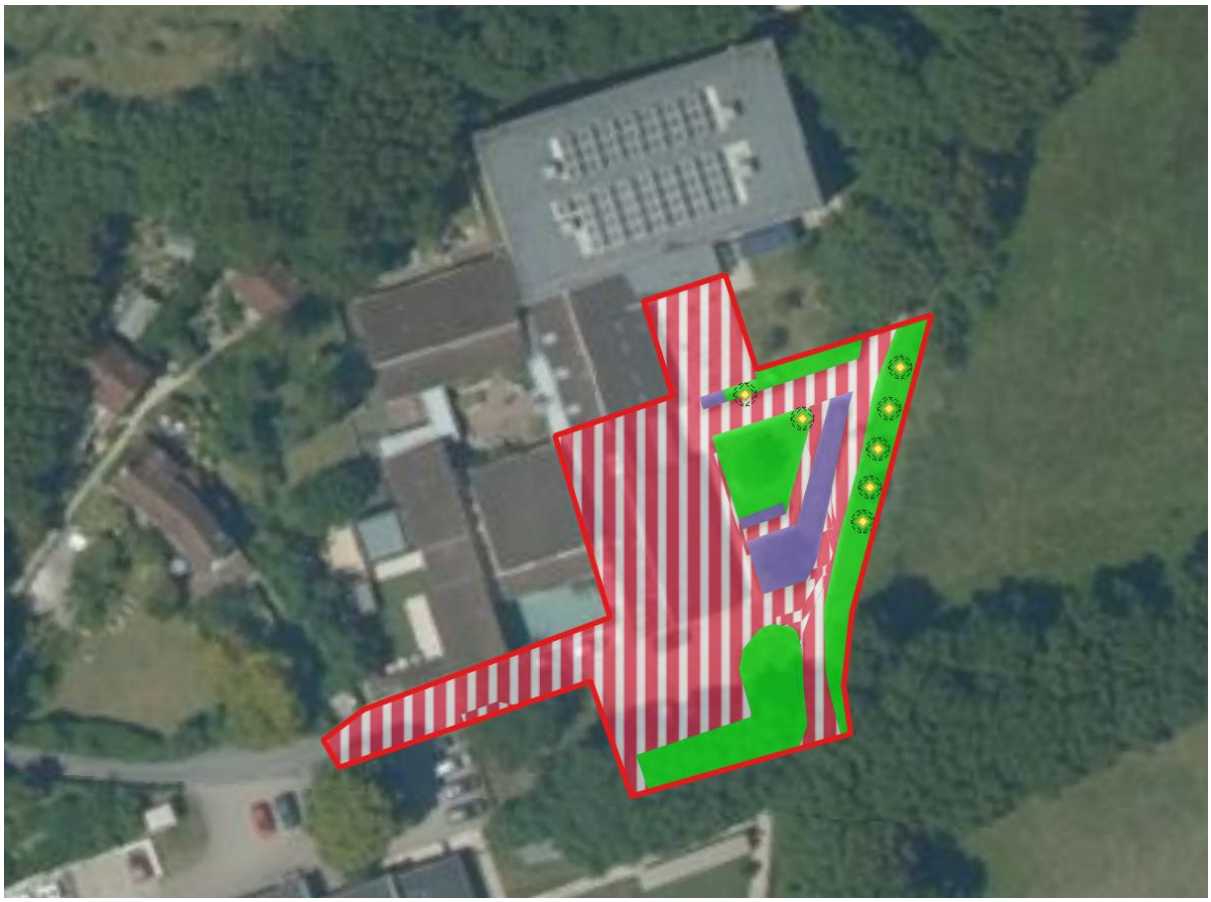
# BIODIVERSITY NET GAIN ASSESSMENT

# BELONGING AND INCLUSION HUB, CARN GWAVEL, ST MARY'S, ISLES OF SCILLY



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# 1. Introduction

## 1.1. Overview

The purpose of this report is to characterise the baseline habitats present on site; identify the impacts of the proposed development, and characterise the performance of the scheme in accordance with the Biodiversity Net Gain (BNG) methodology.

