

# REPORT

## **Tewin Road, Welwyn Garden City**

### Ecology Survey Report

Client: Henry Boot Developments

Reference: PB5985-RHD-ZZ-XX-RP-Z-0003

Status: Draft/P01.01

Date: 23 July 2021

HASKONINGDHV UK LTD.

Rightwell House  
Rightwell East  
Bretton  
Peterborough  
PE3 8DW  
Industry & Buildings  
VAT registration number: 792428892

+44 1733 334455 **T**  
+44 1733 262243 **F**  
info@uk.rhdhv.com **E**  
royalhaskoningdhv.com **W**

Document title: Tewin Road, Welwyn Garden City

Document short title:

Reference: PB5985-RHD-ZZ-XX-RP-Z-0003

Status: P01.01/Draft

Date: 23 July 2021

Project name:

Project number: PB5985

Author(s): Claire Smith

Drafted by: Claire Smith

---

Checked by: Charlotte Clements

---

Date: 26/07/2021

---

Approved by: Claire Smith

---

Date: 30/07/2021

---

Classification

Project related

*Unless otherwise agreed with the Client, no part of this document may be reproduced or made public or used for any purpose other than that for which the document was produced. HaskoningDHV UK Ltd. accepts no responsibility or liability whatsoever for this document other than towards the Client.*

*Please note: this document contains personal data of employees of HaskoningDHV UK Ltd.. Before publication or any other way of disclosing, this report needs to be anonymized.*

## Table of Contents

|          |   |           |
|----------|---|-----------|
| <b>1</b> | <b>Introduction</b>                     | <b>1</b>  |
| <b>2</b> | <b>Development Proposals</b>            | <b>1</b>  |
| <b>3</b> | <b>Methodology</b>                      | <b>1</b>  |
| 3.1      | Legislation, Policy and Guidance        | 1         |
| 3.2      | Study Area                              | 5         |
| 3.3      | Desk Study                              | 5         |
| 3.4      | Field Survey                            | 6         |
| 3.5      | Preliminary daytime inspection for bats | 6         |
| 3.6      | Constraints to Survey                   | 7         |
| <b>4</b> | <b>EclA Assessment Methodology</b>      | <b>7</b>  |
| 4.1      | Scope of the Impact Assessment          | 7         |
| 4.2      | Assessment of Impacts                   | 7         |
| <b>5</b> | <b>Existing Conditions</b>              | <b>9</b>  |
| 5.1      | Designated sites                        | 9         |
| 5.2      | Field survey                            | 9         |
| 5.2.1    | Habitats                                | 9         |
| 5.2.2    | Legally protected and notable species   | 9         |
| <b>6</b> | <b>Assessment of Potential Impacts</b>  | <b>12</b> |
| 6.1      | During Construction                     | 12        |
| 6.1.1    | Impacts to Habitats                     | 12        |
| 6.1.2    | Impacts to Birds                        | 12        |
| 6.2      | During Operation                        | 13        |
| 6.2.1    | Impacts to Habitats                     | 13        |
| 6.2.2    | Impacts to Birds and Bats               | 13        |
| <b>7</b> | <b>Conclusion</b>                       | <b>13</b> |

## 1 Introduction

This report has been produced on behalf of Henry Boot Developments (herein “the applicant”) as part of the forthcoming planning application for the proposed development on Tewin Road, Welwyn Garden City (herein referred to as the site).

An Extended Phase 1 Habitat Survey of the site was undertaken on the 14<sup>th</sup> July 2021 by Claire Smith (a Chartered Ecologist and full member of the Chartered Institute of Ecology and Environmental Management (CIEEM)). The findings of this survey form the basis of this report.

This report has been prepared following the guidelines as set out in the Chartered Institute of Ecology and Environmental Management’s (CIEEM) Guidelines on Ecological Report Writing (CIEEM 2017).

## 2 Development Proposals

A planning application will be submitted for the redevelopment of the site, comprising three units. **Drawing 1734-JSA-WY-XX-DR-A-01203** shows the proposed development.

## 3 Methodology

### 3.1 Legislation, Policy and Guidance

This Ecological Impact Assessment (EclA) has been undertaken with reference to current best practice and in particular the *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal* (Chartered Institute of Ecology and Environmental Management (CIEEM), 2018). These guidelines aim to predict the residual impacts on important ecological features affected, either directly or indirectly by a development, once all the appropriate mitigation has been implemented.

**Table 1** provides a summary of the key ecological legislation in relation to individual species and designated sites for nature conservation, and

**Table 2** provides a summary of key ecological policy relevant to the proposed development.

**Table 1: Summary of designated sites and protected species legislation**

| Site designation /Species          | Legislation   | Level of Protection   | Relevant Mitigation/Actions   |
|------------------------------------|---|---|---|
| <b>Designated sites</b>            |   |   |   |
| Special Protection Area (SPA)      | Conservation of Habitats and Species Regulations 2017 (as amended) <sup>1</sup> | Planning controls are affected through Part 2 of the Conservation of Habitats and Species regulations 2010 (Reg 21) and Part 6 (Regs 61- 67).<br>These sites are given protection through policies in the Local Development Plan. | Formal Habitat Regulations Assessment is required before undertaking, or giving consent, permission or other authorisation for a plan or project which is likely to have a significant effect on such a site. |
| Special Area of Conservation (SAC) | Conservation of Habitats and Species  | Article 3 of the Habitats Directive requires the establishment of a European network of important high-quality conservation sites that will make  | Formal Habitat Regulations Assessment is required before undertaking, or giving consent, permission or other authorisation for a  |

