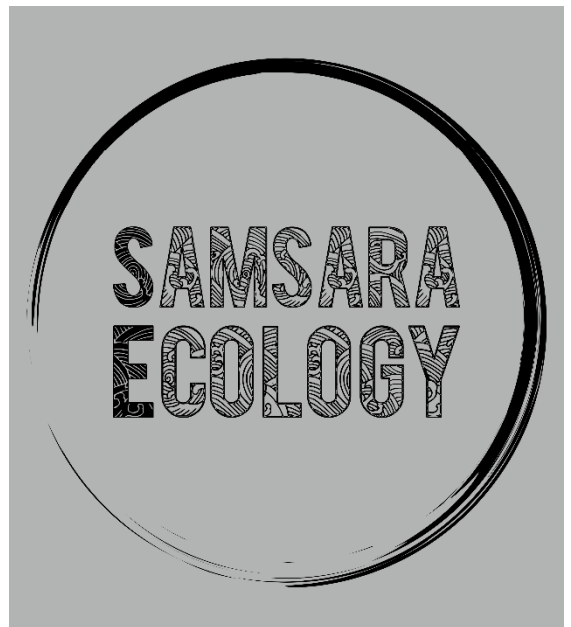


Biodiversity Net Gain
Barley Scouts Hut
Barley Scout Group
Project Number: 475
Version: 1
July 2025



Document Control

Project Information	
Client	Barley Scout Group
Project Type	Biodiversity Net Gain
Project Name	Barley Scout Hut
Project Location	Church End, Barley, Hertfordshire, SG8 8JW

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It is important that planning decisions are based on up-to-date ecological reports and survey data. However, it is difficult to set a specific timeframe over which reports or survey data should be considered valid, as this will vary in different circumstances. In some cases, there will be specific guidance on this (such as for the age of data, which may be used to support an EPS licence application). In circumstances where such advice does not already exist, CIEEM provides general advice in its Advice Note on the Lifespan of Ecological Reports and Surveys¹, which should be referred to if this report is not submitted within 12 months of the first production.

This Biodiversity Net Gain (BNG) report contains recommendations on measures for achieving BNG. These recommendations do not constitute a design for BNG. In submitting these recommendations, Samsara Ecology Ltd has no Design Liability associated with these recommendations for BNG.

¹ <https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf>

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1 Introduction

- 1.1.1 Samsara Ecology Ltd was commissioned by the Barley Scout Group (the Client) in May 2025 to undertake a Biodiversity Net Gain (BNG) assessment of the Barley Scouts Hut at Church End, Barley, Hertfordshire, SG8 8JW (the Site) [Ordnance Survey (OS) grid reference TL 40117 38524].
- 1.1.2 The Client is submitting a planning application to demolish the existing hut and build a slightly bigger, more modern building. The application boundaries are presented in Figure 1.

Figure 1-Application Boundaries



1.2 Purpose of the Report

- 1.2.1 This report has been written in accordance with the Chartered Institute for Ecological and Environmental Management's (CIEEM) guidelines for report writing and aims to:
- Classify the existing habitats within the Site.
 - Evaluate the Site's biodiversity value and assess the impact on the value with the proposed development.
 - Make recommendations for habitat creation and/or enhancement measures which will result in a net gain in biodiversity.
- 1.2.2 The relevant planning policies related to biodiversity net gain are presented in **Appendix 1**.

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1.3 Suitably Qualified Ecologist (SQE)

1.3.1 The report has been written by Hayley Farnell, BSc, MSc (Hons), an SQE with over 20 years of professional experience in environmental consultancy. Hayley is a full member of the Chartered Institute of Ecological and Environmental Management (CIEEM) and holds a Class 2 survey licence for bats [Licence Number: 2015 -15896-CLS-CLS] and a Class 1 survey licence for great crested newts [Licence Number: 2017-27675-CLS-CLS].

1.3.2 Please note that the metric is a tool to be used by and reviewed by a competent person. The guidelines state:

A competent person has the knowledge and skills to perform specified tasks to complete and review biodiversity metric calculations. You obtain this through training, qualifications, experience, or a combination of them.

1.3.3 Training completed regarding biodiversity net gain includes:

- CIEEM – Calculating and Using Biodiversity Units (October 2020)
- UKHab – UK Hab and Biodiversity Net Gain (May 2022)
- CIEEM - The Statutory Biodiversity Metric for Mandatory Biodiversity Net Gain in England (January 2024)
- CIEEM – QGIS for Biodiversity Net Gain (March 2024)

1.3.4 It should be noted that the person reviewing the metric for planning should be of equal or greater competency than the person completing the metric.

