



# Biodiversity Net Gain Assessment

## Marshgate Farm, Langley

June 2025

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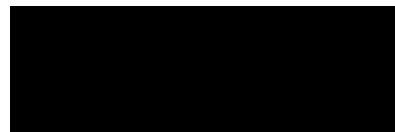
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This document was prepared to the standard set out in the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct and makes every reasonable attempt to comply with the relevant best practice guidelines and BS42020:2013 (Biodiversity: Code of Practice for Planning and Development). All information and data set out in this report is true and based upon bona fide opinions and professional knowledge to the best of Brown & Co's knowledge at the time of writing.

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# 1. Introduction

## 1.1 Project Background

Brown & Co was commissioned by Steve Foster in April 2025 to undertake a Biodiversity Net Gain Assessment at Marshgate farm, Marsh road, Crowle, DN17 4EU (NGR: SE 76787 13072)—hereafter referred to as ‘the Site’.

The Site is a parcel of land comprising an existing pasture field dominated by modified grassland.

This report sets out the results of a Site survey undertaken 24 April 2024 and a subsequent desk-based assessment. The information, assessment and discussion set out in this report aim to inform the potential for Biodiversity Net Gain on the Site in the context of plans to erect a new stable building and associated amenity and access infrastructure.

## 1.2 Site Description

The Site was an approximately 0.04 ha parcel of land in the western extent of Crowle, Lincolnshire (see Figure 1). The Site was dominated by a tract of modified grassland that comprises an existing pastoral field.



**Figure 1** – Site location (redline), showing the wider local landscape (© 2024 Microsoft Corporation, © 2024 Maxar, ©CNES (2024) Distribution Airbus DS).

*Imagery taken from Bing Aerial June 2025.*

The wider landscape around the Site is dominated by agricultural field parcels with various hedgerows, woodland blocks, waterbodies, and small urban areas also present.

A public road lies directly northwest of the Site, as well as multiple public roads in the surrounding area chiefly associated with the urban area of Crowle and Thorne.

No Statutory Main Rivers were present within 2 km of the Site.

## **2. Methods**

### **2.1 Objectives**

The aim of this report is to provide an initial assessment of the habitats present within the Site and those included in proposals for the Site with regard to the potential of achieving Biodiversity Net Gain. Plans showing all onsite habitats will be generated.

This report was produced following current best practice guidance, including that set out in BS 8683:2021 Process for designing and implementing Biodiversity Net Gain (British Standards 2021).

### **2.2 Legislation and Policy**

Appendix A sets out the national and local planning policy, as well as environmental and wildlife legislation relevant to the Site. The project must adhere to these documents at all times. The contents of this report are written in part to avoid an offence being committed in regard to this policy and legislation.

### **2.3 Biodiversity Net Gain Calculation**

A survey of the Site was conducted on 24 April 2025 by Senior Ecologist Ryan Clark BSc (Hons) MSc ACIEEM. Ryan is a qualified ecologist, having worked within ecology and the wider environmental sector for the last 14 years.

The survey area was subject to a walkover by the attending ecologist, where in the onsite habitats were identified and assessed in accordance with the UK Habitat Classification Version 2.0 (UKHab Ltd 2023). Flora species lists were compiled for each habitat and assigned positions on the DAFOR (Dominant, Abundant, Frequent, Occasional, or Rare) scale as laid out in Walker *et al.* (2010). Additionally, the Site was assessed for its suitability

for protected and notable species. Any evidence of such species, e.g. Badger setts and signs, was recorded and geo-referenced onsite.

The Statutory Biodiversity metric (Defra 2023) was employed to input the results of the Site survey and the proposed new onsite habitats, thereby generating the value difference between the pre-project and post-project habitats—relative Biodiversity Net Gain (BNG).

The Statutory Biodiversity Metric requires the following site condition data points to generate the BNG associated with the Site and proposed works:

**Habitat Type:** both the broad habitat, e.g. woodland, and the specific habitat type, e.g. lowland mixed deciduous woodland, as outlined in UKHab Ltd. (2023).

