



Biodiversity Net Gain Assessment

Twine Valley Farm

Church Road, Shuttleworth, Bury

November 2024

Prepared for: Mr and Mr Brown

Report prepared by: Verity Webster BSc (Hons) MSc CEcol CMIEEM

This document is to be read in conjunction with:

- The Statutory Biodiversity Metric Calculation Tool– Twine Valley Farm excel tool
- The Habitat Condition Assessment Sheets – Twine Valley Farm excel document



EXECUTIVE SUMMARY

- On 9th December 2024 a site visit to inform the Biodiversity Net Gain Assessment was undertaken on land at Sheep Hey Farm, Shuttleworth, Bury to inform the proposals for a slurry pit.
- The survey site encompasses modified grassland, three small trees and a native species hedgerow.
- The development will result in the loss of 0.0330ha of modified grassland and 0.0220ha of artificially unvegetated unsealed surface.
- The proposals will include planting of 2 small native trees and natural colonisation of modified grassland.
- The Statutory Biodiversity Metric shows there will be a Biodiversity Net Gain of 17.94% in Habitat Units.

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1. Introduction

1.1 Application Site

- 1.1.1 This report details a Biodiversity Net Gain Assessment of land at Twine Valley Farm, Church Road, Shuttleworth, Bury BLO 0EH. Ordnance Survey grid reference (centre of site): SD80191764.
- 1.1.2 Mr and Mrs Brown commissioned Verity Webster Ltd to undertake a Biodiversity Net Gain Assessment in order to inform the proposals for the site.

1.2 Objectives

- 1.2.1 The objectives of the Biodiversity Net Gain Assessment are to determine:
- Potential for enhancement or compensation (offsetting) on the site for protected species, habitats of conservation interest and overall biodiversity with the aim of achieving 10% net gain in biodiversity.

1.3 Proposals

- 1.3.1 The proposals comprise the installation of a slurry pit.

1.4 Ecologist

- 1.4.1 The Ecological Assessment was undertaken by Verity Webster. Verity is a Chartered Ecologist and a full member of the Chartered Institute of Ecology and Environmental Management.
- 1.4.2 Verity has worked as an ecological consultant since 2007. She has undertaken Ecological Assessments and protected species surveys for a large variety of projects and schemes, producing the required impact assessment and subsequent mitigation schemes and method statements when necessary.

1.5 Report Limitations

- 1.5.1 This document includes recommendations for measures to achieve BNG. These recommendations do not comprise a landscape design or planting prescriptions as provided by a Landscape Architect and the ecologist has no Design Liability associated with these recommendations.



2. Site Location and Description

2.1 Site Location

2.1.1 The survey site is located in a semi-rural location to the northeast of the residential town of Ramsbottom, approximately 300m southeast of the A676 Bolton Road north and 300m west of the M56 which runs north to south through the landscape. The River Irwell weaves north to south approximately 350m to the west.

2.1.2 The site is located in arable land and is immediately surrounded by this landscape. See Figures 1 and 2.

2.1 Site Description

2.1.1 The survey site, at the time of survey comprised artificially unvegetated unsealed surface and modified grassland. The slurry pit has previously been installed and so the habitat descriptions are based upon surrounding, retained vegetation and Google Earth imagery.

2.1.2 The slurry pit is located to the west of a stable block used to house cattle. Pasture runs north and south. There are trees to the southwest and west that are not impacted by the proposals.

Figure 1: Ordnance survey map showing the location of the proposed development site.

