

**Land at Tesco Extra Car Park
Portman Road
Reading
Berkshire
RG30 1AW**

Preliminary Ecological Appraisal & Biodiversity Net Gain Assessment

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1 EXECUTIVE SUMMARY

- 1.1.1** John Wenman Ecological Consultancy LLP was commissioned by Ridgepoint Homes to undertake a Preliminary Ecological Appraisal (PEA) and Biodiversity Net Gain (BNG) Assessment of '*Land at Tesco Extra Car Park in Reading*' in Berkshire (OS grid reference: SU 69654 73937). The PEA and BNG assessment were commissioned to consider the ecological impacts of proposals to build a new block of flats on the land to at the car park of the Tesco Extra (refer to '*Proposed Habitats Plan*' in **Appendix 5**).
- 1.1.2** The development site covered an area of approximately 0.58 ha comprising primarily of hard standing with a patch of modified grassland with scattered trees towards the northern end of the site. A planted native hedgerow with trees and a patch of introduced shrubs formed the northern boundary of the site and part of the eastern boundary. The hedgerow in its existing condition was not considered to be an example of a habitat of principal importance for conservation (HPI). The habitats on site are of conservation value within context of the site only.
- 1.1.3** The desk study (which included a data search from Thames Valley Records Centre) revealed that the site is not mapped as a habitat of principal importance (HPI). The site is not statutorily designated and the closest statutorily designated site of wildlife importance i.e. Pincents Kiln Site of Special Scientific Interest (SSSI), is 4.9 kilometres southwest from the site's boundary. The proposals fall within the SSSI Impact Risk Zone but do not fall under any categories, which will have an impact on the SSSI.
- 1.1.4** The ecological value of the development site should be maximised through the protection and enhancement of the retained hedgerow, and with the addition of habitat features such as the integration of bat and bird boxes into the new flats.
- 1.1.5** The proposed construction of the new block of flats and associated access and landscaping will result in the total net unit gain of 0.31 habitat units, i.e. a biodiversity % change of 62.32%, and a gain of 0.27 hedgerow units, i.e. a biodiversity change of 31.92%. The gain will be achieved on-site through the combination of enhancement of the retained hedgerow habitat, planting

of a new native hedgerow with trees, planting of scattered trees and species rich grassland.

2 INTRODUCTION

2.1 Background

2.1.1 John Wenman Ecological Consultancy LLP was commissioned by Ridgpoint Homes to undertake a Preliminary Ecological Appraisal (PEA) and Biodiversity Net Gain (BNG) Assessment of '*Land at Tesco Extra Car Park in Reading*' in Berkshire (OS grid reference: SU 69654 73937). The PEA and BNG assessment were commissioned to consider the ecological impacts of proposals to build a new block of flats on the land to at the car park of the Tesco Extra (refer to '*Proposed Habitats Plan*' in **Appendix 5**).

2.2 Site Location and Context

2.2.1 The land at Tesco Express Car Park (henceforth referred to as the 'site'), comprises a car park with a patch of modified grassland with scattered trees, with a native hedgerow and strip of introduced shrubs along the northern end of the site, covering an area of just over 0.78 hectares.

2.2.2 The site is situated on the southern side of Portman Road, in Reading, Berkshire (OS Grid reference for approximate centre of site: SU 69654 73937). The site is in a urban area surrounded by the superstore to the south, industrial buildings to the north and residential properties to the east and west. In the wider area extensive areas of farmland are situated approximately 220 metres north of the site beyond a railway line.

2.2.3 The habitats in the wider area are suitable for use by a range of fauna adapted to an urban area and likely to form part of important foraging and commuting corridors for birds and bats.

2.3 Objectives

2.3.1 The aim of this PEA is to understand the nature of the site and assess its ecological value. The key objectives are:

- to identify any likely ecological constraints associated with the planning proposals;
- establish appropriate mitigation measures in accordance with the mitigation hierarchy (i.e., avoid > minimise > remediate > compensate);
- determine any additional surveys following on from this preliminary

stage; and

- recognise opportunities for biodiversity enhancement in line with national and local planning policy (i.e., Biodiversity Net Gain).

3 LEGISLATIVE BACKGROUND

3.1 Overview

3.1.1 The following legislation is considered relevant for the purpose of this preliminary ecological appraisal:

- Wildlife and Countryside Act (W&CA) 1981 (as amended)
- Conservation of Habitats and Species Regulations ('Habitat') Regulations 2017
- Countryside and Rights of Way (CROW) Act 2000
- Natural Environment and Rural Communities (NERC) Act 2006
- Protection of Badgers Act 1992
- Wild Mammals (Protection) Act 1996

3.1.2 These acts hold relevance to both protected and invasive species and the degree of protection varies depending on faunal/floral group or species. For example, some species of European importance receive full protection within the UK under the Habitat Regulations (e.g., bats), whereas others, may only be afforded protection through national legislation such as the Wildlife and Countryside Act 1981 (as amended) (e.g., common lizard). For a detailed overview of species-specific legislation, please refer to **Appendix 1**.

3.2 European Protected Species Mitigation Licensing

3.2.1 The government's statutory conservation advisory organisation, Natural England, is responsible for issuing European Protected Species Mitigation Licences (EPSML), which permit activities that would otherwise lead to an infringement of the Habitat Regulations 2017. An EPSML can be issued if the following three tests have been met:

- **Regulation 55(9)(a)** - there is "*no satisfactory alternative*" to the derogation;
- **Regulation 55(9)(b)** - the derogation "*will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range*"; and
- **Regulation 55(2)(e)** - the derogation is for the purposes of "*preserving public health or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and*

beneficial consequences of primary importance for the environment”.