## 1.2. Site Description

The site is 0.16 hectares (ha) in size and is identified in Map 01 below. The central grid reference of the site is SV 91077 10361.

**Map 01** – Showing the redline boundary of the survey site.

## 1.3. Scope

This report is focussed solely on the BNG performance of the scheme.

A separate Preliminary Ecological Assessment (PEA) and Preliminary Roosting Assessment (PRA) report will be submitted to support the application and include consideration of wider ecological factors including protected species; reasonable avoidance measures to protect onsite ecological receptors; and consideration of designated sites within the Zone of Influence (ZOI).

These details will not be repeated in this BNG report for clarity and brevity.

# 2. Methods

## 2.1. Vegetation and Habitat Assessment

An assessment was made of all areas of vegetation within the site.

This involved a walkover survey to identify broad vegetation types, which were then classified against the UKHabs[1] classification.

A list of characteristic plant species for each vegetation type was compiled.

## 2.2. Approach to BNG

The assessment has been undertaken in accordance with the BNG principles outlined in The Statutory Biodiversity Metric User Guide (November 2023)[2].

The metric used in the assessment is the BNG Metric Release Date: July 2024[3].

The UKHabs Classification Version 2 was used to aid in the classification of habitats within the site.

## 2.3. Technical Competence and Experience

The surveys which support this assessment, as well as the BNG assessment itself, were undertaken by James Faulconbridge MRes MCIEEM trading as IOS Ecology.

James is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM); he is a Licensed Bat Worker (Class Licence Level 2) and has over 16 years' experience undertaking a range of ecological surveys and assessing the factors that affect ecology in relation to construction and the built environment.

## 2.4. Limitations

No limitations pertinent to the assessment of existing habitats or enhancement opportunities were noted.

[1] UKHab Ltd (2023). UK Habitat Classification Version 2.0

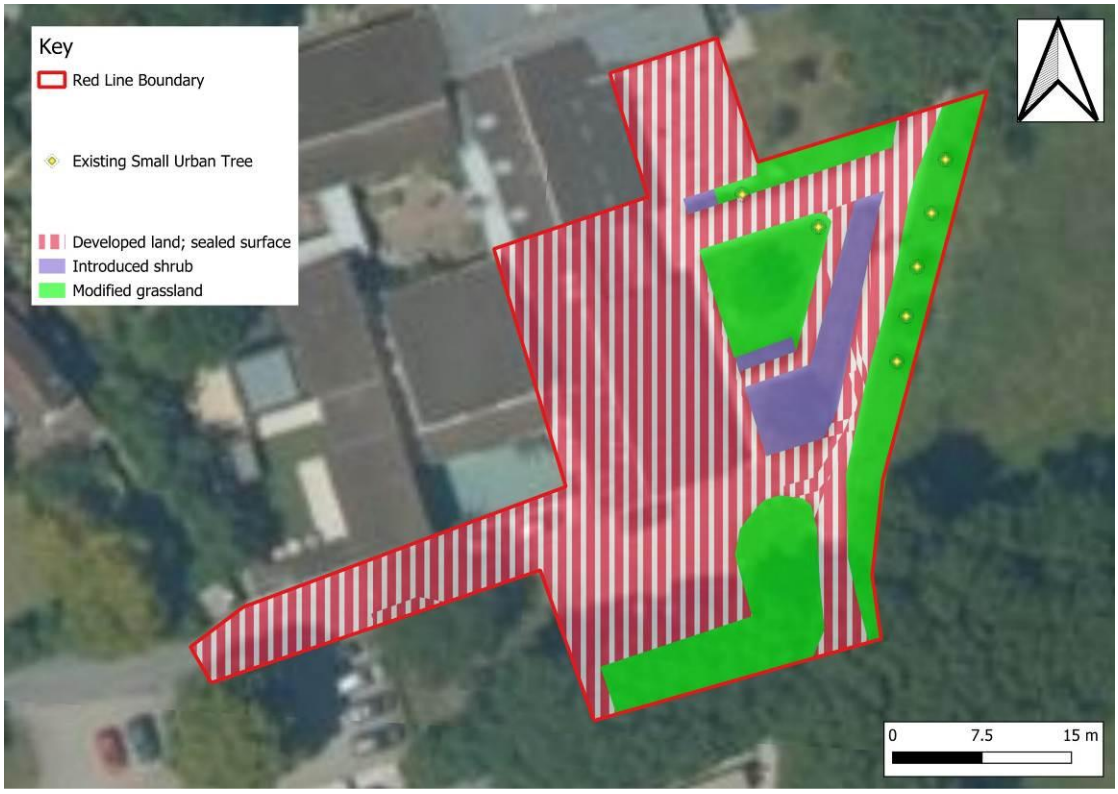
[2] https://assets.publishing.service.gov.uk/media/65673fee750074000d1dee31/The_Statutory_Biodiversity_Metric_-_Draft_User_Guide.pdf