<sup>1</sup> Transposes the following in UK law: Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora and EC Directive 2009/147/EC on the Conservation of Wild Birds

| Site designation /Species                  | Legislation  | Level of Protection  | Relevant Mitigation/Actions   |
|--|--|--|---|
|  | <p>Regulations 2017 (as amended)</p> <p>Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora</p>                          | a significant contribution to conserving the 189 habitat types and 788 species identified in Annexes I and II of the Directive (as amended).   | plan or project which is likely to have a significant effect on such a site.  |
| Site of Special Scientific Interest (SSSI) | Wildlife and Countryside Act 1981 (as amended)   | <p>It is an offence to carry out or permit to be carried out any potentially damaging operation.</p> <p>SSSIs are given protection through policies in the Local Development Plan.</p>   | <p>Owners, occupiers, public bodies and statutory undertakers must give notice and obtain the appropriate consent under Section 28 before undertaking operations likely to damage a SSSI.</p> <p>Section 28G places a duty on all public bodies to further the conservation and enhancement of SSSIs.</p> <p>England: The National Planning Policy Framework (Department for Communities and Local Government, March 2012), with particular reference to Policy 11, and the joint Circular.</p> |
| Local Nature Reserve (LNR)                 | <p>National Parks and Access to the Countryside Act 1949</p> <p>Countryside and Rights of Way Act 2000</p> <p>Natural Environment and Rural Communities Act 2006</p> | An LNR can be given protection against damaging operations. It also has protection against development on and around it. This protection is usually given via the Local Plan.  | <p>A development proposal likely to significantly affect a LNR will be permitted only:</p> <ul style="list-style-type: none"> <li>- if it can be shown that the reasons for the development or benefits to the local community from the development outweigh the interest or value of the site, or</li> <li>- any harm can be overcome by mitigating measures, secured through conditions or planning obligations.</li> </ul>   |
| Species                                    |  |  |   |
| Bats                                       | Conservation of Habitats and Species Regulations 2017 (as amended) Reg. 41   | <p>Deliberately capture, injure or kill a bat; deliberate disturbance of bats; or damage or destroy a breeding site or resting place used by a bat.</p> <p>[The protection of bat roosts is considered to apply regardless of whether bats are present.]</p> | <p>A Natural England licence in respect of development is required in England.</p> <p>European Protected Species: Mitigation Licensing- How to get a licence (NE 2010)</p> <p>Bat Mitigation Guidelines (English Nature 2004)</p> <p>Bat Workers Manual (JNCC 2004)</p>   |
|  | Wildlife and Countryside Act   | Intentionally or recklessly damages, destroys or obstruct access to any structure or place used for shelter or   | Licence from Natural England is required for surveys (scientific purposes) that would involve   |

Project related

| Site designation /Species  | Legislation   | Level of Protection   | Relevant Mitigation/Actions  |
|--|---|---|--|
|  | 1981 (as amended) S.9   | protection or disturb a bat in such a place.  | disturbance of bats or entering a known or suspected roost site.   |
| Birds  | Wildlife and Countryside Act 1981 (as amended) S.1                        | Intentionally kill, injure or take any wild bird; intentionally take, damage or destroy the nest of any wild bird while that nest is in use or being built; intentionally take or destroy the nest or eggs of any wild bird.<br>[Special penalties are liable for these offences involving birds on Schedule 1<br>Intentionally or recklessly disturb a Schedule 1 species while it is building a nest or is in, on or near a nest containing eggs or young; intentionally or recklessly disturb dependent young of such a species.   | No licences are available to disturb any birds in regard to development.<br><br>Licences are available in certain circumstances to damage or destroy nests, but these only apply to the list of licensable activities in the Act and do not cover development.<br><br>General licences are available in respect of 'pest species' but only for certain very specific purposes e.g. public health, public safety, air safety. |
| Adder ( <i>Vipera berus</i> )<br>Common lizard ( <i>Zootoca vivipara</i> )<br>Grass snake ( <i>Natrix natrix</i> )<br>Slow worm ( <i>Anguis fragilis</i> ) | Wildlife and Countryside Act 1981 S.9(1) (part); S.9(5)                   | Intentionally kill, injure or take a protected reptile species.<br><br>Sells, offers or exposes for sale, or has in his possession or transports for the purpose of sale, a protected reptile species, or any part of, or anything derived from, such an animal. Publishes or causes to be published any advertisement likely to be understood as conveying that he buys or sells, or intends to buy or sell, any of those things.  | No licence is required in England or Wales.<br><br>However, an assessment for the potential of a site to support reptiles should be undertaken prior to any development works which have potential to affect these animals.  |
| Badger ( <i>Meles meles</i> )  | Protection of Badgers Act 1992<br>Wildlife and Countryside Act 1981 S.6   | Wilfully kill, injure or take, or attempt to kill, injure or take, a badger.<br><br>Interfering with a badger sett by damaging a badger sett or any part of it; destroying a badger sett; obstructing access to, or any entrance of, a badger sett; causing a dog to enter a badger sett; or disturbing a badger when it is occupying a badger sett.<br><br>Set in position any trap or snare, any electrical device for killing or stunning or any poisonous, poisoned or stupefying substance so placed as to be calculated to cause bodily injury to any wild animal, unless in the interests of public health, agriculture, forestry, fisheries or nature conservation. | Licence from Natural England is required for any development which may interfere with a badger sett.   |
| Otter ( <i>Lutra lutra</i> )   | Conservation of Habitats and Species Regulations 2017 (as amended) Reg 41 | Deliberately capture, injure or kill an otter; deliberate disturbance of otters; or damage or destroy a breeding site or resting place used by an otter.  | Licences issued for development by Natural England.<br><br>European Protected Species: Mitigation Licensing- How to get a licence (NE 2010)  |