- 3.2.2** Local Planning Authorities (LPAs) have a statutory duty under Regulation 7(3e) of the Habitat Regulations 2017 to regard requirements of the Habitats Directive in the exercise of their functions. Consequently, the LPA must consider and determine whether these three tests are likely to be satisfied by an application affecting European protected species before granting planning permission.

4 PLANNING POLICY

4.1 National Planning Policy

4.1.1 The ODPM Circular 06/2005 provides guidance on the application of the law relating to planning and nature conservation in England, stating that *'the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat.'*

4.1.2 The revised National Planning Policy Framework (NPPF), published in July 2021, sets out the Government's planning policies for England and how they should be applied. Section 15 of the NPPF sets out the approach local authorities should adopt to conserve and enhancing the natural environment when preparing planning policy and when considering planning applications. Paragraph 180 sets out the principles local authorities should apply when determining planning applications as follows:

180. When determining planning applications, local planning authorities should apply the following principles:

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and*
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate*

biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

4.2 Local Planning Policy

4.2.1 Planning policy within Reading Borough is defined by the policies within the Local Plan (adopted Nov 2019). The policy relevant to biodiversity and natural environment is as follows:

EN12: BIODIVERSITY AND THE GREEN NETWORK

a) *The identified Green Network, the key elements of which are shown on the Proposals Map, shall be maintained, protected, consolidated, extended and enhanced. Permission will not be granted for development that negatively affects the sites with identified interest or fragments the overall network. The Green Network comprises:*

- *Sites with identified biodiversity interest - Local Wildlife Sites, Local Nature Reserves, Biodiversity Opportunity Areas, protected and priority species and their habitats, Priority and Biodiversity Action Plan habitats, and the River Thames and all its tributaries (including the River Kennet and the Kennet & Avon Canal); and*
- *Areas with potential for biodiversity value and which stitch the Green Network together – designated Local Green Space and open green spaces, and existing and potential Green Links.*

New development shall demonstrate how the location and type of green space, landscaping and water features provided within a scheme have been arranged such that they maintain or link into the existing Green Network and contribute to its consolidation. Such features should be designed to maximise the opportunities for enhancing this network. All new development should maximise opportunities to create new assets and links into areas where opportunities are as yet unidentified on the Proposals Map.

b) *On all sites, development should not result in a net loss of biodiversity and geodiversity, and should provide a net gain for biodiversity wherever possible. Development should:*

- *Protect and wherever possible enhance features of biodiversity interest on and adjacent to the application site, incorporating and integrating them into development proposals wherever practicable; and*
- *Provide new tree planting, wildlife friendly landscaping and ecological enhancements (such as wildlife ponds, bird and bat boxes) wherever practicable.*

4.2.2 In exceptional circumstances where the need for development clearly outweighs the need to protect the value of the site, and it is demonstrated that the impacts cannot be: 1) avoided; 2) mitigated or; 3) compensated for

on-site; then new development will provide off-site compensation to ensure that there is “no net loss” of biodiversity. Provision of off-site compensation shall be calculated in accordance with nationally or locally recognised guidance and metrics. It should not replace existing alternative habitats and should be provided prior to development.

5 SURVEY METHODOLOGY

5.1 Desk Study

- 5.1.1** A desktop study was conducted by Vicky Potts - a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM) - before and after visiting the site. The study utilised data from the local environmental records centre (Thames Valley Environmental Records Centre (TVERC)) and online resources to acquire information on the nature of the site and its surroundings and highlight any potential ecological features.
- 5.1.2** TVERC was commissioned to undertake a search of pre-existing records of protected and/or notable species and non-statutorily designated wildlife sites held by them within a 1km radius around a central point inside the site.
- 5.1.3** The DEFRA Data Services Platform and the MAGIC website was used to obtain geospatial datasets for designated sites (i.e., RAMSAR, SPA, SAC, SSSI) and habitat inventories (i.e., Priority Habitat Inventory, Ancient Woodland Inventory) to be analysed in QGIS. The Multi-Agency Geographical Information Centre (MAGIC) website was examined for granted European protected species applications. Furthermore, geospatial datasets and Google Earth satellite imagery were used to determine the extent and connectivity of habitats, how the site is linked to the surrounding landscape and whether the development could have wider scale impacts on biodiversity.
- 5.1.4** Google Earth satellite imagery and online OS mapping websites were consulted to provide insight into historic and current land use; such information helps contextualise the continuity of habitats and determine the importance of existing ecological features.

5.2 Field Survey

- 5.2.1** A site walkover was undertaken on December 7th 2022 by Vicky Potts – an experienced ecologist and full member of the Chartered Institute of Ecology and Environmental Management (CIEEM) - and Conor Watson - an ecologist with four years' experience. The site was surveyed using the UK Habitat Classification (UKHab) system (Butcher *et al.* 2020) in accordance

with the CIEEM Guidelines for Preliminary Ecological Appraisal 2nd Edition (CIEEM 2017). Particular attention was given to evidence of protected and priority species (NERC Act 2006 Section 41 species of principal importance) and the site's potential to support such species.

- 5.2.2** Photographs of habitats and other ecological features were taken during the site walkover and mapped using QGIS software after the survey visit (**Appendices 2, 3 & 4**). Plant species were recorded to aid habitat classification.

5.3 Survey Constraints

- 5.3.1** Full access was available to the site and therefore there were no significant access constraints. All ecological survey work is subject to seasonal constraints because not all plant and animal species are visible throughout the year and therefore the report represents a snapshot of the site at the time of the survey only. The plant species recorded should not be considered a comprehensive list of species present.