[3] https://assets.publishing.service.gov.uk/media/669e4670ab418ab055592a23/The_Statutory_Biodiversity_Metric_Calculation_Tool_-_Macro_enabled_tool_23.07.2024.xlsm

# 3. Baseline

## 3.1. Overview

The site is dominated by existing hardstanding with areas of amenity grassland and non-native shrub planting which form the soft landscaping at the entrance to the existing building. A number of young oak trees are present within the amenity grassland sward within the redline. An adjacent offsite elm tree line is present along the southern boundary.




**Map 02** – Showing the baseline habitats present within the redline boundary of the site. Please see end of report for a full size version of this figure.

## 3.2. Modified Grassland - Habitat Description

A closely mown amenity sward dominated by perennial rye-grass (*Lolium perenne*) with frequent Yorkshire-fog (*Holcus lanatus*), cocksfoot (*Dactylis glomerata*) and fescue (*Festuca* spp.). A suite of common forbs is present throughout, including white clover (*Trifolium repens*), ribwort plantain (*Plantago lanceolata*), creeping buttercup (*Ranunculus repens*), daisy (*Bellis perennis*), dandelion (*Taraxacum officinale* agg.), sorrel (*Rumex acetosa*), sheep's-sorrel (*Rumex acetosella*), violet (*Viola* spp.), yarrow (*Achillea millefolium*), hogweed (*Heracleum sphondylium*), shepherd's-purse (*Capsella bursa-pastoris*), smooth sow-thistle (*Sonchus oleraceus*) and dove's-foot cranesbill (*Geranium molle*). Mosses are frequent.

The habitat represents a relatively species-diverse modified grassland maintained through regular mowing.

Individual young oak trees (*Quercus robur*) are present where mapped.

The grassland is in Moderate Condition in accordance with the BNG Condition Assessment criteria (see Table 01).

**Table 01** – Habitat Condition assessment for Low Distinctiveness grasslands as adapted from BNG Condition Assessment 5.

| Criteria | Criteria Met? | Notes |
|---|---|---|
| A - There are 6-8 vascular plant species per $m^2$ present, including at least 2 forbs. This criterion is essential for achieving Moderate or Good condition. | Yes | 7.3 species p/sqm with Bermuda buttercup excluded - three quadrats sampled |
| 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 that provide opportunities for vertebrates and invertebrates to live and breed. | No | Closely managed - no sward >7cm. |
| C - Any scrub present accounts for less than 20% of the total grassland area. Scattered scrub (e.g., bramble Rubus fruticosus agg.) may be present. Note: Continuous scrub patches (more than 90% cover) should be classified as the relevant scrub habitat type. | Yes | Closely managed - no scrub present |
| D - Physical damage is evident in less than 5% of the total grassland area. Examples include excessive poaching, machinery damage, erosion caused by high access levels, or other damaging activities. | Yes | |
| E - Cover of bare ground is between 1% and 10%, including localized areas (e.g., rabbit warrens). | Yes | On such a small area with pedestrian use, minor areas of bare ground within this range occur |
| F - Cover of bracken (Pteridium aquilinum) is less than 20%. | Yes | None |
| G - There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA). | No | Three cornered leek present (WCA) as well as locally relevant Bermuda Buttercup. |
| **Number of Criteria Passed** | **4** | **The grassland is in Moderate condition.** |

