and the off-site warehouse may enable access to potential roost sites. The construction type of the building is likely to create some suitable roost spaces within. The flat-roofed extension is generally unsuitable for roosting bats, although the ivy covering could provide some suitable roost spaces. Based on this survey, undertaken in accordance with best practice guidance (11), this building is considered to be of low bat roost potential, however a further survey is recommended to confirm this assessment.

The canopy on the forecourt and sheds on the northern side of the site are of negligible bat roost potential.

The site in general is highly illuminated to enable night-time operation and contains very little vegetation. Therefore, it is of limited value for foraging bats.

3.4.3 *Nesting birds*

HERC returned many records of birds from within the search area. Whilst many were of species that would not be found within the habitats on site, several were of species which are often found in urban/suburban habitats such as house sparrow *Passer domesticus*, dunnock *Prunella modularis,* robin *Erithacus rubecula,* great tit *Parus major,* blue tit *Cyanistes caeruleus,* wren *Trogladytes trogladytes,* house martin *Delicon urbicum,* starling *Sturnus vulgaris* and song thrush *Turdus philomelos*. Vegetation and buildings on the site could be used by a variety of common bird species to nest. Due to the lack of vegetation, foraging opportunities for birds are limited.

3.4.4 *Terrestrial mammals*

HERC returned records of both badgers *Meles meles* and hedgehogs *Erinaceous europaeus* from within the search area. No evidence of use by badgers or hedgehogs was found during the survey. The site is unsuitable for badgers to excavate setts as it lacks suitable vegetation cover. Due to the hard surfacing over much of the site, there is very limited resources for either species to forage.

3.4.5 *Amphibians*

HERC only returned a few records of amphibians from within the search area including one of great crested newt *Triturus cristatus* and a number of common toad *Bufo bufo*. The great crested newt record is more than 35 years old and very low resolution (1km square). One pond was identified within 500m of the site, a large balancing pond approximately 180m to the southwest, but isolated from the site by the A120 road. None of the habitat on the site is suitable for great crested newts, primarily due to the lack of vegetation cover. Therefore, the likelihood of great crested newts *Triturus cristatus* occurring on the site is extremely low.

3.5 *Ecological Valuation*

The habitats on the site are mostly developed and all are entirely artificial, and extremely commonplace within the local area. The site is unlikely to support notable populations of protected and/or notable species, however a bat survey is required to confirm this. Therefore, it is considered to be of ecological value within the Zone of Influence only.