5.4 Biodiversity Net Gain Assessment

- 5.4.1** A Biodiversity Net Gain (BNG) calculation was undertaken to inform a proposed planning application of the redevelopment of the site for residential dwellings and determine the feasibility of the plans. The feasibility assessment made use of the information collected during the preliminary ecological appraisal.
- 5.4.2** The BNG survey used the '*Biodiversity Metric 3.1*' (Natural England 2022) to calculate the losses and gains in biodiversity value resulting from the proposed development on site.

6 DESK STUDY FINDINGS

6.1 Designated Sites and Habitats

- 6.1.1** The desktop study revealed the closest statutorily designated site is Loosehill Copse – a Local Nature Reserve (LNR), situated 1.4 kilometres to the southwest of the site. The site covers an area of 13.03 hectares, comprising semi-ancient woodland and an open meadow. Pincents Kiln - a Site of Special Scientific Interest (SSSI), situated 4.9 kilometres southwest from the site's boundary. The site covers an area of 0.2 hectares consisting of a former quarry with geological interest.
- 6.1.2** There is one non-statutorily designated site of local importance within the 1km search radius. The closest non-statutorily designated site is Cow Lane Depot – a Berkshire Local Wildlife Site (LWS), situated 590 metres to the east. The site comprises a mosaic of habitats including willow scrub, mature trees, open standing water with swamp and ruderal and tall herb grassland. The site provides a wildlife corridor in an urban landscape.
- 6.1.3** The desk study revealed that the site is not mapped in the priority habitat inventory (NERC Act 2006 Section 41 habitats of principal importance (HPI)). The closest priority habitats are a traditional orchard approximately 440 metres to the north and deciduous woodland at Cow Lane Depot.

6.2 Protected and Notable Species

- 6.2.1** The search of the TVERC database revealed records for protected and notable species within the last ten years in the surrounding area but no records specifically for the site.
- 6.2.2** There are records of three species of reptile within the search area: common lizard (*Zootoca vivipara*), grass snake (*Natrix helvetica*) and slow worm (*Anguis fragilis*). Common lizard has been recorded at two sites including 485 metres to the northeast at Cow Lane Allotments recorded in 2010 and 690 metres to the east at Cow Lane Depot, recorded in 2013. Grass snake has been recorded at two sites including 970 metres to the east at George Street Park (recorded in 2016) and at Cannuaght Road 705 metres to the southeast (recorded in 2014). Slow worm has been recorded at two sites

including 665 metres to the south east along Western Elms Avenue in 2013 and 670 metres to the southeast along the Oxford Road in 2008.

- 6.2.3** There are records of one species of amphibian within the search area, smooth newt (*Lissotriton vulgaris*), which has been recorded at Lousehill Copse just under 1.6 kilometres to the west of the site, recorded in 2018.
- 6.2.4** There are records of at least five bat species within the search radius including common pipistrelle (*Pipistrellus pipistrellus*), brown long-eared (*Plecotus auritus*), Daubenton's (*Myotis daubentonii*), noctule (*Nyctalus noctula*) and soprano pipistrelle (*Pipistrellus pygmaeus*). There are also several records for unidentified *Pipistrellus* and *Myotis* bat species. The closest records are for common pipistrelle bats recorded in flight in 2016 along the Oxford Road, just under 200 metres to the southwest of the site.
- 6.2.5** Other mammal species recorded within the search radius include badger (*Meles meles*), water vole (*Arvicola amphibius*) and western European Hedgehog (*Erinaceus europaeus*). Badger has been recorded at six sites including approximately 560 metres to the north and 690 metres to the northwest of the site. Water vole was recorded in 1998 approximately 560 metres to the north of the site. Hedgehog has been recorded at ten sites including one record just over 100 metres to the west of the site at Fulmead Road.
- 6.2.6** Higher flowering plants were recorded within the search radius with them being historical records from 2005 at Little John's Farm Meadows. Species recorded include common valerian (*Valeriana officinalis*), corn mint (*Mentha arvensis*), marsh ragwort (*Jacobaea aquatica*), marsh speedwell (*Veronica scutellata*) and ragged robin (*Silene flos-cuculi*).
- 6.2.7** There are several invertebrate records within the search radius with recent records within the last ten years including four-banded flower bee (*Anthophora quadrimaculata*), red-girdled mining bee (*Andrena labiata*), stag beetle (*Lucanus cervus*), white-letter hairstreak (*Satyrrium w-album*), common club-tail (*Gomphus vulgatissimus*) and grey dagger (*Acronicta psi*).
- 6.2.8** There are several bird records within the search radius within the last ten years including house sparrow (*Passer domesticus*), lapwing (*Vanellus vanellus*), lesser spotted woodpecker (*Dryobates minor*), starling (*Sturnus*

vulgaris), and yellow wagtail (*Motacilla flava*) – all species protected under schedule 1 of the Wildlife and Countryside Act.

6.3 Historic and Current Land Use

6.3.1 Google Satellite imagery dating back to 2006 shows the site was under development for the existing Tesco Extra Superstore and prior to that in 2003 mapping shows the site was built up with car parking and buildings present on site.

6.3.2 Historical OS mapping shows the northern end of the site was bracken, heath or rough grassland. The southern end of the site was part of Battle Hospital and workhouse, which was built in 1867 and closed in 2005.

