

Green Hill Solar Farm

EN010170

Environmental Statement

Appendix 9.13: Biodiversity Net Gain

Assessment

Revision A

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Date: November 2025

Document Reference: EX1/GH6.3.9.13_A

APFP Regulation 5(2)(a)



Appendix 9.13 – Biodiversity Net Gain Assessment (Revision A)

Schedule of Changes

Revision	Date	Section Reference	Description of Changes	Reason for Revision
A	Examination Deadline 1 – November 2025	Throughout	Updates to document references as required for submission at Deadline 1.	
		Throughout	Updated to include additional baseline survey results from Cable Route Corridor in Spring/Summer 2025.	
		Throughout	Updated to change treatment of grassy verge alongside track at FF26 to be well-managed Modified Grassland, rather than a tussocky grassland, as per [EX1/GH6.4.4.19_A]	
		Throughout	Updated to include minor amendments to the layout at Green Hill C, to include a Fire Rescue Service access area and passing places along the access track, as per [EX1/GH6.4.4.13.1_A]	

1.1 Introduction

Overview

- 1.1.1 Clarkson and Woods Ltd. was commissioned by Green Hill Solar Farm Limited to carry out a Biodiversity Net Gain (BNG) Assessment across nine parcels of land which are the focus of a proposed solar generating and battery energy storage scheme known as Green Hill A, A.2, B, C, D, E, F and G, and the Battery Energy Storage System (BESS) Site. These parcels are located in the county of Northamptonshire and are referred to hereafter as ‘the Sites’, or individually as given above. The project is classed as a Nationally Significant Infrastructure Project (NSIP) and will require an application for a Development Consent Order.
- 1.1.2 The purpose of this report is to provide a quantitative assessment of the likely BNG which the Scheme will achieve post-development, justifying and comparing the valuation of baseline and proposed habitats.



- 1.1.3 Whilst BNG delivery is not yet mandatory for NSIPs (this is expected to be the case from November 2025), the Scheme aims to adhere to good practice and deliver a net gain for biodiversity nonetheless.
- 1.1.4 This assessment has been prepared by Adèle Remazeilles MSc and Chris Poole MSc, who are both Associate members of the Chartered Institute of Ecology and Environmental Management (CIEEM). The biodiversity calculations and this report have been subject to a two-stage quality assurance review by appropriately experienced senior consultants who are members of CIEEM.
- 1.1.5 This report is supported by the following figures:
- Figure 9.13.1 - Biodiversity Net Gain Baseline (Green Hill A)
 - Figure 9.13.2 - Biodiversity Net Gain Baseline (Green Hill A.2)
 - Figure 9.13.3 - Biodiversity Net Gain Baseline (Green Hill B)
 - Figure 9.13.4 - Biodiversity Net Gain Baseline (Green Hill C)
 - Figure 9.13.5 - Biodiversity Net Gain Baseline (Green Hill D)
 - Figure 9.13.6 - Biodiversity Net Gain Baseline (Green Hill E) (1 of 2)
 - Figure 9.13.7 - Biodiversity Net Gain Baseline (Green Hill E) (2 of 2)
 - Figure 9.13.8 - Biodiversity Net Gain Baseline (Green Hill BESS)
 - Figure 9.13.9 - Biodiversity Net Gain Baseline (Green Hill F) (1 of 3)
 - Figure 9.13.10 - Biodiversity Net Gain Baseline (Green Hill F) (2 of 3)
 - Figure 9.13.11 - Biodiversity Net Gain Baseline (Green Hill F) (3 of 3)
 - Figure 9.13.12 - Biodiversity Net Gain Baseline (Green Hill G)
 - Figure 9.13.13 Biodiversity Net Gain Proposed (Green Hill A)
 - Figure 9.13.14 Biodiversity Net Gain Proposed (Green Hill A.2)
 - Figure 9.13.15 Biodiversity Net Gain Proposed (Green Hill B)
 - Figure 9.13.16 Biodiversity Net Gain Proposed (Green Hill C) - Revision A
 - Figure 9.13.17 Biodiversity Net Gain Proposed (Green Hill D)
 - Figure 9.13.18 Biodiversity Net Gain Proposed (Green Hill E) (1 of 2)
 - Figure 9.13.19 Biodiversity Net Gain Proposed (Green Hill E) (2 of 2)
 - Figure 9.13.20 Biodiversity Net Gain Proposed (Green Hill BESS)
 - Figure 9.13.21 Biodiversity Net Gain Proposed (Green Hill F) (1 of 3)
 - Figure 9.13.22 Biodiversity Net Gain Proposed (Green Hill F) (2 of 3)
 - Figure 9.13.23 Biodiversity Net Gain Proposed (Green Hill F) (3 of 3) - Revision A
 - Figure 9.13.24 Biodiversity Net Gain Proposed (Green Hill G)



