Biodiversity Net Gain Report & Biodiversity Enhancement Scheme

Yerrill Garden, Burton End, Haverhill CB9 9AD

For Freshwater Estates Ltd

September 2024



Report: SE2422.1

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Andrew Palmer BSc (Hons), DipLA, MCIEEM, Sound Ecology, September 2024

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1 EXECUTIVE SUMMARY

Sound Ecology has prepared this report on behalf of Freshwater Estates Ltd. It concerns a proposed new residential property at Yerrill Garden, Burton End, Haverhill CB9 9AD.

The Stautuory Biodiversity Metric Calculation Tool (DEFRA, 2023) has been used to establish baseline and post-development biodiversity units. The area figures used in this report have been derived from the baseline and post-development habitat drawings provided in the Appendices.

Baseline

The baseline survey was undertaken on 25 July 2024, an optimal time for a habitat condition assessment. The development site is 0.1774 ha (1,774 m²) and was formerly used as an ambulance station but is now abandoned, with no standing structures. The site has boundary vegetation, including hedgerows, but the interior is primarily unvegetated developed land.

These proposals would not impact statutory or non-statutory sites. There are no priority or irreplaceable habitats on site, nor was there any evidence of protected or S41 species present.

Proposed Development

The redevelopment proposal The proposal involves the construction of five new residential buildings (Appendix A2).

Off-site Biodiversity Gain

The proposed on-site development would result in an overall biodiversity net gain of 17.7 % in habitat units and 86 % in hedgerow units (Table 1). Trading rules would also be satisfied, resulting in a satisfactory outcome regarding the statutory biodiversity net gain requirement.

Table 1 - Summary of Change in Biodiversity Units:

Category	Unit type	Units change	Percentage change
On-site net % change	Habitat Units	0.02	17.71
On-site net % change	Hedgerow Units	0.13	86.14
Trading Rules Satisfied	Yes		

2 INTRODUCTION

2.1 Introduction

Sound Ecology has prepared this report on behalf of Freshwater Estates Ltd. It concerns a proposed new residential property at Yerrill Garden, Burton End, Haverhill CB9 9AD, which is located at OS grid reference TL 6635 4531.

The proposal involves the construction of five new residential buildings on a site formerly used as an ambulance station but now derelict, with no standing structures. The site has boundary vegetation, including hedgerows, but the interior is mostly macadam surfacing.

The report summarises the results from a Biodiversity Net Gain (BNG) Assessment. Baseline Habitat was assessed on a site walkover carried out on 29 July 2024. Post-development details are taken from the architect's plans (Claywall Architectural) and landscape architect plans (Wynne-Williams Associates).

2.2 Objectives

The report summarises the results from a Biodiversity Net Gain (BNG) Assessment and addresses the National Planning Policy Framework's (NPPF) requirement for Biodiversity Net Gain (BNG).

2.3 Policy and Legislation

The requirement for developments to seek to achieve a net gain in biodiversity arises from the National Planning Policy Framework (NPPF, 2023), which states in Para. 174, that: "*Planning policies and decisions should contribute to and enhance the natural and local environment by ... minimising impacts on and providing net gains for biodiversity.*"

In England, BNG is mandatory under Schedule 7A of the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2021).

Developers must deliver a BNG of 10 %, which means that redevelopment will result in more or better-quality natural habitats than before.

3 METHODOLOGY

3.1 Desk Study and Field Survey Methods

A habitat survey was conducted according to the CIEEM Guidelines for Preliminary Ecological Appraisal (CIEEM 2017) and using the UK Habitat classification version 2.0 (UKHab Ltd, 2023). Andrew Palmer BSc (Hons), DipLA, MCIEEM, a licence ecologist and landscape architect with over forty years of experience, conducted the survey.

The results of the field survey have been used to undertake a Biodiversity Net Gain (BNG) calculation (metric), which forms part of this document.

3.2 Approach to BNG

This BNG assessment has been approached according to the principles set out in BS 8683:2021, the Process for designing and implementing Biodiversity Net Gain. The full statutory biodiversity metric was employed due to the requirements to provide off-site habitat provision to achieve a net gain exceeding 10%. This metric version was used in preference to the small sites metric, as this provided a fairer approach to describing the value of the habitats present.

This report uses the CIEEM template (CIEEM 2021. Biodiversity Net Gain Report and Audit Templates, Chartered Institute of Ecology and Environmental Management, Winchester, UK). The metric calculations and results can be found on the attached spreadsheet SE2422.2 BNG Metric Yerrill Garden Haverhill Sep 2024.