1.4 Constraints and Considerations

1.4.1 There were no access constraints during the survey, and the condition assessment was undertaken in the optimal season for botany surveys.

2 Methodology

- 2.1.1 The 25-year environmental plan² and the National Planning Policy Framework (NPPF)³ include policies which aim for all developments to achieve a net gain in biodiversity. This is to be achieved through compensation and/or enhancement of habitats.
- 2.1.2 Ideally, the net gain should be achieved within the Site boundaries; however, biodiversity offsetting can be applied where this can't be done. This allows a developer to achieve a net gain by creating or enhancing habitats beyond the Site's boundaries.

2.2 Habitat mapping

- 2.2.1 The habitats have been mapped in accordance with the UK habitat classification system⁴. The classifications used within this system are those used within Defra's statutory biodiversity metric⁵.
- 2.2.2 A walkover survey was undertaken on the 19th of June 2025 to map the habitat and apply condition assessments.
- 2.2.3 Tools within QGIS have been used for digitising habitat data and calculating the area of habitats (ha) and the length of linear features (km).

2.3 Biodiversity net gain

- 2.3.1 The biodiversity metric is a spreadsheet-based system which can be used to calculate the existing habitat and hedgerow units and the potential change to these units with the proposed development.
- 2.3.2 If the change in units is calculated as a negative number with the proposed development, this indicates a potential net loss. A positive number indicates a net gain.
- 2.3.3 Habitat and hedgerow units are separate considerations, and both need to meet net gain targets (as determined by local and or national policies⁶) for a proposal to be found compliant.
- 2.3.4 The metric uses different multipliers within the calculators. These are:
- Habitat distinctiveness
 - Habitat condition
 - Strategic significance
- 2.3.5 The distinctiveness multipliers are pre-determined within the spreadsheet. The habitat condition and strategic significance have been entered manually and are described as follows:
- **Habitat condition** – Aims at measuring the biological 'working order' of a habitat type judged against that particular habitat's perceived ecological

² Defra (2019), A Green Future: Our 25 Year Plan to Improve the Environment, HM Government

³ MHCLG (2019), National Planning Policy Framework, HM Government

⁴ UKHab Ltd (2023). *UK Habitat Classification Version 2.0* (at <http://www.ukhab.org>)

⁵ Defra (2024) The Statutory Biodiversity Metric

⁶ A target of 10% net gain is set within the Environment Act 2021, however, some local planning authorities have set higher targets within local plans.

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optimum state. The habitat condition within this assessment has been determined using the Habitat and Condition Assessment Sheet 4.0.

- **Strategic significance** – Works at a landscape scale and gives additional unit value to habitats located in preferred locations for biodiversity and other environmental objectives. The local planning authorities' local plan and policies have been reviewed to determine the strategic significance of the habitats.

2.3.6 The ecologist has worked with the Client and relevant stakeholders to achieve a net gain through design.

2.3.7 A summary of the calculations is presented in this report, and detailed calculations are found within the spreadsheet accompanying this document.

3 Baseline Ecological Conditions

3.1 Desk Study

- 3.1.1 UK Gov's guidance⁷ on irreplaceable habitats defines them as "habitat which is very difficult (or takes a very long time) to restore, create or replace once it has been destroyed. This may be due to its age, uniqueness, species diversity or rarity".
- 3.1.2 Examples include:
- Ancient woodland
 - Ancient and veteran trees
 - Blanket bog
 - Limestone pavements
 - Coastal sand dunes
 - Spartina salt marsh swards
 - Mediterranean salt marsh scrub
 - Lowland fens
- 3.1.3 In England, irreplaceable habitats are strictly protected under Biodiversity Net Gain (BNG) regulations. Developments must avoid these habitats whenever possible, as they cannot be recreated or compensated for elsewhere. If avoidance isn't feasible, the development must ensure no net loss of biodiversity through stringent mitigation measures. These habitats receive special consideration in planning decisions, and developments impacting them are generally not eligible for BNG exemptions.
- 3.1.4 There are no irreplaceable habitats within or adjacent to the Site.
- 3.1.5 The presence of a priority habitat within or within 500 m of a Site can help to determine if a project is subject to BNG exemptions or which metric tool can be used⁸.
- 3.1.6 There are 4 parcels of priority habitats within 500 m of the Site: deciduous woodland and traditional orchards. None are located within or adjacent to the Site and will not be lost or impacted by the proposed development.

3.2 Baseline Habitats

- 3.2.1 The habitats recorded on the Site are presented in Table 1, and a map of the Site's baseline habitats (included within the BNG assessment) is presented in Appendix 2.