## 3.3. Introduced Scrub - Habitat Description

A linear block of ornamental and naturalised shrub species including tamarisk (Tamarix gallica), fuchsia (Fuchsia magellanica), karo saplings (Pittosporum crassifolium), grey willow (Salix cinerea), and bramble (Rubus fruticosus agg.). The understory contains ivy (Hedera hibernica), lords-and-ladies (Arum maculatum) and three-cornered leek (Allium triquetrum), with patches of montbretia (Crocosmia × crocosmiiflora), African lily (Agapanthus praecox), alexanders (Smyrnium olusatrum) and bristly ox-tongue (Helminthotheca echioides) occurring within the ground layer.

The habitat represents a managed block of ornamental/introduced scrub with naturalised and invasive non-native species present.

# 4. BNG Good Practice Principles

The following section considers each of the 10 BNG Good Practice Principles and identifies the ways in which these have been addressed or achieved within the project.

## 4.1. Apply the Mitigation Hierarchy

The mitigation hierarchy has been followed throughout the development of the project design.

The habitats to be lost as a result of the project are of Low Distinctiveness and their retention would not override the functional requirements related to the siting of the new hub in its proposed location within the Carn Gwavel complex.

Where practicable, measures to minimise habitat loss onsite have been integrated into the design (see Section 6).

Timing of works and other measures to avoid impacts to species such as nesting birds are prioritised.

## 4.2. Avoid losing biodiversity that cannot be offset by gains elsewhere

The biodiversity loss is the minimum which can be achieved whilst delivering the project given the functional floorspace requirement of the proposed development and its situation in conjunction with existing development.

## 4.3. Be inclusive and equitable

The biodiversity loss is small in scale and associated with amenity landscaping only – the proposals for the hub are designed to be of benefit to the community and will include new landscaping and the retention of existing amenity function within the local environs.

## 4.4. Address risks

The project will address the identified BNG loss through an offsite offset – the proposed risks associated with this offset will be addressed during site selection and agreement.

## 4.5. Make a measurable net gain

The project will address the identified BNG loss through an offsite offset to ensure a net gain.

### 4.6. Achieve the best outcomes for biodiversity

At present, the Nature Recovery Strategy for Cornwall and the Isles of Scilly is still in development[4]; therefore the BNG results for the site cannot be assessed against this.

### 4.7. Be additional

The proposed offsite habitat creation and enhancement works are only proposed in response to the requirement to secure net gain. This enhancement would not otherwise have been undertaken.

### 4.8. Create a net gain legacy

The project will address the identified BNG loss through an offsite offset – the net gain legacy associated with this offset will be addressed during site selection and agreement.

### 4.9. Optimise sustainability

The project will address the identified BNG loss through an offsite offset – the sustainability associated with this offset will be addressed during site selection and agreement.

### 4.10. Be transparent

The commitment to BNG is identified by the applicant in the submission of planning documentation such as this, which are publicly available on the Isles of Scilly Planning Portal[5].

[4] https://www.scilly.gov.uk/environment-transport/local-nature-recovery-strategy
[5] https://www.scilly.gov.uk/planning-development/planning-applications

