



DARWIN ECOLOGY
integrating nature conservation

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**Biodiversity Net Gain
Assessment - Sutton Impact
Calculator**

93 Epsom Road, London

February 2024

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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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<p>This report remains valid for 12 months from date of issue.</p> <p>Survey data are valid for 12-24 months from the date the survey was undertaken.</p>		

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The views and opinions contained within the 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 works.

1. EXECUTIVE SUMMARY

- 1.1. This report has been produced to provide the results of the Biodiversity Net Gain calculation at Epsom Road in order to ensure compliance with the *National Planning Policy Framework (2021)* regarding no net-loss of biodiversity.
- 1.2. The site proposals are for the partial demolition of the current dwelling to allow for the remodel of the structure into a new dwelling, plus an additional second attached dwelling.
- 1.3. This report should be read in conjunction with the Ecological Impact Assessment (EclA) produced for the site by Darwin Ecology (2023).
- 1.4. 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. Various forms of the metric are available, the appropriate metric for this site is the Sutton Impact Calculator, which has been used to complete this assessment.
- 1.5. This assessment has been informed by an Extended Phase 1 Habitat Survey and habitat condition assessment carried out in 2023.
- 1.6. Baseline habitats include; garden (lawn and planting), bare ground, buildings, introduced shrub and tall ruderal. This will all be lost as a result of the development.
- 1.7. Proposed habitats include buildings, garden (lawn and planting) and an area of semi-improved grassland.
- 1.8. The results of the metric can be summarised as follows:
- 1.9. The Sutton Impact Calculator demonstrates a 0.0665 score gain in habitats and a hedgerow impact score of 0 at the site.

Habitat Impacts	Loss	Gain	Impact	%age losses	Compensatory Unit loss	Indicative Offset (ha)	LBS Offset units	LBS Offset Contribution
Woodland Habitat	0.0000	0.0000	0.0000					
Grassland Habitat	0.0000	0.0164	0.0164					
Wetland Habitat	0.0000	0.0000	0.0000					
Other Habitat (incl. Built Env)	0.0492	0.0993	0.0501			N/A		FALSE
Total	0.0492	0.1157	0.0665	0	0.0000	0.0000	0.0000	£0.00
		Trading down	0.0000					
			0.0665					
Hedgerow Impacts	Loss	Gain	Trading down	Impact	Unit loss	Indicative	LBS Offset	LBS Offset
Hedgerow	0.03	0.04	-0.01	0.00				

- 1.10. Provided the proposed habitats are managed competently, the proposed development will be in compliance with the NPPF. It is recommended that a biodiversity management plan is written to ensure the habitats created met their target score.

2. INTRODUCTION AND BACKGROUND

- 2.1. This report has been produced to provide the results of the Biodiversity Net Gain calculation at 93 Epsom Road in order to ensure compliance with the *National Planning Policy Framework (2021)* regarding no net-loss of biodiversity.
- 2.2. The site proposals are for the partial demolition of the current dwelling to allow for the remodel of the structure into a new dwelling, plus an additional second attached dwelling.
- 2.3. This assessment is based on the landscape proposals as shown in **Appendix 1**.

Site Overview

- 2.4. The site is located in the urban area of Sutton at the intersection between Elm Road West and the A 24.
- 2.5. The site comprises a residential dwelling, utility outbuildings and an associated garden area (see **Figure 1**).
- 2.6. The wider landscape comprises the suburban environment of Sutton. To the north of the site is Morden Park. To the east, south and west are residential and commercial suburban areas of Sutton and Morden.



Figure 1: Site location within the local landscape (Copyright Ordnance Survey Leisure Maps, 2021)

3. LEGISLATIVE AND POLICY BACKGROUND

National Planning Policy Framework (NPPF) 2021

- 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:

"Planning policies and decisions should contribute to and enhance the natural and local environment by:

174 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);

174 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;

Habitats and biodiversity

179. 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.

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

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

- b) *development on land within or outside 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.*

Local Council Policy

- 3.2. The local planning policy for the site is the London Borough of Sutton Local Plan 2016-2031, with relevant policies comprising:

Policy 26

The council will protect and enhance Sites of Importance for Nature Conservation, Green Corridors and biodiversity. It will ensure the restoration of Beddington Farmlands is completed to the agreed quality and implement its Biodiversity Action Plan and agri-environment schemes. Major new development should result in no net loss in biodiversity value, as assessed against the DEFRA biodiversity offsetting metric, the Environment Bank Biodiversity Impact Calculator or any metric which the council subsequently adopts formally. New development should incorporate opportunities to enhance biodiversity, wherever possible.

