# St Bridget's Catholic School, Egremont

## Biodiversity Net Gain Assessment



Client: Governing Body of St Bridget's Catholic Primary School

Commissioned by: Shepherd Architecture and Surveying

August 2024

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# DOCUMENT CONTROL

**Client:** Governing Body of St Bridget's Catholic Primary School

**Address:** St Bridget's Lane, Egremont, CA22 2BD

**Project:** LE076 – St Bridget's Catholic School, Egremont

**Report Date:** 19 August 2024

**Report Revision:** Version 1

**Prepared by:** Patryk Gruba BSc (Hons) MCIEEM

**Checked by:** Cathy Gruba BSc



## Disclaimer

## CONTENTS

# 1.0 INTRODUCTION

## 1.1 Background

Lakeland Ecology was commissioned to undertake a Biodiversity Net Gain (BNG) assessment of the land at St Bridget's Catholic Primary School, Egremont. This report was prepared by Patryk Gruba BSc (Hons) MCIEEM.

## 1.2 Site Location

The site is located within the town of Egremont, Cumbria and is centred at OSGB Reference NY00801077 – see Figure 1.

The site is 0.09 ha in size and comprises a modified grassland (including children's play area), hardstanding and a section of gravel with ephemeral vegetation - see Figure 2.

## 1.3 Proposal

The proposal includes the creation of a new parking area within the land adjacent northwest to the school building.

See Appendix I for the proposed site layout.

## 1.4 Objectives

The main objective of this report was to carry out a Biodiversity Net Gain (BNG) assessment of the site as specified in Figure 2.

This report aims to:

- Map on site habitats in line with UK Hab Level 4 (wherever possible).
- Assess the pre-development baseline biodiversity site value measures in habitat units by evaluating the habitats present, their size, distinctiveness, and condition.
- Estimate the post-development habitat units on the site using the proposed site layout provided by the client.
- Calculate the expected change in biodiversity units from pre to post-development to indicate the biodiversity losses or gains anticipated as a result of post-development on-site interventions.
- Recommend approach to achieve a mandatory biodiversity net gain through enhancing biodiversity on-site and off-site enhancement measures.

## 2.0 METHODOLOGY

### 2.1 Site Visit

A walkover survey was undertaken on site on 15th July 2024 by Patryk Gruba MCIEEM to map vegetation and broad habitat in accordance with the categories specified for UKHab (UKHab Ltd, 2023) and to conduct the Biodiversity Net Gain Condition Assessment survey of the habitats present on site.

### 2.2 UK Habitat Survey

The vegetation and broad habitat types within the site were noted during the survey in accordance with the categories specified for UKHab (UKHab Ltd, 2023) with target notes describing additional features of interest. Plant species nomenclature follows that of Stace (2019). The habitats recorded on site are shown in Figure 2. Habitat description as well as species recorded, and their composition are included in Appendix II (Target Notes).

### 2.3 Statutory Biodiversity Metric

The assessment has been made using Defra's Statutory Biodiversity Metric (Natural England, 2024a), in conjunction with the user guide (Natural England, 2024b) and Technical Annex 1 (Natural England, 2024c).

The Statutory Biodiversity Metric evaluates the overall biodiversity loss or gain for development projects by considering the distinctiveness (type of habitat and its value), condition, extent, and strategic significance of habitats on site before and after development.

To achieve biodiversity net gain, the post-development habitat unit score must exceed the baseline score (pre-development) by 10%. The metric produces separate results for area-based habitats (measured in habitat units) and linear habitats, such as hedgerows (measured in hedgerow units) and rivers (measured in river units). For the BNG assessment, the output value determines whether there has been a net gain in biodiversity post-development. A development can only claim an overall net gain if this is predicted for all area-based and linear habitats.