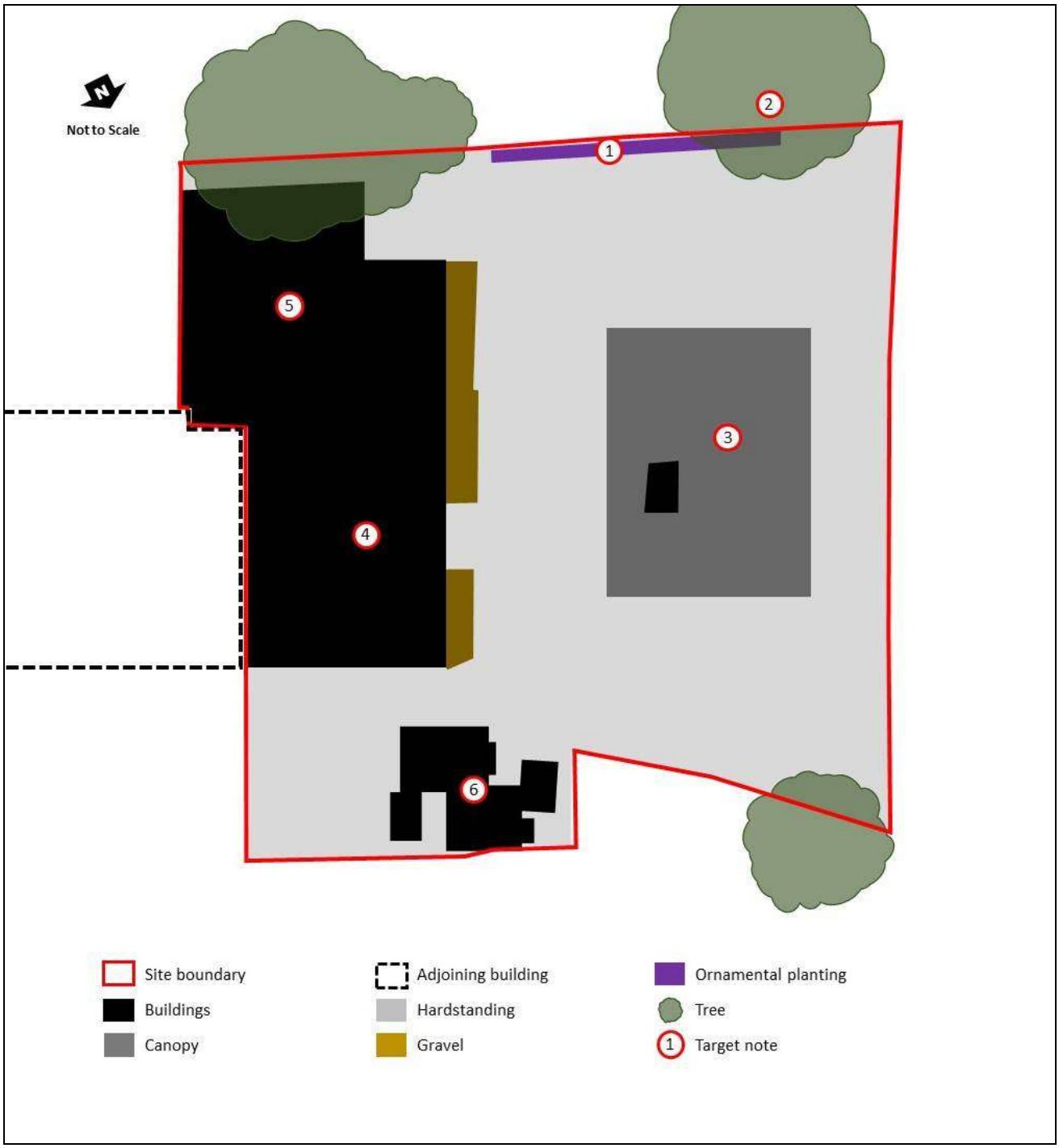

Figure 3.1: ***Habitats present on the site****. See main text for target note descriptions.*

Photo 1: *The site comprises a petrol station forecourt and a former residential building.*

Photo 2: *Vegetation on the site is limited to a narrow strip of ornamental planting no overgrown with ivy.*

Photo 3: *A former residential property with a single-storey extension is present on the eastern side of the site.*

Photo 4: *A second smaller extension is present on the southern end of the building.*

Photo 5: *Gaps are present around lead flashing and where the building joins an off-site building.*

Photo 6: *A collection of small outbuildings is present on the northern side of the site.*

4.0 Assessment of Likely Impacts in Absence of Mitigation

4.1 *Introduction*

The CIEEM guidelines (12) require that the potential impacts of the proposals should be considered in absence of mitigation. In order for a significant adverse effect to occur, the feature being affected must be at least of local value. However, in some cases, features of less than local value may be protected by legislation and/or policy and these are also considered within the assessment. Although significant effects may be identified at this stage of the assessment, it is often possible to provide appropriate mitigation.

4.2 *Site Preparation and Construction Activities*

4.2.1 *Habitats*

The habitats on the site are not considered to be of significant ecological value and therefore their loss or damage as a result of the proposals would not have a significant ecological impact.

4.2.2 *Nesting birds*

Buildings and vegetation on the site could be used by nesting birds. If clearance works or demolition occurred whilst birds were nesting, they could be disturbed, and their nests destroyed or damaged. The nests, eggs and nestlings of all wild birds are protected from disturbance, damage and destruction under the Wildlife & Countryside Act and therefore this could result in a legal offence.

4.2.3 *Bats*

The main building on the site is potentially suitable for roosting bats. If this building did contain a bat roost, it would be lost as a result of the proposals, and any bats present at

the time the building was demolished, could be killed or injured as a result. Regardless of the value of any roost present, bats and their roosts are protected from damage and disturbance under the Wildlife & Countryside Act and the Habitats Regulations, and therefore this could result in a legal offence.

4.3 *Site Operation*

No operational effects are predicted.

5.0 Mitigation, Compensation and Enhancements

5.1 *Introduction*

This chapter contains recommendations for further works needed to fully assess the ecological impacts of the proposals and to mitigate any potential adverse effects. In addition, recommendations for the enhancement of nature conservation and biodiversity on the site are included.

