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Biodiversity Net Gain Assessment

19 Estcots Drive
East Grinstead
RH19 3DA

April 2025

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The information which we have prepared and provided is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct.		
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Checked by	Principal Ecologist Olatz Gartzia BSc MSc ACIEEM	17/04/2025
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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 works.

1. EXECUTIVE SUMMARY

- 1.1. This report has been produced to provide the results of the Biodiversity Net Gain calculation at 19 Estcots Drive, East Grinstead, RH19 3DA in order to ensure compliance with the *National Planning Policy Framework (2024)* regarding no net-loss of biodiversity.
- 1.2. The site proposals are for the construction of two semi-detached houses and associated landscaping.
- 1.3. Biodiversity Net Gain Assessments calculate the change in ecological value at a site by comparing the number of 'biodiversity units' within the site pre- and post-construction, for both linear habitats and areas of habitat, and demonstrating measurable loss or gain. The ecological value of the site is expressed as a percentage change in total Biodiversity Units following implementation of the proposals. The *DEFRA: The Statutory Biodiversity Metric* has been used to complete this assessment.
- 1.4. This assessment has been informed by a habitat walkover survey and habitat condition assessment. Baseline habitats include vegetated garden, ornamental ponds, non-native and ornamental hedgerow, and modified grassland. This will all be lost as a result of the development. Proposed habitats include buildings and vegetated gardens.
- 1.5. The results of the metric can be summarised as follows:

FINAL RESULTS				
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)			Habitat units	-0.07
			Hedgerow units	-0.01
			Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)			Habitat units	-47.73%
			Hedgerow units	-100.00%
			Watercourse units	0.00%
Trading rules satisfied?			No - Check Trading Summaries ▲	
Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	0.16	0.17	0.09
Hedgerow units	10.00%	0.01	0.02	0.02
Watercourse units	10.00%	0.00	0.00	0.00

- 1.6. The Statutory Biodiversity Metric demonstrates a -47.73% (-0.07 units) net loss for habitats and -100% (-0.01 units) for linear features. At least 0.09 habitat units and 0.02 hedgerow units will need to be purchased through on off site scheme to achieve 10% net gain for this project.

2. INTRODUCTION AND BACKGROUND

- 2.1. This report has been produced to provide the results of the Biodiversity Net Gain calculation at 19 Estcots Drive, East Grinstead, RH19 3DA in order to ensure compliance with the *National Planning Policy Framework (2024)* regarding no net-loss of biodiversity.
- 2.2. The proposals are for the construction of two, semi-detached houses
- 2.3. This assessment is based on the landscape proposals as shown in **Appendix 1**.

Site Overview

- 2.4. The site comprises the curtilage of a residential dwelling situated in a residential area of East Grinstead. The site is bordered by residential properties with associated hard-standing and amenity gardens (see **Figure 1**).
- 2.5. The wider landscape comprises a moderate density of residential and commercial properties to the east, west and south of the site. To the north is an area of public green space extending into an expanse of woodland. A large pond lies 130m north-east of the site. Further to the east, the urban area transitions into a patchwork of woodland and agricultural fields.



Figure 1: Site location within the local landscape. Copyright Google Earth Pro (March 2025)

3. LEGISLATIVE AND POLICY BACKGROUND

National Planning Policy Framework (NPPF) 2024

- 3.1. The NPPF aims to minimise impacts on biodiversity and provide net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity. Chapter 15 'Conserving and enhancing the natural environment' details what local planning policies should seek to consider with regard to planning applications:
- 3.2. Planning policies and decisions should contribute to and enhance the natural and local environment by:

187 a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

187 d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs.

Habitats and Biodiversity

- 3.3. Specific policies regarding habitats and biodiversity comprise:

192. To protect and enhance biodiversity and geodiversity, plans should:

a) identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation and

b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species and identify and pursue opportunities for securing measurable net gains for biodiversity.