7 FIELD SURVEY FINDINGS

7.1 Overview

- 7.1.1** The site covers an approximate area of 0.78 hectares of car parking and modified grassland with scattered trees. A planted native hedgerow with trees and strip of introduced shrubs were present towards the northern end of the site.
- 7.1.2** The following UK Habitat Classification (UKHab) habitats were observed during the site walkover: g4 modified grassland and u1d developed land, sealed surfaces. Linear habitats observed on site were h2NE4 native hedgerow with trees. Secondary coded habitats/features present included; introduced shrubs (1160) and scattered trees (11).
- 7.1.3** The UKHab primary habitats are outlined below; associated photographs are displayed in **Appendix 2**, the habitat survey is mapped in **Appendix 3** with detailed habitat parcel descriptions and associated species presented in **Appendix 4**.
- 7.2 G4 – Modified grassland (Secondary code – 11)**
- 7.2.1** The northern end of the site comprised a mound covered with a patch of frequently cut grassland. The grassland was dominated by perennial rye grass (*Lolium perenne*), with dove's foot cranesbill (*Geranium molle*), yarrow (*Achillea millefolium*) being abundantly present, dandelion (*Taraxacum officinale* agg.), cock's-foot (*Dactylis glomerata*), cats ear (*Hypochaeris radicata*) being occasionally present, musk storks bill (*Erodium moschatum*), red dead nettle (*Lamium purpureum*) and spotted medick (*Medicago arabica*) locally present, and spear thistle (*Cirsium vulgare*), common sow thistle (*Sonchus oleraceus*), ragwort (*Senecio jacobaea*), common mallow (*Malva sylvestris*) and Canadian fleabane (*Conyza canadensis*) being rarely present. (**Photographs 1 & 2**).
- 7.2.2** The trees on the eastern side of the grassland included six silver birch trees (*Betula pendula*) with two field maple (*Acer campestre*) trees towards the centre of the grassland (**Photographs 3 & 4**).

7.3 u1d – Developed land, sealed surfaces (Secondary codes 11 & 1160)

- 7.3.1** Most of the site comprised of a tarmacked car park, which was part of the car park for Tesco Extra. Three planted flowerbeds were present each with two callery pear trees (*Pyrus callerydnia*) and Wilson's honeysuckle (*Lonicera nitida*) and annual meadow grass (*Poa annua*) beneath (**Photographs 5 & 6**).

7.4 h2NE4 - Native hedgerow with trees

- 7.4.1** A planted native hedgerow with trees was present along the northern and north western side of the site. Species within the hedge included hornbeam (*Carpinus betulus*), silver birch (*Betula pendula*), elder (*Sambucus nigra*), hawthorn (*Crataegus monogyna*), field maple (*Acer campestre*), bramble (*Rubus fruticosus* agg.), ivy (*Hedera helix*) and privet (*Betula pendula*) (**Photograph 7**). Standard trees amongst the hedgerow included silver birch (*Betula pendula*), field maple (*Acer campestre*), hornbeam (*Carpinus betulus*) and a London Plane (*Platanus x hispanica*) (**Photograph 8**). Cleavers (*Galium aparine*) was dominant at the base of the hedge with garlic mustard (*Alliaria petiolata*), herb Robert (*Geranium robertianum*) and old man's beard (*Clematis vitalba*) present occasionally.
- 7.4.2** A strip of Wilson's honeysuckle (*Lonicera nitida*) was present along the northern side of the hedgerow along the roadside (**1160; Photograph 9**).

8 DISCUSSION

8.1 Assessment of Existing Ecological Value – Habitats

Designated sites

- 8.1.1** The desk study revealed that the site is not statutorily designated for its wildlife interest and therefore not currently recognised as being of international or national importance.
- 8.1.2** The closet SSSI Pincent's Kiln situated 4.9 kilometres southwest from the site's boundary; all other nationally or internationally designated wildlife sites are more than 5km from the site. Habitats
- 8.1.3** The site does not have habitats mapped under the priority habitat inventory (NERC Act 2006 Section 41 habitats of principal importance (HPI). The hedgerow on site is relatively newly planted: mapping shows it was not present in 2006 but was by 2009. The hedgerow, which is made up of at least 80% native species and therefore is an example of a UK priority habitat. The relatively recently planted hedges of site-level ecological value for species adapted to suburban environments, such as nesting birds, and is of ecological value at the local level but of negligible value at a wider scale. The introduced shrubs and scattered trees on site offer habitats suitable for a range of faunal groups such as nesting birds and small mammals adapted to suburban environments.

8.2 Assessment of Existing Ecological Value – Species

Bats

- 8.2.1** The scattered trees on the site offer potential commuting and foraging habitat for bats, however, in the urban setting it is considered unlikely that the site is of value to local bat populations in the surrounding area. Furthermore, the trees lacked features suitable for roosting bats.

Hazel dormice

- 8.2.2** Hazel dormice favour dense habitat connected to woodland that allows animals to move easily through habitats without coming to the ground (English Nature 2006). The hedgerow lacked continuous ground cover which is favoured by dormice. The site has limited connectivity to suitable

dormouse habitat in the local area. Furthermore, there are no records for hazel dormice within the search radius and a search of MAGIC showed no dormouse mitigation licences within 2km and as such, the presence of dormice on site is highly unlikely.

Amphibians

- 8.2.3** There is no standing water on site offering breeding opportunities for protected species such as the fully protected great crested newt (*Triturus cristatus*). The nearest pond to the site is 1.16 kilometres to the southwest at Prospect Park. The site is surrounded by roads, commercial and residential buildings and hard standing, isolating it from any potential amphibian habitat and therefore any local populations which may include great crested newt (*Triturus cristatus*) – an amphibian protected fully under UK and European legislation. There is only one amphibian record, which is just under 1.6 kilometres from the site. Taking into consideration the lack of suitable habitats on site and off site, there is negligible potential for amphibians to be present.