5.2 *Further Survey*

The main building on the site is potentially suitable for roosting bats. Therefore, a survey is required to determine their presence or likely absence, and if present, the species and roost type. Surveys should follow the best practice methodology (11) with respect to effort and timing. It has been preliminarily assessed as having “low” potential as part of this ecological appraisal. However, first step should be to undertake a Preliminary Roost Assessment (PRA) to confirm the assessment within this report. The purpose of this would be to record any evidence of bats throughout the building (inside and outside), identify potential roost locations and assess the potential of the building to support roosts of different types. This can be undertaken at any time of year and should be carried out by a licensed surveyor.

The PRA will need to be followed by emergence or re-entry surveys. This entails positioning surveyors outside of the buildings at dusk in order to identify bats emerging from the buildings. As the building is currently considered to be of low potential, it will therefore require one survey visit. Emergence surveys should be carried out between May and September. However, survey effort may need to be increased following the PRA.

5.3 *Mitigation Measures*

5.3.1 *Nesting birds*

Vegetation clearance and demolition should be timed to take place outside of the nesting bird season (typically March to August inclusive). If it is necessary to undertake any vegetation clearance or demolition within this period, any vegetation to be cleared, or building to be demolished, should be thoroughly checked for the presence of active nests. If any nests are found, they should be retained *in situ* with a suitable buffer of uncleared vegetation until the nestlings have fledged.

5.3.2 *Wildlife-friendly lighting*

New lighting associated with the proposals must be designed to minimse the effects on nocturnal wildlife, particularly bats, and should follow best practice guidance (17). The following principles will minimise the impact of lighting on nocturnal wildlife and should be applied to the lighting design across the site:

- Use of low-level bollard lighting to minimise light spill
- Directing lights away from the edges of the site and the use of hoods or similar measures to direct light away from important habitats
- Restriction of UV light frequencies through selection of suitable lighting elements or the use of filters
- Use of warm white spectrum lighting elements.

5.4 *Recommendations for Ecological Enhancements*

5.4.1 *Introduction*

Planning policy requires development to provide some form of ecological enhancement. Due to the situation and existing ecological value of the site, opportunities for

enhancements are limited. However, the following measures would provide some ecological enhancements within the proposed development.

5.4.2 *Native hedge*

A native-species hedge should be planted along the southern boundary of the site where the existing non-native planting is. This should include species such as hawthorn *Crateagus monogyna*, hazel *Corylus avellana*, field maple *Acer campestre*, wayfaring tree *Viburnum lantana*, guelder rose *Viburnum opulus*, dogwood *Cornus sanguine* and dog rose *Rosa canina*. This will provide benefits pollinating insects and suburban bird species.

5.4.5 *Planting to benefit pollinators*

Nectar-rich shrub species should be planted to provide a food source for a variety of urban/suburban pollinator species including bees. Native species are preferred as they will benefit the widest range of species. However, due to the relatively urban location of the site, other beneficial species such as lavenders *Lavendula* spp., would also be appropriate in more formal landscaped areas.

5.4.6 *Bird boxes*

A number of bird boxes should be erected on or incorporated into the new building or fixed on retained trees. A variety of designs should be used so to be suitable for a number of species, including species such as house sparrow *Passer domesticus* which has been recorded within the vicinity. Several suitable designs of nest boxes are commercially available.

6.0 Biodiversity Net Gain

6.1 *Introduction*

A Biodiversity Net Gain (BNG) calculation has been undertaken for the proposed development, using the Natural England/Defra Biodiversity Metric (15). Due to the size of the site, the small sites metric has been used. Due to the small size of the site, there is no option to create new habitats. However, there is potential to deliver a small biodiversity gain by enhancing the non-native planting on the southern side of the site.

6.2 *Calculation*

The figures used in the BNG calculation are provided in tables 6.1a and 6.1b. Post-development figures are not provided as there is essentially no change in area units. The only vegetation present on the site is the non-native planting, this has been classified as an ornamental hedge. The change in hedgerow units has been calculated for three scenarios:

A. The planting is completely removed
B. The planting is retained in its existing condition
C. The planting is replaced by a native species hedge (moderate condition)

The full calculation is provided on a separate spreadsheet. No off-site habitat creation and/or enhancement is proposed. In summary:

- The existing biodiversity value of the site is 0.00 habitat units and 0.014 hedgerow units.

- If the non-native planting is removed, the post-development biodiversity value would be 0.00 habitat units, an increase of 0.00 units (0.00%) and 0.00 hedgerow units, a decrease of 0.014 units (-100%).
- If the non-native planting is retained in its current state, the post-development biodiversity value would be 0.00 habitat units, an increase of 0.00 units (0.00%) and 0.014 hedgerow units, an increase of 0.00 units (0.00%).
- If the non-native planting is replaced by a native hedge, as recommended in Chapter 5, the post-development biodiversity value would be 0.00 habitat units, an increase of 0.00 units (0.00%) and 0.0469 hedgerow units, an increase of 0.0329 units (234.73%).