3.3 Suitably Qualified Ecologist

Best practice guidelines require that a Suitably Qualified Ecologist complete this report. BS42020:2013 defines a suitably qualified ecologist as someone who:

- 1. holds a degree (or equivalent qualification) in an ecology-related subject.
- 2. has been a practising ecologist with a minimum of three years of relevant experience within the last five years.
- 3. clearly demonstrates a practical understanding of factors affecting ecology in relation to construction and the built environment, including acting in an advisory capacity to provide recommendations for ecological protection, enhancement and mitigation measures.
- 4. is bound by a professional code of conduct.
- 5. is subject to peer review.
- 6. is not acting or advising outside their professional competencies.

Andrew Palmer (AP) has completed this report. AP holds a degree in Environmental Science and a post-graduate diploma in landscape architecture, was a former chartered member of the Landscape Institute (CMLI), and is now a full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM) with over forty years relevant experience in ecology and habitat management. AP, therefore, meets the criteria for a Suitably Qualified Ecologist (SQE).

3.4 Limitations

There were no limitations present during the survey or subsequently during the assessment. AutoCAD LT was used to establish accurate measurements of the Ordnance Survey base and architect's drawings. Measurements are accurate to +/- 1 metre.

4 BASELINE CONDITIONS

The baseline habitat assessment on 25 July 2024 included a Preliminary Ecological Appraisal (PEA). While not published as a separate document, the findings have informed the BNG process.

4.1 Designated Sites and Priority Habitats

The site is not covered by any statutory designations related to ecological features. No designated sites of conservation value lay within 500 m. While the site lies within impact risk zones of a Site of Scientific Interest (3.5 km away), it does so at a distance below the threshold for action. No priority habitats were present on the site or identified within 500 m. As a result, the proposed development would not result in detrimental impacts on surrounding sites or habitats of conservation value.

4.2 Protected Species and Notable Species

No evidence of protected species was recorded within the site. Aside from an expectation of deficient levels of bat commuting and foraging and occasional nesting by widespread urban bird species, the site was unsuitable to support species that, with respect to planning, would require further surveys. Potential impacts on these bat behaviours or nesting birds can be avoided (through habitat retention) or mitigated (by the timing of works and lighting design). Consequently, this potential value does not constrain redevelopment of the site.

4.3 Baseline Habitat Description

Developed land and sealed surfaces dominated the habitats present and retained artificial unvegetated surfaces where the former flat roof single-storey office unit has been. At the front of the site were areas of neglected lawn with Bramble scrub encroachment and a small area of native scrub. A single bushy Sycamore tree was present within this scrub. An overgrown Cherry Laurel hedge dominated the western boundary, while the rear (southern) boundary was a scrappy native hedgerow with Hawthorn, Mountain Ash, Field Maple, and Ash. Encroaching the site from the adjacent bank with Greenfields Way was a non-native Snowberry. Two Pedunculate Oak trees overhung the eastern side of the site, the northern oversailing macadam, the southern oversailing Snowberry and a small area of ruderal forbs.

The site is shown in the baseline habitats drawing (appendix A1), the Photographs (below) and the accompanying habitat condition sheets (SE2422.3 BNG HCA Yerrill Garden Haverhill Sep 2024).

Site Photographs

Photo 1 - Scrub (right) at the entrance of the site at the junction of Burton End (foreground) and Greenfields Way (left). The trees to the left are outside of the site. Photo 2 - Site entrance from Burton End showing laurel hedge to the right. Photo 3 - Interior of the site viewing east to west showing the expanse of unvegetated macadam surfacing. Photo 4 - The Cherry Laurel hedge running along the western boundary.



Photo 5 – Adjacent Oak trees alongside Greenfields Way. Photo 6 – Viewing north along the eastern side of the site. Photo 7 – Cleared foundations of the structure that occupied the southern end of the site. Note overground native hedgerow behind. Photo 8 – As Photo 7 looking west to east.



The baseline was established during a survey on 29 July 2024. This date is within the optimal survey window for assessing habitat conditions and is valid for planning submissions made within the next 12 months.

Appendix A1 to this document provides a baseline habitat map. The habitats occupied 0.1774 ha (1,774 m²), which is comparatively small and simple, as shown in Appendix A1. The proposals would not impact statutory or non-statutory sites. There were no priority or irreplaceable habitats on site, nor was there any evidence of protected or S41 species present.