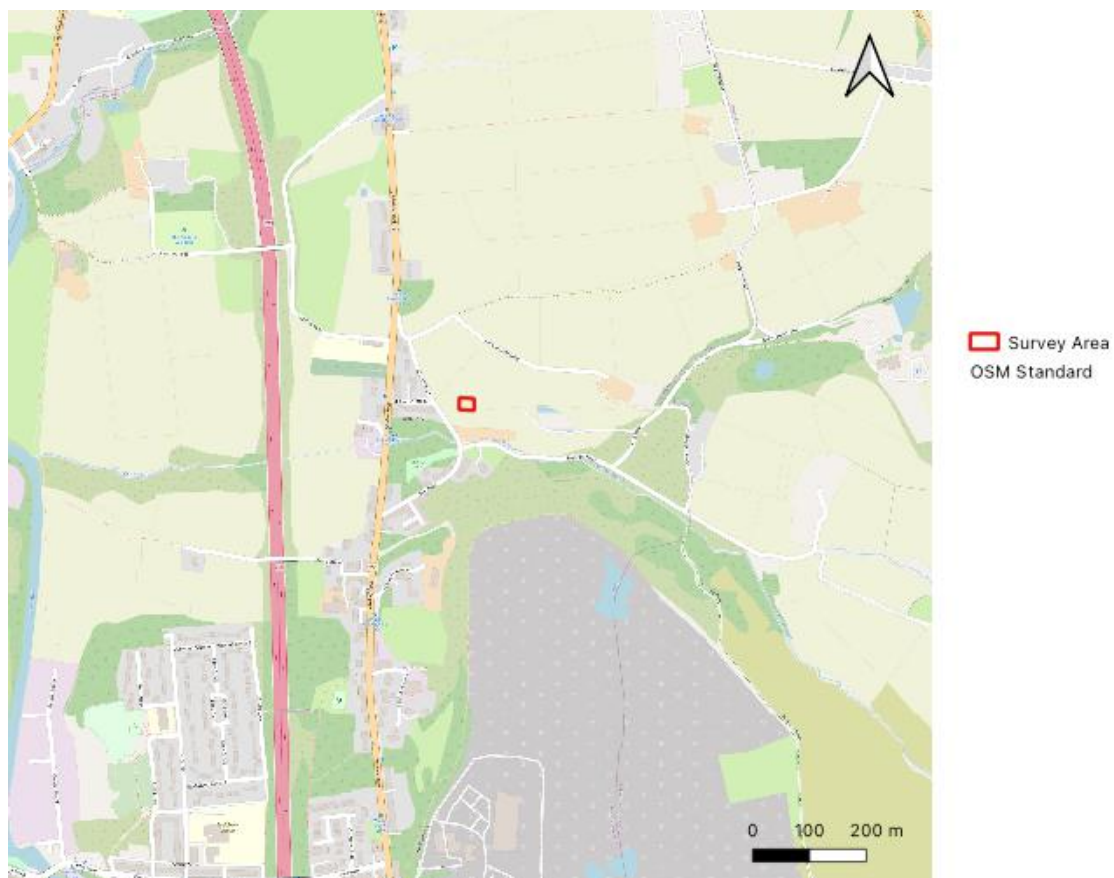




Figure 2: Aerial image showing the proposed development site and immediate surroundings





3. Legislation

3.1 Planning Policy and Legislation

- 3.1.1 In England, biodiversity net gain is required under a statutory framework introduced by Schedule 7A of the Town and Country Planning Act 1990 (inserted by the Environment Act 2021). This is referred to as biodiversity net gain in Planning Practice Guidance to distinguish it from other or more general biodiversity gains.
- 3.1.2 Under the statutory framework for biodiversity net gain, every grant of planning permission is deemed to have been granted subject to a general biodiversity gain condition to secure the biodiversity gain objective. This objective is to deliver at least a 10% increase in relation to the pre-development biodiversity value of the development granted permission. This increase can be achieved through onsite biodiversity gains, registered offsite biodiversity gains or statutory biodiversity credits (Gov.Uk Biodiversity Net Gain, 2023).
- 3.1.3 Under the NERC Act 2006, planning authorities are obliged to make sure that they have all the information on the presence of protected species on site before they make a decision on the planning permission.
- 3.1.4 The National Planning Policy Framework (NPPF, 2021) encourages Local Planning Authorities to conserve and enhance biodiversity.

Chapter 15, Para 180 of NPPF states: *"The planning system should contribute to and enhance the natural and local environment by:*

- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils....***
- d) 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 181 states: *"Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries."*

Para 185 identifies that plans should do the following to protect and enhance biodiversity and geodiversity:

- a) "Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and***



- b) Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and peruse opportunities for securing measurable net gains for biodiversity.”***

Para 186 states that “when determining planning applications, local authorities should apply the following principles:

- a) if significant harm to biodiversity from a development cannot be avoided...,adequately mitigated, or, as a last resort compensated for, then planning permission should be refused”***

- 3.1.5 The local planning authority has a responsibility, therefore, to obtain all information regarding the potential for protected species on a site prior to making a decision about a proposal.