**Area:** an aerial measurement of total land cover area (in hectares) for each habitat parcel. Recording of habitat extents, both pre and post-works, was conducted using the onsite survey results, readily available online mapping and aerial imagery, and verified land use records. The minimal mapping unit (MMU) was taken at 0.001 ha.

**Condition:** a measure within Defra’s BNG guidance and assessment tools that quantified the relative ‘condition’ of a habitat parcel based on various physical, composition, and landscape variables dependant on the habitat type, e.g. number of vascular plant species present per square metre. The Statutory Biodiversity Metric Condition Assessment sheets (Defra 2023) were used to assign condition scores to the habitat parcels identified in the onsite survey.

**Strategic Significance:** a category ascribed to the geographical location of the Site in regard to its position in the context of Local Planning Authority areas and National Character Area profiles.

## 2.4 Limitations

The survey of the Site was conducted in April 2025, within the optimal botanical assessment period and habitat survey season (April-September inclusive). Thus, it is considered that a full and appropriate botanical assessment was conducted at the time of survey.

Habitat mapping is subject to seasonal variations, where in, ecotones—transitional zones between biological communities—may drift or be relocated at different periods of the year. This can be a natural shift owing to abiotic factors, or a consequence of management, either within the habitat itself or within adjacent communities.

### 3. Baseline Conditions

#### 3.1 UK Habitat Classification Survey

This section outlines all habitats recorded within the Site on 24 April 2025. A plan depicting the onsite habitats, their extent and location, and relevant target notes are shown in Appendix B; photographs of the Site are shown in Appendix C.

UKHab baseline habitats present within the Site:

- Modified grassland – g4 (Secondary codes: 103 – horse grazed and 516 – active management).

##### 3.1.1 Modified Grassland

The only habitat with the Site was a tract of modified grassland that comprised a section of one field (Photograph 1). The sward was dominated by perennial rygrass (*Lolium perenne*) with frequent cocksfoot (*Dactylis glomerata*). The only forb present was dandelion (*Taraxacum* agg.). This habitat was subject to frequent disturbance from active grazing and human footfall.

This habitat failed condition criteria A as the diversity of vascular plant species per square metre was 3. Therefore, a condition score of Poor was achieved.

## 4. Feasibility of Biodiversity Net Gain

### 4.1 Irreplaceable Habitat and Other Important Ecological Features Evaluation

No irreplaceable or Priority habitats are present within the Site or the surrounding area.

The assessment of the Site did not include an in-depth survey that would have identified suitability and risks in regard to protected and notable species. However, it is estimated that the onsite grassland and would provide sub-optimal basking resources for common and widespread reptiles and may provide habitat for some invertebrates that would qualify as Priority Species by the Natural Environment and Rural Communities Act 2006 (as amended).

### 4.2 Proposed Habitats

This section outlines all UKHab habitats proposed to be present on the Site post development; as shown in the indicative Site plan (Appendix B).

UKHab habitats proposed to be present after project delivery on the Site:

- Modified grassland – g4 (Secondary codes: 103 – horse grazed and 516 – active management).
- Building – u1b5 (Secondary codes: 516 – active management).
- Other developed land – u1b6 (Secondary codes: 516 – active management and 800 – road).

#### 4.2.1 Modified Grassland

Retained area of grassland.

Five new small trees are proposed to be planted within the grassland habitat. These trees should be native species, sourced from local provenance where possible, and include species such as English oak (*Quercus robur*) and silver birch (*Betula pendula*). While these

trees are plotted on the indicative plan, their location can be adapted to fit in with the proposed scheme without any impact to the Biodiversity Net Gain obligation—trees will remain within the modified grassland habitat. These trees are anticipated to pass condition criteria A, B and F; therefore, achieving Moderate condition.

#### 4.2.2 Other Developed Land and Building

New hardstanding and building. These habitats are considered to be Developed Land; Sealed Surface under the Statutory Metric and will be wholly artificial and absent of vegetation.

### 4.3 Summary of Habitat Change

Tables 4.1 and 4.2 details summary changes in UKHab habitats associated with the proposed project prior to and after the proposed development.

**Table 4.1 – summary of UKHab habitat change pre-development**

<b>Habitat</b>	<b>Total area</b>	<b>Area retained</b>	<b>Area enhanced</b>	<b>Description</b>
<b><i>Non-linear habitats (ha)</i></b>				
Modified grassland – g4	0.035	0.011	0.78	Existing onsite Poor condition grassland.