The council will grant permission for developments that create, conserve or enhance biodiversity and improve access to nature, subject to other policies in the plan. In particular, the council will support the creation of:

- 1 hectare of new woodland.*
- 2 hectares of new chalk grassland at suitable locations.*

- *Various habitat enhancements identified through the council's Biodiversity Action Plan and the Catchment Plans for the River Wandle and Beverley Brook,*

The council will not grant planning permission within or adjacent to a SINC where there would be a damaging impact on the nature conservation value or integrity of the site, unless:

- (i) the need for and the benefits of the development clearly outweigh the harm.*
- (ii) where there are no reasonable alternative sites that would result in less harm.*
- (iii) where development can demonstrate no net loss for biodiversity and, where possible, net gains for biodiversity by providing mitigation and/or compensation measures.*

The council will not grant planning permission for development within a Green Corridor where there would be a significant damaging impact to the corridor, unless the need for and benefits of the development clearly outweigh the harm and where development can demonstrate no net loss for biodiversity by providing mitigation and/or compensation measures.

The council will grant planning permission for development provided that the development will not adversely affect the integrity and biodiversity of the Banstead Downs SSSI (Site of Special Scientific Interest) adjacent to the London Borough of Sutton.

- 3.3. The local biodiversity action plan relevant to the site is Sutton Biodiversity Action Plan. It aims to set out a long-term strategy for biodiversity conservation within Sutton and provide a series of objectives and actions for achieving successful conservation of habitats and species across the county.

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 Sutton Impact Calculator v1.5 and the Biodiversity Metric 4.0 Condition Assessment Sheets.

Calculation Components

- 4.3. The Sutton Impact Calculator v1.5 takes account of all the habitats on site prior to development and post development using UK Habitat Classification System (UKHabs). Therefore, Phase 1 Habitat types have been converted to UKHabs Habitats for the purposes of this assessment. 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 spacial 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 indicate 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-sett 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 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.

4.14. 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

Pre-development Habitats/Baseline

- 5.1. Below is a summary of the habitats and condition assessments recorded on site during the Phase 1 Habitat Survey undertaken by Ecologist Joe Denny on 22nd March 2023.

Built Environment: Gardens (lawn and planting)

- 5.2. Areas of amenity lawn and garden planting were present to the front and rear of the property. This area was mown with a very short sward of less than 3cm in height with introduced ornamental planting beds arranged along the edges of the garden. Species present included; perennial ryegrass (*Lolium perenne*), ground ivy (*Glechoma hederacea*), moss species, dandelion (*Taraxcum officinale agg.*), red clover (*Trifolium pratense*) and ribwort plantain (*Plantago lanceolata*).

Other: Bare ground

- 5.3. A small patch of bare ground is present along the western boundary of the site. This area is too overshadowed by the adjacent buildings to support plant communities and is used for bin storage, as such it has remained bare ground.

Built Environment: Buildings/hardstanding

- 5.1. The current buildings present on site and the associated pathways form the majority of the hardstanding habitats on site, few opportunistic plant species have established in cracks in the paving.

Other: Ephemeral/ short perennial

- 5.2. A small parcel of ephemeral plants growing between a fence and a metal garden shed, this includes a single bramble shrub (*Rubus fruticosus agg.*) and several monocot plant species.

Linear Habitats

Hedgerows: non-species rich hedge

- 5.3. This hedgerow is an ornamental hedgerow comprising only of box for approximately 7m. This hedgerow does not contain enough woody species to be considered an important hedgerow under the Hedgerow Regulations (1997).
- 5.4. Hedgerow 1 scores a moderate condition as it passes 4 of 7 criteria in the condition assessment and therefore achieves **moderate condition**.

Baseline

- 5.5. The total area of pre-development habitat is 0.0567 ha with a total of **0.0492 baseline Habitat Units**. It has been assumed during the demolition at the site all area habitats will be damaged and require replanting. Therefore, the proposals will result in the loss of 0.0567ha of habitats which reduces the biodiversity value of the site by **-0.0467** habitat units.
- 5.6. Approximately 7m of hedgerows are present bounding the site which provide a 0.03 linear units for the site. These are proposed to be removed, with 11m being replanted to provide 0.04 linear units for the site. This will result in a 0.00 impact.