4. Methodology

4.1 Site Survey

- 4.1.1 A site visit was undertaken on 9th December 2024 to inform the Biodiversity Net Gain Metric and Assessment. Habitats on site were assessed and described in accordance with UK Habitat Classification (UK Hab Ltd, 2023) and a list of conspicuous species recorded. The condition of the habitats was determined using the condition sheets provided for the Statutory Metric (DEFRA, 2023).
- 4.1.2 Due to habitat removal post-January 2020, the baseline habitat has been determined using Google Earth imagery. For the purposes of the calculation, retained grassland adjacent to the site has been used to gain an estimate of condition.
- 4.1.3 The Ecological Assessment was undertaken by Verity Webster BSc MSC CECol MCIEEM. Verity is a Chartered Ecologist and a full member of the Chartered Institute of Ecology and Environmental Management.
- 4.1.4 Verity has worked as an ecological consultant for over 17 years. She has undertaken Ecological Assessments and protected species surveys for a large variety of projects and schemes, producing the required impact assessment and subsequent mitigation schemes and method statements when necessary.

4.2 Biodiversity Net Gain Assessment

- 4.2.1 Biodiversity Offsetting was developed by Defra. The pilots of the study were first published in 2012.
- 4.2.2 The Biodiversity Calculator is a system created by Defra to quantify change in biodiversity of a site in biodiversity units.
- 4.2.3 *The Biodiversity Offsetting Pilots: Guidance for Developers* (Defra, 2012) details the original metric for calculating biodiversity loss or gain as a result of development proposal.



- 4.2.4 *The Statutory Biodiversity Metric* (DEFRA, 2023) and the associated guidance was used to assess the habitat condition and calculate potential change in biodiversity within the survey site.
- 4.2.5 To determine strategic significance of the habitats at baseline and post-development, the relevant documentation was considered including Local and Neighbourhood Plans, Priority Habitats, Local Biodiversity Action Plans and Local Ecological Networks. When available the relevant Local Nature Recovery Strategy will be utilised for this purpose.
- 4.2.6 The Mitigation. Hierarchy and the Biodiversity Net Hierarchy and was used to inform recommendations about habitat retention, loss, enhancement and creation as per the Biodiversity Net Gain: Good Practice principles for development (CIRIA C776a, 2019).
- 4.2.7 The calculation of change in biodiversity units has been based upon the proposals provided by Steven Hartley.

4.3 Limitations

- 4.3.1 The survey work was undertaken in early-December 2024. At this time of year, the majority of higher plants are visible, but some species are more conspicuous or only present at some times of the year, and some species may have been missed. The species list constructed is not comprehensive. However, given the habitat types present, the data and is considered sufficient to inform the Statutory Site Metric.



5. Biodiversity Net Gain Assessment

5.1 Baseline condition and potential impacts on Biodiversity

Offsetting and the Biodiversity Calculator

5.1.1 The baseline condition of the habitat and the predicted change as a result of the proposals has been assessed with the use of the Biodiversity Offset principals.

5.1.2 Biodiversity offsetting principal: What is it?

“Using the biodiversity offsetting approach means that an offset provider delivers quantifiable amount of biodiversity benefit to offset the loss of the biodiversity resulting from the development. The losses and gains are measured in the same way, even if the habitats concerned are different. In the biodiversity offsetting pilot, the measurement is done in ‘**biodiversity units**’, which are the product of the **size of an area**, the **distinctiveness** and the **condition** of the habitat it comprises. The assessment of biodiversity units lost and gained can be calculated” (Defra, 2012).

5.1.3 The Biodiversity Calculator is a system created by Defra to quantify change in biodiversity of a site in biodiversity units. The current calculator is known as Statutory Biodiversity Metric (Gov.UK Statutory Biodiversity Metric Tool, 2023).

5.1.4 This quantitative assessment will be considered in relation to the other qualitative ecological functions of the site in order to assess the impact (i.e. functionality for protected species), but is a useful tool to show predicted or potential loss of habitat, change in condition and enhancement (net gain).

Habitats at Baseline

5.1.5 The survey site supports, unvegetated land, sparsely vegetated ground, tall forb vegetation, tree lines and scattered individual rural trees.

5.1.6 The UK Habitat classifications are as follows:

- Modified grassland g4 101
- Artificially unvegetated unsealed surface u1c

Habitat Loss

5.1.7 Habitat loss was determined with the use of Google Earth Imagery from April 2020.

5.1.8 For the purposes of the assessment approximately 50% of the survey site is considered to comprise modified grassland and approximately 50% is considered to comprise artificially unvegetated unsealed surface.