This result means that the proposed development would comply with planning policies the require development to provide a net gain in biodiversity.

Table 6.1a: *Habitat area units baseline. No habitats are within an area of strategic significance.*

Broad habitat	Habitat type	Area (m^2)	Condition	Retained (ha)	Enhanced (ha)
Urban	Developed land; sealed surface	854	N/a-other	0	0

Table 6.1b: *Hedgerow units baseline. No habitats are within an area of strategic significance. * Under scenario B, the hedge would be retained.*

Broad habitat	Habitat type	Length (m)	Retained (m)*	Enhanced (m)
Hedge	Hedge ornamental non-native	14	0	0

7.0 Summary and Conclusions

7.1 *Summary*

The habitats present within the zone of influence of the proposed development are not considered to be of ecological value. Therefore, the loss of this habitat would not have a significant ecological effect.

The site is considered unlikely to support protected or notable species, however bat surveys are required to confirm the likely absence of bats in one of the buildings, and buildings and vegetation on the site are suitable for common bird species to nest.

In order to mitigate the ecological effects of the proposals, measures are required to prevent the disturbance of nesting birds during site clearance. If bats were subsequently found to be roosting on the site, mitigation would be required to ensure they are not adversely affected by the proposals and an EPS licence would be required for demolition to proceed. In addition, lighting for the development should be designed to avoid affecting the behaviour of nocturnal wildlife.

There are opportunities to enhance the ecological value of the site post-development, through the planting of a native species hedgerow, planting species to benefit urban pollinators, and the installation of bird nesting boxes.

7.2 *Biodiversity Net Gain*

The proposals would result in no net change in biodiversity on the site, as calculated for habitat units using the BNG methodology. However, there is the opportunity for a

significant gain in hedgerow units (up to 234.73%) if a native species hedgerow is planted on the site.

7.3 *Residual Impacts*

Based on current proposals, provided all the recommended mitigation measures are implemented, there would be no residual impacts.

7.4 *Compliance with Legislation and Policy*

The following further actions are required to ensure the development complies with relevant legislation:

- A bat survey should be carried out to determine whether bats are using the building on the site.
- Measures to prevent the disturbance of nesting birds must be implemented during site clearance/demolition.

Provided some of the recommended enhancement measures are implemented, the proposals would also comply with relevant planning policy.

8.0 References

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17. Bat Conservation Trust & Institute of Lighting Professionals (2019). *Guidance Note 08/18 Bats and artificial lighting in the UK – Bats and the Built Environment series.* Institute of Lighting Professionals, Rugby.

Appendix 1

Relevant planning policy from the *City and District of St Albans District Local Plan Review 1994 (Adopted 30 November 1994) - Saved and Deleted Policies Version (July 2020)*

POLICY NE1 International, National and Locally Designated Nature Conservation Sites

I. Development proposals, land use or activity (either individually or in combination with other developments) which are likely to have a detrimental impact which adversely affects the integrity of a designated site, will not be permitted unless it can be demonstrated that there are material considerations which clearly outweigh the need to safeguard the nature conservation value of the site, and any broader impacts on the international, national, or local network of nature conservation assets.

II. Evidence will be required in the form of up-to-date ecological surveys undertaken by a competent ecologist prior to the submission of an application. The type of evidence required will be commensurate to the scale and location of the development and the likely impact on biodiversity, the legal protection or other status of a site. Where insufficient data is provided, permission will be refused.

III. Where a site of International or National designation for nature conservation importance is adversely affected by the proposals, permission will only be permitted where the Council is satisfied that:

(a) There are imperative reasons of overriding public interest, which could be of a social or economic nature, sufficient to override the harm to the site; or

(b) There are imperative reasons of overriding public interest relating to human health, public safety or benefits of primary importance to the environment; and in either case

(c) There are no satisfactory alternatives to the proposal.

IV. Proposals should avoid impacts on sites of nature conservation value and wherever possible, alternative options which reduce or eliminate such impacts should be pursued. Where adverse impacts are unavoidable, measures to mitigate the impact will be sought, commensurate to the importance of the site in terms of its status in the hierarchy and the contribution it makes to the wider ecological networks.