When calculating post-development biodiversity units, the metric applies standard 'risk multipliers' to account for the inherent risks associated with creating and restoring habitats, the time needed for habitats to establish, and the location of mitigation relative to the lost

habitats on site. These risk multipliers reduce the value of proposed habitats, meaning larger areas or habitats of higher distinctiveness and/or condition are required to achieve net gain.

## 2.4 Habitat Assessment

### 2.4.1 Habitat Type

The pre-development habitats were mapped in accordance with UKHab classification (UKHab Ltd, 2023) and BNG user guide (Natural England, 2024b). See Figure 3 for the pre-development habitat plan.

Each of the post-development habitats, as set out on proposed site layout (Appendix I), were assigned by the UKHab category which was considered to best represent the habitat present post-development. See Figure 5 for the post-development habitats.

### 2.4.2 Habitat Distinctiveness

Each habitat is assigned a score for distinctiveness. Distinctiveness includes parameters such as species richness, diversity, rarity (at local, regional, national and international scales) and the degree to which a habitat supports species rarely found in other habitats (Treweek *et al.*, 2010). The biodiversity metric tool automatically assigns a distinctiveness category to selected habitats. The categories for distinctiveness within The Statutory Metric are shown in table 1 below.

**Table 1: Categories and scores for distinctiveness**

| Categories | Score |
|---|---|
| Very High (Section 41 Priority Habitats that are threatened, internationally scarce and require conservation action) | 8 |
| High (Section 41 Priority Habitats) | 6 |
| Medium (Semi-natural habitats not classified as Priority Habitat) | 4 |
| Low (Habitat of low biodiversity value) | 2 |
| Very Low (Little or no biodiversity value) | 0 |

### 2.4.3 Habitat Condition

The condition of each habitat is assessed using the methods set out in the user guide (Natural England, 2024b) and Technical Annex 1 (Natural England, 2024c). The ‘condition’ of the habitats present is assessed against a series of relevant criteria. Different criteria are set out for every type of habitat. Depending on how many of the relevant criteria are met, each habitat is given ‘good’, ‘moderate’ or ‘poor’ condition.

A number of lower distinctiveness habitats including cropland and urban habitats are assigned default values and do not require a detailed condition assessment.

#### 2.4.4 Strategic Significance

The strategic significance of a site within the Statutory Metric is based upon whether the location of the development has been identified locally as significant for nature. This is determined by information set out in local plans or policies. If a habitat is within a strategically significant location, a multiplier is applied to increase its value.

#### 2.4.5 Risk Factors

When proposing habitat creation and restoration, it is essential to consider risk factors to account for disparities, delays or risks, including time required to reach the target condition and difficulty of restoration or creation.

Creating a habitat that takes many years to reach its target condition or is difficult to recreate will have a reduced biodiversity value compared to an existing habitat. Therefore, a larger area would be required as an offset to compensate for the loss of the original habitat.

The Statutory Metric provides default values for a range of habitats, which may be adjusted based on site-specific knowledge and proposed management prescriptions, as detailed in the habitat assessment tables.

## 2.5 Limitations

The outputs of the metric are not definitive values but serve as an estimate of the relative biodiversity value of a site before and after development. The calculations in this report should be reviewed and updated if there are any changes to the current habitats on-site.

This assessment is based on the illustrative proposed layout (Appendix I) for the site. As no detailed landscape plan was available to inform this assessment, a ‘best-fit’ approach has been taken regarding the types of habitats and conditions that will be present post-development, to provide an indication of the biodiversity gains or losses on site.

# 3.0 BIODIVERSTIY NET GAIN ASSESSMENT

## 3.1 Baseline Habitat Units – On-Site

The baseline biodiversity value for area-based habitats within the site is provided in Table 2 below. The habitats present on site are shown in Figure 3 and their condition and distinctiveness is shown in Figure 4.

