

Biodiversity Net Gain Results

Fewcott Road, Fritwell



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EXECUTIVE SUMMARY

This report summarises the delivery of biodiversity net gain at Fewcott Road, Fritwell, in accordance with national planning policy. The report sets out the biodiversity baseline and the post-development position, based on the plans submitted as part of a planning application for the site. It provides a summary of the net gain position and measures to secure the delivery of a net gain for biodiversity in accordance with planning policy.

The existing baseline habitats are other neutral grassland, ruderal/ephemeral habitat, and existing urban land uses which total 1.6 ha and generate 7.6 biodiversity units and linear hedgerow habitats total 0.5 km and generate 3.98 biodiversity units. Grassland and urban habitats will be created on site. The proposed post-development habitats generate 4.76 biodiversity units and hedgerow habitats generate 3.63 biodiversity units from new hedgerow creation.

Based on DEFRA biodiversity net gain metric 3.0 calculations, the proposed habitats on the site would result in a net loss of in biodiversity of -37.34% for habitats and net loss of -8.79% for hedgerows.

To deliver a net gain for biodiversity, an land has been identified offsite within the village of Fritwell where a biodiversity enhancement can be made to offset the impacts of the proposed development. Improvements to grassland biodiversity and hedgerow planting at Goose Farm, Fritwell, generate sufficient biodiversity units for both area habitats and hedgerows to offset impacts from the development on the Fewcott Road site.

This offset will be managed by the Trust for Oxfordshire's Environment (TOE), who will manage funds provided by CALA Homes to pay the landowner at goose Farm to deliver the offset. The landowner will enter into an agreement with TOE to manage the land according to a management plan for a period of 30 years.

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1 INTRODUCTION

- 1.1 The following report provides a summary of the biodiversity net gain calculations undertaken for land at Fewcott Road, Fritwell, henceforth referred to as ‘the site’. The report sets out the policy background for biodiversity net gain, the baseline conditions of the site, the proposed site layout and the results of the net gain calculations.

2 POLICY BACKGROUND

2.1 National Planning Policy Framework

- 2.1.1 The National Planning Policy Framework (NPPF) sets out planning policy for England. Paragraph 174 of the NPPF states
“Planning policies and decisions should contribute to and enhance the natural and local environment by:...
- 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;...”
- 2.1.2 Paragraph 179 states
“To protect and enhance biodiversity and geodiversity, plans should:...
- b) 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.”
- 2.1.3 Paragraph 180 states
“d) development whose primary objective is to conserve or enhance biodiversity should be 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.”

2.2 Cherwell Local Plan Part 1

- 2.2.1 Cherwell District Councils Local plan ‘Policy ESD 10: Protection and Enhancement of Biodiversity and the Natural Environment’ states:
Protection and enhancement of biodiversity and the natural environment will be achieved by the following:
- *In considering proposals for development, a net gain in biodiversity will be sought by protecting, managing, enhancing and extending existing resources, and by creating new resources*

2.3 Environment Act 2021

- 2.3.1 The Environment Act 2021 includes provision for biodiversity net gain to be applied to every planning permission.

Schedule 14 of the Environment Act sets out amendments to the Town and Country Planning Act 1990 for the inclusion of biodiversity net gain as follows:

“Biodiversity gain objective

(1) The biodiversity gain objective is met in relation to development for which planning permission is granted if the biodiversity value attributable to the development exceeds the pre-development biodiversity value of the onsite habitat by at least the relevant percentage.

(2) The biodiversity value attributable to the development is the total of—

(a) the post-development biodiversity value of the onsite habitat,

(b) the biodiversity value, in relation to the development, of any registered offsite biodiversity gain allocated to the development, and

(c) the biodiversity value of any biodiversity credits purchased for the development.

(3) The relevant percentage is 10%.”

- 2.3.2 The Environment Act received Royal Assent in November 2021, meaning that by November 2023 the expectation for all planning permissions to include a biodiversity net gain of at least 10% will become a legal requirement.

3 METHOD

3.1 UK Habitat Classification survey

3.1.1 The habitat desk study was carried out according to the UKHabs Classification system¹. The study was undertaken using the results from a previous survey and assessment (*Lockhart Garratt, January 2021*). It was assessed that the site was unlikely to have changed significantly since the assessment and the data within the report could be used for this desktop assessment. The habitats present on site were assessed as either poor, moderate or good condition.

3.2 Biodiversity Net Gain (BNG) assessment

3.2.1 This BNG assessment uses the following industry recognised best practice methods:

- *CIEEM, IEMA & CIRIA (2016). Biodiversity Net Gain: Good Practice Principles for Development;*
- *Natural England (2021). Biodiversity Metric 3.0 – Auditing and Accounting for Biodiversity;*
- *CIEEM (2021). Biodiversity net gain report and audit templates.*

3.2.2 Applying these standardised methods results in the calculation of a baseline biodiversity value, a post-development biodiversity value and a net change in biodiversity value associated with the proposed development.

3.2.3 The quantitative outcomes of the calculations are one component of the BNG assessment and associated good practice principles. A BNG assessment also requires the collation of qualitative evidence on the application of the mitigation hierarchy, stakeholder engagement and post-development habitat management. Collectively, these quantitative outcomes and qualitative evidence are used to inform the outcomes of the project-wide BNG assessment.

3.3 Achieving BNG Good Practice Principles

3.3.1 This section sets out the 10 principles of biodiversity net gain and provides a summary of how these principles have been applied to the project from its inception to the current proposals.

¹ Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020). UK Habitat Classification – Habitat Definitions V1.1 at <http://ukhab.org>

Table 1 10 Principles of biodiversity net gain

PRINCIPLE	APPLICATION TO PROJECT
<p>Principle 1: Apply the mitigation hierarchy Do everything possible to first avoid and then minimise impacts on biodiversity. Only as a last resort, and in agreement with external decision-makers where possible, compensate for losses that cannot be avoided. If compensating for losses within the development footprint is not possible or does not generate the most benefits for nature conservation, then offset biodiversity losses by gains elsewhere.</p>	<p>New development has been focused within lower value habitat e.g modified grassland, with efforts made to retained the higher value grassland to the south. A proposed offsetting site was included to the west of the site within the same local planning authority. This will support the site in achieving biodiversity net gain.</p>
<p>Principle 2: Avoid losing biodiversity that cannot be offset by gains elsewhere Avoid impacts on irreplaceable biodiversity – these impacts cannot be offset to achieve no net loss or net gain.</p>	<p>No irreplaceable habitats are present on site and efforts have been made to retain higher value habitat.</p>
<p>Principle 3: Be inclusive and equitable Engage stakeholders early, and involve them in designing, implementing, monitoring and evaluating the approach to Biodiversity Net Gain. Achieve net gain in partnership with stakeholders where possible, and share the benefits fairly among stakeholders.</p>	<p>The parish council were engaged as part of the development process to ascertain their views on the wider scheme and biodiversity net gain. The parish council were keen that any offset was delivered in Fritwell. Parish Council members canvasses residents to identify possible locations for offsetting and prospective landowners were referred to Ethos to carry out site surveys and develop offset plans. In addition, Trust for Oxfordshire’s Environment (TOE) have been involved to provide both scrutiny and legacy for the delivery of the proposed offset.</p>
<p>Principle 4: Address risk Mitigate difficulty, uncertainty and other risks to achieving net gain. Apply well-accepted ways to add contingency when calculating biodiversity losses and gains in order to account for any remaining risks, as well as to compensate for the time between the losses occurring and the gains being fully realised.</p>	<p>The offset proposals incorporate contingencies for the delivery of the proposals and include a comprehensive monitoring programme to ensure delivery.</p>

<p>Principle 5: Make a measurable net gain contribution Achieve a measurable, overall gain for biodiversity and the services ecosystems provide while directly contributing towards nature conservation priorities.</p>	<p>This report sets out the results of a biodiversity net gain assessment, including demonstrating securing a net gain for biodiversity.</p>
<p>Principle 6: Achieve the best outcomes for biodiversity Achieve the best outcomes for biodiversity by using robust, credible evidence and local knowledge to make clearly-justified choices when:</p> <ul style="list-style-type: none"> • <i>Delivering compensation that is ecologically equivalent in type, amount and condition, and that accounts for the location and timing of biodiversity losses;</i> • <i>Compensating for losses of one type of biodiversity by providing a different type that delivers greater benefits for nature conservation;</i> • <i>Achieving Biodiversity Net Gain locally to the development while also contributing towards nature conservation priorities at local, regional and national levels;</i> • <i>Enhancing existing or creating new habitat; and</i> • <i>Enhancing ecological connectivity by creating more, bigger, better and joined areas for biodiversity.</i> 	<p>The proposed offset proposes the enhancement of grassland similar to that lost to the development. The proposed offset is within the same village as the impact.</p>
<p>Principle 7: Be additional Achieve nature conservation outcomes that demonstrably exceed existing obligations (i.e. doesn't deliver something that would occur anyway).</p>	<p>Enhancement of the offsite habitat would not occur without funding provided by the development.</p>

<p>Principle 8: Create a net gain legacy Ensure Biodiversity Net Gain generates long-term benefits by:</p> <ul style="list-style-type: none"> • <i>Engaging stakeholders and jointly agreeing practical solutions that secure net gain in perpetuity;</i> • <i>Planning for adaptive management and securing dedicated funding for long-term management;</i> • <i>Designing net gain for biodiversity to be resilient to external factors, especially climate change;</i> • <i>Mitigating risks from other land uses;</i> • <i>Avoiding displacing harmful activities from one location to another; and</i> • <i>Supporting local-level management of Biodiversity Net Gain activities.</i> 	<p>The offset will be managed and monitored by Trust for Oxfordshire’s Environment, a local environmental charity. The site is located within the village of Fritwell and can be viewed from public rights of way.</p>
<p>Principle 9: Optimise sustainability Prioritise Biodiversity Net Gain and, where possible, optimise the wider environmental benefits for a sustainable society and economy.</p>	<p>Given the small size of the site, it was not possible to deliver BNG on site. Every opportunity was taken to retain the highest value habitat where possible.</p>
<p>Principle 10: Be transparent Communicate all Biodiversity Net Gain activities in a transparent and timely manner, sharing the learning with all stakeholders.</p>	<p>This report provides transparent reporting on the delivery of biodiversity net gain for this scheme.</p>

3.4 Strategic Significance

3.4.1 Strategic significance relates to the spatial location of a habitat parcel at a landscape scale. It is based on the habitat type and its location, depending on their status in a local plan, strategy or policy. The user guide that accompanies the DEFRA metric 3.0 provides some guidance on how to assign strategic significance.