5.1.9 The habitat description of modified grassland is based upon that grassland adjacent to the site which is



has been subject to the same management, cattle grazed.



Google Earth Imagery showing the survey Area in April 2020

Habitat descriptions

Modified grassland g4 101

5.1.10 The modified grassland is dominated by rye grass (*Lolium perenne*) and cock's-foot grass (*Dactylus glomerata*). There are very few herbs. Creeping buttercup (*Ranunculus repens*) is rare.

Artificially unvegetated unsealed surface u1c

5.1.11 The artificially unvegetated surface is bare, disturbed ground as a result of vehicle movement.



Modified grassland retained adjacent to the newly installed slurry pit



The newly installed slurry pit

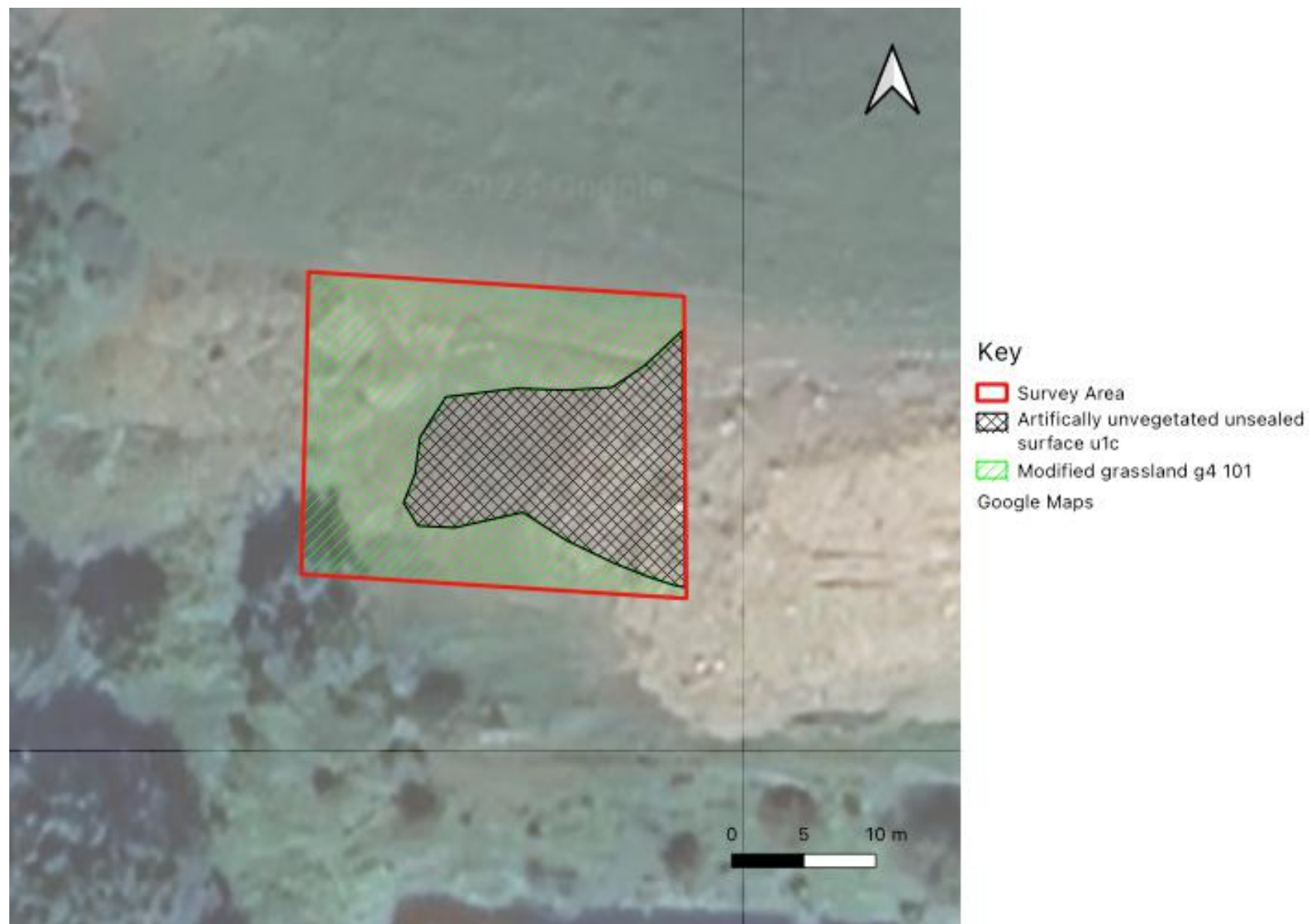


Modified grassland retained adjacent to the newly installed slurry pit



Artificially unvegetated unsealed surface

Figure 3: The Survey Site – UK Habitat Classification Plan



Distinctiveness of the Habitat and Trading Rules

5.1.12 Under the Biodiversity Calculator principals each habitat is categorised into a distinctiveness band.

5.1.13 The distinctiveness of the habitat is based upon 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)

- Modified grassland is considered to have LOW distinctiveness.

Trading Rules

5.1.14 Habitats of low distinctiveness, if lost, must be compensated for with habitat of the same distinctiveness, or better habitat.

Habitat Condition Assessment

5.1.15 The condition the habitat on site can be categorised as low, moderate or good and is based upon the Habitat Condition Assessment Sheets within the Statutory Biodiversity Metric. See excel condition assessment.

Modified Grassland

5.1.16 The Modified Grassland is considered to have been of poor condition, reflecting the condition of adjacent grassland subject to the same management pressures, that is, cattle grazed and nutrient enriched. The area lost was also likely to have been subject to regular disturbance.

Strategic Significance

5.1.17 The strategic significance of the habitat present is based upon the value of the habitat in the wider landscape. Consideration is given to local and neighbourhood plans, priority habitats, local nature reserves and local ecological networks.

5.1.18 The area habitats on site are not considered Habitats of Principal Importance. For this reason the modified grassland is recorded as 'area not in local strategy/no local strategy'.