**Table 2: Baseline value of the habitats on site**

| Categories | Total Area (ha) | Distinctiveness | Condition | Habitat Units |
|---|---|---|---|---|
| Vacant or derelict land | 0.0018 | Low | Good | 0.01 |
| Modified grassland | 0.0829 | Low | Moderate | 0.33 |
| Developed land; sealed surface | 0.0255 | V.Low | N/A - Other | 0.00 |
| **Total** | | | | **0.34** |



| | | Units |
|---|---|---|
| On-site baseline | Habitat units | 0.32 |
| On-site post- development | Habitat units | 0.06 |
| **Total on-site net % change** | **Habitat units** | **- 81.26 %** |
| Trading rules satisfied? | **No** | |

## 4.0 EVALUATION

The biodiversity net gain (BNG) metric for the proposed development predicts that the current landscape layout for the site will result in an overall net loss of biodiversity units. **The metric indicates that the current layout for the site will result in a 81.26% net loss in habitat. In order to achieve a mandatory minimum 10% gain**, **0.31 off-site habitat units will need to be created.**

The trading rules for the metric will not be satisfied as a result of the proposed site layout.

As the site does not currently meet the mandatory 10% net gain, further steps will need to be taken to meet the minimum target mandated by the Environment Act 2021 and local planning policy.

**Retention:** habitats to be removed on site should be designed into the scheme to be retained where possible rather than lost and recreated.

**Mitigation:** Further habitat creation on site should be considered where possible within the design of the proposed development. If any off-site land within or nearby school grounds can be used as a habitat creation/enhancement area, then the development may be able to offset using off-site land.

One of the options to achieve the mandatory net gain is to enhance the modified grassland with a flood bund adjacent north to the red line planning boundary (see Target Note 6 in Figure 2 and Appendix II). This habitat is 0.054ha in size and it has been assessed to be in good condition.

- Enhancing this habitat into other neutral grassland in good condition will generate 0.18 habitat units which will leave a remaining deficit of 0.13 habitat units. The remaining habitat units will need to be generated through additional off-site interventions / habitat enhancement.
- Enhancing this habitat into other lowland meadow in good condition will generate 0.37 habitat units. This intervention will result in 26.30% biodiversity gain (exceeding the mandatory minimum 10% gain). However, creating a lowland meadow without grazing can be difficult and will require a high level of input and several years of management in order for the sward to fully establish. Therefore, creation of this type of grassland might not be feasible within the off-site land directly adjacent north of the site boundary.

**Compensation**: If on-site or off-site habitat creation cannot mitigate for the development to achieve a 10% net gain in biodiversity, then compensation measures should be taken; however, this should be a last resort. This could either be through a financial contribution (S106) to the LPA if they have the mechanism in place to offset biodiversity credit loss, or through a third-party habitat credit bank that can sell credits to the developer to offset this development.

## 5.0 REFERENCES


Natural England, (2024a), The Statutory Biodiversity Metric - Calculation Tool - [online] https://assets.publishing.service.gov.uk/media/65c60e5114b83c000ca715f4/The_Statutory_Biodiversity_Metric_Calculation_Tool_-_Macro_enabled_02.24.xlsm

Natural England, (2024b), The Statutory Biodiversity Metric – User Guide - [online] https://assets.publishing.service.gov.uk/media/65c60e0514b83c000ca715f3/The_Statutory_Biodiversity_Metric_-_User_Guide_.pdf

Natural England, (2024c), The Statutory Biodiversity Metric – Technical Annex 1: Condition Assessment Sheets and Methogology - [online] https://assets.publishing.service.gov.uk/media/65c60f00cc433b000ca90b33/Statutory_Biodiversity_Metric_Condition_Assessments-_Feb24.xlsx

Treweek, J., Butcher, B., and Temple, H., (2010), Biodiversity offsets: possible methods for measuring biodiversity losses and gains for use in the UK, In Practice, 69: 29- 32.