**Table 4.2 - summary of non-linear UKHab habitat change post-development**

<b>Habitat</b>	<b>Total area</b>	<b>Description</b>
<b><i>habitat creation (ha)</i></b>		
Developed land; sealed surface	0.025	Proposed new hardstanding and building.
Individual trees	0.0203	Proposed 5 new Moderate condition small trees.

Figure 2 presents an extract from the completed Statutory Biodiversity Metric completed for the Site.

FINAL RESULTS		
<b>Total net unit change</b> <small>(Including all on-site &amp; off-site habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	0.01
	<i>Hedgerow units</i>	0.00
	<i>Watercourse units</i>	0.00
<b>Total net % change</b> <small>(Including all on-site &amp; off-site habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	20.09%
	<i>Hedgerow units</i>	0.00%
	<i>Watercourse units</i>	0.00%
<b>Trading rules satisfied?</b>	Yes ✓	

Figure 2 – extract from a completed Statutory Biodiversity Metric for the Site.

The proposed changes of habitats within the Site result in an increase of habitat units from 0.07 to 0.08—equating to a **Biodiversity Net Gain of 20.09%**.

No hedgerow or watercourse units were present within the Site.

## 5. Conclusion

The proposals for the Site include the installation of new hardstanding and buildings.

A baseline dominated by modified grassland is proposed to be established with a new building and associated hardstanding. An area of grassland will be retained and planted with trees.

The onsite habitat change is estimated to result in a habitat unit uplift of 20.09%. Thus, the project is considered to meet the legal obligation to achieve a minimum of 10% Biodiversity Net Gain in England.

## References

### Methods & Professional Standards

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- **British Standards (2012) BS 5837: 2012 – Trees in relation to design, demolition and construction.** London, British Standards Institution.
- **British Standards (2020) BS 42020: 2013 - Biodiversity Code of Practice for Planning and Development.** London, British Standards Institution.
- **British Standards (2021) BS 8683: 2021 - Process for designing and implementing Biodiversity Net Gain.** London, British Standards Institution.
- **CIEEM (2017b) Guidelines on Ecological Report Writing (2nd Edition).** Winchester, CIEEM.
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- **CIEEM (2019) Advice Note: On the Lifespan of Ecological Reports & Surveys.** Winchester, CIEEM.
- **Department for Levelling Up, Housing & Communities (2023) National Planning Policy Framework.** London, Department for Levelling Up, Housing & Communities.
- **Defra (Department for Environment, Food & Rural Affairs) (2023). Statutory biodiversity metric tools and guides: tools for measuring the biodiversity value of habitat for biodiversity net gain (BNG).** Available from: <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>.
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- **Rose, F. – updated by O'Reilly C. (2006) The Wild Flower Key (Revised Edition) - How to identify wild plants, trees and shrubs in Britain and Ireland.** Bristol, Warne.
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## Species and Habitats Best Practice Guidance

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- **Badger Trust (2023)** *Badger Protection: Best Practice Guidance for Developers, Ecologists and Planners (England)*.
- **Institute of Lighting Professionals (2023)** *Guidance Note 08/23: Bats and Artificial Lighting at Night*. Rugby, Institute of Lighting Professionals.
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- **English Nature (2001)** *Great crested newt mitigation guidelines*. Peterborough, English Nature.
- **Bright, P., Morris, P. & Mitchell-Jones T.J. (2006)** *The Dormouse Conservation Handbook (2<sup>nd</sup> Edition)*. Peterborough, English Nature.
- **Langton, T., Beckett, C. & Foster, J. (2001)** *Great Crested Newt Conservation Handbook*. Halesworth, Froglife.
- **Natural England (2020)** *Prepare a planning proposal to avoid harm or disturbance to protected species*. Available at: Gov.uk.
- **Natural England (2022)** *Badgers: Advice for making planning decisions*. Available at: Gov.uk.
- **Natural England (2022)** *Hazel Dormice: Advice for making planning decisions*. Available at: Gov.uk.
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- **Natural England (2022)** *Otter: Advice for making planning decisions*. Available at: Gov.uk.
- **Natural England (2022)** *Protected plants, fungi and lichens: Advice for making planning decisions*. Available at: Gov.uk.
- **Natural England (2022)** *Reptiles: Advice for making planning decisions*. Available at: Gov.uk.
- **Natural England (2022)** *Water Voles: Advice for making planning decisions*. Available at: Gov.uk.
- **Natural England (2022)** *White-clawed crayfish: Advice for making planning decisions*. Available at: Gov.uk.
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## Other Literature