Post Development Habitat Creation

- 5.7. The post-development proposals for the site comprise the erection of two residential buildings and creation of associated hardstanding, garden/lawn and poor semi-improved grassland.

Built Environment: Gardens (lawn and planting)

- 5.8. Residential gardens will be created as part of the development.
- 5.9. Gardens are allocated a pre-determined fixed condition score within the Metric. Therefore, gardens have been set a **poor target condition**.

Built Environment: Buildings/hardstanding

- 5.10. Buildings and hardstanding areas will be created as part of the development.
- 5.11. These allocated a pre-determined fixed condition score within and gain no habitat units in the calculations.

Grassland: Poor semi-improved grassland

- 5.12. A semi-improved grassland will be created as part of the development. A **poor condition** has been targeted for the creation of this habitat.
- 5.13. The proposed creation of habitats as part of this development will provide **+0.1157 habitat units**.

Trees

- 5.14. A number of small sized trees will be planted within the amenity spaces of the two new houses.
- 5.15. These gain no score from the metric as they will be located in private gardens.

6. RESULTS AND EVALUATION

- 6.1. Overall, the site will achieve a **0.0665 units net gain for habitats and 0 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 Sutton Impact Calculator spreadsheet will also be provided along with comments where deemed necessary.

Further Recommendations

- 6.3. A biodiversity management plan should be written for the site to ensure that all habitats created obtain their target scores. The Biodiversity Net Gain Principles document stipulates that created habitats must be maintained over a period of at least 25-30 years, along with providing monitoring and review, therefore any management plan must take this into account.

7. REFERENCES

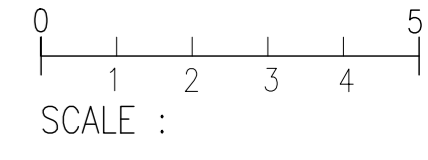
CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland*.

London Borough of Sutton - *Habitat Impact Assessment Calculator*

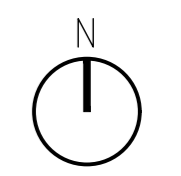
CIRIA, CIEEM, IEMA (2016) Biodiversity Net Gain: Good Practice Principles for Development [Available <https://cieem.net/wpcontent/uploads/2019/02/Biodiversity-Net-Gain-Principles.pdf>]

ALL DIMENSIONS MUST BE CHECKED ON SITE. INFORM THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. INTERNAL LAYOUTS INDICATIVE.

NOTES



SITE BOUNDARY :



EPSOM ROAD

ELM ROAD WEST



REV DATE	DESCRIPTION	DRN
P01 07.02.24	FIRST ISSUE FOR REVIEW	DS

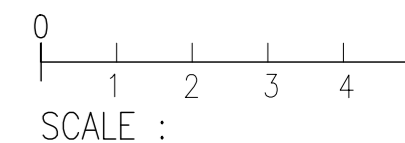
Gouldstone and Co.

CLIENT: UMER MANSOOR
PROJECT: EPSOM ROAD SUTTON
DRAWING TITLE: PROPOSED LANDSCAPE GA

SCALE: 1:1000A2 SHEET
STATUS: PLANNING
DRAWING NO: ER_P_160 REV: P01
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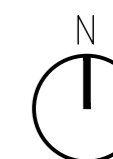
ALL DIMENSIONS MUST BE CHECKED ON SITE. INFORM THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. INTERNAL LAYOUTS INDICATIVE.

NOTES



SCALE :

SITE BOUNDARY :



EPSOM ROAD

ELM ROAD WEST



EXISTING TREE

EXISTING CROSSOVER

SUB STATION

PARKING SPACE

125m² GARDEN

ACCESS TO GARAGES

97m² GARDEN

PARKING SPACE

EXISTING TREE

P03 07.02.24	DESIGN DEVELOPMENT	DG
P02 25.01.24	DESIGN DEVELOPMENT	DG
P01 14.01.24	FIRST ISSUE FOR REVIEW	DG
REV DATE	DESCRIPTION	DRN

Gouldstone and Co.