UKHab Ltd (2023). UK Habitat Classification Version 2.0. Available from: https://www.ukhab.org

## FIGURES

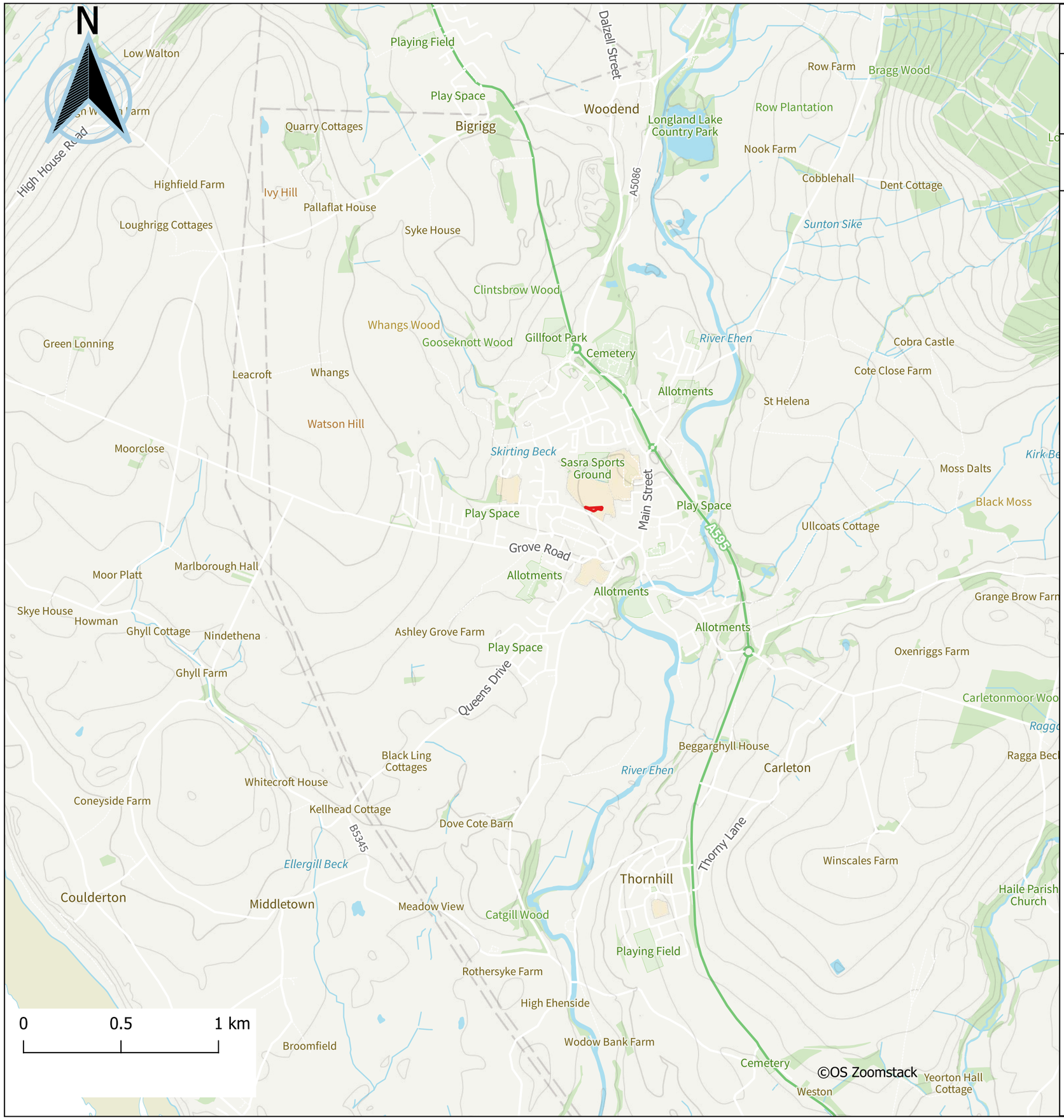
# Figure 1 - Site Location

PROJECT

LE-076 - St Bridget's Catholic School, Egremont

| Date: 19-08-2024 | Created By: Patryk Gruba | Scale 1:20,000 |
|---|---|---|

Site Location

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# Figure 2 - UK Hab Map

PROJECT

LE-076 - St Bridget's Catholic School, Egremont

| Date: 19-08-2024 | Created By: Patryk Gruba | Scale 1:400 |
|---|---|---|

N

6
5
1
106, 823
2
3
81
4

0 10 20 30 40 50 m

©Getmapping

Red Line Boundary

Target Notes

UK Hab Categories

g4 - modified grassland

u1b - developed land. sealed surface

u1f - sparsely vegetated urban land

UK Hab Linear Features

u1e - Built linear features

| Secondary Code | Habitat Name |
|---|---|
| 81 | Ruderal or Ephemeral |
| 106 | Mown |
| 823 | Children's Play Space |

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# Figure 3 - Pre-Development Habitat Plan