Project related

| Site designation /Species  | Legislation   | Level of Protection  | Relevant Mitigation/Actions  |
|--|---|--|--|
|  | Wildlife and Countryside Act 1981 (as amended) S.9  | Intentionally or recklessly damages, destroys or obstruct access to any structure or place used for shelter or protection or disturb an otter in such a place.   | No licence is required for survey in England. However, a licence would be required if the survey methodology involved disturbance.   |
| Water vole ( <i>Arvicola amphibius</i> )   | Wildlife and Countryside Act 1981 (as amended)  | Intentionally or recklessly damages, destroys or obstruct access to any structure or place used for shelter or protection or disturb a water vole in such a place.   | Any activity that would result in a contravention of the offences listed would require a Natural England licence to avoid committing an offence.   |
| Dormice ( <i>Muscardinus avellanarius</i> )  | Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017. | It is an offence to:<br>capture, kill, disturb or injure hazel dormice (on purpose or by not taking enough care)<br>damage or destroy a breeding or resting place (even accidentally)<br>obstruct access to their resting or sheltering places (on purpose or by not taking enough care) possess, sell, control or transport live or dead hazel dormice, or parts of hazel dormice | Any activity that would result in a contravention of the offences listed would require a Natural England licence to avoid committing an offence.   |
| Great Crested Newt ( <i>Triturus cristatus</i> )   | Wildlife and Countryside Act 1981 (as amended)  | Intentionally or recklessly damages, destroys or obstruct access to any structure or place used for shelter or protection or disturb a Great Crested newt in such a place.   | Any activity that would result in a contravention of the offences listed would require a Natural England licence to avoid committing an offence.   |
|  | Conservation of Habitats and Species Regulations 2017 (as amended).   | Deliberately capture, injure or kill a Great Crested newt; deliberate disturbance of Great Crested newt; or damage or destroy a breeding site or resting place used by a Great Crested newt.   |  |
| White Clawed Crayfish ( <i>Austropotamobius pallipes</i> )   | Wildlife and Countryside Act 1981 (as amended)  | Intentionally or recklessly damages, destroys or obstruct access to any structure or place used for shelter or protection or disturb a White clawed crayfish in such a place.  | Any activity that would result in a contravention of the offences listed would require a Natural England licence to avoid committing an offence.   |
| Invasive plant species<br><br>e.g. Japanese knotweed ( <i>Fallopia japonica</i> ), giant hogweed ( <i>Heracleum mantegazzianum</i> ), rhododendron, Himalayan balsam ( <i>Impatiens glandulifera</i> ) | Wildlife and Countryside Act 1981 S.14<br><br>Environmental Protection Act 1990 S. 34                         | It is illegal to plant or otherwise cause to grow in the wild these species.   | Any contaminated soil or plant material is classified as controlled waste and should be disposed of in a suitably licensed landfill site, accompanied by appropriate Waste Transfer documentation, and must comply with section 34 of the Environmental Protection Act 1990. |

**Table 2: Summary of relevant policy**

| Policy document   | Relevant policy  |
|---|--|
| Biodiversity Action Plan (BAP) Habitats & Species (Hertfordshire BAP) | N/A<br>The BAP is the UK's initiative to maintain and enhance biodiversity in response to the Convention on Biological Diversity signed in 1992.<br>The original BAP list of species and habitats prepared over 10 years ago, was used to form the new list of species and habitats of principal importance. However, some of the species have been taken off the new list and additional species and habitats have been included. |
| Welwyn Hatfield District Plan (adopted in 2005)                       | Policy R11 Biodiversity and Development<br>Policy R13 Site of Special Scientific Interest<br>Policy R14 Local Nature Reserves<br>Policy R15 Wildlife Sites<br>Policy R17 Trees, Woodland and Hedgerows   |

### 3.2 Study Area

A zone of 2km around the site is considered an appropriate 'study area' for the gathering of information during the desk study. For the Extended Phase 1 Habitat Survey, the site's footprint plus a 50m zone from its boundary is the defined survey area (with the exception of a 250m zone for the purposes of the great crested newt survey).

The study area for this EclA was determined through a review of the proposed scheme in order to identify the spatial scale at which ecological features could be affected. This study area is sufficient to include the zone of influence is the area encompassing all predicted negative ecological effects from the proposed development; both those which will occur as a result of land-take and habitat loss, and those which may occur indirectly through disturbance such as noise or via other pathways such as the fluvial environment.

### 3.3 Desk Study

The Multi-Agency Geographic Information for the Countryside (MAGIC) website ([www.magic.gov.uk](http://www.magic.gov.uk)) was reviewed in July 2021 for information on statutory sites and notable habitats (e.g. ancient woodlands) of nature conservation value within 2km of the site.

A search for water bodies within 250m of the site, with specific reference to great crested newts, was made using Ordnance Survey (OS) maps in July 2021. A search area of 250m was chosen having considered the habitats around the site. Whilst great crested newts can use suitable terrestrial habitat up to 500m from a breeding pond (Great crested newt mitigation guidelines, English Nature, 2001), research suggests that newts are likely to travel no more than 250m from ponds where suitable habitats for foraging and hibernation exist<sup>2</sup>.

The water body information derived from the OS maps was then used to identify the potential presence of (and impacts on) great crested newts and on other protected species including otter, water vole and white clawed crayfish which might also use water bodies.

<sup>2</sup> Cresswell & Whitworth, 2004, An assessment of the efficiency of capture techniques and the value of different habitats for great crested newt *Triturus cristatus*, ENRR Number 576

Google Earth aerial photographs were reviewed in July 2021, where available, to assist in identifying any other notable habitats within the site and its surrounding area.

A request for the biological records for the site was made to the Hertfordshire Environmental Records Centre (HERC) although these are yet to be received at the time writing this report.

### 3.4 Field Survey

An ecological walkover survey of the site and its immediate surrounds was undertaken on the 14<sup>th</sup> July 2021.

This survey broadly followed the 'Extended Phase 1' methodology as set out in *Guidelines for Baseline Ecological Assessment* (Institute of Environmental Assessment, 1995). This method of survey provides information on the habitats within the site and assesses the potential for legally protected species to occur on or adjacent to the site.

Preliminary investigations were undertaken in respect of the presence of the following legally protected species within the site:

- searching for suitable habitats for breeding populations of great crested newts within and up to 250m from the site boundaries. Also, searching for suitable terrestrial habitat within and immediately surrounding the site;
- searching for signs of badger activity including setts, tracks, snuffle holes and latrines within the site and up to 30m from its boundary;
- searching for suitable habitat for water voles, otters and white clawed crayfish in water bodies within or immediately adjacent to the site;
- searching for signs of potential roosting sites for bats, particularly within trees and existing structures within the site;
- searching for suitable habitats for reptiles within the site;
- searching for signs of bird nests and identifying any suitable nesting habitats within the site;
- searching for suitable habitat for any other protected species such as dormice; and
- the presence of invasive species within and up to 10m from the site boundary. The list of invasive plant species included on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) is extensive and these plants are found in a range of different habitats. The 2021 ecological survey checked, in particular, for the presence of Japanese knotweed, giant knotweed, hybrid knotweed, giant hogweed, Himalayan balsam, rhododendron and cotoneaster.