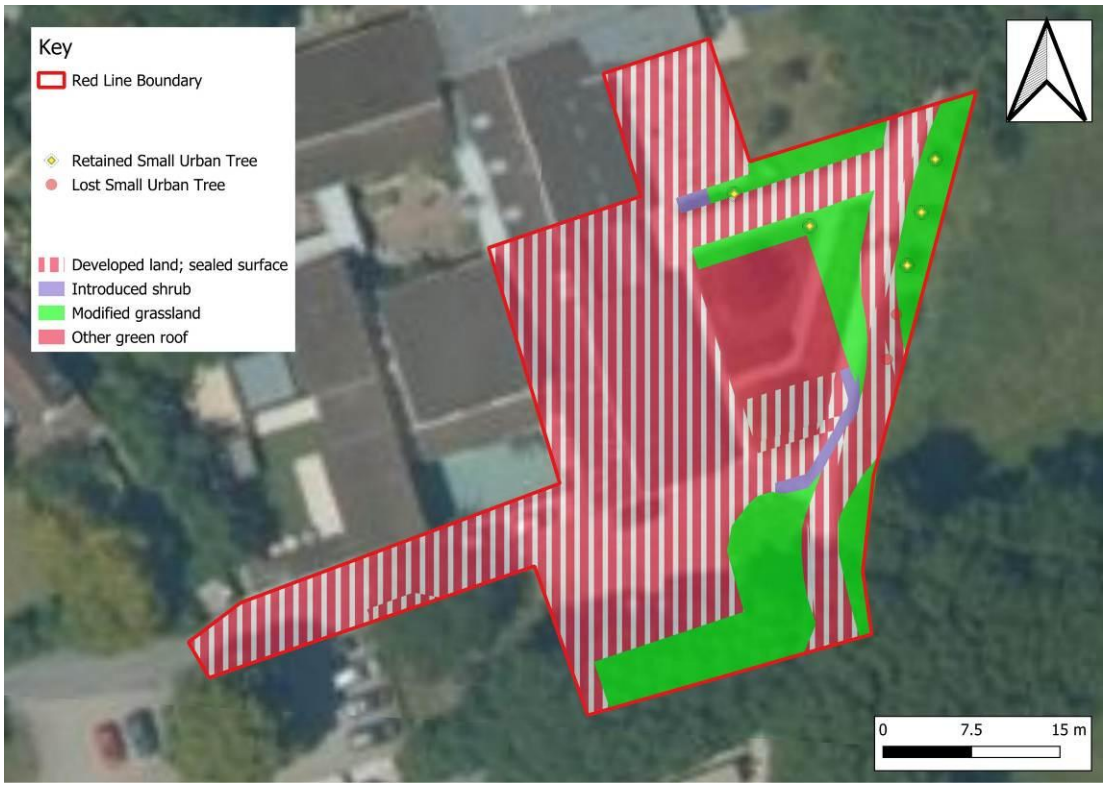
# 5. Proposed Design

## 5.1. Development Impacts

The proposals comprise the construction of a new single-storey structure to the east/south-east of the existing Children's Services building, together with associated internal adjustments and external works. The extension will be tied into the existing structure with a linking section of roof. External changes include the adjustment and extension of paved areas, installation of a pergola-style canopy between the two buildings, construction of a covered external play area and minor path realignments.

These works will result in the following net impacts:

- 0.0081 ha of **modified grassland** will be lost;
- 0.0062 ha of **developed land** (hardstanding) will be gained;
- 0.0074 ha of **introduced shrub** will be lost;
- 0.0081 ha of **urban tree cover** (two small oak trees) will be lost;
- 0.0093 ha of new **green roof habitat** will be created.




**Map 03** – Showing the proposed habitats present within the redline boundary of the site. Please see end of report for a full size version of this figure.

## 5.2. BNG Credits

This report is accompanied by the BNG Metric relevant to the site which fully characterises the ecological performance of the project. In summary:

- The proposed development would represent a loss of **-0.10 BNG Area Credits.** This represents an **-23.7% Area Net Loss** arising from the project;
- No linear habitats are present within the redline;
- No watercourse habitats are present within the redline.

# 6. Summary

## 6.1. Onsite Enhancement

Detailed consideration was given to the potential to address the net loss through onsite enhancement – this included the incorporation of the green sedum roof which has been taken forward into the final design.

Other options explored included:

- Enhancement of existing grassland to a higher distinctiveness or improved condition; however the amenity function of the grassland in a highly accessed area within the context of the existing Carn Gwavel complex would make this ecologically unviable as well as functionally inappropriate to the setting;
- Planting new trees would not be ecologically viable within the retained areas of habitat whilst maintaining amenity function;
- The upgrade of the green roof to a more biodiverse sward would reduce the scale of loss but would not secure a net gain – given this situation, the additional costs of construction to support the enhanced habitat would be financially inappropriate for the nature of the project.