⁷ <https://www.gov.uk/guidance/irreplaceable-habitats>

⁸ The type of metric to be used is irrelevant for this assessment as the Statutory Metric has been used by a suitably qualified ecologist.

Table 1 - Baseline Habitat Descriptions

UKHabs code	Habitat type used in the BNG metric	Description	Photograph
G4	Modified grassland ^a	The mown areas of grass to the front and rear of the building are dominated by perennial rye grass with abundant wall barley. Other grass and flora include cock's foot, cow parsley, common nettle, field bindweed, sterile brome and green alkanet. A species-poor grassland with >75% grass cover and an average of <9 species per m²	

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UKHabs code	Habitat type used in the BNG metric	Description	Photograph
U1b	Developed land – sealed surface	The existing scout's hut, foot path and car park fall into this category.	
n/a	Individual tree	There is a medium-sized ^b , multi-stemmed field maple in the southwest corner of the modified grass to the front of the scouts' hut.	
Notes: a- This is defined as a modified grassland in accordance with the UK hubs guidelines. To be other neutral grassland, the UK hubs states the following: <i>A neutral grassland that does not meet the definition of either g3a or g3b AND that meets at least three of these four criteria:</i> <i>>20% cover of broadleaved herbs and sedges;</i> <i>>8 species per m² (including forbs, grasses, sedges and rushes, and excluding bryophytes);</i>			

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UKHabs code	Habitat type used in the BNG metric	Description	Photograph
		3. ≥ 1 grass species that is not generally sown for intensive agricultural production (i.e. Rye-grasses <i>Lolium</i> spp., Timothy <i>Phleum pratense</i>, Cock's-foot <i>Dactylis glomerata</i>, Meadow fescue <i>Festuca pratensis</i>) is at least abundant; 4. Cover of Rye-grasses <i>Lolium</i> spp. and White Clover <i>Trifolium repens</i>, where present, is $<30\%$. The grassland in this Site does not meet the first two criteria. In addition, the UK habs guidelines state under 'exclusions' for 'other neutral grassland' <i>Species-poor swards that in previous classifications were included within 'semi-improved neutral grassland' (see g4 [modified grassland]).</i> b – In accordance with the user guide, the size of the multi-stemmed tree has been calculated by measuring the largest stem.	

4 Biological Net Gain Assessment

4.1.1 The UK Habs categorisations applied to the Site's existing habitats, justification for the category and condition assessment result are presented in Table 2.

Table 2 - Habitat Classifications and Definitions of Baseline Habitats

Categorisation	Area Coverage (ha) or Length (km)	Justification for categorisation	Condition assessment
U1b Developed land; sealed surface	0.115 ha	Buildings and other hard surfaces fall into this category.	N/A
G4 Modified grassland	0.016 ha (0.007 retained)	Grass to the front and rear of the Scouts hut >75% grass cover and few forbs.	Poor – only passes 5 criteria (excluding criterion A).
Individual tree – Medium	0.0163 ha (retained)	A multi-stemmed field maple. The largest stem has a DBH of 39 cm	Moderate – Passes 4 of the criteria

4.1.2 The following new habitats will be created with the development:

- Developed/sealed surface – 0.12 ha (new scouts hut)
- 3no. small trees

4.1.3 For the new trees to achieve a moderate condition as estimated by the biodiversity net gain condition, they must pass 3 or more of the criteria recreated in Table 3. The first two criteria and the fourth criteria will be assumed to be met when new native trees are planted with a residential scheme.

Table 3 - Condition Criteria for Trees

Condition Assessment Criteria
The tree is a native species (or at least 70% within the block are native species).
The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of the total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).
The tree is mature (or more than 50% within the block are mature).
There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity), and there is no current regular pruning regime, so the trees retain >75% of the expected canopy for their age range and height.
Natural ecological niches for vertebrates and invertebrates are present, such as the presence of deadwood, cavities, ivy or loose bark.
More than 20% of the tree canopy area is oversailing vegetation beneath.

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- 4.1.4 There are no hedgerows in the baseline, and therefore, there is no requirement for a net gain to be achieved for hedgerow units in accordance with the regulations and guidelines. The biodiversity metric is a spreadsheet tool; therefore is unable to calculate a percentage gain if the baseline is zero.
- 4.1.5 The proposals will result in an 11.88 % gain in habitat units. The summary of the biological impact assessment calculations is presented in Table 4.