Assessment Scope

- 1.1.6 This report, alongside Figures 9.13.1-9.13.12, provides a quantitative baseline of the biodiversity value of the Sites. Together with Figures 9.13.13-9.13.24 and the Detailed Landscape and Ecological Mitigation Plans **[APP-207 – APP-219]**, it also sets out the habitat creation, mitigation and enhancement measures which will be implemented to achieve BNG. The Cable Route Corridor also forms part of the Scheme's Order Limits, although habitats here will be subject to temporary impacts only. A discussion of BNG in relation to the Cable Route Corridor is provided in this report in Section 1.12, although the assessment focuses on the Sites.
- 1.1.7 Habitat features are used as a proxy measure for quantifying the value and importance of nature within the Sites. This enables assessments to be made on the present and future biodiversity value of a site through the calculation of biodiversity gains and losses. The process itself follows the mitigation hierarchy, which prioritises effort to first be made to avoid impacts, then minimise and only compensate at a last resort. It should be noted that the mitigation hierarchy has been followed throughout the scheme design and assessment process and as such, no off-site habitat compensation is considered necessary as significant impacts have been avoided through design and mitigation.
- 1.1.8 Whilst the approach quantifies biodiversity loss or gain, it is separate to the legal and planning duties to take account of the protection afforded to habitats and species, which decision-makers and developers should discharge. Therefore, relevant assessments and consideration are still given to these to ensure legal compliance and that no environmental offences are committed, as set out in Chapter 9 of the Environmental Statement (ES) Revision A **[EX1/GH6.2.9_A]** and the Outline Ecological Protection and Mitigation Strategy (OEPMS) Revision A **[EX1/GH7.5_A]**.



- 1.1.9 This document aims to:
- Establish the total number of Habitat Units (HU), Hedgerow Units (HeU) and Watercourse Units (WU) present on the Sites at baseline (baseline units);
 - Establish the total number of HU, HeU and WU which will be lost, created, retained or enhanced during the delivery of ecological measures during construction or once the Sites become operational;
 - Determine whether the proposal will result in net loss, no net loss or a net gain for biodiversity and to what extent;
 - Justify how each of the CIEEM BNG Principles (Ref.1) have been applied to the Sites; and
 - Establish how BNG will be secured at the Sites in the long term.
- 1.1.10 Whilst illustrative layout plans have been included in the DCO Application Figures 4.1 to 4.8 **[APP-193 – APP-202]**, this represents one example of how the Scheme could be developed in accordance with the Concept Design Parameters and Principles Revision A **[EX1/GH7.17_A]**. The ability of the Applicant to micro-site during construction is an important consideration and this may be required to reflect any technological advancement or changes in plant design or shape.
- 1.1.11 Aspects of the Scheme that require design flexibility include, but are not limited to:
- The arrangement of the Solar PV Panels and panel type/specification;
 - The arrangement of associated development such as the Conversion Units/Inverters; Battery Energy Storage System (BESS) Area; Substations; and
 - The exact routing of the Grid Connection Cables within the Cable Route Corridor.
- 1.1.12 A BESS compound may be sited at Green Hill BESS, as shown on Figure series 4.9_Illustrative Layout Plan Green Hill BESS **[APP-203 – APP-204]**, or also at Green Hill C as shown on Figure 4.4.1 Illustrative Layout Plan Green Hill C_Option A **[APP-196]** and Figure 4.4.2 Illustrative Layout Plan Green Hill C_Option B **[APP-197]**. The draft DCO Revision A **[EX1/GH3.1_A]** seeks consent for both locations, and the final layout of the BESS compound(s) will be determined during detailed design.
- 1.1.13 Given that the design of the Scheme requires an element of flexibility, the BNG assessment provided in this document should be treated as indicative, and may be subject to minor changes based on the final layout of the Scheme. For the purposes of this assessment, the locations and arrangement of Solar PV Panels have been taken from the Illustrative Layout Plans **[APP-193 – APP-204]**, and the locations and extent of the BESS areas have been taken from the Option A layouts for Green Hill C **[APP-198]** and Green Hill BESS **[APP-203]** respectively.