3.4.2 Strategic significance will be high if the location of the habitat is identified in a local plan, strategy or policy related to biodiversity. Medium strategic significance can be used where a location is deemed ecologically desirable for that particular habitat type. In the absence of any locally or nationally relevant strategic document indicating areas of significance for biodiversity, or robust ecological justification for a medium score, a low strategic significance score should be used.

3.4.3 The Natural England guidance provides the following example:

- *If woodland is planted in an area that has been identified in a Local Nature Recovery Strategy as a strategic corridor between two existing areas of woodland, it would be of high strategic significance.*
- *If the same location was not recognised in a local plan or strategy but the woodland would still create a strategic corridor, this would be of medium strategic significance.*
- *If the woodland was in a location not recognised in a local plan or strategy and was isolated from other woodland habitat it would be of low strategic significance.'*

3.4.4 Assessing strategic significance relies on published local strategies and objectives to identify local priorities for targeting biodiversity and nature improvement. These include (but are not limited to) Local Nature Recovery Strategies, local biodiversity action plans, National Character Area objectives, Local Planning Authority Local Ecological Networks, Shoreline Management Plans, estuary strategies and green infrastructure strategies that specifically identify strategic locations for biodiversity.

Assigning strategic significance

3.4.5 The guidelines above have been used to assign strategic significance to habitats on the site. A search for published local strategic plans for biodiversity was undertaken to inform this assessment. The following published strategies were identified for the site's location:

- *Oxford BAP*
- *Oxford Nature Recovery Network*

3.4.6 Strategic significance was assigned as follows:

- *If the site was within and identified strategic location and the specific habitats identified in that strategy were present on site, they were assigned high strategic significance.*
- *If the site was not in a strategic location, or none of the specific habitats identified in the strategy were present on site, then habitats could not be assigned high strategic significance.*
- *If a habitat was considered to provide a strategic feature within the landscape, or supported another ecological function within the landscape (e.g. provided a foraging resource for a priority species), then it was assigned medium strategic significance.*
- *Habitats which met none of the above criteria were assign low strategic significance.*

3.4.7 A discussion of each habitat parcel's strategic significance is provided in the relevant habitat section below.

3.5 Limitations and assumptions

3.5.1 The Biodiversity Metric 3.0 (Natural England, 2021) is an updated version of the old metric 2.0, however, it is likely it will be subject to further change and enhancement in the future. Known errors in the calculator tool have been avoided, however there are potentially further errors not yet identified.

3.5.2 This biodiversity net gain report only address impacts on habitats. Other ecological impacts, such as those to protected species or designated sites are not covered by this report.

3.5.3 The biodiversity net gain calculations have been undertaken based on the previous assessment not undertaken by Ethos, therefore, conditions assessment have not been provided as part of this assessment.

3.5.4 There are considered to be no significant limitations to the assessment.

4 BASELINE HABITATS

4.1 Introduction

The site covers 1.6 ha. The baseline biodiversity map showing the existing habitats across the site is shown in Figure 1 and the habitats are listed below:

- *Grassland – Modified grassland;*
- *Grassland – Other neutral grassland;*
- *Sparsely vegetated land; ruderal/ephemeral;*
- *Urban – Developed land; sealed surface;*
- *Urban – Vacant/derelict land/bareground;*
- *Hedgerow – Native species rich hedgerow.*



Figure 1 Existing habitats

4.2 Summary of baseline units

Based on the desktop assessment, area-based habitats total 1.6 ha and generate 0.196 biodiversity units. Hedgerow habitats total 0.497 km and generate 3.98 biodiversity units.

Table 2 Baseline habitat units assessment results

Habitat	Area (ha)	Distinctiveness	Condition	Strategic significance	Units
(A1) Modified grassland	0.391	Low	Poor	Low Strategic Significance	0.78
(A2) Other neutral grassland	0.743	Medium	Moderate	Low Strategic Significance	5.94
(A3) Ruderal/Ephemeral	0.399	Low	Poor	Low Strategic Significance	0.80
(A4) Developed land; sealed surface	0.03	V.Low	N/A - Other	Low Strategic Significance	0.00
(A5) Vacant/derelict land/ bareground	0.04	Low	Poor	Low Strategic Significance	0.08
Total	1.6				7.6

Table 3 Baseline linear units assessment results

Habitat	Length (km)	Distinctiveness	Condition	Strategic significance	Units
Hedgerow – Native species rich hedgerow	0.497	Medium	Moderate	Low Strategic Significance	3.98
Total	0.497				3.98

5 PROPOSED HABITATS

5.1 Habitat Map

5.1.1 The post-development habitats expected on site after construction are based on the development proposals and shown in figure 2 below. The development proposals identify the habitats lost to the development and the habitats created on site. The proposed habitats will be managed as prescribed in the Landscape Management Plan (20-4772 Fewcott Rd DLD V6 JHA 02032022).

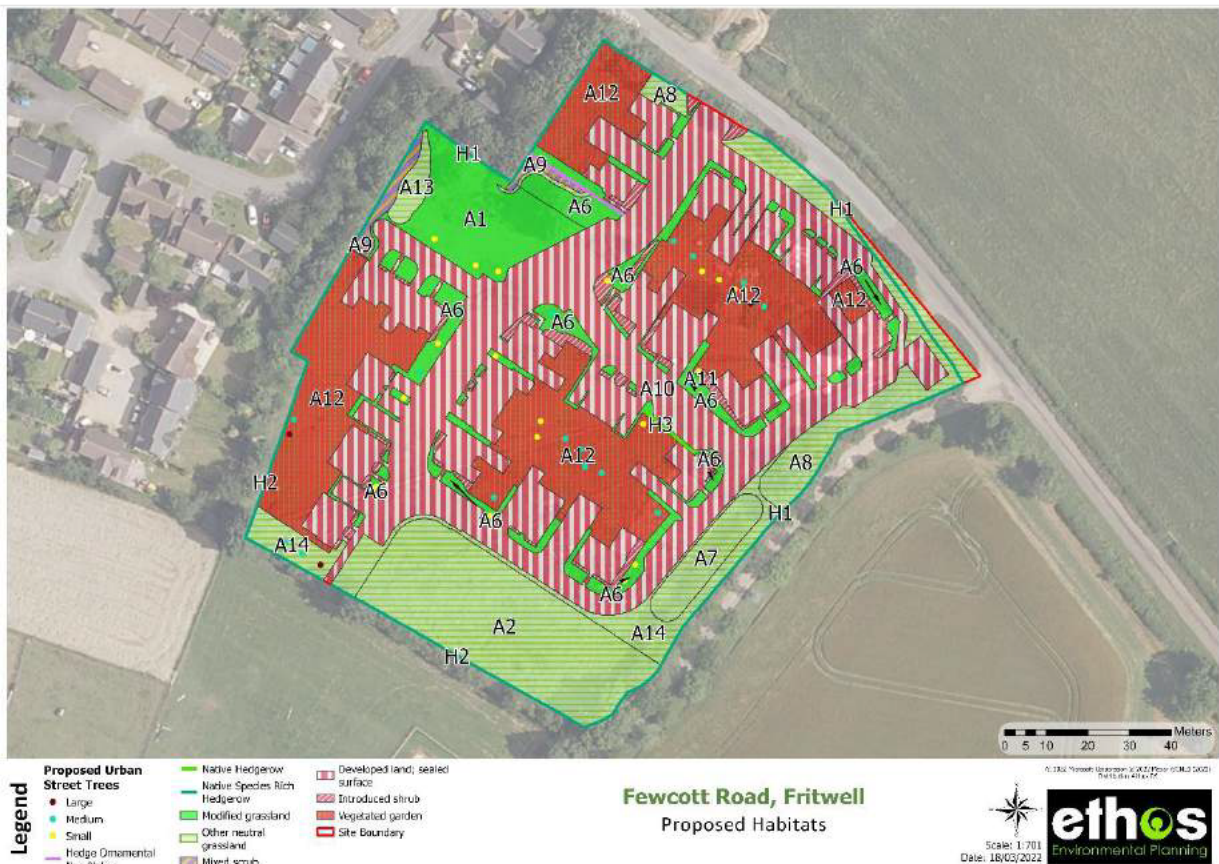


Figure 2 Proposed habitats

5.2 Created habitats

(A6) Grassland – modified grassland

5.2.1 Areas of modified grassland will be created as part of the street scene. The target condition for the habitat is moderate. Table 4 below shows how the habitat will achieve its target condition.

Table 4 Modified grassland proposed management

Condition Assessment Criteria	Proposed management
1. There must be 6-8 species per m2. Note - if a grassland has 9 or more species per m2 it should be	Pass – grassland sown with slow growing grass mix which respond well to regular mowing.

Condition Assessment Criteria	Proposed management
<i>classified as a moderate distinctiveness grassland habitat type. NB - this criterion is non-negotiable for achieving good condition.</i>	
<i>2. Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.</i>	Fail – Grassland will be regularly managed to a short sward in a uniform fashion.
<i>3. Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.</i>	Pass – Grassland will be managed to minimise scrub through regular mowing.
<i>4. Physical damage evident in less than 5% of total grassland area, such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities.</i>	Fail – Potential for damage through parking on grass verge if bollards are absent. Remedial measures to included should this occur.
<i>5. Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.</i>	Pass – small amounts of bare ground to be present within the sward but none should be present through damaging management activities. Remedial measures included.
<i>6. Cover of bracken less than 20%.</i>	Pass – Regular mowing will minimise the establishment of bracken.
<i>7. There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and undesirable species make up less than 5% of ground cover.</i>	Pass – Regular mowing will minimise the potential for invasive and undesirable species. Spot management of invasive species to be undertaken where necessary.