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# APPENDIX A: Planning Policy & Legislation

## Relevant Planning Policy

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### National Planning Policy Framework 2023

The NPPF states that:

#### Para 8

Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives).

#### Para 32

Local plans and spatial development strategies should be informed throughout their preparation by a sustainability appraisal that meets the relevant legal requirements<sup>17</sup>. This should demonstrate how the plan has addressed relevant economic, social and environmental objectives (including opportunities for net gains).

#### Para 180

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

- minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

#### Para 185

To protect and enhance biodiversity and geodiversity, plans should:

- 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

#### Para 186

When determining planning applications, local planning authorities should apply the following principle:

- development whose primary objective is to conserve or enhance biodiversity should be
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supported; 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.

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**North Lincolnshire Local Development Framework: Core Strategy (2010)**

Policy CS16: North Lincolnshire's Landscape, Greenspace and Waterscape states that:

The council will protect, enhance and support a diverse and multi-functional network of landscape, greenspace and waterscape through:

- Identifying in supporting documents within or evidencing the Local Development Framework, a network of strategically and locally important landscape, greenspace and waterscape areas. Development on or adjacent to these areas will not be permitted where it would result in unacceptable conflict with the function(s) or characteristic of that area.
- Requiring development proposals to improve the quality and quantity of accessible landscape, greenspace and waterscape, where appropriate.
- Requiring development proposals to address local deficiencies in accessible landscape, waterscape and greenspace where appropriate.
- Requiring the protection of trees, hedgerows and historic landscape to be specified where appropriate. The creation and maintenance of the network of landscape, green space and waterscapes will be secured by a range of measures, including protecting open space, creating new open spaces as part of new development, and by using developer contributions to create, improve and maintain green infrastructure assets where appropriate.

Policy CS17: Biodiversity states that:

The council will promote effective stewardship of North Lincolnshire's wildlife through:

- Safeguarding national and international protected sites for nature conservation from inappropriate development.

- Appropriate consideration being given to European and nationally important habitats and species.
- Maintaining and promoting a North Lincolnshire network of local wildlife sites and corridors, links and stepping stones between areas of natural green space.
- Ensuring development retains, protects and enhances features of biological and geological interest and provides for the appropriate management of these features.
- Ensuring development seeks to produce a net gain in biodiversity by designing in wildlife, and ensuring any unavoidable impacts are appropriately mitigated for.
- Supporting wildlife enhancements that contribute to the habitat restoration targets set out in the North Lincolnshire's Nature Map and in national, regional and local biodiversity action plans.
- 7. Improving access to and education/interpretation of biodiversity sites for tourism and the local population, providing their ecological integrity is not harmed.
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## Main Environmental and wildlife Legislation (England)

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### Environment Act 2021

Schedule 14 of The Environment Act 2021 makes it mandatory for all new developments (with some limited exceptions) to achieve a biodiversity net gain (BNG) of at least 10% by the time the development is completed compared to the pre-development biodiversity value of the onsite habitat.

The outputs and statutory instruments of this legislation may be amended in the future by the Secretary of State.

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### Conservation of Habitats and Species regulations 2017 (as amended).

Section 43 of Part 3 of this legislation makes it an offence to do any of the following with regards to European Protected Species (animals) as listed on Schedule 2:

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- Deliberately capture, injure or kill any wild animal of a European protected species.
  - Deliberately disturb wild animals of any such species.
  - Deliberately takes or destroy the eggs of such an animal.
  - Damage or destroy a breeding site or resting place of such an animal. (*Note: no intentionality is necessary to prosecute this activity*).