193. 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 of Sites 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 feature 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 improve biodiversity in and around development should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

4. METHODOLOGY

Biodiversity Net Gain Assessment

4.1. Biodiversity Net Gain Assessments calculate the change in ecological value at a site by comparing the number of 'Biodiversity Units' within the site pre and post-construction for both linear habitats and areas of other habitats. The ecological value of the site is expressed as a percentage change in total Biodiversity Units following the completion of the proposed development. This is an indicator of what the proposed development's impact would be on the site's existing ecological value and will establish if a net loss of biodiversity has been avoided.

4.2. The biodiversity calculations were undertaken using The Statutory Biodiversity Metric, the User Guide, Technical Supplement and Condition Assessment Sheets.

Calculation Components

4.3. The Statutory Biodiversity Metric takes account of all the habitats on site prior to development and post-development using UK Habitat Classification System (UKHabs). Using this metric, area habitats are measured in hectares and inputted to three decimal places. Linear habitats are measured in kilometres to the nearest three decimal places.

4.4. The Biodiversity Metric further assesses all habitats using the following:

4.5. *Distinctiveness*- Habitats are automatically given a distinctiveness score based on habitat type. This ranges from 'High' to 'low'. 'High' distinctiveness habitats include those listed as Habitats of Principal Importance under the NERC Act. Habitats of low wildlife value (such as ornamental planting) are given a 'low' distinctiveness score.

4.6. *Condition*- Habitat conditions are assessed for each individual habitat type using the technical supplement. Habitat condition uses criteria such as botanical diversity and invasive species cover.

4.7. *Strategic Significance*- This relates to the spatial location of a habitat type and if the location is 'ecologically desirable'. Habitats located in areas considered desirable are given larger weighting within the metric.

4.8. Once the post-development Biodiversity Units have been calculated, the mitigation hierarchy is applied. Application of the mitigation hierarchy is one of the guiding principles for biodiversity no net loss / net gain proposals. Through its application, the hierarchy highlights actions to avoid, minimise or restore biodiversity losses on site, and account for unavoidable losses off-site.

4.9. The difference between the baseline Biodiversity Units and those calculated on the proposed development design indicates the number of units that would be needed to deliver no net loss or a net gain for biodiversity. Using this information the habitat types and

the size of the area that would be needed off-site to deliver no net loss or net gain can be identified if required.

- 4.10. The area calculations of existing and proposed habitat areas are made using QGIS.
- 4.11. The proposed habitats were calculated from the site landscaping proposals.

Good Practice Principles

- 4.12. Good practice principles for biodiversity net gain are set out in Table 1.1 of the Biodiversity Net Gain: Good Practice Principles for Development (Baker *et al*, 2019). The key principles include:
 - Apply the Mitigation Hierarchy (CIEEM, 2018) and be additional by achieving outcomes that exceed existing obligations.
 - Avoid losing biodiversity which cannot be off-set elsewhere for example irreplaceable habitats such as ancient woodland.
 - Address any risk (e.g. difficulty of achieving habitat creation or enhancement for net gain.
 - Make a measurable net gain contribution for the site and ensure it is achievable.

Assumptions and Limitations

- 4.13. The habitat walkover survey was undertaken in March, which is a sub-optimal period for identifying many native plant species as many plant species have not grown into recognisable growth forms. Considering the context of the site, the urban nature of the site (residential gardens), and the habitats to be impacted by the proposals, it is considered unlikely that this would have a significant impact on the reliability of the survey results or conclusions.
- 4.14. A small Magnolia sp. tree is present on site but will be lost as part of the works but due to its small size is not included in the BNG assessment in line with user guidance.
- 4.15. The accuracy of the habitat area measurements is limited by the form of the baseline data collection and resolution of development proposals plans. In this instance, the baseline habitats for the site have been calculated by cross-referencing illustrative habitat plans and aerial imagery. Post-development habitats have been measured using QGIS by geo-referencing the proposed layout to the baseline dataset.
- 4.16. The proposed habitat baseline is calculated using both the landscaping plans and professional opinion on the target conditions that can be attained for each habitat type with proficient management. Therefore, all proposed habitat types rely on implementation of a long-term management plan and planting in line with the provided landscape proposals. Further information on this is provided in the conclusion.