Table 4 - Biodiversity Metric Results

Onsite Baseline	
Habitat units	0.16
Onsite post-intervention (including habitat retention, creation and enhancement & succession)	
Habitat units	0.18
Total net % change (including all onsite and offsite habitat creation and retained habitats)	
Habitat units	11.88 %

- 4.1.6 It should be noted that Defra and Natural England are currently conducting a consultation on Biodiversity Net Gain (BNG) requirements for small sites. The outcomes of this consultation may lead to changes in the assessment methods or offsetting requirements applicable to such sites.
- 4.1.7 At present, this BNG assessment has been carried out in accordance with the current rules and regulations. However, the findings and recommendations may be subject to change depending on the results of the ongoing consultation.

5 Conclusions

- 5.1.1 Samsara Ecology completed a biodiversity net gain assessment of a proposed replacement scout's hut in Barley, Hertfordshire.
- 5.1.2 The assessment found that the development will result in a net gain in accordance with the regulations and current policies.

Appendix 1: Biodiversity Net Gain Policies and Legislation

National Planning Policy Framework (NPPF) (Revised – July 2021)

Chapter 15 of the National Planning Policy Framework (NPPF) aims at conserving and enhancing the natural environment. It states that planning policies and decisions should contribute to and enhance the natural and local environment. In terms of biodiversity, this should be achieved by:

- protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils,
- recognising the intrinsic character and beauty of the countryside, and wider benefits from natural capital and ecosystem services, and
- minimising impacts on and providing net gains for biodiversity by establishing coherent ecological networks that are more resilient to current and future pressures.

The NPPF states that to protect and enhance biodiversity, [local] plans should:

- identify and safeguard components of wildlife-rich habitats and wider ecological networks, and
- promote the conservation and enhancement of priority habitats and ecological networks and the protection and recovery of priority species.

The NPPF states that when determining planning applications, local planning authorities should refuse applications which:

- cause significant harm to biodiversity which cannot be avoided, adequately mitigated or, as a last resort, compensated for,
- plan to develop on land within or outside of a Site of Special Scientific Interest (SSSI) and which is likely to have an adverse effect on it (either individually or in combination with other developments) and/or
- result in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) unless there are wholly exceptional reasons and where a suitable compensation strategy exists.

The local planning authority should support developments whose primary objective is to conserve or enhance biodiversity, while opportunities to improve biodiversity in and around developments 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.

HM Government – 25-Year Environment Plan

The 25-year plan to improve the environment sets out what the government intends to do to increase biodiversity, reduce climate change and secure ecosystem services. It aims to deliver cleaner air and water, protect threatened species, and provide richer wildlife habitats.

Environment Act 2021

The Environment Act 2021 aims at conserving and enhancing the natural environment, emphasising that planning policies and decisions should contribute to these objectives. Specifically focusing on biodiversity, the Act seeks to achieve the following:

- **Protecting and Enhancing Natural Assets:** The Act prioritises the protection and enhancement of valued landscapes, biodiversity sites, geological features, and soils.
- **Recognising Intrinsic Value:** It acknowledges the intrinsic character and beauty of the environment, as well as the wider benefits derived from natural capital and ecosystem services.
- **Minimising Impact and Providing Net Gains:** Efforts are directed towards minimising negative impacts on biodiversity and ensuring net gains by establishing resilient ecological networks.

To safeguard and enhance biodiversity, the Act mandates that local plans should:

- **Identify and Safeguard Wildlife-rich Habitats:** Local plans are required to identify and safeguard components of wildlife-rich habitats and wider ecological networks.
- **Promote Conservation and Enhancement:** Priority habitats, ecological networks, and species must be promoted for conservation, enhancement, and recovery.

When assessing planning applications, local planning authorities are instructed to:

- **Refuse Applications Causing Significant Harm:** Applications causing significant harm to biodiversity should be refused unless such harm can be avoided, mitigated, or compensated for.
- **Protect Sites of Special Scientific Interest (SSSIs):** Development plans affecting SSSIs and likely to have adverse effects should be rejected.
- **Preserve Irreplaceable Habitats:** Loss or deterioration of irreplaceable habitats like ancient woodlands should be avoided, with exceptions only under wholly exceptional circumstances and with suitable compensation strategies.

Furthermore, the Act emphasises that local planning authorities should actively support developments aimed at conserving or enhancing biodiversity. Opportunities to improve biodiversity within and around developments should be integrated into their designs, particularly where measurable net gains for biodiversity can be achieved or where enhancing public access to nature is deemed appropriate.

