



## **Preliminary Ecological Appraisal and Urban Green Factor**

**Land at Addison Estate**

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### LIABILITIES:

Whilst every effort has been made to guarantee the accuracy of this report, it should be noted that living animals and plants are capable of migration/establishing. Whilst such species may not have been located during the survey duration, their presence may be found on a site at a later date. This report provides a snap shot of the species that were present at the time of the survey only and does not consider seasonal variation. Furthermore, where access is limited or the site supports habitats which are densely vegetated, only dominant species may be recorded.

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

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

## 1.0 INTRODUCTION

### Background

1.1 The Ecology Partnership was commissioned by Future PD to undertake a Preliminary Ecological Appraisal (PEA) and calculate the Urban Green Factor (UGF) for the proposed development at land at Addison Estate, 702 Field End Road, HA4 0QP, hereafter referred to as the 'site' (Figure 1).

1.2 The key objectives of a PEA (CIEEM 2017) are to:

- Identify the likely ecological constraints associated with a project;
- Identify any mitigation measures likely to be required, following the 'Mitigation Hierarchy' (CIEEM 2016; BSI 2013, Clause 5.2);
- Identify any additional surveys that may be required to inform an Ecological Impact Assessment (EcIA); and
- Identify the opportunities offered by a project to deliver ecological enhancement.

### Site Context

1.3 The site (TQ 12280 85900) includes hardstanding and a large industrial building with two scattered trees on the eastern border. The site is bounded to the south by an industrial building, the east by a row of mixed-use buildings comprising shops and flats, and the north and west by residential buildings.



Figure 1: Site red line boundary.

### **Proposed Development**

- 1.4 The proposed development comprises a stepped block containing 8 dwellings with one, two and three bedroom homes, with associated amenity space, landscaping, accessible parking and servicing access.

### **Planning Policies**

- 1.5 The site was surveyed to assess its ecological value and ensure the proposals complied with relevant planning policy and legislation. Policy guidance is provided by the National Planning Policy Framework (NPPF 2021) as well as policies from the London Borough of Hillingdon and the London Plan. The following policies are considered relevant to ecology, biodiversity and nature conservation:

- Hillingdon Local Plan (Adopted 2012)
  - **Policy BE1: Built Environment**
- The London Plan 2021:
  - **Policy G5: Urban Greening**
  - **Policy G6: Biodiversity and access to nature**
  - **Policy G7: Trees and woodlands**

- 1.6 The Environment Bill received Royal Assent on 9<sup>th</sup> November 2021 and is now enacted as the Environment Act 2021. Part 6 (Nature and Biodiversity) and Schedule 14 of the Environment Act 2021 insert a new section 90A and Schedule 7A into the Town and Country Planning Act 1990 (TCPA), which contain the provisions requiring mandatory biodiversity net gain for development granted planning permission pursuant to the TCPA. These provisions are not yet in force, but, once they are brought into effect through implementing legislation, will require developments to provide a biodiversity value post-development that exceeds the predevelopment biodiversity value of the onsite habitats by at least 10%. These provisions are not expected to come into force until November 2023 for new planning applications, so do not apply to this proposed development.

- 1.7 The site has therefore been surveyed to assess its ecological value and to ensure compliance with national and local plan policies and other relevant nature conservation legislation including; Wildlife and Countryside Act 1981, Natural Environment and Rural Communities Act 2006, and the Conservation of Habitats and Species (EU Exit) Regulations 2019.

- 1.8 The report has been produced with reference to current guidelines for PEA (CIEEM 2017) and in accordance with BS 42020:2013 Biodiversity – Code of Practice for Planning and Development.