### 3.5 Preliminary daytime inspection for bats

A daytime inspection of all features (e.g. structures and/or trees) within the site was undertaken on the 14<sup>th</sup> July 2021 and concurrently with the ecological field survey.

During this survey, all suitable structures and/or trees within the site were externally surveyed from ground level using binoculars for their potential to support roosting bats. Where present, each building/structure within the site was categorised using a four-point scale (negligible, low, medium and high) broadly based on the Bat Conservation Trust (BCT) guidelines (3<sup>rd</sup> Edition, 2016) for their potential to support roosting bats, where:

- **Negligible potential** – no features present which could offer bats the opportunity to roost;
- **Low potential** – only minor crevices or cracks present which are considered to offer poor roosting spaces for bats;
- **Medium potential** – features present such as small cavities and gaps leading to small enclosed spaces, which offer some form of protection for either individual bats or small numbers of bats; or

- **High potential** – significant holes, cracks or crevices in roof or building structures, which are considered very suitable to be used by bats for roosting and could support large or important roosts such as maternity roosts, and internal features such as fresh, recent droppings.

### 3.6 Constraints to Survey

Ecological surveys are limited by factors which affect the presence of plants and animals such as the time of year, migration patterns and behaviour. There may be invasive plant species present within the site that were not recorded, but it is considered that this survey is sufficient to identify any significant constraints posed by invasive species. The 2021 ecological survey has not therefore produced a complete list of plants and animals and the absence of evidence of any species should not be taken as conclusive proof that the species is not present or that it will not be present in the future.

Only land within the site and up to 50m from its boundaries was surveyed at the time of the 2021 survey.

The survey was undertaken within the optimal surveying window and therefore the results of the 2021 work has allowed for an initial assessment of the ecological value of the site and the potential for ecological constraints to the proposed development and the likely requirements for further surveys and/or mitigation to be made.

## 4 EclA Assessment Methodology

### 4.1 Scope of the Impact Assessment

The scope of the EclA includes:

- Desk study and field survey data;
- Identification of potential effects on identified and potential ecological features;
- Mitigation measures to minimise negative effects and enhancement measures to increase the biodiversity value of the land within the site; and
- Assessment of the significance of potential ecological impacts from the proposed development, taking mitigation into account, including habitat loss, disturbance of animals and off-site effects from the proposed development.

### 4.2 Assessment of Impacts

The first stage of an EclA is determining the ‘importance’ of ecological features or ‘receptors’. CIEEM identifies the important ecological features as those key sites, habitats and species which have been identified by European, national and local Governments and specialist organisations as a key focus for biodiversity conservation in the UK. These include:

- Statutory and non-statutory designated sites for nature conservation;
- Species occurring on national biodiversity lists;
- UK Habitats of Principal Importance; and
- Red listed, rare or legally protected species.

Importance is also qualified by the geographic context of an ecological receptor, i.e. a species which may not be recognised on a national biodiversity list but may be locally in decline, and therefore its local importance is greater than its national importance. The definitions of each importance level are set out in **Table 3**.

**Table 3: Definitions of importance for biodiversity**

| Importance | Description  |
|------------|--|
| Very High  | Habitats or species that form part of the cited interest within an internationally protected site, such as those designated under the Conservation of Habitats and Species Regulations (e.g. SPAs) or other international convention (e.g. Ramsar site).<br>A feature (e.g. habitat or population) which is either unique or sufficiently unusual to be considered as being one of the highest quality examples in an international/national context, such that the site is likely to be designated as a site of European importance (e.g. SAC or SPA).  |
| High       | Habitats or species that form part of the cited interest within a nationally designated site, such as an SSSI or a NNR.<br>A feature (e.g. habitat or population) which is either unique or sufficiently unusual to be considered as being one of the highest quality examples in a national context for which the site could potentially be designated as a SSSI.<br>Species that are protected under the Wildlife and Countryside Act 1981 (as amended) or Conservation of Habitats and Species Regulations (2017).<br>Presence of habitats or species, where the action plan states that all areas of representative habitat or individuals of the species should be protected.   |
| Medium     | A feature (e.g. habitat or population), which is either unique or sufficiently unusual to be considered as being of nature conservation value from a county to regional level.<br>Habitats or species that form part of the cited interest of a Local Nature Reserve (LNR), or some local-level designated sites, such as a Local Wildlife Site (LWS), also referred to as a non-statutory Site of Importance for Nature Conservation or the equivalent, e.g. Ancient Woodland.<br>Presence of habitats or species listed under Natural Environment and Rural Communities (2006) Schedule 41.<br>Presence of Local Biodiversity Action Plan (LBAP) habitats or species, where the action plan states that all areas of representative habitat or individuals of the species should be protected. |
| Low        | A feature of importance at district level.<br>A feature (e.g. habitat or population) that is of nature conservation value in a local context only, with insufficient value to merit a formal nature conservation designation.  |
| Negligible | A feature of importance at local level.<br>Commonplace feature of little or no habitat/historical significance. Loss of such a feature would not be seen as detrimental to the ecology of the area.  |

Negative and positive impacts on nature conservation features have been characterised based on changes predicted to occur as a result of the proposed development (as shown in **Table 5**). Magnitude also considers duration of effect, whether temporary or permanent and in order to characterise the effects on each feature, the following parameters are taken account of:

**Table 4: Magnitude of effect**

| Magnitude                | Definition examples  |
|--------------------------|--|
| High                     | The impact is likely to have an adverse effect on the integrity of a site or the conservation status of a species or species assemblage. |
| Medium                   | The impact adversely affects an ecological receptor but is unlikely to adversely affect its integrity or conservation status.            |
| Low                      | The impact adversely affects an ecological receptor but would not adversely affect its integrity or conservation status.                 |
| Negligible/<br>No change | There would be minimal effect on the ecological receptor.  |

Following the identification of receptor value and sensitivity and magnitude of the effect, the significance of the impact is considered using the matrix presented in **Table 5** below and knowledge of the ecological

features affected. Major and moderate impacts are deemed to be significant according to the EIA Directive and relevant EIA regulations. Minor impacts become more important when considering potential, cumulative impacts or interactions. The assessment identifies those positive and negative impacts which would be 'significant', based on the value or sensitivity of the ecological feature and the magnitude of the effect upon that feature. Impacts are unlikely to be significant where features of local value or sensitivity are subject to low magnitude or short-term impacts. However, where there are a number of low magnitude impacts that are not significant alone, cumulatively, these may result in an overall significant impact.