Relevant Documents

- 1.1.14 This document makes reference to, and should be read in conjunction with, the following documents:
- Outline Landscape and Ecological Management Plan (OLEMP) Revision A **[EX1/GH7.4_A]**
 - Outline Ecological Protection and Mitigation Strategy (OEPMS) Revision A **[EX1/GH7.5_A]**
 - Environmental Statement Chapter 9 – Ecology and Biodiversity Revision A **[EX1/GH6.2.9_A]**
 - Landscape and Ecology Mitigation Plans **[APP-207 – APP-219]**

Relevant Policy & Legislation

- 1.1.15 The following BNG-related policies are considered pertinent to the Sites and the proposals. The text of each policy is given in turn in Annex A at the end of this report.

Relevant Legislation

The Environment Act (2021) (Ref.6)

Relevant National Planning Policies

- Overarching National Policy Statement for Energy (EN-1) (2024) (Ref.4)
- The National Policy Statement for Renewable Energy Infrastructure (EN-3) (2024)) (Ref.3)
- National Policy Statement for Electricity Networks Infrastructure (EN-5) (2024) (Ref.5)
- National Planning Policy Framework (February 2025) (Ref.2)

Relevant Local Planning Policies

- Milton Keynes Council Plan: MK 2016-2031 (adopted March 2019) (Ref.7)
- MK City Plan 2050 (not adopted) (Ref.8)
- The Plan for the Borough of Wellingborough - Adopted Plan (adopted February 2019) (Ref.9)
- Settlements and Countryside Local Plan for Daventry District 2011-2029 (adopted February 2020) (Ref.10)
- Northamptonshire Biodiversity Supplementary Planning Document - August 2015 (Ref.11)
- Northamptonshire Biodiversity Action Plan (3rd edition, 2015-2020) (Ref.12)
- Northamptonshire Local Nature Recovery Strategy (2025) (Ref.13)
- Biodiversity Opportunities Mapping produced by Natural Capital Solutions and Northamptonshire Biodiversity Records Centre (NBRC).



Consultation

- 1.1.16 Full details of the consultation relevant to Ecology and Biodiversity is displayed in Chapter 9 of the Environmental Statement Revision A **[EX1/GH6.2.9_A]** and Appendix 9.4: Consultation Responses **[APP-087]**. A summary of consultation relevant to the BNG assessment is provided below.

North Northamptonshire Council

- 1.1.17 A meeting was held with North Northamptonshire Council on 29th February 2024. During this meeting, the then LPA Ecologist, Gareth Ryman, advised the following re. BNG:
- Local Nature Recovery Networks were at the time in the process of being established and should be considered for a Scheme of this scale.
 - Landscape mitigation will need to be reflected in the submitted BNG metric and related BNG condition assessments

Natural England

- 1.1.18 Natural England was consulted in regard to BNG and the approach to be taken for the Scheme. Natural England responded to the Applicant Ecologist's query re. BNG via email on 13th February 2025 and confirmed the following:
- Natural England have no current timeline for BNG guidance for NSIPs.
 - Natural England's comments are only advisory and intended to help align the Scheme with best practice as BNG is not yet mandatory. However, Natural England would expect that any deviations from the Town and Country Planning Act 1990 (as amended) principles (e.g. securing habitat for 30 years or inclusion/ exclusion of certain areas) should be explained and fully justified within any reports.
 - Natural England would strongly recommend that the Scheme aims for the minimum of 10% gain to align with good practice. Commitments to BNG should be secured in the DCO.
 - The mitigation hierarchy should be followed to prioritise the avoidance of impacts wherever possible.
 - Land that has temporary impact and can be restored to condition within two years still needs to be included within the metric, with temporary impacts highlighted. Any land that will take more than two years to restore can be secured in the DCO.