## 2.0 METHODOLOGY

### Desktop Study

- 2.1 A desktop study was completed using an internet-based mapping service ([www.magic.gov.uk](http://www.magic.gov.uk)) for statutory designated sites and an internet-based aerial mapping service ([maps.google.co.uk](http://maps.google.co.uk)) was used to understand the habitats present in and around the site, including identifying habitat linkages and features (ponds, woodlands etc.) within the wider landscape.
- 2.2 Records of protected/notable species and non-statutory designated sites within 1km of the site were requested from Greenspace Information for Greater London (GiGL). Species records were screened for relevance and age with only those from the last 10 years and those that could occur on site.

### Phase 1 Habitat Survey and UKHab

- 2.3 The site was surveyed on 12<sup>th</sup> December 2022 and the surveyor identified the habitats present, following the standard ‘Phase 1 habitat survey’ auditing method developed by the Joint Nature Conservancy Council (JNCC) and the UK Habitat classification system (UKHab). In addition, the dominant plant species in each habitat were recorded and the potential for the site to support protected species was also assessed. The habitats within the site were also subject to a condition assessment to support a Biodiversity Net Gain assessment.

### Additional Protected Species Assessments

- 2.4 Any evidence of additional protected species was recorded. Standard methods of search and measures of presence, or likely presence based on habitat suitability were used for bats in trees (Collins 2016), breeding birds (BTO 2020), hazel dormice *Muscardinus avellanarius* (Bright *et al.* 2006), great crested newts *Triturus cristatus* (ARG 2010), reptiles (Froglife 2015), badgers *Meles meles* (Creswell *et al.* 1990) and water voles *Arvicola amphibius* (Strachan *et al.* 2011).

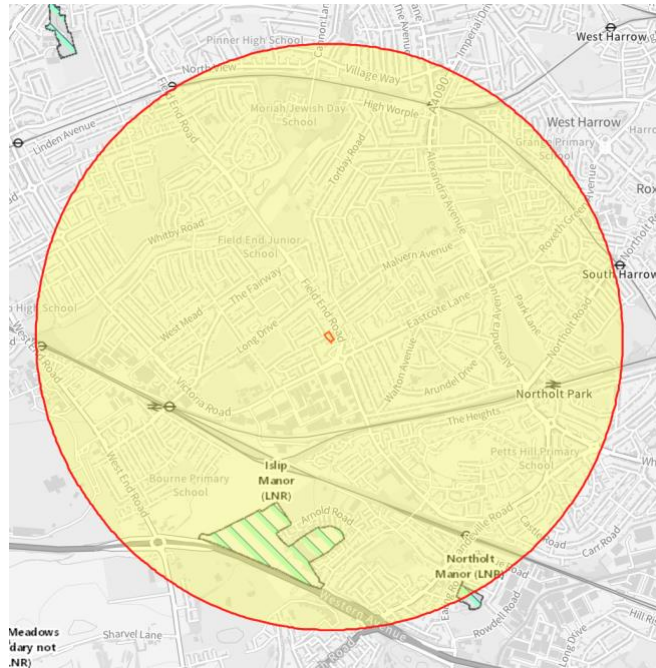
### **Limitations**

- 2.5 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no single investigation could ensure the complete characterisation and prediction of the natural environment. The site was visited over the period of one site visit, as such seasonal variations cannot be observed.
- 2.6 The protected species assessment provides a preliminary view of the likelihood of protected species occurring on-site, based on the suitability of the habitat and any direct evidence on site. It should not be taken as providing a full and definitive survey of any protected species group. The assessment is only valid for the time when the survey was carried out. Additional surveys may be recommended if, on the basis of this assessment it is considered reasonably likely that protected species may be present.

## **3.0 RESULTS**

### **Desktop Study**

- 3.1 The site does not fall within or adjacent to any designated sites.
- 3.2 The closest international designated site is Richmond Park Special Area of Conservation (SAC) located approximately 13.40km southeast of the site and supports Annex II species stag beetle *Lucanus cervus*.
- 3.3 The closest statutory designated site is Islip Manor Local Nature Reserve (LNR) approximately 1.20km southwest of the site and is designated for its wet meadow and rich mosaic of different grassland types.