**Table 5: Matrix of significance**

|            |           | Negative Magnitude |            |            |            | Positive Magnitude |            |            |           |
|------------|-----------|--------------------|------------|------------|------------|--------------------|------------|------------|-----------|
|            |           | Very High          | High       | Medium     | Low        | Low                | Medium     | High       | Very High |
| Importance | Very High | Major              | Major      | Moderate   | Minor      | Minor              | Moderate   | Major      | Major     |
|            | High      | Major              | Moderate   | Minor      | Minor      | Minor              | Minor      | Moderate   | Major     |
|            | Medium    | Moderate           | Minor      | Minor      | Negligible | Negligible         | Minor      | Minor      | Moderate  |
|            | Low       | Minor              | Negligible | Negligible | Negligible | Negligible         | Negligible | Negligible | Minor     |

The mitigation measures described in this report have been considered in the assessment of impacts. The residual impact assessment reflects the completed development.

## 5 Existing Conditions

### 5.1 Designated sites

The site is not located within a statutory or non-statutory site for nature conservation. The closest statutory designated site for nature conservation is approximately 1.3km north-west, namely Sherrardspark Wood SSSI and LNR. This site is afforded protection for its sessile oak woodland and associated understorey. This site is not functionally linked to the site and therefore no further surveys and/or mitigation measures are required. Consequently, this site is not considered further in this report.

### 5.2 Field survey

#### 5.2.1 Habitats

The main habitats noted during the 2021 survey include:

- Areas of hard standing associated with the previous land use;
- Areas of tall ruderals and scattered scrub; and
- Earth (excavated material) bunds.

#### 5.2.2 Legally protected and notable species

**Table 6** provides a summary of the field survey findings for the site with respect to legally protected and notable species.

**Table 6– Summary of findings from ecology field survey.**

| Ecological Receptor  | Summary of survey findings  |
|--|---|
| Bats   | <p>There are two structures (one brick building and one metal container) within the site (<b>Photograph 1 and 2</b>). Both structures were assessed as providing negligible potential to support roosting bats due to the lack of suitable cracks/crevices for which bats could use.</p> <p>Although trees are present at the entrance to the site (<b>Photograph 3</b>), these were assessed as providing negligible potential to support roosting bats due to lack of suitable features (e.g. cracks/crevices).</p> |
| Birds  | <p>The trees and areas of scattered scrub and tall ruderals provide suitable nesting habitat for common bird species, although no evidence of nesting (active/relic nests) was noted at the time of the survey (<b>Photograph 3</b>).</p> <p>No potential or evidence for Schedule 1 bird species was noted at the time of the survey.</p> <p>The two structures within the site do not provide opportunities for nesting birds due to the absence of suitable ledges for nests to be constructed.</p>                |
| Badgers  | No evidence of badgers noted. Habitat is assessed as negligible potential due to its urban nature and the absence of suitable sett construction habitat.  |
| Reptiles   | No evidence of common reptile species was noted during the survey. Whilst the areas of tall ruderals and scattered scrub may provide opportunities for foraging and basking reptiles ( <b>Photograph 4</b> ), they are unlikely to be present due to the urban nature of the site and its immediate surroundings. Therefore, common reptiles are considered to be absent.   |
| Great crested newts, otters, water voles and white clawed crayfish | No waterbodies are present within the site or up to 250m of its boundaries. Therefore, due to the absence of this habitat it is considered that these species are absent.   |
| Dormice  | No suitable habitat is present within the site and therefore this species is considered to be absent.   |
| Invasive species   | No evidence noted during the survey and therefore considered to be absent.  |



**Photograph 1 – Brick building within the site.**



Photograph 2 – Metal storage container within the site.



Photograph 3 – Trees at entrance to the site.



Photograph 4 – Area of tall ruderals and scattered scrub along site boundaries.

## 6 Assessment of Potential Impacts

### 6.1 During Construction

#### 6.1.1 Impacts to Habitats

The habitats present within the site are typical of the urban area and are all considered to be of negligible ecological value. The construction works will result in the loss of areas of tall ruderals and scattered scrub. These habitats are considered to be of limited ecological value as they are unlikely to support legally and/or notable species and therefore their removal is considered to be insignificant.

#### 6.1.2 Impacts to Birds

All birds, their nests and eggs are afforded protection by the Wildlife and Countryside Act 1981 (as amended) making it an offence to intentionally take, damage or destroy the nest of any wild bird whilst it is in use or being built.

The trees and areas of tall ruderals and scattered scrub were noted as providing nesting opportunities for common bird species. The proposed development will require the removal of these areas and therefore this should be programmed to be undertaken outside of the bird nesting season (which is typically between March and September but is weather and temperature dependent). However, should this not be possible, a pre-removal check and the installation of robust bird nesting deterrent measures will be required. An ecologist will need to check the areas requiring removal for nesting birds a maximum of 48 hours prior to its removal. Active nests and their associated vegetation/location must remain undisturbed until young birds have left the nest; during this period an alternative approach to the works must be undertaken.

The importance of this ecological receptor is considered to be negligible, and the loss of these habitats is considered to result in a residual impact of negligible significance being predicted during construction following implementation of mitigation.

## **6.2 During Operation**

### **6.2.1 Impacts to Habitats**

There will be no operational impacts to habitats upon completion of the proposed development and following establishment of a mitigation landscape planting scheme.

Once the mitigation landscape planting scheme has established it will provide habitat opportunities for common bird species for both feeding, foraging and potential nesting opportunities. The proposed landscaping scheme will also contribute towards linking areas of green space (habitats) both within and outside the proposed working area which in turn will improve the ecological connectivity of the immediate working area with its wider landscape. The Applicant will be responsible for the long-term management and maintenance of the implemented landscape planting scheme will be the Applicant and subject to an acceptable maintenance period.