4.4 Baseline Habitat Areas

The baseline metrics, distinctiveness, condition and strategy significance for each habitat are provided within the accompanying metric and condition sheets (SE2422.2 BNG Metric Yerrill Garden Haverhill Sep 2024 and SE2422.3 BNG HCA Yerrill Garden Haverhill Sep 2024, respectively). A summary is provided in Table 2 (Habitat Units) and Table 3 (Hedgerow Units).

Line No.	Habitat Type	Area (ha)	Area (ha) retained	Comment
1	Developed land; sealed	0.0562	0	Buildings and paving
2	Artificial unsealed unvegetated	0.0256	0	Former foundation areas
3	Bare Ground	0.0103	0	Hedge bases
4	Modified grassland	0.0081	0	Recreational grassland

Table 2 – On-site Baseline Habitats Area

5	Mixed Scrub	0.0090	0	Poor condition scrub
6	Bramble Scrub	0.0027	0	
7	Sparsely vegetated - Ruderal	0.0009	0	Moderate condition
8	Introduced shrub	0.0046	0	Ornamental shrubs
9	Individual Urban Tree	0.0041	0	Medium size/poor condition
	Site Area (excl. Individual tree)	0.12	0	

Table 3 – On-Site Hedgerow Units

Line No.	Habitat Type	Length (km)	Retained (km)	Comment
H1	Non-native and ornamental hedgerow	0.033	0.033	Cherry Laurel
H2	Native Hedgerow	0.028	0.028	To be enhanced
	Hedgerow Length (km)	0.06	0.06	

5 APPLICATION OF THE MITIGATION HIERARCHY

5.1 Background

BNG is a specific, measurable outcome of project activities that deliver demonstrable and quantifiable benefits to biodiversity compared to the baseline situation. These benefits must be achieved through the application of the 'mitigation hierarchy'. This approach is included in the National Planning Policy Framework and also in ecological best practice guidelines. The following steps must be implemented in order:

- Level 1 Avoidance: Anticipated biodiversity losses should be avoided and reduced by using alternative sites and designs, retaining habitats of value for enhancement and management and retaining species in situ.
- Level 2 Minimise: Where total avoidance is not practical, impacts should be minimised or mitigated through design and working practices.
- Level 3 Remediate: Where damage occurs to areas that can be restored before or upon completion, this should occur in preference to compensation elsewhere.
- Level 4 Compensate: As a last resort, compensatory measures should also be implemented in proportion to the harm done by creating suitable habitats and relocating species.

5.2 Application

The surveying and reporting included scoping for statutory and non-statutory sites, protected species and habitats, Habitats and Species of Principal Importance, and irreplaceable habitats. The

survey also evaluated the impact of potentially sensitive receptors. In the context of this site, there were no significant habitats of higher conservation value that required avoidance or specific mitigation. Therefore, the application of the mitigation hierarchy levels applies as follows:

- Level 1 Avoidance: The proposed development comprises no loss of very high or high distinctiveness habitats. While habitats achieving medium distinctiveness (scrub and an individual tree) would be lost, these were small, isolated, in poor condition and of no particular ecologically merit. It was not practical to avoid an impact on these habitats without significantly constraining the redevelopment. Therefore, avoidance was considered to be unjustified. The native hedgerow at the rear of the site and the non-native hedgerow on the western perimeter will be retained as these offer screening and some continuity of structure that would potentially benefit nesting birds and foraging bats. No other habitat feature within the site has sufficient biodiversity value to merit a design strategy that avoids their loss.
- Level 2 Minimise: Precautionary working methods will be employed to ensure that, should protected wildlife enter the site before or during construction, reasonable avoidance measures are enacted to prevent unforeseen harm.
- Level 3 Remediate: The retained native hedgerow, which has suffered from damage and neglect, will be enhanced through restorative management and additional gap-filling with appropriate native species. No other remediation would be necessary.
- Level 4 Compensate: The loss of the low and medium distinctiveness habitats will be offset by creating habitats including areas of native shrubs, native hedgerows, native tree planting and a range of ornamental plants chosen to offer value to invertebrates, particularly those that rely on nectar sources. The habitats created will increase the site's biodiversity value that exceeds that found in its current condition. In addition to habitat improvements, new bird nesting and bat roosting opportunities are being provided.