5.2 Achieving Biodiversity Net Gain

5.2.1 The EU is committed to halt the loss of biodiversity and the degradation of ecosystem services by 2020. The Biodiversity Strategy sets out 6 targets and 20 specific actions geared towards this overall objective. Action 7 is to ensure no net loss of biodiversity and ecosystem services.

5.2.2 The 'mitigation hierarchy' is included with current planning policy, aiming to halt the loss of biodiversity. The National Planning Policy Framework, consolidating planning guidance states that '*if significant harm cannot be avoided, adequately mitigated, or as a last resort, compensated for, planning permission should be refused*'.



- 5.2.3 Defra's biodiversity offsetting pilot was developed to address this requirement and ensure development, economic growth and biodiversity conservation are compatible (British Ecological Society, 2013).
- 5.2.4 Biodiversity net gain, as a good practice principal, has been developed by Ciria, CIEEM and IEMA (BNG, 2016). At the very least developments should aim for no net loss as part of the proposals.
- 5.2.5 The Headline Results in the Statutory Biodiversity Metric show the overall net change in Biodiversity Units as a result of the development and creation of new habitat.

Habitat Lost

- 5.2.6 The development has resulted in the disturbance of 0.055ha of land, approximately 0.033ha of modified grassland and 0.022ha of artificially unvegetated unsealed surface.

Area habitats to be created

- 5.2.7 The following habitats are to be created on site:
- **2 small native trees will be planted on site.** These are considered likely to reach moderate condition.
 - **0.0270ha of modified grassland of poor condition** will naturally recolonised the wider disturbed area around the slurry pit.

5.3 Habitat Creation and Enhancement

Small Trees

- 5.3.1 Two small native trees will be planted adjacent to the slurry pit comprising rowan (*Sorbus aucuparia*), birch (*Betula pendula*).
- 5.3.2 These are considered likely to reach moderate condition, but to do so the following must be considered within a management plan:
- The tree canopy must be continuous, so avoiding any damage as a result of over-pruning or other accidental damage.
 - Trees must be healthy and replaced in the first 1-5 years if they die.