5. BIODIVERSITY NET GAIN ASSESSMENT

On-site Pre-development Habitats/Baseline

- 5.1. Below is a summary of the habitats and condition assessments recorded on site during the habitat walkover survey undertaken by Consultant Ecologist Libby Pinches BSc and Assistant Ecologist Maddy Simmonds BSc (Hons) on 12th March 2025.

Vegetated Garden

- 5.2. The majority of the site can be categorised as vegetated garden comprising areas of amenity grassland, flowerbeds, and hard landscaping. Species recorded in the grassland included perennial ryegrass *Lolium perenne*, chickweed *Stellaria sp.*, large-leaved avens *Geum macrophyllum*, willow herb *Epilobium sp.*, babies tears *Soleirolia soleirolii*, moss *Sphagnum sp.*, creeping buttercup *Ranunculus repens*, sedge *Carex sp.*, wood rush *Luzula sp.*, *Clematis sp.*, *Hyacinth sp.*. The grass present was regularly managed and at the time of the survey had an average sward length of less than 10cm.
- 5.3. Vegetated gardens do not require a condition assessment.

Modified Grassland

- 5.4. A strip of modified grassland along the south boundary forming a verge for Estcots Drive and is outside the ownership of the property but included in the application site. The strip is regularly managed and at the time of the survey had a sward length of less than 10cm. The species composition was primarily common grassland species includes perennial ryegrass, daisy *Bellis perennis*, and dandelion *Taraxacum sp.*
- 5.5. This habitat passes 3 of 7 criteria, however as it does not pass criteria A (an essential criteria for achieving moderate condition) It is assessed as having **poor condition**.

Table 1: Modified Grassland Habitat Condition Score

Condition Assessment Criteria		Criteria Met	Condition Score
A	There are 6-8 vascular plant species per m ² present, including at least 2 forbs. Note - this criterion is essential for achieving Moderate or Good condition.	No - There were 5-4 species per m ²	Poor
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	No - The habitat was well mown throughout the site	
C	Some scattered scrub (including bramble <i>Rubus fruticosus</i> agg.) may be present, but scrub accounts for less than 20% of total grassland area.	Yes - No scrub was present	
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	No - excessive mowing evident	
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) ² .	No - no bare ground was present	
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Yes - No bracken present	
G	There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴).	Yes - No invasive species were recorded	

Ornamental Lakes or Ponds

- 5.6. Two waterbodies were recorded within the site. The first (W1) was a raised ornamental fish pond of concrete construction with an aeration system. The second (W2) was an ornamental feature of two ponds connected by what was likely formerly a running channel. At the time of the survey these ponds appeared very shallow and the surfaces were covered in leaf litter and duckweed *Lemna minor*. The channel was almost dry with some mud and wet leaf litter. W2 was set within stone on a raised hard landscaping feature of the site.
- 5.7. W1 passed 3 of 9 criteria whilst W2 passed 4 of 9 criteria and therefore they are assessed as having **Poor condition**.

Table 2: Ponds Habitat Condition Score

Condition Assessment Criteria		Criteria Met - W1	Criteria Met - W2
A	The pond is of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution. Turbidity is acceptable if the pond is grazed by livestock.	Yes - the water was clear	No - the water had high levels of sediment
B	There is semi-natural habitat (moderate distinctiveness or above) completely surrounding the pond, for at least 10 m from the pond edge for its entire perimeter.	No - The habitat was surrounded by vegetated garden	No - The habitat was surrounded by vegetated garden
C	Less than 10% of the water surface is covered with duckweed <i>Lemna</i> spp. or filamentous algae.	Yes - no duckweed present	Yes - no duckweed present
D	The pond is not artificially connected to other waterbodies, e.g. agricultural ditches or artificial pipework.	Yes	Yes
E	Pond water levels can fluctuate naturally throughout the year. No obvious artificial dams ² , pumps or pipework.	No	No
F	<i>There is an absence of listed non-native plant and animal species³.</i>	Yes - no listed non-native species were identified	Yes - no listed non-native species were identified
G	The pond is not artificially stocked with fish. If the pond naturally contains fish, it is a native fish assemblage at low densities.	No - non-native fish present	Yes - no fish present
Additional Criteria - must be assessed for all non-woodland ponds			
H	Emergent, submerged or floating plants (excluding duckweed) ⁴ cover at least 50% of the pond area which is less than 3 m deep.	No - plant cover less than 50%	No - plant cover less than 50%
I	The pond surface is no more than 50% shaded by adjacent trees and scrub.	No	Yes
Condition Assessment Score:		Poor	Poor