6 PROPOSED DESIGN AND BIODIVERSITY ENHANCEMENT SCHEME

Appendix A2 shows the proposed scheme. In addition to the creation of new habitats, which have formed part of the onsite compensation, the development will include biodiversity enhancements in the form of bat, bird, and insect boxes. It will also avoid or mitigate impacts on wildlife through considered lighting design and precautionary working practices.

6.1 Retained Vegetation

It is recommended that retained hedgerows and trees close to the development be protected by installing root protection areas using Heras fencing prior to and during construction, in accordance with Trees in Relation to Design, Demolition and Construction—Recommendations BS5837:2012 (BSI, 2012).

6.2 Precautionary Working Methods Statement (PWMS)

PWMS applies immediately before and during construction. Therefore, a copy of this report should be retained on-site during clearance and construction work. All site operatives should be made aware of its contents where they are relevant to the tasks they are undertaking. In addition, the contact details of a Suitably Qualified Ecologist (SQE) should be made available in case advice is required during the operations.

6.2.1 Protected Species

Construction personnel will undertake a brief site walkover and check of excavations each day before work commences to ensure no protected species have entered the site overnight.

If protected species are found during site clearance, demolition, or construction, work will stop immediately, and the SQE will be contacted immediately for advice. Protected species should not be handled unless they are an immediate and unavoidable danger. If this arises, the SQE should be contacted immediately. Under advisement, the animal should be secured in an escape-proof ventilated container and stored in a shady location before being released by the ecologist.

6.2.2 <u>Birds</u>

All bird species are offered protection under the Wildlife and Countryside Act 1981 (as amended) when nesting or preparing nests (typically, but not exclusively, between March and August inclusive). As such, vegetation removal should be done outside of the breeding bird season (between September and February inclusive) to avoid disturbing or destroying active nests. Should this time frame be unfeasible, it is recommended that before the commencement of work, a nesting bird check is carried out by the SQE (although checks at all times of the year are recommended). If active nests are observed, vegetation/structures must be left alone until the SQE is satisfied that the young have successfully fledged.

6.2.3 Site Clearance

Pre-work inspections should be carried out to ensure nesting birds are not present. If nesting birds are found during clearance or construction, work will stop, and the SQE will be contacted immediately for advice.

Ground Works and Miscellaneous - Short-mown vegetation should be maintained on-site throughout the pre-demolition period to ensure that it does not become a favourable habitat for species that may be harmed during the works. When strimming or cutting longer vegetation, extreme care should be taken not to harm Hedgehogs and amphibians, and in all cases, the area should be checked before cutting commences. Once cut short, these areas should be maintained as short swards.

During the clearance of debris, timber, and rubble piles, care should be taken by checking these before moving to ensure that wildlife is not seeking refuge. Loose material piles should be dismantled by hand rather than by machine. It is advisable that only building products to be used on the day are brought and stored on the site. If building products need to be stored on-site (e.g., overnight or for a few days), these products should be stored on palettes or retained in bags on palettes to ensure that refuges that will attract wildlife are not created. Where possible, building products should be placed on hard standings.

All excavations created during construction (e.g., for foundations or services) should be filled in and finished on the same day to avoid leaving any traps into which animals might fall. If this is unavoidable, then an escape route is provided overnight from the hole, which can be in the form of a wooden plank cut into the bank to provide a ramp, or the hole is entirely covered by a heavy sheet or slab flush to the surrounding ground and without holes at the sides so to exclude

amphibians from crawling beneath. If in doubt, the soil should be piled over the side of the slab to seal the edges.

Security and work floodlighting should only be used where necessary to avoid any potential detrimental impacts on commuting bats during construction. These lights should not continually illuminate boundary vegetation during hours of darkness. The principles outlined below and set out in the Institute of Lighting Professional's Guidance Note should also be applied to construction phase lighting.

6.3 Mitigation – New Lighting

There should be no additional light spillage onto the surrounding boundary habitats to avoid detrimental lighting impacts on bats and nocturnal wildlife using the Site. Lighting should be restricted to the lowest level of illumination required for safety and security and only where needed. The following measures should be implemented within the lighting scheme:

- New column-mounted luminaires, lighting bollards, and wall-mounted luminaires should be selected, sited, and angled so they do not spill unnecessary light onto areas without illumination.
- Consider installing internal light fittings in a recess near windows facing the boundary vegetation to reduce glare and light spill.
- Ensure new LED luminaires have dimming capability, a warm white spectrum (ideally less than 2700, but below 3500 Kelvin) with peak wavelengths higher than 550 nm, and no UV output.
- Security lamps should use a trigger (e.g., passive infrared detector) and switch off after a short period (ideally 1-2 minutes) rather than remaining on all night.