PROJECT

LE-076 - St Bridget's Catholic School, Egremont

| Date: 19-08-2024 | Created By: Patryk Gruba | Scale 1:400 |
|---|---|---|

N

2

1

3

0 10 20 30 40 50 m

©Getmapping

Red Line Planning Boundary

HABITATS

Habitats Baseline (parcel reference numbers correspond to the relevant reference numbers within the statutory metric)

Developed land; sealed surface

Modified grassland

Vacant or derelict land

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# Figure 4 - Condition and Distinctivness of the On-Site Habitats

PROJECT
LE-076 - St Bridget's Catholic School, Egremont

| Date: 19-08-2024 | Created By: Patryk Gruba | Scale 1:400 |
|---|---|---|

N

0 10 20 30 40 50 m

©Getmapping

Red Line Planning Boundary

HABITATS

Habitat

Baseline Habitat Condition

- Good
- Moderate
- N/A - Other

Baseline Habitat Distinctiveness

- Low
- V.Low

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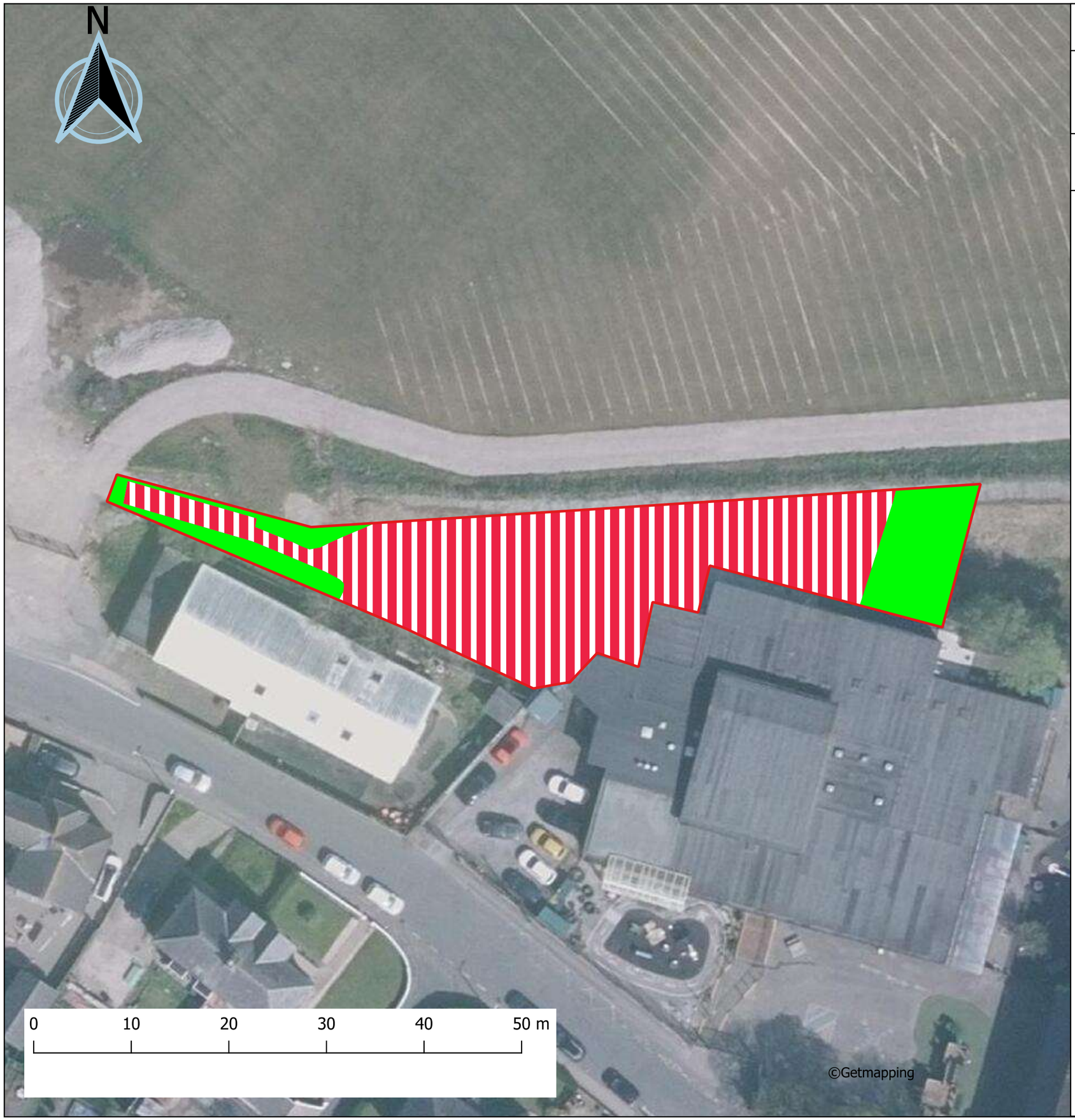