Section 43 of Part 3 of this legislation makes it an offence to do any of the following with regards to European Protected Species (plants) as listed on Schedule 5:

- Deliberately pick, collect, cut, uproot or destroy a wild plant of a European Protected Species.
- Be in position of or to transport said plant.

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#### **Natural Environment and Rural Communities Act (as amended).**

Section 40 of Part 3 of this act compels public bodies (local authorities, police, fire and health authorities, and utility companies) with exercisable functions within England to consider actions to be taken to conserve and enhance biodiversity in England—in particular to have regard to the United Nations Environmental Programme Convention on Biological Diversity of 1992, any relevant local nature recovery strategies, and any relevant species conservation strategy or protected site strategy (prepared by Natural England).

Section 41 of Part 3 of this Act ensures the publishing of a list containing species and habitat types that are of principle importance for the purpose of conserving or enhancing biodiversity in England.

#### **Wild Mammals (Protection) Act 1996.**

Under this legislation it is an offence to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with the intent to inflict unnecessary suffering.

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#### **Protection of Badgers Act 1992**

Under this legislation it is an offence to (or intend to, or to be reckless as to whether your actions would have these consequences):

- Wilfully kill, injure or take a badger (or attempts to do so).
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- Damage or destroy any part of a badger sett. (Note: no intentionality is necessary to prosecute these activities).
  - Obstruct access to a badger sett. (Note: no intentionality is necessary to prosecute these activities).
  - Disturb a badger when it is occupying a sett. (Note: no intentionality is necessary to prosecute these activities).
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#### **Wildlife and Countryside Act 1981** (as amended).

Part 1 of this act makes it an offence to intentionally or recklessly kill, injure or take any wild bird, to take, damage or destroy the nest of any wild bird while that nest is in use or being built, and/or to take or destroy an egg of any wild bird.

Part 1 also makes it an offence to intentionally or recklessly disturb any wild bird included in Schedule 1 of the act, and to take, damage, or destroy the nest of any wild bird included in Schedule ZA1.

Schedule 5 lists non-avian species that are afforded various protections under Sections 9.1a, 9.1b, 9.2, 9.4a, 9.4a (Whales), 9.4b, 9.4c, 9.5a and 9.5b.

Schedule 8 lists plant species that are protected from intentionally picking, uprooting or destroying under Section 13.

Schedule 9 lists non-native invasive plants for which it is an offence under Section 14 to plant or otherwise cause to grow in the wild any part of said plants. (Note: no intentionality is necessary to prosecute these activities).

#### **Other Legislation (England)**

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- **The Environmental Impact Assessment (EIA) Regulations 2017**
- **Anti-social Behaviour Act 2003** (as amended).
- **Countryside and Rights of Way Act 2000**
- **Hedgerows Regulations 1997.**
- **Weeds Act 1959.**

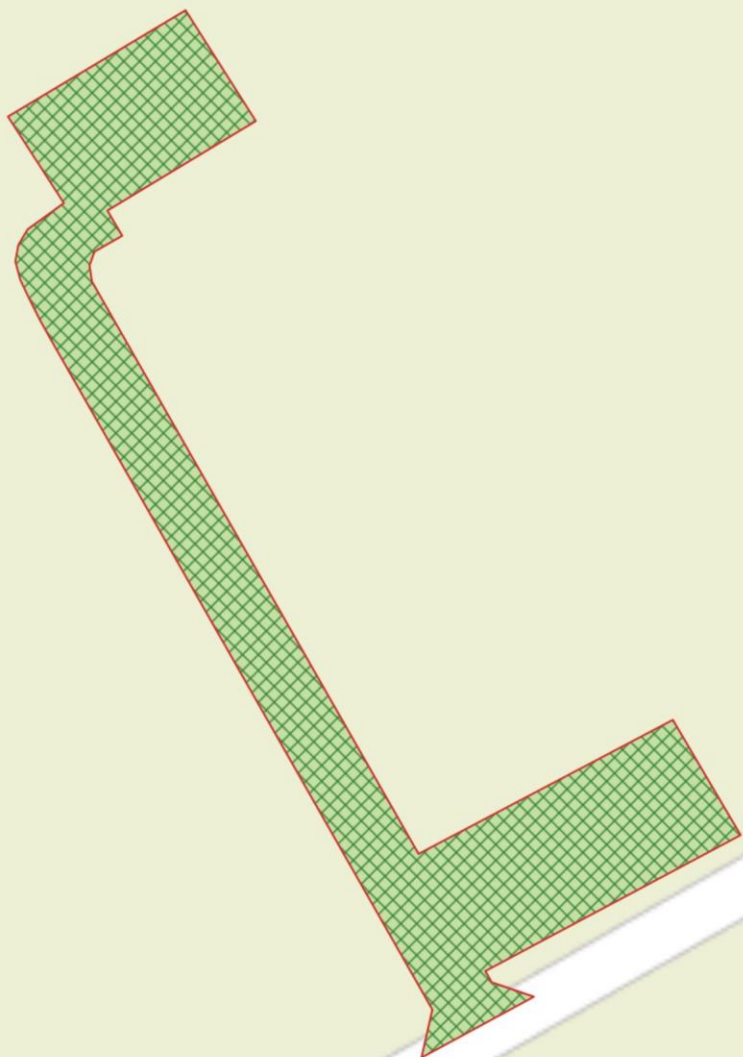
## APPENDIX B: Baseline Habitat Plan & Proposed Habitats Plan