Linear Habitats - Hedgerows

- 5.8. On the southern and eastern boundary was linear feature of red cedar trees *Thuja plicata* which is best categorised as a non-native and ornamental hedgerow.
- 5.9. Non-native and ornamental hedgerows are automatically assigned **Poor condition**.

Summary of Baseline Units

- 5.10. The total area of pre-development habitat is 0.08ha with a total of **0.16 baseline Habitat Units**. The proposals will result in the loss of all habitats on site.
- 5.11. 0.014 km of hedgerows/ line of trees are present bounding the site which provide 0.01linear units for the site. These will all be lost.

Post Development Habitats

- 5.12. The post-development proposals for the site comprise erection of two residential dwellings and creation of associated hardstanding and vegetated gardens.

Vegetated Gardens

- 5.13. Residential gardens will be created as part of the development, measuring a total of 0.0423ha.
- 5.14. This habitat does not require a condition assessment and will provide **+0.08 habitat units**.

Developed Land; Sealed Surface

- 5.15. Building footprint and associated hardstanding will cover an area measuring 0.023ha. This habitat does not require a condition assessment and will provide no habitat units.

Artificial unvegetated, sealed surface

- 5.16. An unsealed driveway will cover an area measuring 0.0128ha. This habitat does not require a condition assessment and will provide no habitat units.

6. RESULTS AND EVALUATION

- 6.1. Overall, the site will achieve a **-47.73% (-0.07 units) net gain for habitats and -100% (-0.01 units)** for linear features within the site based on the current proposals as set out in **Appendix 1**. A summary of these results within the metric can be found below:
- 6.2. The Metric in an excel spreadsheet will also be provided along with comments where deemed necessary.

FINAL RESULTS				
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-0.07		
	Hedgerow units	-0.01		
	Watercourse units	0.00		
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-47.73%		
	Hedgerow units	-100.00%		
	Watercourse units	0.00%		
Trading rules satisfied?	No - Check Trading Summaries ▲			
Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	0.16	0.17	0.09
Hedgerow units	10.00%	0.01	0.02	0.02
Watercourse units	10.00%	0.00	0.00	0.00

- 6.3. A biodiversity net gain cannot be achieved on site, therefore at least 0.09 off-site units in the A1 tier and 0.02 units in the H tier will need to be purchased and the client is prepared to do so. The spatial risk multiplier has not been added to these values.

7. REFERENCES

CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland*.

Darwin Ecology (2024) *Ecological Impact Assessment - 19 Estcots Drive*. Darwin Ecology Ltd, Farnham.

CIRIA, CIEEM, IEMA (2016) Biodiversity Net Gain: Good Practice Principles for Development [Available <https://cieem.net/wpcontent/uploads/2019/02/Biodiversity-Net-Gain-Principles.pdf>] [April 2025].