Modified grassland

5.3.3 The modified grassland will naturally colonise the disturbed ground around the new slurry pit.

5.4 Percentage Change in Biodiversity Units

Baseline Habitat Units: 0.07

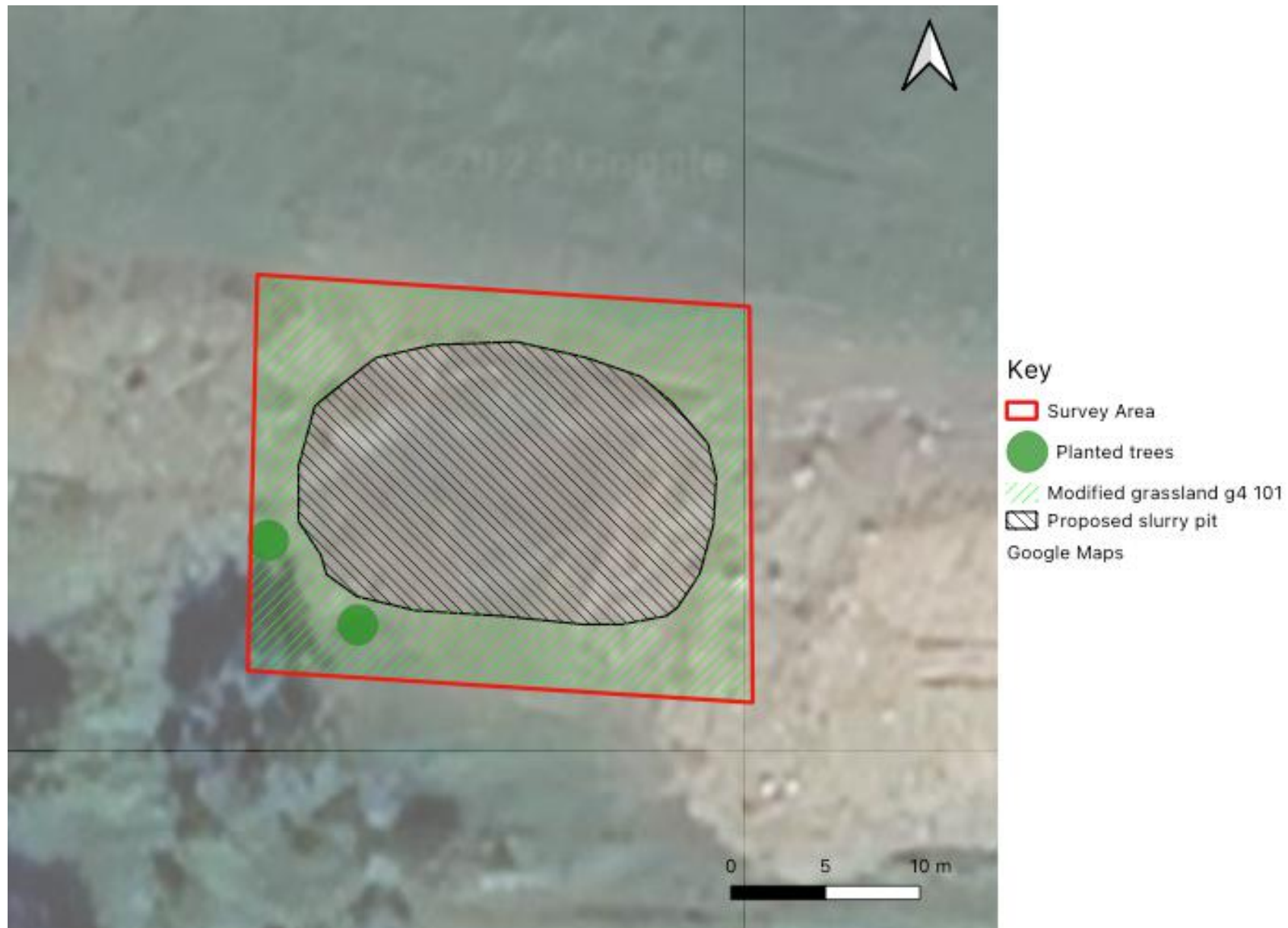
Habitat Units Change: 0.01

Total percentage change in Habitat Units: 17.94%

5.4.1 The Statutory Biodiversity Metric shows there will be a gain of 17.94% in Habitat Units as a result of the proposals.

5.4.2 An appropriate 30 year management plan will be required to ensure the habitats proposed are created and reach their desired condition.

Figure 4: The Survey Site – Proposed habitat creation



6. References

- BNG (2016). Biodiversity Net Gain: Good practice principles for development. CIEEM, CIRIA, IEMA. <https://cieem.net/wp-content/uploads/2019/02/Biodiversity-Net-Gain-Principles.pdf>
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