**Figure 2: Statutory designated sites within 2km of the site.**

- 3.4 There are four non-statutory sites within 1km of the site and the closest is Victoria Road Rail Banks Site of Importance for Nature Conservation (SINC) located approximately 530m south of the site and supports extensive areas of scrub and trees.
- 3.5 There are several units of priority habitat within 1km of the site (Figure 3). The closest of each type are detailed below:
- Deciduous woodland approximately 590m south;
  - Traditional orchards approximately 870m northwest.



**Figure 3: Priority habitat within 1km of the site. Deciduous woodland is denoted by dark green and traditional orchards is denoted by light green.**

- 3.6 OS maps and aerial imagery indicate there are no ponds within 250m of the site.
- 3.7 The closest past European Protected Species (EPS) licences for each EPS species is:
- Bats - located c. 3km northwest of the site, 2012-2015 licence for the destruction of a resting place site for common pipistrelle *Pipistrellus pipistrellus* and soprano pipistrelle *Pipistrellus pygmaeus*.
  - Great crested newts - located c. 2.5km southwest of the site, 2014-2020 licence for the damage of a resting place.
  - Dormice - located over 10km from the site.

**Table 1: Biological Records from GiGL within 1km of the site**

Species	Status	Closest record to site	Most recent record
Slow-worm <i>Anguis fragilis</i>	W&CA Sch5 Sec 9.1k/I; NERC Act Section 41; LPS; Local Spp of Cons Conc	420m SE 2009	428m E 20/05/2020
Swift <i>Apus apus</i>	LPS; Bird-Red	249m NE 04/07/2017	841m N 12/06/2020
Greenfinch <i>Chloris chloris</i>	Bird-Red	819m NW 29/04/2016	
Linnet <i>Linaria cannabina</i>	LPS; Local Spp of Cons Conc; Bird-Red	819m NW 23/04/2016	
Red Kite <i>Milvus milvus</i>	Birds Dir Anx 1; W&CA Sch1 Part 1	554m N 16/02/2017	732m W 16/11/2019
Grey Wagtail <i>Motacilla cinerea</i>	Local Spp of Cons Conc	635m SW 1986	764m SW 06/12/2015
Green Sandpiper <i>Tringa ochropus</i>	W&CA Sch1 Part 1	963m W 12/11/2015	
Redwing <i>Turdus iliacus</i>	W&CA Sch1 Part 1	732m W 12/01/2019	
Mistle Thrush <i>Turdus viscivorus</i>	LPS; Local Spp of Cons Conc; Bird-Red	819m NW 23/04/2016	
West European Hedgehog <i>Erinaceus europaeus</i>	NERC Act Section 41; LPS; Local Spp of Cons Conc; RedList_GB-VU	235m W 1999	813m S 12/11/2021
Stag Beetle <i>Lucanus cervus</i>	Hab&Spp Dir Anx 2 NERC Act Section 41 LPS	86m NE 25/05/2018	703m NE 27/06/2021

*\*Additional species are present within the biological records may be older than 10 years or outside our search radius. Some species have not been included due to the likelihood of presence on site due to habitat types.*



### Phase 1 Habitat Survey

- 3.8 A detailed habitat map is attached in **Appendix 1** and site photos are in **Appendix 2**.

#### *Building and Hardstanding*

- 3.9 The site includes a single building surrounded by areas of hardstanding. The building is separated into six units and is constructed from brick with a pitched metal roof and no loft cavities. The single-story sections with flat roofs are on the west side of the building.

#### *Trees*

- 3.10 The site includes two trees along the eastern boundary, a horse chestnut *Aesculus hippocastanum* and what is believed to be a cherry *prunus* sp. The dense ivy on the cherry and obstruction of view meant that an accurate identification was not possible.