(A7) Grassland – other neutral grassland

5.2.2 Other neutral grassland will be created along the eastern boundary in the form of a Suds/wet grassland area. The target condition for the habitat is good. Table 5 below shows how the habitat will achieve its target condition.

Table 5 Other neutral grassland proposed management

Condition Assessment Criteria	Proposed management
<i>1. The appearance and composition of the vegetation closely matches characteristics of the specific grassland habitat type (see UKHab definition). Wildflowers, sedges and indicator species for the specific grassland habitat type are very clearly and easily visible throughout the sward.</i>	Pass – grassland will be sown with Emorsgate EM8 wetland meadow seed mixture. EM8 contains species suitable for seasonally wet soils and is based on the vegetation of traditional floodplain and water meadows. Soils in wet meadows may flood for short periods in winter but are usually well drained in summer.
<i>2. Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.</i>	Pass – will be managed using traditional grassland management techniques including rotational cutting to allow for sward variation.

Condition Assessment Criteria	Proposed management
3. Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	Pass – sections of bare ground will be present within the sward, but large areas will be remediated through additional sowing.
4. Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%.	Pass – The establishment of scrub will be monitored to minimise encroachment.
5. There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981). Combined cover of undesirable species and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area.	Pass – Spot treatments of invasive species will be undertaken where necessary.

(A8) Grassland – other neutral grassland

5.2.3 Other neutral grassland will be created northern and eastern boundary and will comprise of wildflower sections. The target condition for the habitat is good. Table 6 below shows how the habitat will achieve its target condition.

Table 6 Other neutral grassland proposed management

Condition Assessment Criteria	Proposed management
1. The appearance and composition of the vegetation closely matches characteristics of the specific grassland habitat type (see UKHab definition). Wildflowers, sedges and indicator species for the specific grassland habitat type are very clearly and easily visible throughout the sward.	Pass – grassland will be sown with wildflower seed mix to be confirmed.
2. Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Pass – will be managed using traditional grassland management techniques including rotational cutting to allow for sward variation.
3. Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	Pass – sections of bare ground will be present within the sward, but large areas will be remediated through additional sowing.
4. Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%.	Pass – The establishment of scrub will be monitored to minimise encroachment.
5. There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981). Combined cover of undesirable species and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area.	Pass – Spot treatments of invasive species will be undertaken where necessary.

(A9) Heathland and shrub – Mixed scrub

- 5.2.4 Native mixed species scrub will be created along the western edge of the western open space area in moderate condition. Table 7 shows how the proposed habitat will be managed to achieve its target condition.

Table 7 Mixed scrub proposed management

Condition Assessment Criteria	Proposed management
1. Habitat is representative of UKHab description (where in its natural range). There are at least three woody species, with no one species comprising more than 75% of the cover (except common juniper, sea buckthorn or box, which can be up to 100% cover).	Pass - Scrub will be planted with a range of native species included (but not limited to) field maple (<i>Acer campestre</i>), hazel (<i>Corylus avellana</i>), holly (<i>Ilex aquifolium</i>), hawthorn (<i>Crataegus monogyna</i>) and spindle (<i>Euonymus europaeus</i>).
2. There is a good age range – all of the following are present: seedlings, young shrubs and mature shrubs.	Pass – the scrub will be cut back on a rotational basis once established, removing approximately 25% each year. This will create a variation in the maturity of the scrub.
3. There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and undesirable species make up less than 5% of ground cover.	Pass – spot check treatments will be undertaken to remove any invasive which may establish.
4. The scrub has a well-developed edge with scattered scrub and tall grassland and/or herbs present between the scrub and adjacent habitat(s).	Pass – the rotational management of the scrub will create a varied edge habitat, with wildflower grassland proposed along the eastern and southern edges.
5. There are clearings, glades or rides present within the scrub, providing sheltered edges.	Fail

(A10) Urban – Developed land; sealed surface

- 5.2.5 Areas of developed land will be created in the form of residential dwellings, parking areas and roads.

(A11) Urban – Introduced shrub

- 5.2.6 Areas of introduced shrub will be created as part of the development. To maximise their value for biodiversity, these areas will include species that provide nectar and pollen sources for insects and berries for insects and birds.

Urban – street tree

- 5.2.7 A range of small and medium street trees will be planted across the site. This will include fruit bearing species to provide value for wildlife.

(A12) Urban – Vegetated garden

- 5.2.8 Vegetated gardens will be created as part of the street scene. These will be sown with a similar seed mix to A6; containing slow growing grasses which respond well to regular mowing.

(H2) Hedgerow – Native species rich hedgerow

- 5.2.9 Native species rich hedgerows will be planted as part along the southern, eastern and northern boundaries in good condition. Table 8 shows how the proposed habitat will achieve its target condition.

Table 8 Native species rich hedgerow proposed management

Condition Assessment Criteria	Proposed management
1. >1.5 m average height along length	Pass – Hedges will be allowed to establish to at least 2m tall.
2. >1.5 m average width along length	Pass – Hedges will be allowed to establish to at least 1.5m wide.
3. Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')	Pass – Neat hedgerows will be avoided, will be allowed to establish at ground level.
4. Gaps make up <10% of total length and - No canopy gaps >5 m	Pass – hedge to be planted at 5 specimens per 5m to minimise gaps.
5. >1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: - measured from outer edge of hedgerow, and · is present on one side of the hedge (at least)	Fail – Sections of hedge in the south will be adjacent to habitat retained outside of the control of the development and therefore it is unclear how it will be managed.
6. Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	Pass – Species indicative of nutrient enrichment will be managed out as part of the adjacent grassland management regime.
7. >90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	Pass – Invasive species will be monitored and removed through spot treatments where necessary.
8. >90% of the hedgerow or undisturbed ground is free of damage caused by human activities	Fail – some potential damage caused by human activities in the south of the site in adjacent habitat outside of development control.

(H3) Hedgerow – Native hedgerow

- 5.2.10 A native hedgerow will be planted as part of the street scene in moderate condition. Table 9 shows how the proposed habitat will achieve its target condition.

Table 9 Native hedgerow proposed management

Condition Assessment Criteria	Proposed management
1. >1.5 m average height along length	Fail – Hedge will be managed to approx. 1m tall
2. >1.5 m average width along length	Fail – Hedge will be managed to approx. 1m wide.

Condition Assessment Criteria	Proposed management
3. Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')	Pass – Will be allowed to establish at ground level.
4. Gaps make up <10% of total length and - No canopy gaps >5 m	Pass – hedge to be planted at 5 specimens per 5m to minimise gaps.
5. >1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: - measured from outer edge of hedgerow, and · is present on one side of the hedge (at least)	Fail – little to no adjacent vegetation.
6. Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	Pass – Species indicative of nutrient enrichment will be managed out as part of the adjacent grassland management regime.
7. >90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	Pass – Invasive species will be monitored and removed through spot treatments where necessary.
8. >90% of the hedgerow or undisturbed ground is free of damage caused by human activities	Pass – unlikely to be impacted by human activities, remedial measures to be implemented.

(H4) Hedgerow – Hedge ornamental non-native

- 5.2.11 An ornamental hedge is proposed as part of the street scene. This will be planted with non-native species which produce pollen or nectar which have value for insects and birds.

5.3 Enhanced habitats

(A13) Grassland – Other neutral grassland

- 5.3.1 Areas of modified grassland in the west of the site will be enhanced to other neutral grassland in moderate condition. This will be achieved through in a change in habitat management and the sowing of a wildflower seed mix through scarification of the existing soil.

(A14) Grassland – Other neutral grassland

- 5.3.2 Areas of other neutral grassland will be enhanced to good condition. This will be achieved through a change in management; allowing the grassland sward to grow and manage it using traditional grassland management techniques.

5.4 Summary

- 5.4.1 Within the site, area-based habitats generate 4.76 biodiversity units, of which 2.58 are from newly created habitats, with the remaining 2.18 from retained and enhanced habitats. Hedgerow habitats generate 3.68 biodiversity units, 2.4 units of which are from retaining hedgerows along the northern, eastern and western boundaries with the remainder coming from the creation of new hedgerows.

Table 10 *Summary of biodiversity units*

Habitat	Area (ha)	Distinctiveness	Condition	Strategic significance	Units	Type
(A6) Modified grassland	0.129	Low	Moderate	Low strategic significance	0.45	Creation
(A7) Other neutral grassland	0.028	Medium	Good	Low strategic significance	0.24	Creation
(A8) Other neutral grassland	0.086	Medium	Good	Low strategic significance	0.72	Creation
(A9) Mixed scrub	0.013	Medium	Moderate	Low strategic significance	0.09	Creation
(A10) Developed land; sealed surface	0.65	V.Low	N/A - Other	Low strategic significance	0.00	Creation
(A11) Introduced shrub	0.037	Low	Poor	Low strategic significance	0.07	Creation
(A12) Vegetated garden	0.347	Low	Poor	Low strategic significance	0.67	Creation
Urban Tree	0.112	Medium	Moderate	Low strategic significance	0.34	Creation
(A13) Other neutral grassland	0.01	Medium	Moderate	Low strategic significance	0.06	Enhance
(A14) Other neutral grassland	0.061	Medium	Good	Low strategic significance	0.66	Enhance
(A1) Modified grassland	0.078	Low	Poor	Low strategic significance	0.16	Retain
(A2) Other neutral grassland	0.164	Medium	Moderate	Low strategic significance	1.31	Retain
Total	1.6				4.76	

Table 11 *Baseline linear units assessment results*

Habitat	Length (km)	Distinctiveness	Condition	Strategic significance	Units	Type
(H1) Native species rich hedgerow	0.3	Medium	Good	Low Strategic Significance	2.4	Retain
(H2) Native Species Rich Hedgerow	0.147	Medium	Good	Low strategic significance	1.15	Creation
(H3) Native Hedgerow	0.015	Low	Moderate	Low strategic significance	0.05	Creation

(H4) Hedge Ornamental Non Native	0.027	V.Low	Poor	Low strategic significance	0.03	Creation
Total	0.49				3.63	

6 SUMMARY OF OVERALL BIODIVERSITY CHANGE

6.1 Based on the metric calculations, the proposed habitats on the site would deliver a net loss of biodiversity of -37.34% for habitats and -8.79% for hedgerows. Figure 3 shows the headline results from the metric.