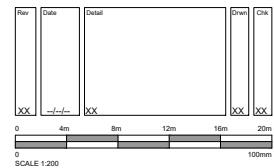
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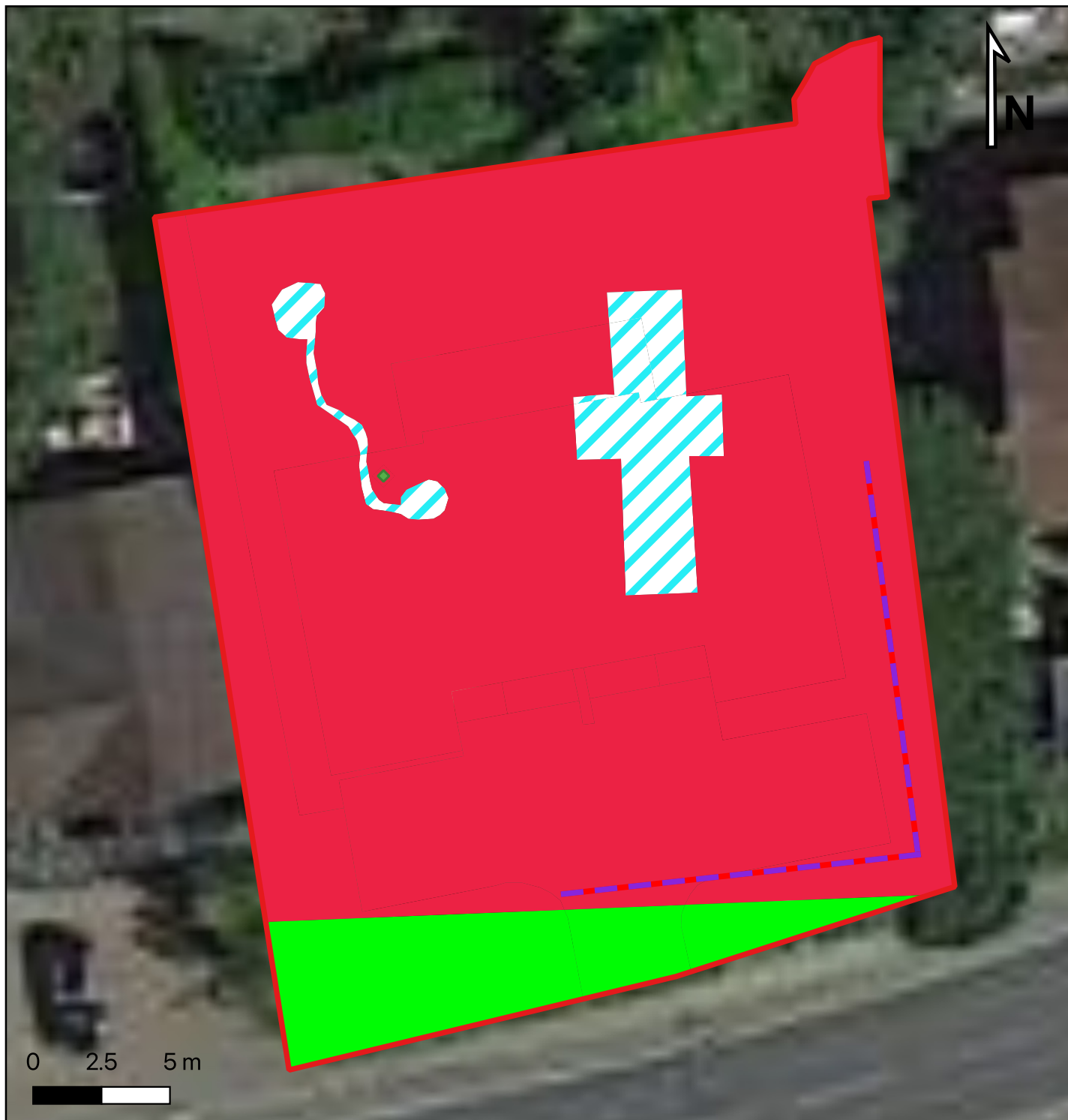
APPENDIX 1: LANDSCAPE PLANS

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Legend

-  Red Line Boundary
-  Existing Small Urban Tree
-  Non-native and ornamental hedgerow
-  Modified grassland
-  Ornamental lake or pond
-  Vegetated garden