1.2 Methods

BNG Assessment

- 1.2.1 This report follows the guidance set out within *Biodiversity Net Gain Report & Audit Templates (Version 1)*. CIEEM. July 2021 (Ref.14). It is also in line with the *British Standard 8683:2021 (Process for Designing and Implementing Biodiversity Net Gain)* (Ref.15).
- 1.2.2 The stages of design of the Site and application of the mitigation hierarchy have followed *Biodiversity Net Gain: Good Practice Principles for Development (CIEEM, CIRA, IEMA 2016)* (Ref.1).
- 1.2.3 The Statutory Biodiversity Metric, referred to hereafter as ‘the Metric’, has been used to complete the calculation and assessment which accompanies this document, with mapping carried out on QGIS Version 3.34 or later.
- 1.2.4 Figures showing baseline and proposed habitats across all of the Sites are provided at the end of this document.
- 1.2.5 Modular River Physical surveys (MoRPh) of all watercourses within the Sites were undertaken between October 2024 – March 2025 by accredited MoRPh surveyors. At least 5 modules (sample points) were undertaken for subreach samples of the watercourses within the Sites to obtain preliminary condition scores. A final condition score for each subreach was obtained by combining the field survey results with a desk-based ‘river type’ assessment within Cartographer (Ref.16) with reference to the MoRPh survey Technical Reference Manual and A Guide to Assessing River Condition (Ref.17) (part of the rivers and streams component of the Biodiversity Net Gain Metric). Surveys were completed in line with the guidance provided in the MoRPh Survey Technical Reference Manual 2022 version (Ref.18). Assessments of riparian and watercourse encroachment were largely informed by desk-based assessment of satellite imagery and habitat mapping, in combination with surveyor observations and photographs from the field. Where relevant, data collected during MoRPh surveys were also used to inform the assessment.

Quality Assurance

- 1.2.6 A suitably competent person is defined within the BNG British Standard BS8683:2020 as a ‘person who can demonstrate they have acquired through training, qualifications or experience, or a combination of these, the knowledge and skills enabling that person to perform a specified task.’
- 1.2.7 The preparation of this BNG assessment has been led by Adèle Remazeilles who is an Associate member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and the technical lead in BNG at Clarkson & Woods.
- 1.2.8 Since joining Clarkson & Woods in 2018, Adèle has taken the lead on Clarkson and Woods’ Biodiversity Net Gain work and is highly conversant in the use of the Metric. Adèle has acquired experience through attending many training and conference relating to BNG. Adèle provides BNG training and support to the rest of the team in the use of various Metrics and is proficient in the use of QGIS to produce professional mapping as well as in underpinning Metric calculations.



- 1.2.9 The report has been subject to a two-stage quality assurance review by appropriately experienced senior consultants who are full members of CIEEM.

Limitations

- 1.2.10 The number of rows generated by the overlay of baseline and proposed habitat once mapped on GIS approached 2,124 in the case of Habitat Units, 762 for Hedgerow Units and 77 for Watercourse Units. As per the Statutory Biodiversity Metric QGIS template and GIS import tool User Guide (Natural England, July 2024), data have been consolidated into groups of identical values (i.e., multiple polygons with identical baseline values proposed to have identical outcomes) for simpler representation within the Metric. If requested, the raw data can be provided in full.
- 1.2.11 In addition, condition assessment information for each individual habitat parcel/feature recorded has not been presented in this appendix, given the number of parcels recorded, as detailed above. Instead, summaries of the overall condition scores for each habitat/hedgerow/watercourse type is provided.
- 1.2.12 It is anticipated that a non-significant margin of error in the mapping may occur throughout the process from collecting data in the field to mapping on GIS software.
- 1.2.13 The River Condition Assessment (RCA) methodology is inherently limited by its reliance on sampling small subreaches (at least 20%) and extrapolating the results to represent a broader watercourse section, as far as it is considered relevant. The subreach lengths to survey were strategically chosen to represent the typical condition of the river, following guidance set out within the Guide to Assessing River Condition Watercourse (Ref.19). This is not considered to be a significant limitation to the baseline survey as it provides a good representation of the watercourse characteristics; however, it does not provide complete information on all types and extents of habitats, and all human pressures and interventions along the entire length of watercourse.
- 1.2.14 RCA guidance acknowledges that identifying an overdeep channel is best undertaken by a geomorphologist but provides a simple river shape calculation to identify whether a site is likely to have been affected by 'overdeepening'. In combination with each river shape calculation, on-site observations and professional judgement were used by accredited MoRPh surveyors to consider overdeepening at the Site. It was subsequently found that all watercourses within the Site had likely been overdeepened and their condition class was therefore downgraded by one condition. This is not considered to be a significant limitation as no change in condition class of the watercourses has been proposed, and uplift is achieved by changes to riparian encroachment only, but the limitation has been noted given that the overdeepening assessment has an overall bearing on the BNG condition assessment of a watercourse.