### Protected Species

#### *Bats*

- 3.11 The urban surrounding and limited connectivity to suitable habitats reduce the likelihood of bats foraging and commuting within the site.
- 3.12 None of the trees within the site support potential roosting features and therefore the trees have '**Negligible**' suitability for roosting bats.
- 3.13 The buildings on site are well-sealed and do not support any loft voids due to their structure. As such, the buildings have '**Negligible**' suitability to support roosting bats.
- 3.14 As such, it is considered that bats are not present within the site and will not be discussed further in this report.

#### *Badgers*

- 3.15 No evidence of badger activity was recorded within the site and the site is not considered suitable for badgers. As such, it is considered that badgers are not present within the site and will not be discussed further in this report.

### *Birds*

- 3.16 The two trees on site have the potential to support nesting birds.

### *Other Species*

- 3.17 Due to a lack of suitable habitat, the site was not considered suitable for other protected species, such as great crested newts, hazel dormice, reptiles, water voles and otters.

## **4.0 DISCUSSION**

- 4.1 The following paragraphs consider the effects of the development on designated sites, priority habitats and protected and priority species. Where the desk study and Phase 1 survey provide sufficient evidence for an assessment of effects on any of these groups to be taken through planning, these are detailed below, the need for additional surveys and when and how these should be completed are summarised, if required.
- 4.2 Provisional recommendations are also given for means to enhance biodiversity net gain, following the principle (CIEEM et al. 2016) of following the mitigation hierarchy of; avoidance, minimisation of loss, compensation on site and biodiversity offset.

### **Urban Greening Factor (UGF)**

- 4.3 The UGF is a tool to evaluate the quality and quantity of urban greening. It enables developments to demonstrate how they have included urban greening as a fundamental element of the site and building design in order to meet London Plan Policy G5 Urban Greening.
- 4.4 The UGF has been calculated (Appendix 3) and the proposed development will score 0.1. It is recommended that the proposed development includes intensive green roofs to increase the UGF to the recommended value (0.4).

### **Effects on Designated Sites**

- 4.5 The Impact Risk Zones indicated the proposed development will not have any likely impact on international and statutory designated sites. As such, it is considered that the development will not result in any direct or indirect impacts on this or any international and statutory sites within the local area.

- 4.6 There are four non-statutory sites within 1km of the site and the closest is Victoria Road Rail Banks SINC located approximately 534m south. Due to the distance between the site and Victoria Road Rail Banks SINC it is considered that the development will not result in any direct or indirect impacts on this or any non-statutory sites within the local area.

#### **Effects on Priority Habitats**

- 4.7 There are a number of priority habitats within the wider landscape, the closest is an area of deciduous woodland located approximately 592m south of the site. Due to the distance, it is considered that the development will not result in any direct or indirect impacts on priority habitats within the local area.

#### **Effect on On-site Habitats**

- 4.8 The site is a single building surrounded by a hardstanding car park with negligible ecological value. There are two trees on the eastern border which have the highest ecological value on the site. The trees are likely to be retained, although if removed, the proposed tree planting would offset the loss. It is considered that the proposed planting would provide a biodiversity net gain post-development.

#### **Effects on Protected Species**

##### *Birds*

- 4.9 Nesting birds may use the trees. It is therefore recommended that vegetation removal is undertaken outside of the breeding bird season (March-September inclusive) or immediately after a nesting bird check by a suitably qualified ecologist. If active nests are identified, works in the vicinity of the nest must cease until the birds have fledged the nest.

#### **Ecological Enhancements**

- 4.10 A number of enhancements can be made to the final development to further enhance the site's ecological value for wildlife.
- 4.11 The use of raised beds and planters could be incorporated into the design of the scheme where green space on site is limited. Native nectar-rich species should be

planted to benefit invertebrates which are in turn food sources for other species including birds and bats. Species can include chamomile *Anthemis nobilis*, honeysuckle *Lonicera periclymenum*, jasmine *Jasminum officinale*, lavender *Lavendula vera*, mint *Mentha piperita*, rosemary *Rosmarinus officinalis*, sage *Salvia officinalis*, sweet pea *Lathyrus odoratus* and thyme *Thymus vulgaris*.