On-site baseline	<i>Habitat units</i>	7.60
	<i>Hedgerow units</i>	3.98
	<i>River units</i>	0.00
On-site post-intervention <small>(Including habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	4.76
	<i>Hedgerow units</i>	3.63
	<i>River units</i>	0.00
On-site net % change <small>(Including habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	-37.34%
	<i>Hedgerow units</i>	-8.79%
	<i>River units</i>	0.00%
Off-site baseline	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Off-site post-intervention <small>(Including habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Total net unit change <small>(including all on-site & off-site habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	-2.84
	<i>Hedgerow units</i>	-0.35
	<i>River units</i>	0.00
Total on-site net % change plus off-site surplus <small>(including all on-site & off-site habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	-37.34%
	<i>Hedgerow units</i>	-8.79%
	<i>River units</i>	0.00%
Trading rules Satisfied?	No - Check Trading Summary	

Figure 3 Headline result from the DEFRA metric 3.0

7 OFFSITE DELIVERY OF BIODIVERSITY NET GAIN

- 7.1 To address the net loss of biodiversity on-site, an offset site was identified to deliver net gains for biodiversity.
- 7.2 The site, Goose Farm, is located in the village of Fritwell, approximately 300 metres to the east of the site (Figure 4).



Figure 4 - Location of Goose Farm in relation to the site.

- 7.3 The baseline habitats at Goose Farm are modified grassland, in a range of conditions. The baseline habitats generate 3.34 biodiversity units.
- 7.4 Proposals are to enhance the grassland by improving its botanical diversity and structure. This will be achieved through seeding and management by sheep grazing. New hedgerows will also be planted.
- 7.5 These proposals will generate 7.13 biodiversity units for area habitats and 1.84 biodiversity units for hedgerows. The net units for area habitats will be 3.80 units and 1.84 units for hedgerows.
- 7.6 The units generated on Goose Farm will be used to offset the impacts of the development at the Fewcott Road site. This means that the project will deliver an overall net gain for biodiversity as set out in table 12 below.

Table 12: Summary of biodiversity net gain for the development site and the offset site

	Fewcott Road	Goose Farm	Total
Area habitats			
Baseline units	7.6	3.34	
Proposed units	4.76	7.13	
Net units	-2.84	3.8	0.96
% net gain			51%
Hedgerow habitats			
Baseline units	3.98	0	
Proposed units	3.63	1.84	
Net units	-0.35	1.84	1.49
% net gain			34%

- 7.7 The funding for the offset site will be managed by the Trust for Oxfordshire’s Environment (TOE). TOE are an Oxfordshire-based environmental funding charity with a track record in securing and managing biodiversity offsets.
- 7.8 Funding from CALA Homes will be managed by TOE via an agreement with the landowner at Goose Farm. The landowner will undertake to enhance and manage the habitats at Goose Farm according to a management plan prepared for the site for 30 years.
- 7.9 Details of the biodiversity net gain assessment and the management plan for the site can be found in Appendix 2.

8 CONCLUSION AND RECOMMENDATIONS

- 8.1 The development proposals for the site would result in a net loss of biodiversity. The metric calculations show a net loss in area-based habitats of 2.84 biodiversity units. The proposals would also result in a net loss for hedgerows of 0.35 biodiversity units.
- 8.2 Local and national policy requires developments to deliver a net gain in biodiversity. In order to deliver a biodiversity net gain of 10%, a further 3.6 biodiversity units are required.
- 8.3 The biodiversity metric indicates a current loss of 2.95 biodiversity grassland units. The habitat trading summary within the biodiversity metric requires like-for-like compensation for the loss of grassland units. It has been calculated that 0.5 ha of modified grassland enhanced to other neutral grassland would achieve a biodiversity net gain of approximately 1% and satisfy the habitat trading requirements. A further 0.15 ha would achieve a 10% net gain
- 8.4 Given the habitats present on site and the requirements of the allocation, it will not be possible to deliver net gain on the site.

-
- 8.5 An offset has been identified within the village of Fritwell. Enhancement of grassland habitat will deliver sufficient biodiversity units to offset the development impacts and deliver a net gain for biodiversity. In addition hedgerow habitats will be created that will offset the loss of hedgerows on site.

 - 8.6 The offset will be managed by Trust for Oxfordshire’s Environment via an agreement with the landowner for 30 years. Details of the offset are provided in appendix 2.

 - 8.7 The offset site means that the scheme delivers a net gain for biodiversity in accordance with planning policy.

9 APPENDIX 1 - HEDGEROW CONDITION CRITERIA

Table 12 Hedgerow favourable conditions attributes

Hedgerow favourable condition attributes			
Attributes and functional groupings (A, B, C and D)		Criteria (the minimum requirements for 'favourable condition')	Description
Core groups – applicable to all hedgerow types			
A1.	Height	>1.5 m average along length	The average height of woody growth estimated from base of stem to the top of shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees. Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). A newly planted hedgerow does not pass this criterion (unless it is > 1.5 m height).
A2.	Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (e.g. blackthorn suckers) are only included in the width estimate when they >0.5 m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion
B1.	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')	This is the vertical gappiness of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).
B2.	Gap - hedge canopy continuity	· Gaps make up <10% of total length and · No canopy gaps >5 m	This is the horizontal gappiness of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small). Access points and gates contribute to the overall gappiness, but are not subject to the >5 m
C1.	Undisturbed ground and perennial herbaceous vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: · measured	This is the horizontal gappiness of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small).

Hedgerow favourable condition attributes			
Attributes and functional groupings (A, B, C and D)	Criteria (the minimum requirements for 'favourable condition')	Description	
Core groups – applicable to all hedgerow types			
		from outer edge of hedgerow, and · is present on one side of the hedge (at least)	Access points and gates contribute to the overall gappiness, but are not subject to the >5 m criterion (as this is the typical size of a gate).
C2.	Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	The indicator species used are nettles (<i>Urtica</i> spp.), cleavers (<i>Galium aparine</i>) and docks (<i>Rumex</i> spp.). Their presence, either singly or together, should not exceed the 20% cover threshold.
D1.	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	Neophytes are plants that have naturalised in the UK since AD 1500. For information on neophytes see the JNCC website and for information on invasive non-native species see the GB Non-Native Secretariat website.
D2.	Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (e.g. excessive hedge cutting).
Additional group – applicable to hedgerows with trees only			
E1.	Tree age	At least one mature tree per 30m stretch of hedgerow. A mature tree is one that is at least 2/3 expected fully mature height for the species.	This criterion addresses if there are sufficient mature trees (within the scope of planning timescales) which are of higher value to biodiversity.
E2.	Tree health	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens.

Table 13 Hedgerow condition assessment and weighting

Condition categories for hedgerows without trees		
Category	Maximum number of attributes that can fail to meet 'favourable condition' criteria in Table TS1-2	Metric Score
Good	No more than 2 failures in total; AND No more than 1 in any functional group.	3
Moderate	No more than 4 failures in total; AND Does not fail both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & C2 = Moderate condition).	2
Poor	Fails a total of more than 4 attributes; OR Fails both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & B2 = Poor condition).	1
Condition categories for hedgerows with trees		
Category	Maximum number of attributes that can fail to meet 'favourable condition' criteria in Table TS1-2	Metric score
Good	No more than 2 failures in total; AND No more than 1 failure in any functional group.	3
Moderate	No more than 5 failures in total; AND Does not fail both attributes in more than one functional group (e.g. fails attributes A1, A2, B1, C2 & E1 = Moderate condition).	2
Poor	Fails a total of more than 5 attributes; OR Fails both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & B2 = Poor condition).	1

10 APPENDIX 2 – GOOSE FARM BNG ASSESSMENT

Biodiversity Net Gain Assessment

Goose Farm, Fritwell

In support of application 21/02180/REM proposing residential development at land south of Fewcott Road, Fritwell

April 2022

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EXECUTIVE SUMMARY

This report summarises the delivery of biodiversity net gain at Goose Farm, Fritwell, in support of application 21/02180/REM proposing residential development at land south of Fewcott Road, Fritwell, in accordance with national planning policy. The existing baseline habitats are modified grassland which cover 0.82 ha and generate 3.34 biodiversity units. Enhancement of the grassland to other neutral grassland and the creation of hedgerows will generate 7.13 biodiversity units for area habitats and 1.84 biodiversity units for hedgerows.

Based on DEFRA biodiversity net gain metric 3.0 calculations, the proposed habitats on the site would result in a net gain in biodiversity of 113.81% for area habitats and a net gain of 100% for hedgerows.

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11 INTRODUCTION

- 11.1 The following report provides a summary of the biodiversity net gain calculations undertaken for Goose Farm, Fritwell, henceforth referred to as ‘the site’. The site has been identified as a receptor site to deliver BNG in conjunction with development to come forward at land south of Fewcott Road, Fritwell. The proposal should be read in conjunction with material accompanying planning application reference 21/02180/REM. The report sets out the policy background for biodiversity net gain, the baseline conditions of the site, the proposed site layout and the results of the net gain calculations.

12 POLICY BACKGROUND

12.1 National Planning Policy Framework

- 12.1.1 The National Planning Policy Framework (NPPF) sets out planning policy for England. Paragraph 174 of the NPPF states
“Planning policies and decisions should contribute to and enhance the natural and local environment by:...
- 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;...”
- 12.1.2 Paragraph 179 states
“To protect and enhance biodiversity and geodiversity, plans should:...
- b) 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.”
- 12.1.3 Paragraph 180 states
“d) development whose primary objective is to conserve or enhance biodiversity should be 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.”

12.2 Cherwell Local Plan

- 12.2.1 Cherwell District Councils Local plan ‘Policy ESD 10: Protection and Enhancement of Biodiversity and the Natural Environment’ states:
- 12.2.2 *Protection and enhancement of biodiversity and the natural environment will be achieved by the following:*
- *In considering proposals for development, a net gain in biodiversity will be sought by protecting, managing, enhancing and extending existing resources, and by creating new resources*

12.3 Environment Act 2021

- 12.3.1 The Environment Act 2021 includes provision for biodiversity net gain to be applied to every planning permission.