1.3 Baseline Habitats

Strategic Significance

- 1.3.1 Given that any existing valuable habitats identified within Biodiversity Opportunity Mapping or in the North Northamptonshire Local Nature Recovery Strategy (LNRS) areas will be retained within the Scheme, no baseline habitats were afforded an elevated Strategic Significance score at baseline, and therefore the base 'Area/compensation not in local strategy/no local strategy' Strategic Significance category was applied to all existing habitats. However, Strategic Significance multipliers were applied to some proposed habitats where habitat creation/enhancement met the objectives and the locations of the LNRS target areas. This is discussed further in Section 1.7: Proposed Habitats. The Biodiversity Opportunity Mapping (BOM) areas are considered to have been superseded following the publication of the LNRS, and therefore the BOM areas have not been considered in the Strategic Significance Assessment. Nevertheless, habitat creation measures within the Sites have been prepared with the contribution to the objectives of the BOM in mind. Further details of how the Scheme meets the objectives of the BOM areas is included in the OLEMP Revision A [EX1/GH7.4_A].

Irreplaceable Habitats

- 1.3.2 It is acknowledged that ancient and veteran trees are classified as 'Irreplaceable Habitat' under The Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024 (Ref.20). One ancient and 36 veteran trees were recorded within the Sites (ES Chapter 19: Arboriculture [APP-056] refers). These trees have been marked as Irreplaceable Habitat within the metric for clarity, and will all be retained through the Scheme.

Baseline Survey

Cropland Habitats

- 1.3.3 Condition assessments are Not Applicable for all habitats listed within the broad habitat type 'Cropland'.

Cereal Crops

- 1.3.4 The cereal crop fields occupied the vast majority of the Sites' areas, and were intensively farmed monocultures, which are likely to receive periodic fertiliser and pesticide treatments.

Non-cereal Crops

- 1.3.5 Several fields within the Sites were planted with non-cereal crops such as legumes.

Arable Field Margins: Tussocky

- 1.3.6 As per the UK Habitat Classification System, arable field margins were considered to be sited on the outer 2 – 12m margin of arable fields and were understood to be managed specifically to provide benefits for wildlife. Margins wider than 12m were classified as their relevant habitat category such as a grassland type or ruderal/ephemeral, depending on the dominant vegetation type



present. Margins narrower than 2m were considered to be contiguous with hedgerow ground flora and were included within the Metric as such.

- 1.3.7 Arable field margins across the Sites were generally very narrow (<2m wide and therefore covered within the relevant hedgerow type), although tussocky arable field margins which have been purposefully left wide and managed for wildlife were present at Green Hill A, B, C, D, E and F. Generally, they were species-poor and relatively uniform in structure, being cut most years in order to halt any scrub encroachment from hedgerows. These margins typically comprised species-poor grassland with occasional ruderal species.

Arable Field Margins: Game Bird Mix

- 1.3.8 Several fields, the majority of which being located at Green Hill C and E, were planted with strips of wild bird cover crops, left unharvested for seed to benefit farmland birds.

Arable Field Margins: Pollen and Nectar

- 1.3.9 Several field margins across many of the Sites had been sown with wildflowers that are of particular value for nectar-feeding insects.

Temporary Grass and Clover Leys

- 1.3.10 One field at Green Hill A, four fields at Green Hill E and six fields at Green Hill G were planted with a temporary perennial rye grass and clover ley.

Winter stubble

- 1.3.11 Seven Green Hill C fields and four Green Hill E fields were left as winter stubbles.

Grassland Habitats

Other Neutral Grassland

- 1.3.12 Several grassland fields in Green Hill A, C, E, F, and G were assessed as being 'Other Neutral Grassland'. These fields were either managed as grazed pasture (horses, livestock) or comprised fallow fields, presumably as part of agri-environmental agreements. These have a higher botanical diversity and constitute the most likely areas to support notable plant species within the Sites. Other areas of Other Neutral Grassland across the Sites were found in margins and field corners of smaller fields.

- 1.3.13 The majority of existing Other Neutral Grassland achieved a Moderate condition (76.2%), with 22% achieving Poor condition, and 1.8% achieving Good condition. This was largely due to the lack of species and structural diversity of the grasslands.

Modified Grassland

- 1.3.14 Modified Grassland, usually managed via sheep or horse grazing, or else cut for silage, was recorded across all Sites (excluding Green Hill A.2 and BESS) but were most prevalent at Green Hill E and F. Modified Grassland was also recorded in field margins and along grassy tracks. These areas featured relatively low botanical diversity.



- 1.3.15 The majority of existing Modified Grassland achieved a Poor condition (57.7%) due to failing Criterion A which requires a diversity of 6-8 species per m², however 19% achieved a Moderate condition and 23.2% were in Good condition.