See overleaf.

*Plans are indicative approximations of the layout of onsite habitats and are not drawn to measurable scale.*

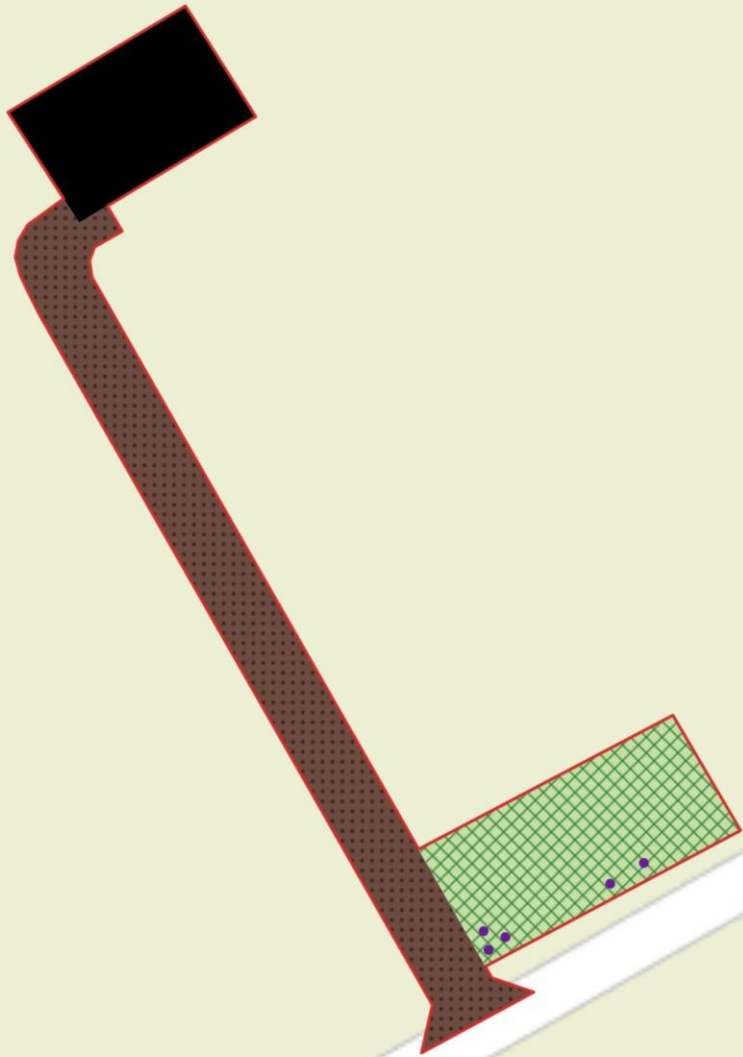
Site Features

- Site boundary
- Modified grassland



Site Features

- Site boundary
- Building
- Artificial surface
- Modified grassland
- Individual tree



## APPENDIX C: Photographs



**Photograph 1:** modified grassland in the centre of the Site.

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