- 4.12 Intensive green roofs are considered a significant enhancement and they provide opportunities for a range of invertebrates and bird species as well as floral species. Green roofs are also installed for sustainable drainage purposes, countering climate change, improving building performance as well as amenity value, alongside health and wellbeing.
- 4.13 Habitat opportunities for birds and insects could be created in the form of green walls, which would increase foraging opportunities for bats as well as providing screening between properties. Climbing plants can be grown onto trellis along the boundary walls and newly converted buildings. Species which can be planted include:
- Honeysuckle *Lonicera japonica*; *L. fragrantissima*; *L. standishii*;
  - Clematis *Clematis vitalba*, *C. armandii*, *C. alpina*, *C. montana*, *C. tangutica*;
  - Ivy *Hedera helix*;
  - Climbing hydrangea *Hydrangea petiolaris*;
  - Dog rose *Rosa canina*.
- 4.14 Green roofs and green walls provide new ecological niches, which in turn can provide habitat for a range of invertebrates which in turn provide suitable foraging opportunities for birds. Green walls and living roofs can soften the edge of the site, providing a more robust green edge and will increase biodiversity.
- 4.15 Bird boxes can be integrated into the building to provide new nesting opportunities on the site. Habitat nest boxes (Figure 4) are recommended and should be positioned north or east facing aspect, near vegetation and 2-3m above the ground. No cleaning or management of the bird boxes is required.



*Figure 4: Habitat Small Bird Nest Box*

- 4.16 Bee Bricks (Figure 5) can also be incorporated into the buildings or left around the site within the garden areas to support the invertebrates and bees attracted to the site by the flowering lawn mixture and Plants for Pollinators. The Bee Brick can be used in place of a standard brick or block in construction to create a habitat for solitary bees. Bee Bricks need to be placed in a warm sunny spot on a south-facing wall at a minimum height of 1m, with no vegetation obstructing the holes. No cleaning or management of the Bee Bricks is required.



*Figure 5: Bee Bricks to be incorporated into the development*

- 4.17 Areas of amenity planting should utilise species recommended for bees. A range of plants should be grown to try and achieve year-round flowering to support the bees throughout the year. A full list of appropriate species can be found on the RHS website, Plants for Pollinators Guide.

## 5.0 IMPACT ASSESSMENT

- 5.1 This section of the report forms an EcIA (Ecological Impact Assessment) and is designed to quantify and evaluate the potential impacts of the development on habitats and species present on site or within the local area.
- 5.2 The approach to this assessment accords with guidance presented within the CIEEM Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM 2018). In essence, an EcIA assesses the activities associated with a proposed scheme that are likely to generate changes within identified zone of influences, on identified ecological features and receptors. The proposals are subsequently reviewed and mitigation and compensation measures are outlined which help to reduce negative impacts.
- 5.3 Table 2 below summarises the impacts and required mitigation for each receptor as previously detailed in the discussion.

*Table 2: Assessment of effects from the proposal after mitigation and compensation*

Feature	Scale of Importance	Mitigation/Compensation Required	Residual Effect
Designated Sites	National	None required – considerable distance from the site.	Not significant
Priority Habitats	National	None required – considerable distance from the site.	Not significant
On-Site Habitats	Site	The two trees are likely to be retained and if removed the proposed development includes significant tree planting which will offset the loss.  The proposed planting will result in a biodiversity net gain.	Not significant
Bats	Local	The urban surrounding and limited connectivity to suitable habitats reduce the likelihood of bats foraging and commuting within the site.  The trees and buildings have negligible suitability for roosting bats.	Not significant
Nesting Birds	Site	Mitigating direct harm to nests by removal of any suitable nesting habitat outside of nesting bird season or after a check by a suitably qualified ecologist.  Enhancement in the form of the installation of bird boxes.	Not significant
Badgers, Great Crested Newts, Dormice and Reptiles	N/A	Considered unlikely to be present on site.	Not significant