Reptiles

- 8.2.4** The hedgerow on site offered sheltering and/or foraging opportunities for reptiles, however it was a relatively fragmented patch from optimal reptile habitat, surrounded by modified grassland and a main road.
- 8.2.5** Common lizard (*Zootoca vivipara*) grass snake (*Natrix natrix*), slow worm (*Anguis fragilis*) and common lizard (*Zootoca vivipara*) have all been recorded at sites within 1 km to the site, with the closest being common lizard being recorded 485 metres from the site at Cow Lane Allotments. The site primarily consists of hard standing, closely cut modified grassland and the managed native hedgerow, and offers limited suitable habitats for use by reptiles. Therefore, it is considered unlikely that the site supports a stable population of reptiles of conservation importance locally or on a wider scale.

Nesting birds

- 8.2.6** The walkover survey showed the site's hedgerow, scattered trees and introduced shrub habitats are likely to be of ecological value at site level and local level for common and widespread nesting bird species adapted to

urban environments, which may include notable species of conservation importance.

Badgers (and other mammals)

- 8.2.7** There are records of badger within the search radius, including one 560 metres north of the site; however, there was no evidence of badger activity (i.e., setts trails, snuffle holes or mammal diggings) on site, and as such it is unlikely to support badger setts or to be of importance to badgers..
- 8.2.8** The site offers no waterbodies suitable for the use by water vole (*Arvicola amphibius*) which has been recorded 560 metres to the north of the site.
- 8.2.9** Hedgehog (*Erinaceus europaeus*) – an SPI (as defined under the NERC Act 2006 Section 41 species of principal importance) – has been recorded just over 100 metres to the west of the site and may use the hedgerow on site to shelter and forage.

Invertebrates

- 8.2.10** The introduced shrubs, scattered trees and hedgerow may provide habitats of some value to invertebrates; however, due to the urban surroundings, it is considered unlikely to be of value in a wider context i.e. beyond the site.

8.3 Impact of Proposals

Summary of proposals

- 8.3.1** The planning proposals are for the building of a new block of flats and associated garden landscaping and car parking on existing hardstanding and modified grassland. Two small sections of hedgerow will be removed to

allow for pedestrian access along the northern boundary of the site (refer to proposed development site plan in **Appendix 5**).

Designated sites and habitats

- 8.3.2** The site is not statutorily or non-statutorily designated for its wildlife interest and therefore the proposals will have no direct impact on protected sites.
- 8.3.3** The site supports a native hedgerow, which meets the criteria for designation as a habitat of principal importance for biodiversity (HPI) as defined as under Section 41 of the NERC Act 2006) although as it is newly planted and surrounded by urban habitats and therefore of limited ecological value. There will be some small loss of existing to enable access, but new hedge planting will lead to an increase the overall amount of native hedging on site
- 8.3.4** Four scattered trees within the modified grassland will be removed and six trees in the flower beds within the carpark will be removed as part of the plans, but new planting will lead to an overall increase in the trees on site; precautionary measures should be adopted prior to development commencing, during construction and post-construction (refer to recommendations in 9.1 below).

Bats

- 8.3.5** The site is of low suitability for roosting bats and offered no potential roosting sites within the scattered trees. Therefore, the removal of some of the scattered trees and the shrubs amongst the hard standing, and small sections of the hedgerow and shrubs along the northern boundary will not dramatically reduce the foraging opportunities for bats or have an impact on roosting potential for bats.
- 8.3.6** Additional artificial lighting will be installed on site however the site is already well illuminated with street lighting along the main road towards the north and in the car park towards the south. Artificial lighting can adversely affect bats by deterring bats from commuting routes or foraging areas, or by illuminating roosts (Stone *et. al.* 2015; Fure 2006) Considering the site's urban and well-lit setting there is only a low risk that additional lighting could

cause disturbance to bats; however measures to minimise any additional impacts should be adopted (refer to recommendations in **Section 9**).

Amphibians

- 8.3.7** The site had no waterbodies for breeding great crested newts and the urban area is isolated from suitable amphibian habitat proposals are therefore the proposals are unlikely to have an adverse impact on populations of great crested newts or other amphibians.

Reptiles

- 8.3.8** The site had limited sheltering habitats for use by reptiles and is in an isolated urban setting and therefore it is considered unlikely that the proposed works could harm reptiles or affect reptile habitat.

Nesting birds

- 8.3.9** The scattered trees, hedgerow and introduced shrubs provide nesting opportunities for common and widespread bird species. The removal of any trees and shrubs may lead to the disturbance of nesting birds and as such necessary precautions must be adopted to ensure the work goes ahead lawfully (refer to recommendations in **Section 9**).

Other mammals

- 8.3.10** There were no signs of badger on site and as such it is considered unlikely that the proposed works will have any impact on badgers or their setts. However, the hedgerow habitat on site may be used by sheltering and foraging hedgehogs (*Erinaceus europaeus*) – a species of principal importance under Section 41 of the NERC Act 2006) which have been recorded nearby (refer to recommendations in **Section 9**).

Invertebrates

- 8.3.11** The site, which is predominantly poor-quality grassland and hard standing, is poor habitat for invertebrates, and the hedgerow onsite does not connect to

any suitable habitats off-site and as such the proposals are unlikely to have any impact on invertebrate assemblages of conservation importance.