Schedule 14 of the draft Environment Bill sets out amendments to the Town and Country Planning Act 1990 for the inclusion of biodiversity net gain as follows:

“Biodiversity gain objective

(1) The biodiversity gain objective is met in relation to development for which planning permission is granted if the biodiversity value attributable to the development exceeds the pre-development biodiversity value of the onsite habitat by at least the relevant percentage.

(2) The biodiversity value attributable to the development is the total of—

(a) the post-development biodiversity value of the onsite habitat,

(b) the biodiversity value, in relation to the development, of any registered offsite biodiversity gain allocated to the development, and

(c) the biodiversity value of any biodiversity credits purchased for the development.

(3) The relevant percentage is 10%.”

- 12.3.2 The Environment Act received Royal Assent in November 2021, meaning that by November 2023 the expectation for all planning permissions to include a biodiversity net gain of at least 10% will become a legal requirement.

13 METHOD

13.1 UK Habitat Classification survey

- 13.1.1 The habitat survey was carried out according to the UKHabs Classification system². The survey included a detailed assessment of the land within the development boundary, including a description and mapping of all key features and habitat types. The survey was carried out to identify the range of habitats within the site and the predominant and notable species of flora.
- 13.1.2 Condition assessments were undertaken alongside the UKHab survey, in accordance with the technical guidance that accompanies the DEFRA biodiversity metric 3.0³. This involves assessing a series of attributes representing key physical characteristics of each habitat type. The attributes are used to assess whether the habitat is in a favourable condition. The habitats present on site were assessed as either poor, moderate or good condition. Guidance for assessment of hedgerows is detailed within Appendix 1.

13.2 Biodiversity Net Gain (BNG) assessment

- 13.2.1 This BNG assessment uses the following industry recognised best practice methods:
- *CIEEM, IEMA & CIRIA (2016). Biodiversity Net Gain: Good Practice Principles for Development;*
 - *Natural England (2021). Biodiversity Metric 3.0 – Auditing and Accounting for Biodiversity;*
 - *CIEEM (2021). Biodiversity net gain report and audit templates.*
- 13.2.2 Applying these standardised methods results in the calculation of a baseline biodiversity value, a post-development biodiversity value and a net change in biodiversity value associated with the proposed development.
- 13.2.3 The quantitative outcomes of the calculations are one component of the BNG assessment and associated good practice principles. A BNG assessment also requires the collation of qualitative evidence on the application of the mitigation hierarchy, stakeholder engagement and post-development habitat management. Collectively, these quantitative outcomes and qualitative evidence are used to inform the outcomes of the project-wide BNG assessment.

² Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020). UK Habitat Classification – Habitat Definitions V1.1 at <http://ukhab.org>

³ Stephan Panks, Nick White, Amanda Newsome, Jack Potter, Matt Heydon, Edward Mayhew, Maria Alvarez, Trudy Russell, Sarah J. Scott, Max Heaver, Sarah H Scott, Jo Tredweek, Bill Butcher and Dave Stone 2021. Biodiversity metric 3.0: Auditing and accounting for biodiversity – User Guide. Natural England.

13.3 Achieving BNG Good Practice Principles

13.3.1 This section sets out the 10 principles of biodiversity net gain and provides a summary of how these principles have been applied to the project from its inception to the current proposals.

Table 14 10 Principles of biodiversity net gain

PRINCIPLE	APPLICATION TO PROJECT
<p>Principle 1: Apply the mitigation hierarchy Do everything possible to first avoid and then minimise impacts on biodiversity. Only as a last resort, and in agreement with external decision-makers where possible, compensate for losses that cannot be avoided. If compensating for losses within the development footprint is not possible or does not generate the most benefits for nature conservation, then offset biodiversity losses by gains elsewhere.</p>	<p>The proposals aim to enhance biodiversity by improving the distinctiveness and condition of habitats on site. Existing scrub species will be relocated to create new hedgerows, reducing the need for new plants to be brought onto site.</p>
<p>Principle 2: Avoid losing biodiversity that cannot be offset by gains elsewhere Avoid impacts on irreplaceable biodiversity – these impacts cannot be offset to achieve no net loss or net gain.</p>	<p>No irreplaceable habitats are present on site</p>
<p>Principle 3: Be inclusive and equitable Engage stakeholders early, and involve them in designing, implementing, monitoring and evaluating the approach to Biodiversity Net Gain. Achieve net gain in partnership with stakeholders where possible, and share the benefits fairly among stakeholders.</p>	<p>The parish council were engaged as part of the development process to ascertain their views on the wider scheme and biodiversity net gain. The parish council were keen that any offset was delivered in Fritwell. Parish Council members canvassed residents to identify possible locations for offsetting and prospective landowners were referred to Ethos to carry out site surveys and develop offset plans. In addition, Trust for Oxfordshire’s Environment (TOE) have been involved to provide both scrutiny and legacy for the delivery of the proposed offset.</p>

<p>Principle 4: Address risk Mitigate difficulty, uncertainty and other risks to achieving net gain. Apply well-accepted ways to add contingency when calculating biodiversity losses and gains in order to account for any remaining risks, as well as to compensate for the time between the losses occurring and the gains being fully realised.</p>	<p>The proposals are to create species-rich grassland typical of the landscape. Management takes advantage of existing arrangements for grazing animals, therefore reducing the likely risk of failure. Monitoring will ensure that management issues are identified early and rectified.</p>
<p>Principle 5: Make a measurable net gain contribution Achieve a measurable, overall gain for biodiversity and the services ecosystems provide while directly contributing towards nature conservation priorities.</p>	<p>This report demonstrates that the net gains are measurable and realistic</p>
<p>Principle 6: Achieve the best outcomes for biodiversity Achieve the best outcomes for biodiversity by using robust, credible evidence and local knowledge to make clearly-justified choices when:</p> <ul style="list-style-type: none"> • <i>Delivering compensation that is ecologically equivalent in type, amount and condition, and that accounts for the location and timing of biodiversity losses;</i> • <i>Compensating for losses of one type of biodiversity by providing a different type that delivers greater benefits for nature conservation;</i> • <i>Achieving Biodiversity Net Gain locally to the development while also contributing towards nature conservation priorities at local, regional and national levels;</i> • <i>Enhancing existing or creating new habitat; and</i> • <i>Enhancing ecological connectivity by creating more, bigger, better and joined areas for biodiversity.</i> 	<p>The proposal at Goose Farm directly offset impacts at the nearby Fewcott Road, Fritwell, development site. Habitats created are similar to those lost, but are of a higher distinctiveness and condition than those lost, making a positive contribution to the local environment. The project also creates habitat that better links existing habitat in the local area.</p>

<p>Principle 7: Be additional Achieve nature conservation outcomes that demonstrably exceed existing obligations (i.e. doesn't deliver something that would occur anyway).</p>	<p>There are no requirements on this land to deliver biodiversity outcomes, therefore this project is genuinely additional.</p>
<p>Principle 8: Create a net gain legacy Ensure Biodiversity Net Gain generates long-term benefits by:</p> <ul style="list-style-type: none"> • <i>Engaging stakeholders and jointly agreeing practical solutions that secure net gain in perpetuity;</i> • <i>Planning for adaptive management and securing dedicated funding for long-term management;</i> • <i>Designing net gain for biodiversity to be resilient to external factors, especially climate change;</i> • <i>Mitigating risks from other land uses;</i> • <i>Avoiding displacing harmful activities from one location to another; and</i> • <i>Supporting local-level management of Biodiversity Net Gain activities.</i> 	<p>The offset will be managed and monitored by Trust for Oxfordshire's Environment, a local environmental charity. The site is located within the village of Fritwell and can be viewed from public rights of way.</p>
<p>Principle 9: Optimise sustainability Prioritise Biodiversity Net Gain and, where possible, optimise the wider environmental benefits for a sustainable society and economy.</p>	<p>The project sits alongside other sustainability measures on the property including renewable energy schemes. It also supports the rural economy by facilitating sheep grazing for a local farmer.</p>
<p>Principle 10: Be transparent Communicate all Biodiversity Net Gain activities in a transparent and timely manner, sharing the learning with all stakeholders.</p>	<p>This report provides transparent reporting on the delivery of biodiversity net gain for this scheme.</p>

13.4 Strategic Significance

- 13.4.1 Strategic significance relates to the spatial location of a habitat parcel at a landscape scale. It is based on the habitat type and its location, depending on their status in a local plan, strategy or policy. The user guide that accompanies the DEFRA metric 3.0 provides some guidance on how to assign strategic significance.
- 13.4.2 Strategic significance will be high if the location of the habitat is identified in a local plan, strategy or policy related to biodiversity. Medium strategic significance can be used where a location is deemed ecologically desirable for that particular habitat type. In the absence of any locally or nationally relevant strategic document indicating areas of significance for biodiversity, or robust ecological justification for a medium score, a low strategic significance score should be used.
- 13.4.3 The Natural England guidance provides the following example:
- *If woodland is planted in an area that has been identified in a Local Nature Recovery Strategy as a strategic corridor between two existing areas of woodland, it would be of high strategic significance.*
 - *If the same location was not recognised in a local plan or strategy but the woodland would still create a strategic corridor, this would be of medium strategic significance.*
 - *If the woodland was in a location not recognised in a local plan or strategy and was isolated from other woodland habitat it would be of low strategic significance.'*
- 13.4.4 Assessing strategic significance relies on published local strategies and objectives to identify local priorities for targeting biodiversity and nature improvement. These include (but are not limited to) Local Nature Recovery Strategies, local biodiversity action plans, National Character Area objectives, Local Planning Authority Local Ecological Networks, Shoreline Management Plans, estuary strategies and green infrastructure strategies that specifically identify strategic locations for biodiversity.