### **6.2.2 Impacts to Birds and Bats**

Post construction, the development will provide areas of nesting opportunities for common bird species as well as potential additional nesting opportunities for breeding species associated with the region (e.g. the installation and/or incorporation of species appropriate bird boxes) as well as the proposed landscape mitigation planting scheme.

Appropriate bird boxes for common bird species (for example but not limited to blackbird FSC nest box) will be erected within sheltered, shaded spots that are at least 2m above ground level. These will be fixed to either suitable trees or walls of the proposed development in accordance with the box specification requirements. The specific bird boxes and their locations will be advised to the appointment contractor by a suitably qualified ecologist prior to their installation. The Applicant will be responsible for the long-term management and maintenance of the installed bird and/or bat boxes and subject to an acceptable maintenance period.

Any lighting requirements for the proposed development will be designed in accordance with the Bat Conservation Trust (BCT) and Institute for Lighting Professional guidance (<https://www.bats.org.uk/our-work/buildings-planning-and-development/lighting>).

Taking this mitigation into account along with the proposed landscape mitigation planting, an impact of minor beneficial significance would be predicted once the proposed development is operational.

## **7 Conclusion**

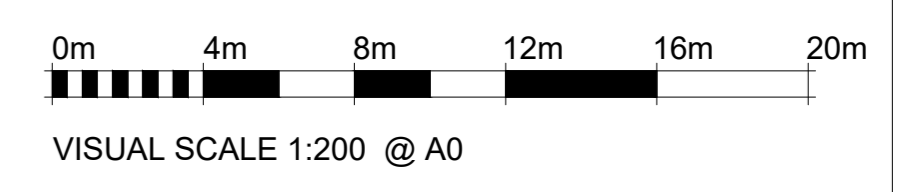
An Extended Phase 1 Habitat Survey was undertaken on the 14<sup>th</sup> July 2021 of the proposed development site on Tewin Road in Welwyn Garden City, Hertfordshire. The site is not located within a statutory, proposed statutory or non-statutory designated nature conservation site.

The main habitats within the site comprise areas of hard standing associated with the previous land use, areas of tall ruderals and scattered scrub and earth (excavated material) bunds. No evidence of the presence of legally protected species or invasive species was noted during the 2021 ecological survey. However, the habitats within the site provide opportunities for nesting birds (common species only) and as

such, mitigation measures in respect to these species will be required and considered when programming the proposed works, especially the removal of the areas of vegetation (i.e. trees and areas of tall ruderals and scattered scrub).

In conclusion, it is considered that based on the findings of the 2021 survey and given the implementation of the appropriate mitigation measures (if required) have been undertaken, it is considered unlikely that there will be significant effects on legally protected habitats or species.

Opportunities for the proposed development to incorporate biodiversity enhancement and/or net gain opportunities for ecological receptors will be further considered. Such opportunities at this time, include the inclusion of berry/nectar bearing species within the proposed landscape mitigation planting scheme for which birds may use for feeding and/or foraging as well as the installation of bird boxes within the proposed building design and/or on trees proposed as part of the landscape mitigation planting scheme.



**SOFT LANDSCAPE KEY**

- EXISTING TREES TO BE RETAINED & PROTECTED IN ACCORDANCE WITH BS5837:2012 - AS PER ARBORICULTURAL REPORT RECOMMENDATIONS
- PROPOSED TREE PLANTING
- PROPOSED ORNAMENTAL SHRUB PLANTING
- PROPOSED NATIVE HEDGEROW MIX PLANTING

- PROPOSED HIGH QUALITY LAWN TURF
- PROPOSED WILDFLOWER MEADOW MIX - EMORGAS EL1 FLOWERING LAWN MIXTURE
- INDICATIVE LOCATION OF BIRD BOX - AS PER ECOLOGY REPORT RECOMMENDATIONS

**HARD LANDSCAPE KEY**

- SERVICE YARD FINISH TO BE CAST CONCRETE - TO ENGINEER'S SPECIFICATIONS
- BITUMEN MACADAM TO FOOTPATH, ROAD, AND CAR PARKING AREAS AS INDICATED. ALL TO ENGINEER'S SPECIFICATION
- PEDESTRIAN PAVING TO BE LAID WITH STACK COURSE OF FLAGS. COLOUR TO BE A MIX OF LIGHT AND DARK GREY PAVERS LAID AT RANDOM PATTERN
- RETAINING STRUCTURE TO STRUCTURAL/CIVIL ENGINEER'S DETAILS
- WELDMESH SECURITY FENCING, TYPE "PALADIN PARK FENCING", 2.4m HIGH, COLOUR BLACK. TO COMPLY WITH LPS 1175 SR1 REGULATIONS

**APPLICATION BOUNDARY**

- APPLICATION BOUNDARY
- ELECTRIC CAR CHARGING BAYS
- ELECTRIC VEHICLE CHARGING STATIONS
- CYCLE SHELTER WITH SHEFFIELD STANDS
- LITTER BIN
- BIRD BOX - AS PER ECOLOGY REPORT RECOMMENDATIONS
- ANTI RAM-RAID BOLLARD - STAINLESS STEEL FINISH WITH REFLECTIVE BAND