9 RECOMMENDATIONS

9.1 Habitats

9.1.1 The hedgerow with trees and scattered trees to be retained on site should be protected during construction to avoid damage to root systems and retain a foraging and nesting habitat for birds and foraging roosting and commuting habitat for bats. The following precautionary measures are recommended:

- Erection of Heras fencing along the northern boundary and around the scattered trees to be retained in advance of site clearance, enclosing tree Root Protection Areas;
- Prohibition of construction activities, material storage, use of vehicles, fires etc. within the fenced area to prevent damage to tree roots and compaction of the soil - these type of activities should be restricted to areas of cleared ground and

9.2 Nesting Birds

9.2.1 The tree and shrub removal should be completed outside of the peak bird nesting season (March to August) or alternatively, following an inspection by an ecologist confirming that there is no current nesting activity. If nesting birds are discovered prior to or during any work, work should stop immediately and should only continue once bird nesting has finished i.e., young have fledged and left the nest.

9.3 Small mammals

9.3.1 During development, any open excavations and trenches should be backfilled before nightfall, or alternatively, escape ramps should be installed to allow hedgehogs and other small mammals to escape if they become trapped.

9.4 Ecological Enhancement Opportunities

9.4.1 The proposals present opportunities for ecological enhancement of the site. A detailed net gain calculation for habitats on site has been prepared using the DEFRA Biodiversity Metric 3.1 (refer to Section 10 below). In outline, the

following provide opportunities for enhancement relating to both habitats and species:

- Landscaping to incorporate native planting within the new vegetated garden habitats within the development area;
- Enhancement of the hedgerow with low intensity management and the addition of a wildflower buffer along the southern side to increase ecological biodiversity as well as provide screening for the new housing;
- The provision of integrated bat boxes on the new buildings on site;
- The provision of house sparrow or starling nest boxes at the eaves of the new buildings; and
- Boundary treatments should be designed to allow the free movement of wildlife such as hedgehogs.

10 BIODIVERSITY NET GAIN FEASIBILITY ASSESSMENT

10.1 Introduction

10.1.1 A Biodiversity Net Gain (BNG) calculation was undertaken to inform a proposed planning application of the redevelopment of the site for residential dwellings and determine the feasibility of the plans. The feasibility assessment made use of the information collected during the Preliminary Ecological Appraisal.

10.2 Baseline habitats

10.2.1 The baseline habitats have been taken from the walkover survey and adapted for the Biodiversity Metric 3.1 and from topographical survey drawings showing the existing and proposed habitats and linear features. The habitat and linear feature descriptions relate to the UK Habitat Classification (UKHab) system (Butcher *et al.* 2020) and are assigned a condition (where applicable) – see **Tables 1 & 2** below.

Table 1. Baseline habitats for the Biodiversity Metric 3.1 calculation.

Habitat type	UKHab (code)	Condition	Area (ha)
Modified grassland	g14	Poor	0.2071
Developed land; sealed surface	u1d	N/A	0.5611
Introduced shrub	1160	N/A	0.0159
Urban trees		Poor	0.014
Total Area			0.80

Table 2. Baseline hedge for the Biodiversity Metric 3.1 calculation.

Habitat type	UKHab (code)	Condition	Length (km)
Line of trees	11	Poor	0.046
Native hedgerow with trees	h2NE4	Poor	0.096
Total Length			0.14

- 10.2.2** A plan of the baseline habitats and hedges for the Biodiversity Metric 3.1 calculation is presented in **Appendix 3**, field survey notes presented in **Appendix 4** and habitat condition assessments are detailed below.

Modified grassland (g1d)

- 10.2.3** The patch of grassland towards the northern end of the site was closely mown and was typical of disturbed grassland habitats. The grassland is not considered to be a notable habitat and therefore a condition assessment was not necessary.

Developed land; sealed surface (u1d)

- 10.2.4** The hard standing is not considered a notable habitat and a condition assessment was not necessary.

Introduced Shrubs (1160)

- 10.2.5** The non-native shrubs were not considered a notable habitat and a condition assessment was not necessary.

Line of trees (Amongst g4 -11)

- 10.2.6** The trees were all young, planted trees amongst shortly mown grassland therefore with no undisturbed vegetation around them. The trees passed two of the criteria and were considered to be poor under the condition assessment score.

Native hedgerow with trees (h2NE4)

- 10.2.7** The native hedgerow failed 6 attributes in the condition assessment and therefore is given a poor habitat condition. The trees are all native apart from one London plane tree; however, they are all the same age with no mature specimens. The trees were healthy however the hedge was subject to human pressures from littering and pollution. The base of the hedgerow was being dominated by undesirable perennial vegetation such as cleavers. Although the northern side of the hedge was undisturbed with a strip of

introduced shrubs the southern side of the site was disturbed and kept shortly mown.

10.3 Proposed Site Layout

10.3.1 The proposed site layout comprises the construction of a block of flats and associated gardens and car parking with areas of grassland, garden, hedgerow and tree planting. A plan of the proposed habitats for the Biodiversity Metric 3.1 calculation is presented in **Appendix 5**.

Table 3. Proposed site habitats for the Biodiversity Metric 3.1 calculation.

Habitat type	UKHab (code)	Condition	Area (ha)
Developed land; sealed surface	U1b5	N/A	0.6166
Other neutral grassland	G3c	Moderate	0.091
Vegetated garden	231	N/A	0.0683
Urban tree		Moderate	0.007
Total Area			0.78

Table 4. Proposed hedge for the Biodiversity Metric 3.1 calculation.

Habitat type	UKHab (code)	Condition	Length (km)
Native hedgerow	h2NE5	Good	0.109
Total Length			0.11

10.3.2 A net gain can be achieved with the creation of species rich grassland habitat on site, the addition of a new native hedgerow and tree planting. The metric illustrates that a biodiversity net gain is possible as illustrated in **Tables 3 & 4** and illustrated in **Appendix 7**. The 'Headline Results' section taken from the metric spreadsheet shows a total new unit change of 0.31 habitat units and 0.27 Hedgerow units, i.e., a biodiversity increase of 62.32% and 31.92% respectively.