V. Where adequate mitigation measures are not possible, compensatory measures may be appropriate. Such compensatory schemes should seek to achieve a net gain for nature and the Council will consider the use of conditions and/or planning obligations to secure appropriate mitigation/compensation commensurate to the type and scale of development. Compensatory measures can be situated on or off the development site. The availability of compensatory measures will be a material consideration in the determination of development proposals.

VI. Ecological impacts will be quantified by utilising and taking into account a locally approved Biodiversity Metric where appropriate. Development must demonstrate a net gain in ecological units. Ecological information must be supplied in accordance with BS 42020 2013.

POLICY NE2 Sites or Features of Nature Conservation Interest (Non-Designated)

I. All proposals should achieve a net gain in biodiversity where it is feasible and proportionate to do so, as measured by using and taking into account a locally approved Biodiversity Metric, and avoid harm to, or the loss of features that

contribute to the local and wider ecological network.

II. Proposals will be expected to apply the mitigation hierarchy of avoidance, mitigation and compensation, as set out in the NPPF, and integrate ecologically beneficial planting and landscaping into the overall design.

POLICY NE3 Species and Habitats

I. Development should always seek to enhance biodiversity and to create opportunities for wildlife. Proposals must demonstrate how the development improves the biodiversity value of the site and surrounding environment. Evidence will be required in the form of up-to-date ecological surveys undertaken by a competent ecologist prior to the submission of an application. The Biodiversity value of a site pre and post development will be determined by applying a locally approved Biodiversity Metric where appropriate. Submitted information must be consistent with BS 42020 2013. Where insufficient data is provided, permission will be refused.

II. Proposals should detail how physical features will be maintained in the long term.

III. Development which would result in the loss or significant damage to trees, hedgerows or ancient woodland sites will not be permitted. The Council will seek their reinforcement by additional planting of native species where appropriate. Protective buffers of complementary habitat will be expected to adjoin these features, sufficient to protect against root damage and improvement of their long term condition. A minimum buffer zone of 10m (or greater if required) is considered appropriate.

IV. Proposals will be expected to protect and enhance locally important biodiversity sites and other notable ecological features of conservation value.

V. Proposals should avoid impacting on Species and Habitats of Principle Importance as published under section 41 of the Natural Environment and Rural Communities Act 2006 (or as subsequently amended).

VI. Where adverse impacts are unavoidable, appropriate mitigation and compensation measures must be employed, commensurate to the importance, the legal protection or other status of the species or habitat. The District Council will impose conditions / planning obligations which seek to:

(a) Facilitate the survival of existing populations as well as encouraging the establishment of new populations;

(b) Reduce disturbance to a minimum;

(c) Provide adequate alternative habitats to sustain at least the current levels of populations.

VII. Development adjoining rivers or streams will be required to preserve or enhance the water environment in accordance with Policy WAT3 (Water Quality and the Water Environment).

VIII. Integrated bird and bat boxes will be expected in all development bordering public green space and beneficial habitat.

POLICY NE4 Green Infrastructure

I. A diverse network of accessible, multi-functional green infrastructure across the district will be protected and enhanced for its biodiversity, recreational, accessibility, health and landscape value and for the contribution it makes towards combating climate change.

II. Development proposals should:

(a) Avoid the loss, fragmentation or functionality of the green infrastructure network, including within the built environment, such as access to urban waterways;

(b) Maximise opportunities for improvement to the green infrastructure network in accordance with the Council's Green Infrastructure Plan, its Parks and Open Spaces Strategy, the Hertfordshire Biodiversity Action Plan, Living Landscape Schemes, locally identified Nature Improvement Areas and any future relevant plans and programmes as appropriate;

(c) Maximise opportunities for urban greening such as through appropriate landscaping schemes and the planting of street trees;

(d) Consider the integration of green infrastructure into proposals as an alternative or to complement 'grey' infrastructure.

(e) Demonstrate how lighting will not adversely impact on green infrastructure that functions as nocturnal wildlife movement and foraging corridors, in line with Policy EQ3 Light Pollution.

III. Contributions towards local green infrastructure projects will be sought where appropriate. If providing green infrastructure as part of a development, applicants should detail how it will be maintained in the long term.

IV. Proposals which affect the district's river environments, including built development and recreation and leisure proposals, should take into account and contribute towards achieving, the aims of any statutory or non-statutory plans, such as the Lee Valley Regional Park Authority Park Development Framework, relevant River Catchment Management Plans and the Water Framework Directive, and any future relevant plans and programmes.