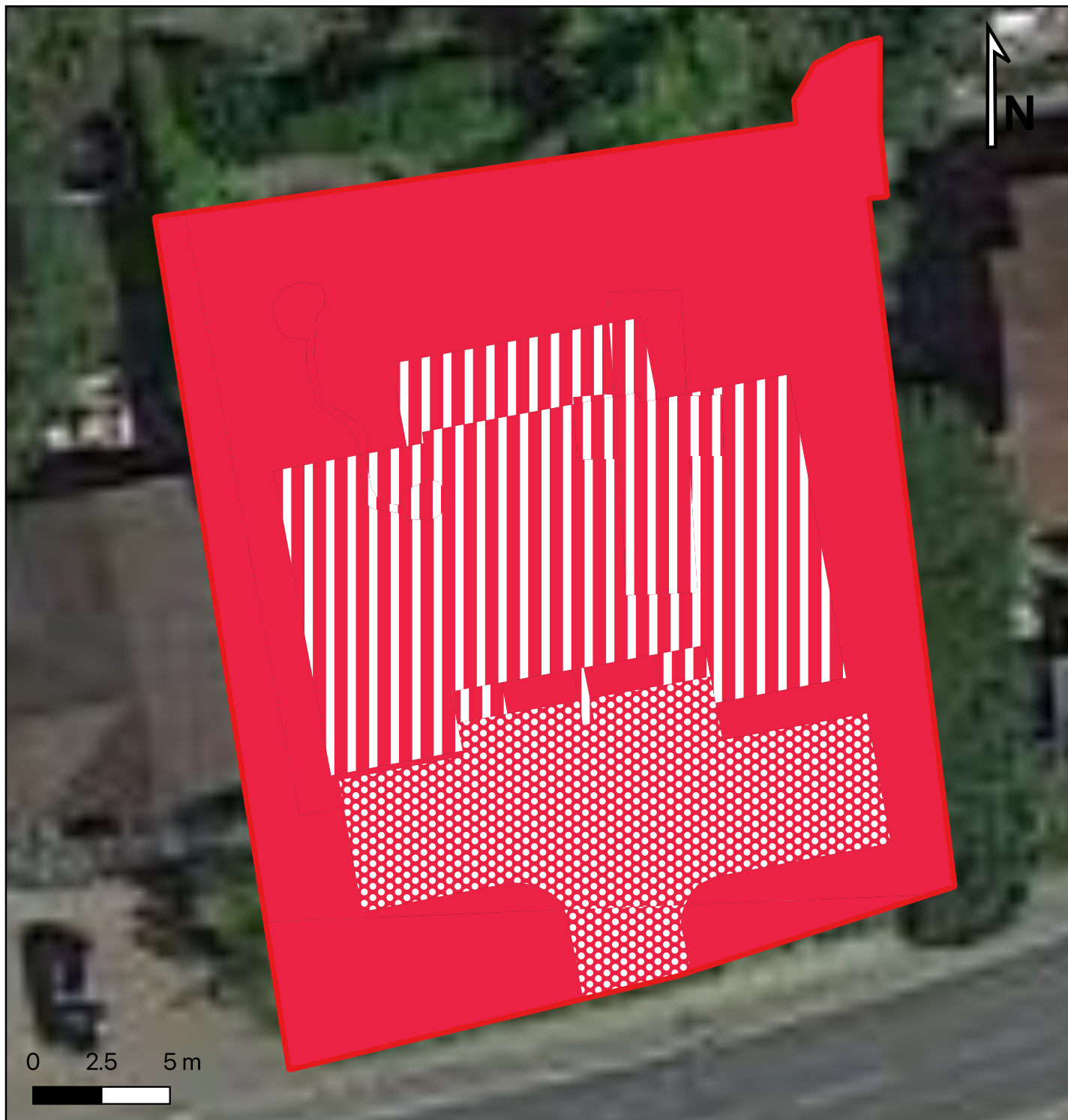


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Project: 19 Estcots Drive

Appendix 2: Pre-development
Habitats

Date: April 2025



Legend

-  Red Line Boundary
-  Artificial unvegetated, unsealed surface
-  Developed land; sealed surface
-  Vegetated garden



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Appendix 3: Post-development
Habitats

Date: April 2025