10.3.3 The proposed development will result in the removal of 0.2074ha of existing modified grassland and -0.0077ha of introduced shrubs, habitats of low

distinctiveness and therefore, without appropriate compensation, would have an adverse impact on the ecological value of the grassland and hedgerow on-site and lead to a net loss of biodiversity. This loss can be compensated for by the creation of new habitat of the same or greater distinctiveness on-site. The creation of vegetated garden, tree planting and 0.091 ha of other neutral grassland - a habitat of medium distinctiveness - will result in the overall unit change of 0.31 habitats units. A species rich grassland turf mix should be used with at least nine grass and wildflower species. Fifteen existing urban trees are to be removed however fifteen trees will be planted and the retained trees will be enhanced, which are all of the same medium distinctiveness and therefore there will be no cumulative change in the habitat. A loss of 0.013 km of native hedgerow with the creation of 0.109 km of native hedgerow will result in the total net unit change of 0.27 hedgerow units.

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13 APPENDIX 1 – LEGISLATIVE BACKGROUND

Amphibians

The seven native species of amphibian receive protection under the W&AC 1981 (as amended). The four widespread and common amphibians (common frog, toad, smooth newt and palmate newt) receive only limited protection – making their sale illegal.

The great crested newt (*Triturus cristatus*) receives full protection under the W&CA 1981 (as amended) and under the Habitat Regulations 2019. The combined legislation makes it illegal to:

- intentionally or recklessly kill, injure or take a great crested newt;
- possess or control any live or dead specimen or anything derived from a great crested newt;
- intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt; and
- intentionally or recklessly disturb great crested newts; in particular, any disturbance which is likely to impair their ability to survive, breed or reproduce or nurture their young; or in the case of hibernating or migrating animals, to hibernate or migrate.

Great crested newts (*T. cristatus*) and common toads (*Bufo bufo*) are species of principal importance for the conservation of biodiversity in England ('*UKBAP Priority Species*') under Section 41 of the NERC Act 2006.

Badgers

Badgers are protected by the Protection of Badgers Act 1992. The Act makes activities such as development that would harm or disturb badgers or damage, obstruct or destroy their setts illegal. If badgers are to be affected

by the proposed development, activities can be undertaken only under a licence issued by Natural England.

Bats

All bat species in Britain are fully protected by the W&CA 1981 (as amended) and by the Habitat Regulations 2019. In summary, the combined legislation makes it an offence to:

- damage or destroy a breeding site or resting place or intentionally or recklessly obstruct access to a structure or place used for shelter by a bat;
- deliberately, intentionally or recklessly disturb bats; in particular, any disturbance which is likely to impair the ability of bats to survive, breed or reproduce or nurture their young; or in the case of hibernating or migrating bats, to hibernate or migrate; or to significantly affect the local distribution or abundance of the species; and
- deliberately kill, injure or take any bat.

Birds

All wild birds are protected under the W&CA 1981 (as amended). The Act makes it an offence to kill, injure or take a wild bird or to damage or destroy the nest of a wild bird whilst in use or being built. Species listed on Schedule 1 of the Act, such as barn owls and kingfishers, are afforded additional protection against disturbance while nesting.

Hazel dormice

Hazel dormice receive full protection under the W&CA 1981 (as amended) and under the Habitat Regulations 2019. These make it illegal to:

- intentionally or recklessly kill, injure or take a dormouse;
- possess or control any live or dead specimen or anything derived from a dormouse;
- damage or destroy a breeding site or resting place or intentionally or recklessly obstruct access to a structure or place used for shelter by a dormouse; and
- intentionally or recklessly disturb dormice; in particular, any disturbance which is likely to impair their ability to survive, breed or

reproduce or nurture their young; or in the case of hibernating or migrating animals, to hibernate or migrate.

Invasive non-native plants

The W&CA 1981 (as amended) provides the primary controls on the release of non-native species into the wild in Great Britain. It is an offence under Section 14(2) of the Act to 'plant or otherwise cause to grow in the wild' any plant listed in Schedule 9, Part II. The species listed in the Act include Japanese knotweed (*Fallopia japonica*), giant hogweed (*Heracleum mantegazzianum*) and Himalayan balsam (*Impatiens glandulifera*).

Otters

Otters are fully protected by the W&CA 1981 (as amended) and by the Habitat Regulations 2019. In summary, the combined legislation makes it an offence to:

- damage or destroy a breeding site or resting place or intentionally or recklessly obstruct access to a structure or place used for shelter by an otter;
- deliberately, intentionally or recklessly disturb otters; in particular, any disturbance which is likely to impair the ability of otters to survive, breed or reproduce or nurture their young; or to significantly affect the local distribution or abundance of the species; and
- deliberately kill, injure or take any bat.

Reptiles

The four widespread reptiles most likely to be encountered (adder, grass snake, slow worm and common lizard) are protected under the W&CA 1981

(as amended). The Act makes it an offence to intentionally kill, injure, possess or sell any of the species.

The aforementioned species are all listed as being of principal importance for the conservation of biodiversity in England (*'UKBAP Priority Species'*) under Section 41 of the NERC Act 2006.

Water voles

Since April 2008, water voles have received full protection under Section 9 in Schedule 5 of the W&CA 1981 (as amended). This makes it an offence to intentionally kill, injure or take water voles or to possess or control live or dead water voles or derivatives. It is an offence to intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection or intentionally or recklessly disturb water voles whilst occupying a structure or place used for that purpose.