Assigning strategic significance

- 13.4.5 The guidelines above have been used to assign strategic significance to habitats on the site. A search for published local strategic plans for biodiversity was undertaken to inform this assessment. The following published strategies were identified for the site's location:
- *Oxfordshire Nature Recovery Network*
 - *Conservation Target Areas*

13.4.6 Strategic significance was assigned as follows:

- *If the site was within and identified strategic location and the specific habitats identified in that strategy were present on site, they were assigned high strategic significance.*
- *If the site was not in a strategic location, or none of the specific habitats identified in the strategy were present on site, then habitats could not be assigned high strategic significance.*
- *If a habitat was considered to provide a strategic feature within the landscape, or supported another ecological function within the landscape (e.g. provided a foraging resource for a priority species), then it was assigned medium strategic significance.*
- *Habitats which met none of the above criteria were assign low strategic significance.*

13.4.7 A discussion of each habitat parcel's strategic significance is provided in the relevant habitat section below.

13.5 Limitations and assumptions

13.5.1 The Biodiversity Metric 3.0 (Natural England, 2021) is an updated version of the old metric 2.0, however, it is likely it will be subject to further change and enhancement in the future. Known errors in the calculator tool have been avoided, however there are potentially further errors not yet identified.

13.5.2 This biodiversity net gain report only address impacts on habitats. Other ecological impacts, such as those to protected species or designated sites are not covered by this report.

13.5.3 The biodiversity net gain calculations based on field survey of habitats and their condition and mapping of habitat parcels in GIS. Habitat areas have been calculated in GIS and rounded to two decimal places.

13.5.4 Habitat surveys were carried out at a suitable time of year, but surveys were not exhaustive and may not have recorded all species present on site.

13.5.5 There are considered to be no significant limitations to the assessment.

14 BASELINE HABITATS

14.1 Introduction

14.1.1 The site covers 2.99 ha. The baseline biodiversity map showing the existing habitats across the site is shown in Figure 1 and the habitats are listed below:

- *Grassland – modified grassland;*



Figure 5 Existing habitats

14.1.2 A description of each habitat and its condition is given below. Area habitats are considered separately from linear habitats.

14.2 Area habitats

(A1) Grassland – Modified grassland

- 14.2.1 There are four parcels of modified grassland on site. The A1 parcel was dominated by cocksfoot (*Dactylis glomerata*), false oat-grass (*Arrhenatherum elatius*) and perennial rye grass (*Lolium perenne*), with frequent creeping buttercup, broad-leaved dock (*Rumex obtusifolius*), cleavers (*Galium aparine*) and clover (*Trifolium* spp.). Other species in the sward included common nettle (*Urtica dioica*), cow parsley (*Anthriscus sylvestris*) and creeping thistle (*Cirsium arvense*).
- 14.2.2 Table 2 shows the condition assessment, which categorises the habitat as low distinctiveness grassland in moderate condition.
- 14.2.3 The site is not within a location identified as a strategic priority. The habitat is generally of low value for biodiversity and is directly connected with other similar habitat in the area. A loss or change in this habitat parcel would have a negligible impact on wider ecosystem function in this location. As such it is of low strategic significance.

Table 15 Condition Assessment: Grassland – Modified grassland

Condition Assessment Criteria	Evidence	Pass / Fail
1. There must be 6-8 species per m2. Note - if a grassland has 9 or more species per m2 it should be classified as a moderate distinctiveness grassland habitat type. NB - this criterion is non-negotiable for achieving good condition.	Species poor sward, but average species per square metre is 6.	Pass
2. Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Good sward structure with varying height across the parcel.	Pass
3. Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Scrub cover exceeds 20%	Fail
4. Physical damage evident in less than 5% of total grassland area, such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities.	No damage recorded	Pass
5. Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	Bare ground is less than 1%	Fail
6. Cover of bracken less than 20%.	No bracken recorded.	Pass
7. There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and undesirable species make up less than 5% of ground cover.	Cow parsley greater than 5% cover	Fail

(A2) Grassland – modified grassland

- 14.2.4 Parcel A2 was dominated cocksfoot (*Dactylis glomerata*), false oat-grass (*Arrhenatherum elatius*) and perennial rye grass (*Lolium perenne*), with frequent creeping buttercup, broad-leaved dock (*Rumex obtusifolius*), cleavers (*Galium aparine*) and clover (*Trifolium* spp.). Other species in the sward included common nettle (*Urtica dioica*), cow parsley (*Anthriscus sylvestris*), creeping thistle (*Cirsium arvense*), lesser celandine (*Ranunculus ficaria*) and pignut (*Conopodium majus*).
- 14.2.5 Table 3 shows the condition assessment, which categorises the habitat as low distinctiveness grassland in poor condition.
- 14.2.6 The site is not within a location identified as a strategic priority. The habitat is generally of low value for biodiversity and is directly connected with other similar habitat in the area. A loss or change in this habitat parcel would have a negligible impact on wider ecosystem function in this location. As such it is of low strategic significance.

Table 16 Condition Assessment: Grassland – modified grassland

Condition Assessment Criteria	Evidence	Pass / Fail
1. There must be 6-8 species per m2. Note - if a grassland has 9 or more species per m2 it should be classified as a moderate distinctiveness grassland habitat type. NB - this criterion is non-negotiable for achieving good condition.	Species poor sward, but average species per square metre is 6.	Pass
2. Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Poor sward structure lacking tall areas of grass	Fail
3. Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Scrub cover exceeds 20%	Fail
4. Physical damage evident in less than 5% of total grassland area, such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities.	No damage recorded	Pass
5. Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	Bare ground is greater than 5%	Fail
6. Cover of bracken less than 20%.	No bracken recorded.	Pass
7. There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and undesirable species make up less than 5% of ground cover.	Common nettle exceeds 5% cover	Fail

(A3) Grassland – modified grassland

- 14.2.7 The A3 parcel was dominated by cocksfoot (*Dactylis glomerata*), false oat-grass (*Arrhenatherum elatius*) and perennial rye grass (*Lolium perenne*), with frequent creeping buttercup, broad-leaved dock (*Rumex obtusifolius*), cleavers (*Galium aparine*) and clover (*Trifolium* spp.). Other species in the sward included common nettle (*Urtica dioica*), cow parsley (*Anthriscus sylvestris*) and creeping thistle (*Cirsium arvense*).
- 14.2.8 Table 4 shows the condition assessment, which categorises the habitat as low distinctiveness grassland in moderate condition.
- 14.2.9 The site is not within a location identified as a strategic priority. The habitat is of high ecological and biodiversity value and is listed on the Priority Habitat Inventory for Traditional Orchard. A loss or change in this habitat parcel would likely have a significant impact on wider ecosystem function in this location. As such it is of medium strategic significance.

Table 17 Condition Assessment: Grassland – modified grassland

Condition Assessment Criteria	Evidence	Pass / Fail
1. There must be 6-8 species per m ² . Note - if a grassland has 9 or more species per m ² it should be classified as a moderate distinctiveness grassland habitat type. NB - this criterion is non-negotiable for achieving good condition.	Species poor sward, but average species per square metre is 6.	Pass
2. Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Good sward structure with varying height across the parcel.	Pass
3. Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Scrub cover exceeds 20%	Fail
4. Physical damage evident in less than 5% of total grassland area, such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities.	No damage recorded	Pass
5. Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	Bare ground is less than 1%	Fail
6. Cover of bracken less than 20%.	No bracken recorded.	Pass
7. There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and undesirable species make up less than 5% of ground cover.	Cow parsley greater than 5% cover	Fail

(A4) Grassland – modified grassland

- 14.2.10 The A3 parcel was dominated by cocksfoot (*Dactylis glomerata*), false oat-grass (*Arrhenatherum elatius*) and perennial rye grass (*Lolium perenne*), with frequent creeping buttercup, broad-leaved dock (*Rumex obtusifolius*), cleavers (*Galium aparine*) and clover (*Trifolium* spp.). Other species in the sward included common nettle (*Urtica dioica*), cow parsley (*Anthriscus sylvestris*) and creeping thistle (*Cirsium arvense*). Adjacent to the hedge lords and ladies (*Arum maculatum*) was recorded.
- 14.2.11 Table 5 shows the condition assessment, which categorises the habitat as low distinctiveness grassland in good condition.
- 14.2.12 The site is not within a location identified as a strategic priority. The habitat is generally of low value for biodiversity and is directly connected with other similar habitat in the area. A loss or change in this habitat parcel would have a negligible impact on wider ecosystem function in this location. As such it is of low strategic significance.

Table 18 Grassland – modified grassland

Condition Assessment Criteria	Evidence	Pass / Fail
1. There must be 6-8 species per m2. Note - if a grassland has 9 or more species per m2 it should be classified as a moderate distinctiveness grassland habitat type. NB - this criterion is non-negotiable for achieving good condition.	Species poor sward, but average species per square metre is 6.	Pass
2. Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Good sward structure with varying height across the parcel.	Pass
3. Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	No scrub recorded	Pass
4. Physical damage evident in less than 5% of total grassland area, such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities.	No damage recorded	Pass
5. Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	Bare ground is about than 1%	Pass
6. Cover of bracken less than 20%.	No bracken recorded.	Pass
7. There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and undesirable species make up less than 5% of ground cover.	No invasive species recorded; undesirable species less than 5% cover	Pass

14.3 Summary of baseline units

14.3.1 Within the site, area-based habitats total 0.82 ha and generate 3.34 biodiversity units.

Table 19 Baseline habitat units assessment results

Habitat	Area (ha)	Distinctiveness	Condition	Strategic significance	Units
Modified grassland	0.13	Medium	Moderate	Low Strategic Significance	0.53
Modified grassland	0.22	Medium	Poor	Low Strategic Significance	0.45
Modified grassland	0.24	Medium	Moderate	Low Strategic Significance	0.97
Modified grassland	0.23	Medium	Good	Low Strategic Significance	1.39
Total	0.82				3.34

15 PROPOSED HABITATS

15.1 Habitat Map

15.1.1 The post-development habitats expected on site after construction are based on the development proposals and shown in figure 2 below. The development proposals identify the habitats lost to the development and the habitats created on site.



Figure 6 Proposed habitats

15.2 Enhanced habitats

(A5) Grassland – other neutral grassland

15.2.1 All areas of modified grassland will be enhanced to other neutral grassland. Table 7 shows how the proposed habitat will be managed to achieve its target condition.