## 6.0 CONCLUSIONS

- 6.1 The Impact Risk Zones indicated the proposed development will not have any likely impact on international and statutory designated sites. As such, it is considered that the development will not result in any direct or indirect impacts on this or any international and statutory sites within the local area.
- 6.2 There are four non-statutory sites within 1km of the site and the closest is Victoria Road Rail Banks SINC located approximately 534m south. Due to the distance between the site and Victoria Road Rail Banks SINC it is considered that the development will not result in any direct or indirect impacts on this or any non-statutory sites within the local area.
- 6.3 The site is a single building surrounded by a hardstanding car park with negligible ecological value. There are two trees on the eastern border which have the highest ecological value on the site. The trees are likely to be retained, although if removed, the proposed tree planting would offset the loss. It is considered that the proposed planting would provide a biodiversity net gain post-development.
- 6.4 The urban surrounding and limited connectivity to suitable habitats reduce the likelihood of bats foraging and commuting within the site. The trees and buildings have 'Negligible' suitability for roosting bats.
- 6.5 Birds may use the trees for nesting. Any works to these features should therefore be undertaken outside of bird nesting season (March – September inclusive) or after a nesting bird check by a qualified ecologist.
- 6.6 The site does not support suitable habitats for badgers, great crested newts, reptiles, dormice, water voles, or otters. Therefore, further surveys for these species groups are not considered necessary.

## 7.0 REFERENCES

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***Internet resources:***

Google Maps: [www.google.co.uk/maps](http://www.google.co.uk/maps)

Magic Interactive Map: [www.magic.gov.uk](http://www.magic.gov.uk)

Appendix 1: Habitat Map



**Appendix 2: Site Photographs**

**Photograph 1:** Internal roof structure.



**Photograph 2:** Internal roof structure.



**Photograph 3:** External building structure



**Photograph 4:** Cherry tree



**Photograph 5:** Horse chestnut tree



Appendix 3 - Urban Greening Factor



Urban Greening Factor Calculator				
Surface Cover Type	Factor	Area (m <sup>2</sup> )	Contribution	Notes
Semi-natural vegetation (e.g. trees, woodland, species-rich grassland) maintained or established on site.	1		0	
Wetland or open water (semi-natural; not chlorinated) maintained or established on site.	1		0	
Intensive green roof or vegetation over structure. Substrate minimum settled depth of 150mm.	0.8		0	
Standard trees planted in connected tree pits with a minimum soil volume equivalent to at least two thirds of the projected canopy area of the mature tree.	0.8	171.758	137.4064	
Extensive green roof with substrate of minimum settled depth of 80mm (or 60mm beneath vegetation blanket) – meets the requirements of GRO Code 2014.	0.7		0	
Flower-rich perennial planting.	0.7		0	
Rain gardens and other vegetated sustainable drainage elements.	0.7		0	
Hedges (line of mature shrubs one or two shrubs wide).	0.6	10.276	6.1656	
Standard trees planted in pits with soil volumes less than two thirds of the projected canopy area of the mature tree.	0.6		0	
Green wall –modular system or climbers rooted in soil.	0.6		0	
Groundcover planting.	0.5	74.393	37.1965	
Amenity grassland (species-poor, regularly mown lawn).	0.4	131.716	52.6864	
Extensive green roof of sedum mat or other lightweight systems that do not meet GRO Code 2014.	0.3		0	
Water features (chlorinated) or unplanted detention basins.	0.2		0	
Permeable paving.	0.1		0	
Sealed surfaces (e.g. concrete, asphalt, waterproofing, stone).	0	1779.039	0	
<b>Total contribution</b>			<b>233.4549</b>	
<b>Total site area (m<sup>2</sup>)</b>				<b>2167.173</b>
<b>Urban Greening Factor</b>				<b>0.107723241</b>

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