| Name                                | Abb. | Form                 | Age    | Girth | Height (cm) | Clear stem               | Root             | Breaks           | Density            |
|-------------------------------------|------|----------------------|--------|-------|-------------|--------------------------|------------------|------------------|--------------------|
| <b>Trees</b>                        |      |                      |        |       |             |                          |                  |                  |                    |
| Acer campestre 'Streetwise'         | AcS  | Standard extra heavy | 3x     | 16-18 | min 450     | min 200                  | RB               | 5                | Item               |
| Betula pendula                      | Bp   | Standard extra heavy | 3x     | 16-18 | min 450     | min 200                  | RB               | 5                | Item               |
| Carpinus betulus 'Frans Fontaine'   | CbFF | Standard extra heavy | 3x     | 16-20 | min 450     | min 200                  | RB               | 5                | Item               |
| Prunus avium                        | Pa   | Standard extra heavy | 3x     | 16-20 | min 450     | min 200                  | RB               | 5                | Item               |
| Sorbus aucuparia 'Streetwise'       | SaS  | Standard extra heavy | 3x     | 16-18 | min 450     | min 200                  | RB               | 5                | Item               |
| Tilia cordata                       | Tc   | Standard extra heavy | 3x     | 16-20 | min 450     | min 200                  | RB               | 5                | Item               |
| <b>Ornamental Shrubs</b>            |      |                      |        |       |             |                          |                  |                  |                    |
| Fatsia japonica                     | Fj   | 30-40                | C      | 3L    | Leader      | /                        | /                | 3/m <sup>2</sup> |                    |
| Hebe 'Blue Gem'                     | HbG  | 30-40                | C      | 5L    | Bushy       | 9                        | 4/m <sup>2</sup> |                  |                    |
| Hebe 'Mrs Winder'                   | HbW  | 30-40                | C      | 5L    | Bushy       | 9                        | 4/m <sup>2</sup> |                  |                    |
| Philadelphus 'Fraser's Red Robin'   | PRR  | 30-40                | C      | 3L    | Branched    | 6                        | 3/m <sup>2</sup> |                  |                    |
| Prunus laurocerasus 'Zabelliana'    | PZ   | 30-40                | C      | 3L    | Bushy       | 3                        | 3/m <sup>2</sup> |                  |                    |
| <b>Native Hedgerow Mix Planting</b> |      |                      |        |       |             |                          |                  |                  |                    |
| Acer campestre                      | Ac   | 1+1 or 1/1           | 60-80  | B     | /           | /                        | /                | 10%              | 4.5/m <sup>2</sup> |
| Corylus avellana                    | Cav  | 1+2 or 1/2           | 60-80  | B     | /           | Branched                 | 3                | 10%              | 4.5/m <sup>2</sup> |
| Corallorhiza innominata             | Cm   | 1+1 or 1/1           | 60-80  | B     | /           | Transplant - seed raised | 1                | 50%              | 4.5/m <sup>2</sup> |
| Ilex aquifolium                     | Ia   | /                    | 60-80  | C     | 3L          | Leader & Lateral         | 1                | 10%              | 4.5/m <sup>2</sup> |
| Ligustrum vulgare                   | Lv   | /                    | 60-80  | B     | /           | Branched                 | 3                | 10%              | 4.5/m <sup>2</sup> |
| Prunus spinosa                      | Ps   | 1+2 or 1/2           | 80-100 | B     | /           | Branched                 | 3                | 10%              | 4.5/m <sup>2</sup> |

\* Native hedgerow mix to be planted in a double staggered row in groups of between 5, 7, 9, 11, 13 and 15 per species at 0.5m centres at rate per m<sup>2</sup> as indicated above.  
 \*\* All whips and transplants to have rabbit guards / shrub shelter appropriate to the species.

**SOFT LANDSCAPE SPECIFICATION**

NOTE: All soft landscape works to be carried out in accordance with BS4248:1989.

**SUBSOIL**  
 Subsoil should be broken up to relieve compaction and aid drainage prior to topsoiling to the following depths:  
 - For light and non cohesive subsoils: 300mm  
 - For stiff clay and cohesive subsoils: 450mm  
 Immediately before spreading topsoil, remove stones larger than 50mm.

**TOPSOIL**  
 To be supplied and spread by the main contractor to the approval of the Landscape Contractor, in accordance with BS 3882: 2015. To be a natural sandy loam, of medium texture, with a pH between 5.5 and 7.8, not more than slightly stony and free of pernicious weeds. Subsoil to be well broken up prior to topsoiling to relieve compaction. Topsoil depths should be:  
 Areas for Ornamental Shrub Planting: minimum 450mm  
 Areas for Lawn Turf: minimum 150mm

**CULTIVATION**  
 Weeds to be prevented from seeding or becoming established by applying a suitable herbicide and allowing the correct time to elapse, as directed by the manufacturer. Compacted soil to be broken up to a depth of 100mm, with any stones, grass tufts or rubbish larger than 50mm in any direction to be removed, leaving a regular and even surface. Suitable slow release fertiliser to be supplied and spread @ 50g/m<sup>2</sup> to all planted areas.

**CLIMATIC CONDITIONS**  
 Topsoiling should be carried out in the driest conditions possible - cultivation to be carried out when the soil is moist, friable and not waterlogged or frozen. Topsoil should not be handled during or after heavy rainfall or when it is wetter than the plastic limit as defined by BS 3882. Planting should not take place in waterlogged conditions or when the ground is frozen.

**SOIL AMENDMENT**  
 Peat free compost to be spread over ornamental shrub beds @ minimum 50mm depth prior to cultivation.

**TREES**  
 All trees within shrub beds to be planted in separate pits in accordance with tree planting details.  
 All plant material to comply with BS 3934 Part 1: 1992, be obtained from a nursery certified by the HFA and transported to site in accordance with the HFA Plant Handling Guide: 1996. All trees to be planted to the original root collar and secured in place with underground guying system in accordance with tree planting detail.

**SHRUB PLANTING**  
 All shrubs to be positioned as shown on the drawing and to the density and specification listed in the plant schedule.  
 Planting holes to be 150mm wider than the root spread, have the base ground thoroughly broken up before planting and backfilled with peat free compost.  
 All shrubs to be equally spaced throughout the planting areas to the specified density in a staggered arrangement unless otherwise noted in the planting schedule.  
 Contractor to ensure numbers on schedule match those shown on drawing before placing any orders for plants. Any discrepancies will be brought to the attention of the Landscape Architect upon discovery.  
 Contractor to check on site dimensions of all landscape areas to ensure specified quantities will achieve the specified densities for each species.

**GRASSED AREAS**  
 Turfed areas should be laid in accordance with BS 3969:1998. Recommendations for Turf for general purposes and BS 4428:1989 General Landscape Operations.  
 Height of initial growth: 100mm  
 Height of first cut: 50mm  
 Height of growth: The height of growth must not exceed 100mm at any time.  
 Frequency: Cut as and when necessary to a height of 25mm, using a rotary mower and remove all arisings.  
 Timing: When grass reaches scheduled height of maximum growth and is reasonably dry.  
 Application: At the time of each cut, trim all grass edges round the base of trees, manholes etc and remove arisings. Sweep all adjoining hard areas clear of cuttings and remove.  
 Weeding: Keep the sward substantially free of broad leaved weeds by applying a suitable selective herbicide.  
 Fertiliser: March application: 15:10:10 Spring turf fertilizer at 35g/m<sup>2</sup>.  
 September application: 5:10:10 Autumn turf fertilizer at 50g/m<sup>2</sup>.