The water vole is listed as being of principal importance for the conservation of biodiversity in England (*'UKBAP Priority Species'*) under Section 41 of the NERC Act 2006.

Wild mammals

Under the Wild Mammals (Protection) Act 1996 it is an offence to intentionally inflict unnecessary suffering, as specified by the Act, on any wild mammal.

APPENDIX 2 - SITE PHOTOGRAPHS



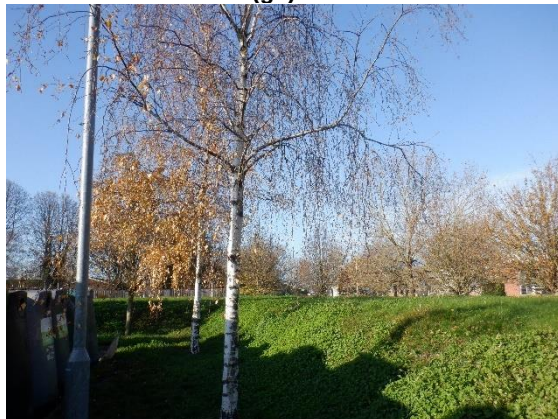
1. Modified grassland towards the northern end of the site (g4)



2. Modified grassland towards the northern end of the site (g4)



3. Silver birch trees towards the eastern side of the grassland (g4 - 11)



4. Silver birch and field maple trees towards the centre of the grassland (g4 -11)



5. Car park covering most of the site (u1d)



6. A couple of flower beds with scattered trees and introduced shrubs (11 & 1160).



7. Planted native hedgerow along the northern end of the site (h2NE4)



8. Standard trees present along the northern boundary of the site (h2NE4)



9. Strip of Wilson's honeysuckle along the northern side of the hedgerow (1160)

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APPENDIX 3 – UK HABITAT CLASSIFICATION BASELINE HABITATS PLAN



APPENDIX 4 - UK HABITAT CLASSIFICATION SURVEY NOTES

Habitat label	Habitat Description
g4	Modified grassland (Secondary code – 11) - the northern end of the site comprised a mound covered with a patch of managed grassland. The grassland was dominated with perennial rye grass (<i>Lolium perenne</i>), with doves foot cranesbill (<i>Geranium molle</i>), yarrow (<i>Achillea millefolium</i>) being abundantly present, dandelion (<i>Taraxacum officinale</i> agg.), cocksfoot (<i>Dactylis glomerata</i>), cats ear (<i>Hypochaeris radicata</i>) being occasionally present, musk storks bill (<i>Erodium moschatum</i>), red dead nettle (<i>Lamium purpureum</i>) and spotted medick (<i>Medicago arabica</i>) locally present, and spear thistle (<i>Cirsium vulgare</i>), common sow thistle (<i>Sonchus oleraceus</i>), ragwort (<i>Senecio jacobaea</i>), common mallow (<i>Malva sylvestris</i>) and Canadian fleabane (<i>Conyza canadensis</i>) being rarely present. (Photographs 1 & 2). The trees on the eastern side of the grassland included six silver birch trees (<i>Betula pendula</i>) with two field maple (<i>Acer campestre</i>) trees towards the centre of the grassland (Photographs 3 & 4).
u1d	Developed land, sealed surfaces (Secondary codes 11 & 1160) - Most of the site comprised of a tarmacked car park which was part of the car park for Tesco's Extra. Three planted flowerbeds were present each with two callery pear trees (<i>Pyrus Callerydnia</i>) and Wilson's honeysuckle (<i>Lonicera nitida</i>) and annual meadow grass (<i>Poa annua</i>) beneath (Photographs 5 & 6).
h2NE4	Native hedgerow with trees - a planted native hedgerow with trees was present along the northern and north western side of the site. Species present within the hedge included hornbeam (<i>Carpinus betulus</i>), silver birch (<i>Betula pendula</i>), elder (<i>Sambucus nigra</i>), hawthorn (<i>Crataegus monogyna</i>), field maple (<i>Acer campestre</i>), bramble (<i>Rubus fruticosus</i> agg.), ivy (<i>Hedera helix</i>) and privet (<i>Betula pendula</i>) (Photograph 7). Standard trees present amongst the hedgerow included silver birch (<i>Betula pendula</i>), field maple (<i>Acer campestre</i>), hornbeam (<i>Carpinus betulus</i>) and a London Plane (<i>Platanus x hispanica</i>) (Photograph 8). Cleavers (<i>Galium aparine</i>) were dominant at the base of the hedge with garlic mustard (<i>Alliaria petiolata</i>), herb Robert (<i>Geranium robertianum</i>) and old mans beard (<i>Clematis vitalba</i>) present occasionally. A strip of Wilson's honseysuckle (<i>Lonicera nitida</i>) was present along the northern side of the hedgerow along the roadside (1160; Photograph 9).

APPENDIX 5 – UK HABITAT CLASSIFICATION PROPOSED HABITATS PLAN



APPENDIX 6 – BIODIVERSITY NET GAIN HEADLINE RESULTS

Return to results menu

Headline Results

On-site baseline	Habitat units	0.50
	Hedgerow units	0.86
	River units	0.00
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.81
	Hedgerow units	1.13
	River units	0.00
On-site net % change (Including habitat retention, creation & enhancement)	Habitat units	62.32%
	Hedgerow units	31.92%
	River units	0.00%
Off-site baseline	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00
Total net unit change (including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.31
	Hedgerow units	0.27
	River units	0.00
Total on-site net % change plus off-site surplus (including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	62.32%
	Hedgerow units	31.92%
	River units	0.00%
Trading rules Satisfied?	Yes ✓	