# Figure 5 - Post-Development Habitat Plan

PROJECT

LE-076 - St Bridget's Catholic School, Egremont

| Date: 19-08-2024 | Created By: Patryk Gruba | Scale 1:400 |
|---|---|---|

Red Line Planning Boundary

HABITATS

Habitats Proposed

Developed land; sealed surface

Modified grassland

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# APPENDIX I – PROPOSED SITE LAYOUT


## PROPOSED KEY

| | |
|---|---|
| | CAR PARK EXTENSION - PERMEABLE STONE FINISH WITH PERIMETER PIN CURB |
| | 40MM WET POUR - WITH PERIMETER PIN KERB (PERMEABLE) |
| | GRADING OF GROUND(LEVELLING OF SLOPING GROUND) |
| | PREPARE & GRASS SEED |
| | NEW LAMP POST |
| | NEW WALL MOUNTED FLOOD LIGHT |

X WORK ZONE

## PARKING KEY

| | |
|---|---|
| (V) | VISITOR PARKING BAY |
| (E) | PARKING SPACE FOR FUTURE ELECTRIC CHARGING |
| (D) | DISABLE PARKING BAY |
| (B) | STAFF BICYCLES STORE AREA |
| (P) | CAR PARKING BAY |

**Proposed Surfacing Work Zone Overview Plan**

*Scale: 1:500 @ A3*

**ST BRIDGET'S EXTERNAL IMPROVEMENTS**

St Bridget's Catholic Primary School, St Bridget's Lane, Egremont, CA22 2BD

Revision Notes
N/A

Proposed Surfacing Work Zone Overview Plan

Drawn - PW
Checked - NAS

17/05/24

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# APPENDIX II – UK HAB SURVEY - TARGET NOTES