Schedule 7A, Part 1 of the Environmental Act establishes a mandatory requirement for developers in England to achieve a measurable increase of at least 10% in biodiversity as a result of their projects, compared to the pre-development state. This statutory target aims to mitigate the impacts of development on biodiversity by ensuring a net gain in biodiversity value. Developers are required to adhere to specific metrics and methodologies outlined in the Act to quantify biodiversity gains, prioritise onsite mitigation measures, and establish coherent ecological networks resilient to current and future pressures.

The Act emphasises robust monitoring, reporting, and enforcement mechanisms to ensure compliance with the 10% biodiversity net gain target and the overall objectives of the legislation.

Appendix 2: Baseline Habitat Map

Barley Scouts Hut

Baseline Habitat BNG

— Red line

Habitat

■ Developed, sealed surface

■ Modified grass

● Tree

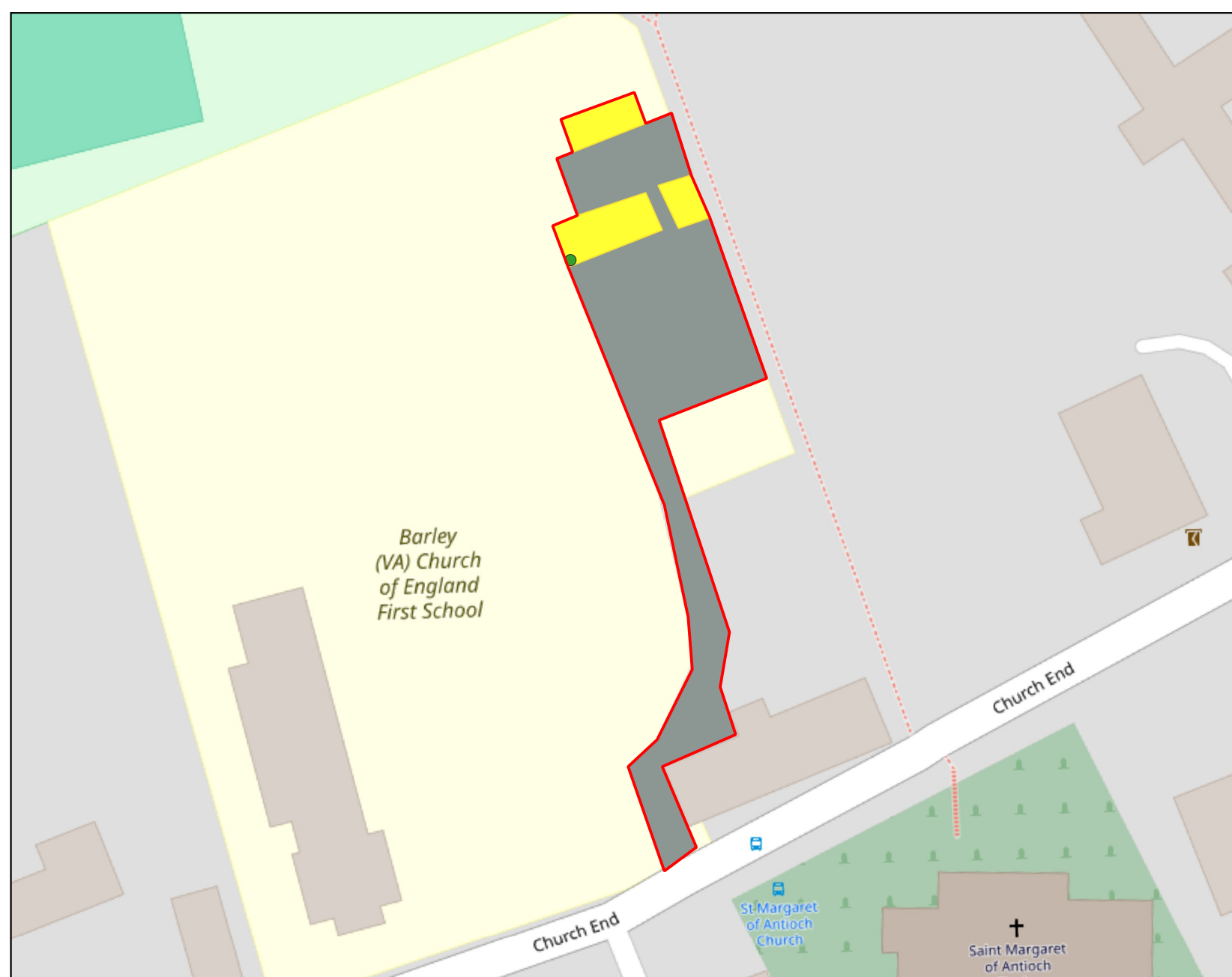
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