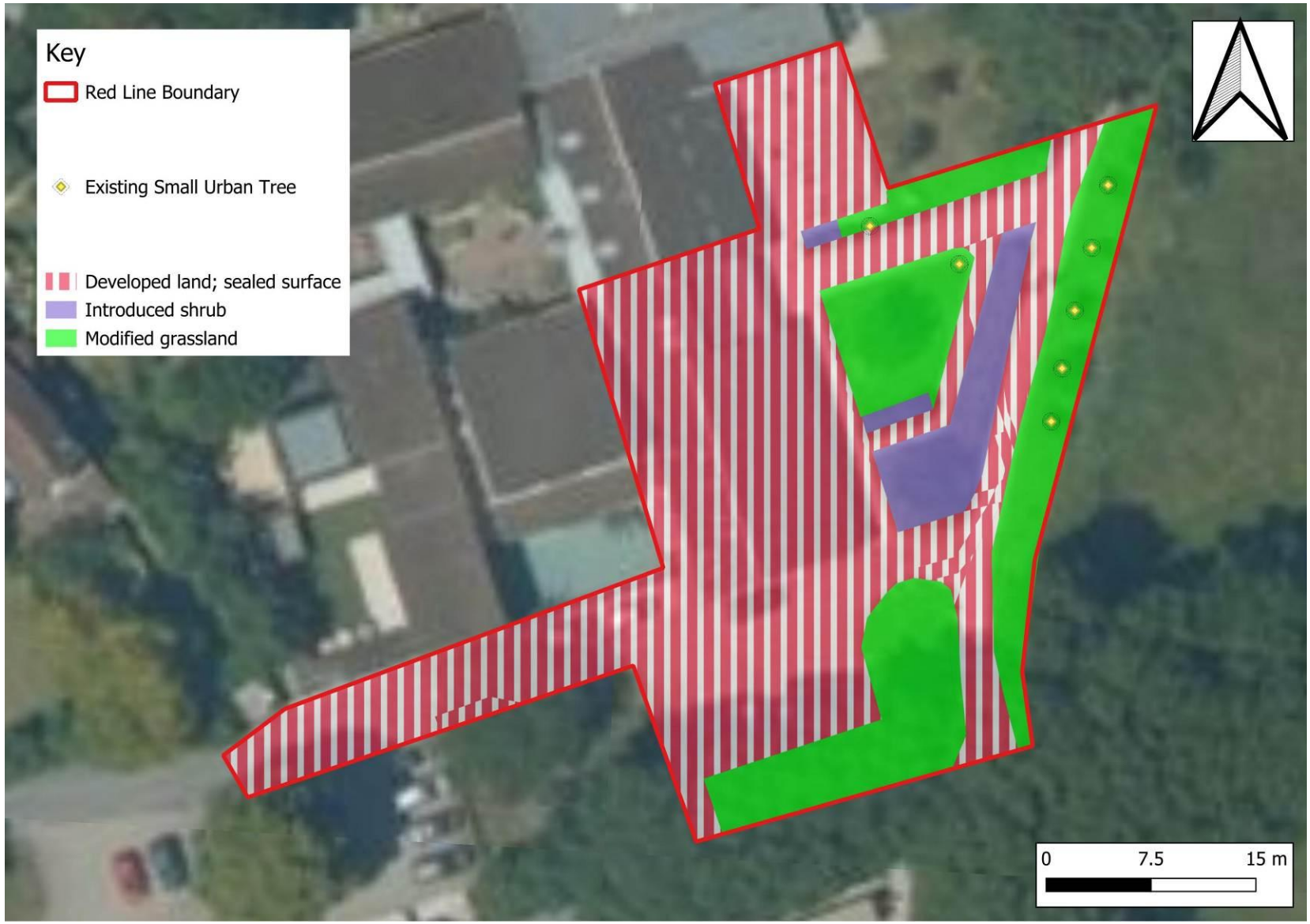
Measures to enhance onsite biodiversity were therefore incorporated where practicable, but it was not possible to achieve a net gain within the redline footprint.

## 6.2. Offsite Offset

The project will achieve the 10% net gain through the use of an offsite offset.