Further guidance is available in Bats and artificial lighting in the UK (ILP 2023).

6.4 Enhancement Opportunities

6.4.1 <u>Proposed Enhancements</u>

The proposal will include features that support wildlife in addition to habitat improvements. These will comprise two bat boxes, six Swift boxes, two insect boxes, and Hedgehog access corridors (fence holes). The nest/roost boxes are located as shown in Figure 1.

Figure 1: Proposed Biodiversity Enhancements





Bat Roost Box: The bat roost boxes should be wall-integrated crevice-type and of a type selected from or similar to those shown by example at <u>https://bit.ly/2QpWrDU</u>). These boxes are permanent and durable, requiring no maintenance. The location of the box has been selected as it matches the ecological requirements of the bat species likely to be in the vicinity and will avoid nuisance to occupants (avoiding bedroom walls, being placed near windows and above doors). In addition, the

placement of any form of constant or intense lighting source, including security lights nearby, should also be avoided.

Swift Nesting Box: Six integrated bird boxes (in two groups of three) will be installed in locations shown in Figure 1 on the side elevations of Plots 2 and 3. These will be AfS S-bricks (www.actionforswifts.com/introduction). Action for Swifts provides bespoke boxes designed to match the brick used in wall construction. They are structurally designed as permanent, durable solutions requiring no maintenance. They should be placed as high as possible, 1 m apart and near the apex, to ensure uncluttered access.

Insect boxes: Two boxes will be made of durable concrete, either with holes directly inserted or capable of holding canes or other materials with holes. These will be fixed or hung from boundary walls/fences facing south in a sunny location close to plants chosen for pollinators. Suitable models can be seen at bit.ly/4dotCQx.

Hedgehog access: A 13cm x 13cm hole will be cut into the base of fences linking adjacent gardens will be provided to ensure any Hedgehogs that frequent the existing garden can continue to travel across their preferred garden habitats without obstruction. To ensure that these holes are not blocked, a notifying sign will be placed next to the hole, e.g. bit.ly/4gsGtnb. For safety, holes will not link directly to Burton End or Greenfields Way.

Garden habitats and landscaping: Ornamental planting will include a range of native plant species attractive to wildlife, particularly pollinating insects, as recommended by the RHS: https://bit.ly/3oxs7GI. When specifying plants specifically to attract pollinating insects, these should only be preferably sourced from organic suppliers, as many commercial outlets use pesticides such as neonicotinoids, which are persistent and can remain harmful to invertebrates.

6.3.2 Programme and management of enhancement features

Installation of all features will be completed before the first residential occupancy and confirmed in writing to the Local Planning Authority. The selected non-landscape habitats (boxes and fence holes) require no maintenance.

7 BIODIVERSITY NET GAIN METRIC

7.1 Proposed Post-development Scheme

Table 4 (Habitat Units) and Table 5 (Hedgerow Units) provide a summary. Aside from lawns within gardens, all planting will be in publically accessible spaces and managed by a management company. Table 6 shows a summary of the headline results provided by the metric calculation.

Line No.	Habitat Type	Area (ha)	Comment
1	Developed land; sealed	0.0771	Buildings and paving
2	Artificial unsealed unvegetated	0.0033	Gravel access paths
3	Bare Ground	0.0101	Hedge bases

Table 4 - Proposed On-site Habitat Areas

	Site Area (excl. Individual tree)	0.12	
9	Individual Urban Tree	0.0081	Small-size native species
6	Mixed Scrub	0.0066	Native shrubs in public areas
5	Introduced Shrub	0.0066	Planting beds in public areas
4	Vegetated Garden	0.0128	Lawns

Table 5 – Proposed On-Site Hedgerow Units

Line No.	Habitat Type	Length (km)	Comment
H3/4	Species-rich Native Hedgerow	0.035	Five native species
	Hedgerow Length (km)	0.04	

7.2 Calculator Summary

The proposed on-site development and landscape would result in an overall biodiversity net gain satisfying the requirements of the relevant legislation. Furthermore, this requirement would be met on-site in accordance with the preferred scenario for achieving net gain.