Table 20 Other neutral grassland proposed management

Condition Assessment Criteria	Proposed management
1. The appearance and composition of the vegetation closely matches characteristics of the specific grassland habitat type (see UKHab definition). Wildflowers, sedges and indicator	Species diversity will be increased by introducing seed into the sward and through grazing management by sheep.

Condition Assessment Criteria	Proposed management
<i>species for the specific grassland habitat type are very clearly and easily visible throughout the sward.</i>	
<i>2. Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.</i>	Low intensity sheep grazing will create a varied sward structure.
<i>3. Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.</i>	Grazing will create patches of bare ground in the grassland.
<i>4. Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%.</i>	Scrub will be reduced and managed through periodic cutting and low intensity sheep grazing. No bracken is present and is unlikely to colonise this site.
<i>5. There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981). Combined cover of undesirable species¹ and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area.</i>	Spot spraying of invasives will be carried where necessary. Low intensity grazing will reduce undesirable species, with occasional hay cuts reducing the presence of these species.

15.3 Summary

15.3.1 Within the site, area-based habitats generate 7.13 biodiversity units from enhancement of the existing grassland.

Table 21 Summary of biodiversity units

Habitat	Area (ha)	Distinctiveness	Condition	Strategic significance	Units	Type
Other neutral grassland	0.82	Medium	Good	Low strategic significance	7.13	Enhancement
Total	0.82				7.13	

16 SUMMARY OF OVERALL BIODIVERSITY CHANGE

16.1 Based on the metric calculations, the proposed habitats on the site would deliver a net gain of 3.8 biodiversity units (+113.8%). Figure 3 shows the headline results from the metric.

On-site baseline	<i>Habitat units</i>	3.34
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
On-site post-intervention (Including habitat retention, creation & enhancement)	<i>Habitat units</i>	7.13
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
On-site net % change (Including habitat retention, creation & enhancement)	<i>Habitat units</i>	113.81%
	<i>Hedgerow units</i>	0.00%
	<i>River units</i>	0.00%
Off-site baseline	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Off-site post-intervention (Including habitat retention, creation & enhancement)	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Total net unit change (including all on-site & off-site habitat retention, creation & enhancement)	<i>Habitat units</i>	3.80
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Total on-site net % change plus off-site surplus (including all on-site & off-site habitat retention, creation & enhancement)	<i>Habitat units</i>	113.81%
	<i>Hedgerow units</i>	0.00%
	<i>River units</i>	0.00%
Trading rules Satisfied?	Yes	

Figure 7 Headline result from the DEFRA metric 3.0

17 CONCLUSION AND RECOMMENDATIONS

- 17.1 The habitat enhancement proposals for the site will create species rich grassland of value for biodiversity. The proposals create 3.8 biodiversity units that can be used as an offset for development impacts.

18 APPENDIX 1 - HEDGEROW CONDITION CRITERIA

Hedgerow condition criteria

Table 22 Hedgerow favourable conditions attributes

Hedgerow favourable condition attributes			
Attributes and functional groupings (A, B, C and D)		Criteria (the minimum requirements for 'favourable condition')	Description
Core groups – applicable to all hedgerow types			
A1.	Height	>1.5 m average along length	The average height of woody growth estimated from base of stem to the top of shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees. Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). A newly planted hedgerow does not pass this criterion (unless it is > 1.5 m height).
A2.	Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (e.g. blackthorn suckers) are only included in the width estimate when they >0.5 m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion
B1.	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')	This is the vertical gappiness of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).
B2.	Gap - hedge canopy continuity	· Gaps make up <10% of total length and · No canopy gaps >5 m	This is the horizontal gappiness of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small). Access points and gates contribute to the overall gappiness, but are not subject to the >5 m
C1.	Undisturbed ground and	>1 m width of undisturbed ground with perennial	This is the horizontal gappiness of the woody component of the hedgerow.

Hedgerow favourable condition attributes			
Attributes and functional groupings (A, B, C and D)		Criteria (the minimum requirements for 'favourable condition')	Description
Core groups – applicable to all hedgerow types			
	perennial vegetation	herbaceous vegetation for >90% of length: · measured from outer edge of hedgerow, and · is present on one side of the hedge (at least)	Gaps are complete breaks in the woody canopy (no matter how small). Access points and gates contribute to the overall gappiness, but are not subject to the >5 m criterion (as this is the typical size of a gate).
C2.	Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	The indicator species used are nettles (<i>Urtica</i> spp.), cleavers (<i>Galium aparine</i>) and docks (<i>Rumex</i> spp.). Their presence, either singly or together, should not exceed the 20% cover threshold.
D1.	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	Neophytes are plants that have naturalised in the UK since AD 1500. For information on neophytes see the JNCC website and for information on invasive non-native species see the GB Non-Native Secretariat website.
D2.	Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (e.g. excessive hedge cutting).
Additional group – applicable to hedgerows with trees only			
E1.	Tree age	At least one mature tree per 30m stretch of hedgerow. A mature tree is one that is at least 2/3 expected fully mature height for the species.	This criterion addresses if there are sufficient mature trees (within the scope of planning timescales) which are of higher value to biodiversity.
E2.	Tree health	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens.

Table 23 Hedgerow condition assessment and weighting

Condition categories for hedgerows without trees		
Category	Maximum number of attributes that can fail to meet 'favourable condition' criteria in Table TS1-2	Metric Score
Good	No more than 2 failures in total; AND No more than 1 in any functional group.	3
Moderate	No more than 4 failures in total; AND Does not fail both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & C2 = Moderate condition).	2
Poor	Fails a total of more than 4 attributes; OR Fails both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & B2 = Poor condition).	1
Condition categories for hedgerows with trees		
Category	Maximum number of attributes that can fail to meet 'favourable condition' criteria in Table TS1-2	Metric score
Good	No more than 2 failures in total; AND No more than 1 failure in any functional group.	3
Moderate	No more than 5 failures in total; AND Does not fail both attributes in more than one functional group (e.g. fails attributes A1, A2, B1, C2 & E1 = Moderate condition).	2
Poor	Fails a total of more than 5 attributes; OR Fails both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & B2 = Poor condition).	1

19 APPENDIX 2 - COSTINGS

Habitat creation	Cost (£)		Cost (£)
Fencing for grazing	12000		
Grassland preparation	1245		
Woodland thinning and planting	3000		
Ecological monitoring	590		
Hedge planting	2900		
	19735		
Management Payment schedule			
2024 year 2 covers costs year 2-8	Cost (£)	years covering	
Grassland	760.38	7	5322.66
Woodland/hedge	1,159.27	1	1,159.27
Reporting	250	8	2000
Ecological	995	4	3980
			12461.93
2031 year 8 covers year 9-15			
Grassland	760.38	7	5322.66
Woodland/hedge	1344	1	1344
Reporting	250	7	1750
Ecological	995	2	1990
Fencing	17112	1	17112
			27518.66
2038 Year 15- to end of agreement			
Grassland	760.38	15	11405.7
Woodland/hedge	4233	1	4233
Reporting	250	15	3750
Ecological	995	3	2985
Fencing	24396	1	24396
			46769.7
		Sub-Total	109,485.29
		TOE fee (20%)	21,987.05
		Total fee	£131,382.34

20 APPENDIX 3 – MANAGEMENT PLAN

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Trust for Oxfordshire's Environment (Applications)

40 Biodiversity Gain

Goose Farm, Fritwell



awXOwdYY

Applicant details

Applicant name

| Dan Carpenter

Application details

Applicant name

| Aulden Dunipace

Type of organisation or business

| Private landowner

e-mail



Phone number



Address of applicant/s

| Goose Farm, North Street, Fritwell, OX27 7QS

Project Title

| Goose Farm, Fritwell

Project objectives

| To enhance grassland, and create and enhance woodland / hedgerows to deliver a net gain for biodiversity

Project overview

The project will enhance existing grassland, enhance woodland planting and create new hedgerows at Goose Farm. This will act as an offset for development at Fewcott Road Fritwell, as part of a planning application. Grassland will be enhanced via overseeding, and managed by grazing and hay cutting. Existing woodland will be thinned to improve its structure and hedgerow planting will be carried out to improve habitat connectivity within the site and across the neighbouring land. Woodland management will consist of periodic thinning and hedgerow management will consist of early trimming, followed by laying in later years where necessary and appropriate.

Project risks

1. Lack of access to grazing animals. Landowner currently has this, but hay cutting can be used instead of grazing.
2. Failure of planting. Replacement planting for tree failures where necessary.

Delivery time frame

| 2022-02-11

Monitoring and ecological recording plan

UKHab survey and condition assessment carried out in years 5, 10, 15, 20, 25 and 30. Condition assessments will use DEFRA metric 3.0 approach to ensure consistency with baseline. Compliance check in year 1.

Project management

Project implementation will be overseen by Dr Dan Carpenter, Associate Director, Ethos Environmental Planning. Dan has over 12 years of post-doctoral experience in ecology and biodiversity and has overseen many similar projects for clients across England. Management will be overseen by the land owner, Aulden Dunipace, using contractors where necessary. Mr Dunipace is a sustainability professional with a broad range of experience in this sector.

Funding amount sought

| 114,400.37

Estimated costs

	Activity	Unit price	No of years	total cost
1	Fencing	10.00	30	53,508.00
2	Ground prep and seeding for grassland	1,500.00	1	1,500.00
3	Woodland management (capital)	1,000.00	1	3,000.00
4	Hedgerow planting	11.60	1	2,900.00
5	Grassland management	300.00	30	22,501.21
6	Woodland management	1,100.00	30	6,736.56
7	Hedge trimming	500.00	5	3,000.00
8	Hedgelaying	1,500.00	2	3,000.00
9	Monitoring	590.00	6	9,008.93
10	Reporting	500.00	30	12,500.67

Local Planning Authority

| Cherwell

Site address

| Goose Farm, North Street, Fritwell, OX27 7QS

Post code and OS grid ref(s)

| SP525292

Total size to be included in the project (hectares) | 0.59

Site summary

| Modified grassland in moderate condition, with scattered trees. Currently grazed by sheep for part of the year.