CLIENT: UMER MANSOOR
PROJECT: EPSOM ROAD SUTTON

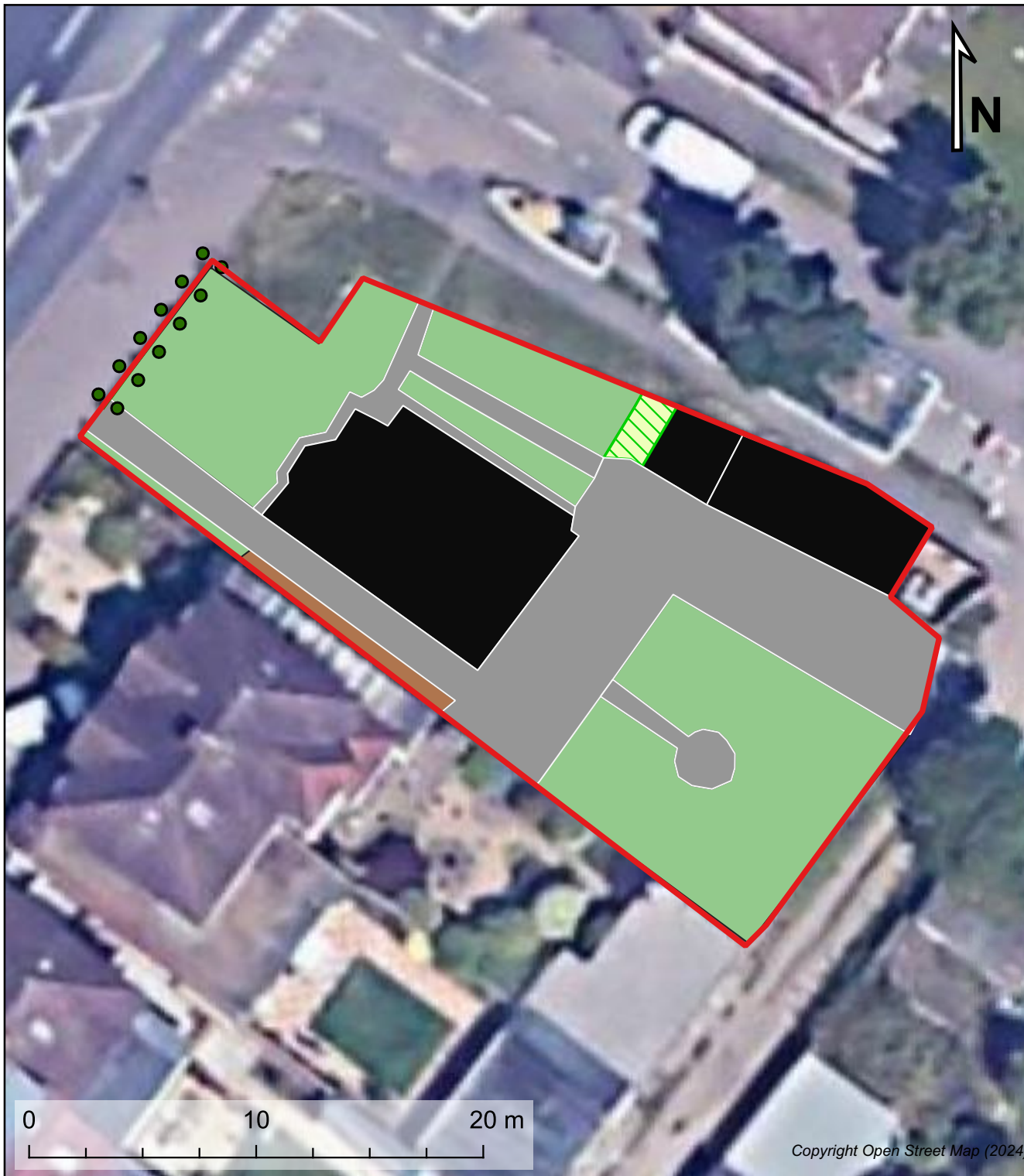
DRAWING TITLE: PROPOSED GROUND GA


SCALE 1:100@A2 SHEET


STATUS: PLANNING

DRAWING NO: ER_P_100 REV: P03

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 site_boundary

 Species-poor hedgerow

Pre-Dev Habitats

 Bramble scrub

 Buildings

 Modified grassland

 Bare ground

 Hardstanding

NOTE: Areas are indicative and are not shown to exact scale.