Table 6: Summary of Habitat Units Post-development

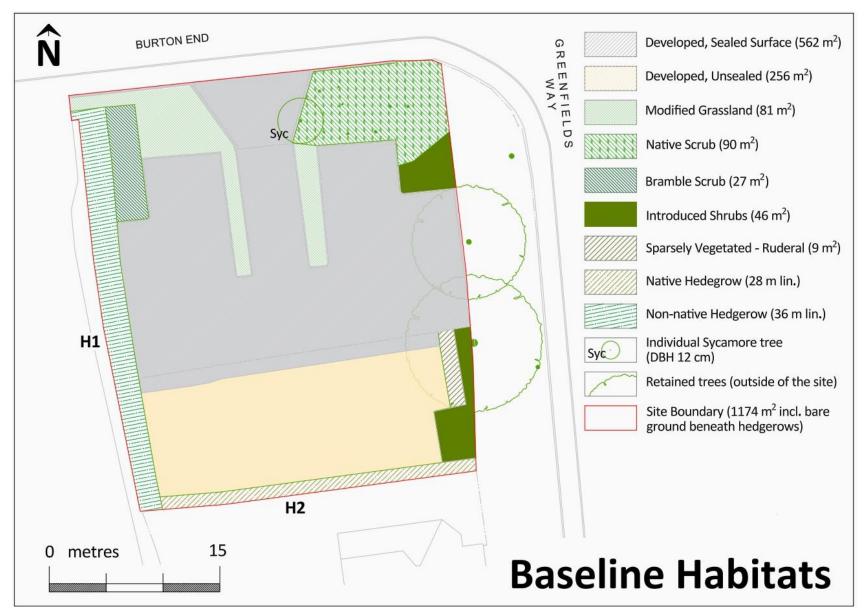
Habitat Units	Units	Percentage
On-site Baseline	0.11	
On-site post-intervention	0.13	
On-site net change	0.02	17.71%
Hedgerow Units	Units	Percentage
On-site Baseline	0.16	
On-site post-intervention	0.29	
On-site net change	0.13	86.14%

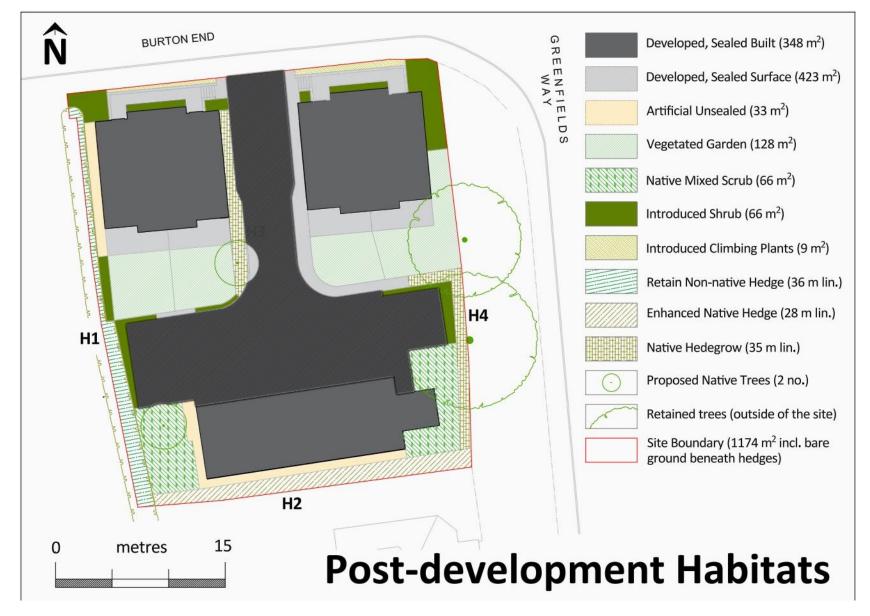
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IMPLEMENTATION, MANAGEMENT AND MONITORING DETAILS

The details of responsibility for implementing, managing and monitoring habitats created to achieve the required biodiversity net gain over the statutory 30-year period are yet to be finalised. It is currently envisaged that management and monitoring will fall to a management company acting on behalf of the property purchasers. Further details will be provided at the appropriate time.

APPENDIX A1 On-site Baseline Habitat Plan





APPENDIX A2 On-site Post-development Habitat Plan (Based on landscape proposals by Wynne-William Associates)