Designated / protected status

| None

Strategic value | Within Nature Recovery Zone

Notable Features nearby

| None

Public access

| None

Map of the site



Legend
Native Species Rich Hedgerow
Other neutral grassland
Site Boundary

Goose Farm, Fritwell
Proposed Habitats

Scale: 1:1,237
Date: 28/03/2022
ethos
Environmental Planning

Tenure of applicant | Land owner occupier

Does the project involve more than one site or landowner? | No

Name of site owner | Aulden Dunipace

Current management

| Sheep grazing

Geology

| Bedrock - White Limestone Formation
Soilscape 5: Freely draining lime-rich loamy soils

Archaeology

| None

Health and safety

| Risk assessment will be written for site and contractors will be required to read and sign this.

Finances

| No

Insurance | Yes

I understand and accept that this will be a 30 year project | Yes

Long term future of the site

| Potential for the grassland to develop into a much more species rich sward, supporting a wide range of scarce and locally important species.

Consents/permissions

| None

Ecological assessments must follow the TOE BNG Monitoring Standards (provided on request from TOE) to ensure data sets are of sufficient quality to reliably inform the delivery of biodiversity net gain. In order to facilitate an efficient, reproducible and repeatable assessment of a project site, these data need to be collected in a consistent manner and to a common standard.

- Structure - the attributes recorded for each observation (e.g. grid reference, location name for species observations, and plant species lists for habitat etc...). Recording the same attributes for each observation ensures that assessments of biodiversity value and the calculation of biodiversity units are reproducible and repeatable and therefore that decisions made with that data are transparent and repeatable.
- Format - formats should be open where possible, but not be onerous for those using proprietary software to use. Therefore, it may be appropriate for more than one format to be specified. However, the use of proprietary formats should not exclude those without the appropriate licences from accessing and scrutinising these data.
- Transparency - data submitted should be full and complete. This means that decisions can be scrutinised without having to make assumptions about the data.
- Habitat classification system - The Defra biodiversity metric 3.0 uses the UK Habitat Classification System. Biodiversity impact assessments and unit calculations carried out using this metric therefore need habitat data to be classified according to this system. As such habitat data collected as part of net gain application will need to be classified according to this system.

Reliable ecological assessments are required, please ensure habitats are assessed at an appropriate time of the year (e.g. grasslands in summer).

Please be as detailed and accurate as possible. Proposed projects are assessed against this baseline data, and must demonstrate an

uplift in biodiversity, using the Defra Biodiversity Metric.

In most situations, the offset site should be surveyed by a competent botanist at an appropriate time of year for the habitat(s) present. Exceptions may be made where the site is an arable field with no field margins.

If you need assistance, organisations such as the Thames Valley Environmental Records Centre (TVERC) can provide support (<http://www.tverc.org/cms/>). Costs incurred may be recovered as part of a grant. Unsuccessful applicants will not be able to recover this cost from TOE, however, the data is useful to inform future site management and could be used for subsequent grant applications. Full details of the survey should be provided. This will provide information for TOE to assess the suitability of the offset proposal. It also establishes the baseline of the offset site before creation or restoration management has started and against which the success of the scheme in meeting its target(s) can be assessed.

Soil analysis (required in some cases)

It is important that soil surveys and analysis are carried out where soil is an important factor in habitat creation and management. Advice on how to undertake a soil survey can be found in Natural England Technical Information Note TIN035. The laboratory analysis should include pH, available phosphorus, available potassium, available magnesium, total nitrogen, and hand soil texture. Natural England Technical Advice Note TIN036 gives advice on the interpretation of soil analysis. The results of the soil analysis should be presented in the management plan.

Site evaluation

The results of the field survey and soil analysis should be used to assess site suitability for habitat creation or restoration. It is important that the right site is chosen for the proposed habitat. If site conditions are unsuitable e.g. nutrient levels too high, it is unlikely the scheme will succeed. TOE has to have confidence that the scheme can deliver the proposed improvements in habitat condition. Where it is not confident that the scheme can deliver, it will request further information or may reject the scheme and request that an alternative site is found.

Ecological baseline survey

DOCX	Goose Farm Fritwell BNG A... (6.5 MiB download)
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Please attach photos of the site

ZIP	Goose Farm.zip (6.8 MiB download)
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Please attach any relevant species list

DOCX	Goose Farm species list.d... (13 KiB download)
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Costings

| 114400.37

Capital costs

| 60653.00

Habitat management cost for life of project

| 32237.77

Reporting

| 12500.67

Monitoring costs

| 9008.93

Please attach any additional documents to assist with your application

Costing Spreadsheet

XLSX	Goose Farm costings.xlsx (12 KiB download)
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Additional documents for ecological baseline survey and assessment

DOCX	Goose Farm BNG proposals.... (2.7 MiB download)
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Submission check list

- ✓ Ecological baseline survey
- ✓ Habitat map
- ✓ Site description
- ✓ Species list
- ✓ Photographs of site
- ✓ Additional information

Please complete this once you have completed your visit,

Biodiversity Gain Plan

The preparation of a detailed Biodiversity Gain Plan (BGP) is an essential component in the development of a project. The plan should outline the management prescriptions that will be carried out in order to achieve the proposed habitat creation/restoration, and for the long-term management of the newly created/restored habitat(s).

Once completed, the form below becomes the project's BGP. Many details will have been sufficiently covered in Stages 1 and 2 and carried over. This stage is about finalising these details and adding any amendments or extra information required.

We only invite applicants to complete Stage 3 if we believe their project has a good chance of success.

Completing this stage

The BGP builds upon information already provided in Stages 1 and 2, which are used to pre-populate each section of the BGP accordingly. TOE will provide you with a project specific template when you progress to Stage 3. Drafting the BGP is also an opportunity to make any agreed amendments to the previously submitted information.

Decision

The BGP needs to be approved by TOE and is required to specify how the scheme will deliver the proposed biodiversity benefits. The funding decision will be based on information provided in the BGP, along with the assessor's report, so it is important that the plan provides adequate information. Where necessary, further information may be requested from the applicant.

We expect that best practice will be followed in managing offset schemes, and this should be reflected in the management plans. A large amount of published advice is available on habitat management for delivering conservation outcomes. TOE can point people in the direction of where to receive appropriate management guidance for the relevant habitat.

Biodiversity metric

XLSM	Goose Farm Biodiversity M... (3.9 MiB download)
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Map of habitat creation

| not able to upload sent by e-mail.

Habitat creation/enhancement key tasks and milestone

Milestone/task	Date and Duration
----------------	-------------------

1	Thin scrub	Autumn 2022, 3 days
2	Cut scarify and reseed grassland areas	Autumn 2022, 3 days
3	Plant hedgerows	Autumn 2022, 2 weeks
4	Fencing	Spring / Summer 2022, 2 weeks

Activity Schedule for habitat establishment

- Fencing of the offsetting areas will be carried out in Spring / Summer 2022. This is required to separate them from areas grazed by sheep through the spring and summer months. These fences will include gates which can be opened up after the main flowering period to allow the sheep in to graze the more species rich grassland. Fencing will be carried out by a contractor.
- Thinning of the scrub will take place in autumn, or possibly earlier subject to a breeding bird check. Much of the existing plants will be relocated to the hedgerow areas helping to quickly establish good quality hedges of mature plants. The aim is to leave some good specimen standard trees (oak, beech, Sorbus) and to relocate the scrub species (hazel, blackthorn, hawthorn, holly). Works will be undertaken by a contractor.
- Once the plants from the scrub areas have been relocated, the remaining areas of grassland will be cut and the land scarified to create bare ground patches. The site will be oversown with an appropriate seed mix (to be determined). The grassland will be cut and arisings removed 2-3 times between sowing and May the following year to help establish a strong root system. Works will be undertaken by a contractor. Subsequent management will be carried out by the landowner.
- The remaining hedgerows will be planted with whips in a double row at 4-6 trees per metre. Species will include (where available) hazel, hawthorn, blackthorn, spindle, dog rose, oak, sycamore, cherry, service tree, English elm (disease resistant), holly. Works will be undertaken by a contractor.

Activity schedule for habitat aftercare (for 30 year period)

- the grassland will be grazed with sheep between June/July and winter, plus some spring grazing each year. The aim should be to remove the grassy biomass to prevent it smothering the wild flower species. Grazing will be reviewed approximately monthly to ensure that there is sufficient grazing and that it doesn't get over grazed.
- livestock will be excluded between late April and mid-July, depending on the weather and other growing conditions that year. Grazing will be managed by the landowner.
- a review of the grassland will be carried out in year 3 and if it is deemed necessary a hay cut will be taken. Periodic hay cuts may be required to reduce the amount of grass in the sward.
- remaining scrub will be thinned in years 5, 10 20 and 30 to reduce vigorous growth and create a varied structure. Works will be carried out by a contractor.
- hedges will be trimmed annually to create a bushy form. Hedges will be laid in years 15 and 30. Works will be carried out by a contractor.

Risk register

	Hazard	Risk if no mitigation	Risk level for no mitigation High Medium Low	Mitigation	Risk level after mitigation, High, Medium, Low
1	Grassland species diversity does not meet target	Forecast net gain will not be achieved	Medium	Monitoring will review species diversity. Additional seed can be added if deemed necessary	Low
2	Grassland	Forecast net gain	Medium	Monitoring will	Low

	condition not achieved	will not be achieved		review grassland condition. Either grazing pressure will need to be adjusted, or hay cuts taken to meet target condition.
3	Plant translocations fail	Hedgerows are gappy.	Medium	Monitoring will review hedgerow condition. Additional planting in subsequent years would fill gaps.
				Low

Monitoring and reporting

DOCX	Goose Farm Fritwell Moni... (52 KiB download)
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Check list of information requested to inform the BGP

- ✓ Site photos
- ✓ Map
- ✓ Tenure
- ✓ Quotes
- ✓ Budget
- ✓ Consents/permissions
- ✓ Insurance
- ✓ Partner support
- ✓ Agri-environment scheme agreements
- ✓ Archaeology
- ✓ Other

Habitats and land cover, current and target

modified grassland, 1, 0.59, Moderate, neutral grassland, 0.59, Medium, Low, 12

Log in to trustforoxfordshire.grantplatform.com to see complete application attachments.


Goose Farm, Frit... 634 KiB

PDF
Goose Farm Frit... 1.1 MiB