**WILDFLOWER PLANTING**  
 Wildflower mixes to be planted directly into cultivated subsoil or low fertility topsoil in accordance with manufacturers recommendations at rate of 4g/m<sup>2</sup> (see key for species mixture).  
 Preparation: Cultivate subsoil, apply a suitable herbicide and allow the correct time to elapse, as directed by the manufacturer, and seed the bed. No fertilizer, compost or mulch are to be applied to the wildflower bed.  
 Cutting first season: Time of first cut - if sown in Autumn cut in March/April, if sown in Spring cut in August - October after flowering. Height of first cut - 70mm. If sown in Autumn it should also be cut in September/October after flowering.  
 Cutting second season: March/April - cut to 50-70mm then September/October - cut to 50mm after flowering.  
 To be cut twice a year from then on as per above.  
 NOTE: At the time of each cut all arisings to be removed from the bed to maintain reduced soil productivity.

**SUBSTITUTIONS:**  
 Upon submission of evidence that certain materials, including plant materials, are not available at the time of the landscape contract, the Landscape Contractor may be permitted to substitute other materials and plants in exceptional circumstances during the contract with an agreed adjustment of prices.  
 All substitutions shall be of nearest equivalent species and variety to the original specified but shall be subject to approval by the Landscape Architect before any change is made.

**TIMES OF YEAR FOR PLANTING:**  
 Landscape works to be carried out during the final possible planting periods prior to practical completion of the building and associated engineering works / car park areas in accordance with the following:  
 - Native and ornamental trees: During dormant winter period - Late October to late March.  
 - Bare root native transplants: During dormant winter period - Late October to late March.  
 - Container grown ornamental and specimen shrubs: At any time if ground and weather conditions are favourable.

**MULCH**  
 75mm depth of 8-35mm ornamental bark mulch (peat-free) to be supplied and spread to all planting areas. Finished mulch level to be installed and maintained at 25mm below any adjacent kerbs or paving surfaces.

**WEEDING**  
 Site to be maintained in a weed free condition. Weeding should be carried out at each and every maintenance visit. All weeding to planting beds should be carried out using hand methods only. Topping up the mulch to maintain the specified depth is the best method of preventing weeds and will reduce ongoing maintenance time.

**MAINTENANCE**  
 All planting areas to be maintained to a high standard by the contractor for 12 months after practical completion, to ensure the landscape scheme is successful, and discourage decline of the area.  
 Site to be visited minimum once per month to carry out required maintenance to all soft landscape areas.  
 Generally, during the first 12 months:  
 - All planting beds to be re-firmed and kept weed free through handweeding and application of an approved herbicide where appropriate.  
 - All litter to be picked and removed from landscape areas.  
 - Mulch to be topped up required to maintain the specified thickness.  
 - The condition of all trees is to be regularly checked, with ties and stakes adjusted or replaced as necessary.  
 - Shrubs to be pruned of appropriate times of year for each species to promote healthy growth and desirable ornamental features.  
 - Lawn & wildflower grass areas to be cut and maintained in accordance with specification note above.  
 - All arisings to be removed from site.  
 - Any defects or plant losses occurring during the first 12 months defects period to be replaced at the contractor's expense.

**GENERAL WATERING**  
 All soft landscaping to be subject to a watering regime which is absolutely essential to ensure the continued success of the scheme, particularly during the initial 12 month establishment period. The watering frequency should be as necessary to ensure the continued thriving of all grass, hedges, trees and ornamental planting but as a minimum should follow the maintenance regime as set out above and be carried out at the time of each maintenance visit. During dry periods it may be necessary to increase watering visits to once per week - if the planting is looking dry please contact Landscape Architect to arrange the extra maintenance visits if necessary. The soil should be checked for dryness using either a soil moisture sensor or by inserting a spade into the ground to a depth of 300mm to observe the appearance of the soil. If the soil is moist there is no need to water but if it is bone dry then watering procedure should be carried out immediately. Water supply should be from potable mains water or an approved alternative. The full depth of topsoil should be well without loosening or damaging plants. Any compacted soil should be broken up sufficiently to allow water to reach the rootzone.

**WATERING TREES**  
 Trees to be watered in accordance with BS 8545:2014 Tree - From Nursery to Independence.  
 Trees should be watered via the installed irrigation / geration pipes around the base of the trees in accordance with the manufacturer's instructions to ensure the water reaches the roots of the tree. Below is a suggested watering regime but this should be used as a guide only and may require modification in times of drought or flood, dependent on the ground conditions at the time, which should be monitored as above:  
 • March - October: 40 litres to be poured into irrigation pipe on every maintenance visit

Do not scale from this drawing. The contractor is to check all dimensions on site and report any discrepancies to the architect. All rights described in chapter IV of the copyright, design and patents act 1988 have been generally exempted.



| Rev | Description   | Date     | By | CHK |
|-----|---|----------|----|-----|
| P3  | Planning Submission   | 17/06/21 | CC | JD  |
| P2  | Helped added. Removed tree shown on plan. Planning Submission | 16/06/21 | JD | CC  |
| P1  | Planning Issue  | 21/05/21 | CC | JD  |

3rd Floor  
 7-15 Rosebery Avenue  
 London EC1R 4SF  
 Telephone: +44(0)2038746707  
 Website: www.jeffersonsheard.com

**Jefferson Sheard Architects**

Project  
 Tewin Road  
 Welwyn Garden City

Drawing  
 Landscape Detail Plan

| Scale             | Drawn                     | Date   |
|-------------------|---------------------------|--------|
| 1:200             | JSA                       | Aug 21 |
| Drawing Purpose   | PLANNING SUBMISSION       | Status |
| Drawing Reference | 1734-JSA-WY-XX-DR-A-01203 | Rev    |
| Job No.           | 1734-JSA-WY-XX-DR-A-01203 | P3     |