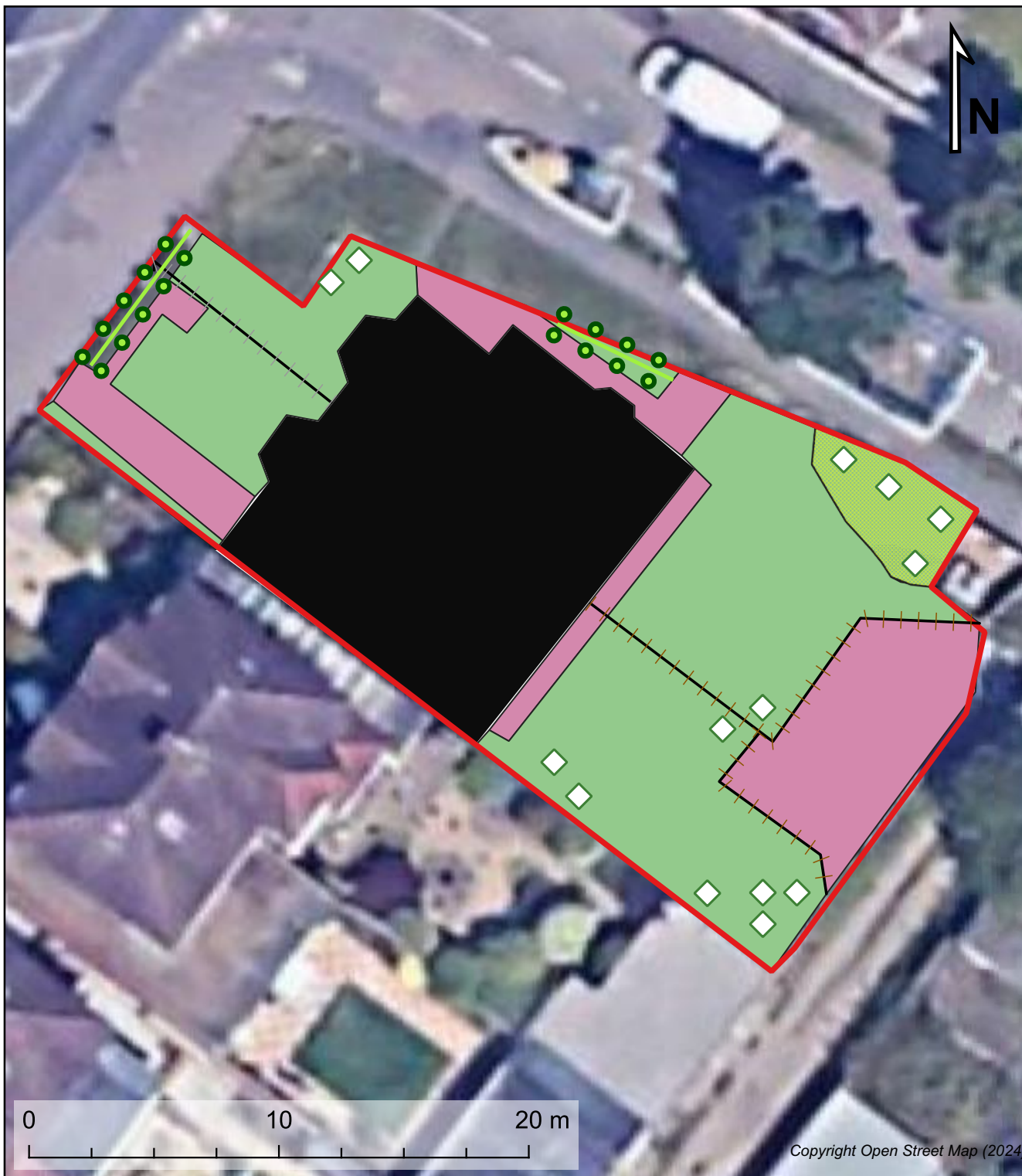
Project: 93 Epsom Road, Sutton


Figure 1: Pre-Development Habitat

Date: 12/02/2024


Info@darwin-ecology.co.uk
www.darwin-ecology.co.uk

Copyright Open Street Map (2024)



 site_boundary

Post Dev Linear

 Species poor hedgerow

 Brick wall

 Wooden fence

Post Dev trees

 Small tree

Post Dev Habitats

 Bramble scrub

 Buildings

 Modified grassland

 Bare ground

 Hardstanding

 Permeable hardstanding

 Other neutral

NOTE: Areas are indicative and are not shown to exact scale.