| Target Note | Description | Photograph |
|---|---|---|
| 1 | NY0083410783<br><br><u>g4, 106, 823 – Modified grassland</u><br><br>Mown modified grassland adjacent north of the school building which is used as children play space. In general, low species diversity with more species recorded near the fence area.<br><br>• Perennial rye-grass *Lolium perenne* Abundant<br>• White clover *Trifolium repens* Frequent<br>• Yorkshire-fog *Holcus lanatus* Frequent<br>• Red fescue *Festuca rubra* Frequent<br>• Creeping bent *Agrostis stolonifera* Occasional<br>• Daisy *Bellis perennis* Occasional<br>• Dandelion *Taraxacum officinale agg.* Occasional.<br>• Red clover *Trifolium pratense* Occasional<br>• Ribwort plantain *Plantago lanceolata* Occasional<br>• Yarrow *Achillea millefolium* Occasional<br>• Cut-leaved crane's-bill *Geranium dissectum* Rare<br>• Selfheal *Prunella vulgaris* Rare |  <br>  |
| 2 | NY0079710779<br><br><u>g4,– Modified grassland</u><br><br>Parcel of fenced off modified grassland. Low species diversity within the sward. Forb species present were typical indicators of modified grassland.<br><br>• Perennial rye-grass *Lolium perenne* Dominant<br>• White clover *Trifolium repens* Dominant<br>• Yorkshire-fog *Holcus lanatus* Frequent<br>• Red fescue *Festuca rubra* Frequent<br>• Creeping buttercup *Ranunculus repens* Frequent<br>• Daisy *Bellis perennis* Occasional |  |

| Target Note | Description | Photograph |
|---|---|---|
| | • Dandelion *Taraxacum officinale agg.* Occasional.<br>• Yarrow *Achillea millefolium* Occasional<br>• Smooth Meadow-grass *Poa pratensis* Occasional<br>• Chicory *Cichorium sp.* Occasional<br>• Red clover *Trifolium pratense* Rare |  |
| 3 | NY0081710780<br><br><u>u1f, 81- Sparsely vegetated urban land with ephemeral vegetation</u><br><br>• Perennial rye-grass *Lolium perenne* Abundant<br>• Red fescue *Festuca rubra* Frequent<br>• Dandelion *Taraxacum officinale agg.* Occasional.<br>• Ribwort plantain *Plantago lanceolata* Occasional<br>• Greater plantain *Plantago major* Occasional<br>• Yarrow *Achillea millefolium* Occasional<br>• Willowherb *Epilobium sp.* Occasional<br>• Rough Hawkbit *Leontodon hispidus* Rare |  |
| 4 | NY0081110774<br><br><u>u1b,– Developed land; sealed surface</u><br><br>Hardstanding next to the school building |  |

| Target Note | Description | Photograph |
|---|---|---|
| 5 | NY0081810785<br><br><u>u1e,– Built linear features</u><br><br>Fence dividing two parcels of grassland with a small stand of young aspen *Populus tremula* scrub |  |
| 6 | NY0080410788<br><br><u>g4, 106, 112 – Modified grassland</u> Mown modified grassland with a flood bund adjacent north of the red line planning boundary separating school grounds from the sports pitch.<br><br>• Perennial rye-grass *Lolium perenne* Abundant<br>• Red fescue *Festuca rubra* Abundant<br>• Creeping bent *Agrostis stolonifera* Frequent<br>• Common bent *Agrostis capillaris* Frequent<br>• White clover *Trifolium repens* Frequent<br>• Yorkshire-fog *Holcus lanatus* Frequent<br>• Red clover *Trifolium pratense* Frequent<br>• Creeping bent *Agrostis stolonifera* Frequent<br>• Dandelion *Taraxacum officinale agg.* Occasional<br>• Dock *Rumex sp.* Occassional<br>• Tufted hair-grass *Deschampsia cespitosa* Occasional<br>• Creeping thistle *Cirsium arvense* Occasional<br>• Cock's-foot *Dactylis glomerata* Occasional<br>• Willowherb *Epilobium sp.* Occasional<br>• Greater plantain *Plantago major* Occasional<br>• Soft rush *Juncus effusus* rare |  |