This will involve the purchase the equivalent of:

- 0.14 BNG onsite area credits;
- 0 BNG linear Credits;
- 0 BNG watercourse credits.

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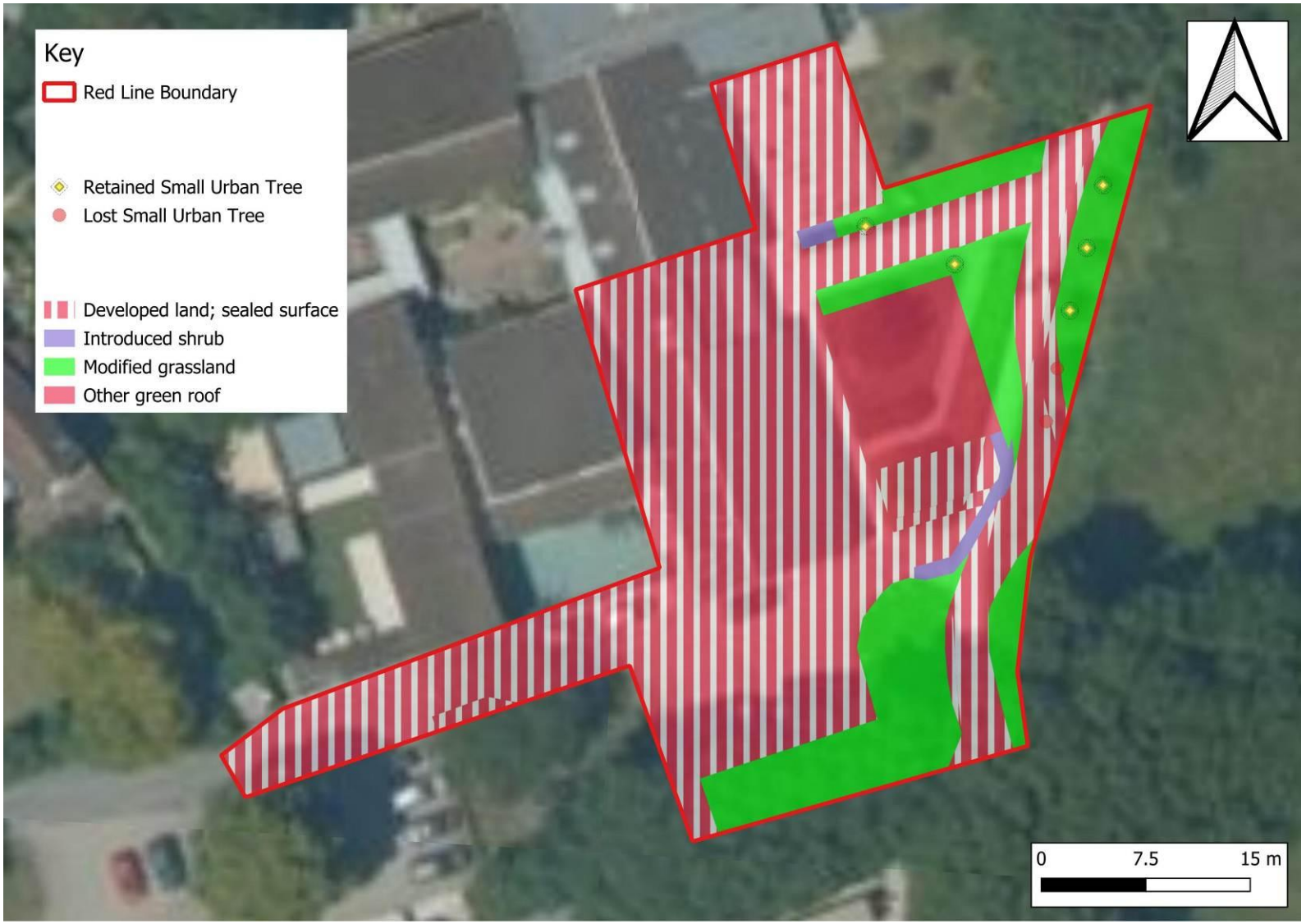


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