Heathland and Shrub Habitats

Mixed Scrub

- 1.3.16 Small pockets of Mixed Scrub were recorded within Green Hill A, B, C and E. Generally, these areas formed isolated patches at field edges or surrounding ponds, but in some places were encroaching into some smaller grassland fields. At Green Hill E, frequent scrub adjacent to tall, species-rich hedgerows served to enhance the habitats present on Site by strengthening habitat connectivity between boundary features.

- 1.3.17 All Mixed Scrub achieved a Moderate condition except for one area located at Green Hill C which achieved a Good condition.

Blackthorn Scrub

- 1.3.18 Several areas of dense scrub dominated by blackthorn *Prunus spinosa* were recorded within Green Hill E. All Blackthorn Scrub habitat was attributed a Poor condition, mostly due the dominance of a single species.

Bramble Scrub

- 1.3.19 Areas of dense Bramble Scrub were recorded at Green Hill D, E and F. Condition assessments are Not Applicable for this habitat type.

Lakes – Ponds (Priority Habitat)

- 1.3.20 A total of 22 ponds were recorded across the Sites, typically associated with the local ditch network. However, occasional larger ponds were recorded, such as within fields at Green Hill A, B and E.

- 1.3.21 A defunct, recently infilled pond was also recorded at Green Hill BESS.

- 1.3.22 Ponds qualify as being a Priority Habitat if they support species of high conservation importance, including UKBAP species. All on-Site ponds have therefore been assumed to constitute Priority Habitat given the likelihood that toads and other amphibians (including great crested newts) may be present.

- 1.3.23 The majority of the ponds were attributed a Moderate condition (57.4%), predominately due to the plant diversity and overall good water quality and presence of good quality semi-natural habitat around the pond edges. The remaining ponds (42.6%) were in Poor condition.

Woodland and Forest Habitats

Other woodland; broadleaved

- 1.3.24 No significant stands of woodland fall within the Sites. Woodland areas generally comprise those around ponds and/or in field corners and occasional long copses at field edges at both Green Hill A and E. A more substantial belt of broadleaved woodland surrounded the watercourse running north to south at Green Hill A.



- 1.3.25 The large majority of woodland parcels were attributed a Moderate condition (73.5%). This is due in part to the lack of herbivore damage / disease impacts and range of native species / lack of invasive species.

Other woodland; mixed

- 1.3.26 Some areas of Mixed Woodland (also containing coniferous trees) were located in Green Hill A, C and E, the majority of which achieved a Poor condition (76%).

Sparsely Vegetated Land Habitats

- 1.3.27 Small areas of Tall Forbs and Ruderal/Ephemeral vegetation were recorded across the Sites, restricted to field corners and margins and extending from hedgerows and other boundary features or associated with unmanaged areas, such as surrounding ponds, around farmsteads/buildings or where agricultural vehicle access is restricted. All conditions were represented but the majority of habitat parcels were in Good condition.

Urban Habitats

Bare Ground

- 1.3.28 Bare ground areas were recorded at Green Hill A.2 and E. The parcel at Green Hill A.2 was in Good condition whilst the remaining areas were in Poor condition, as vegetation structure was less varied.

Developed Land; Sealed Surface

- 1.3.29 'Developed Land; Sealed Surface' habitats identified within Sites included agricultural storage and working areas, buildings, and areas of hardstanding. Condition assessments are Not Applicable for this habitat type.

Artificial Unvegetated; Unsealed Surface

- 1.3.30 Crushed aggregate farm tracks recorded within the Sites were classified as artificial unvegetated; unsealed surface. Condition assessments are Not Applicable for this habitat type.

Rural Trees

- 1.3.31 93 rural trees were recorded, of which a small number were noted as having veteran or ancient characteristics. 27 trees were considered to be 'very large', 34 trees 'large', 27 'medium', and 5 were 'small', in accordance with 'Table 14 - Tree size classes and area equivalents' of the Statutory Biodiversity Metric User Guide document (Ref.21). As noted in paragraph 1.3.2 above, the trees recorded within the Sites included one ancient and 36 veteran trees (ES Chapter 19: Arboriculture [APP-056] refers). In accordance with the Statutory Biodiversity Metric User Guide, all ancient and veteran trees have been recorded as individual rural trees, regardless of their location (e.g. veteran trees within hedgerows or lines of trees have been mapped individually). All trees were in Moderate or Good condition.



1.4 Baseline Hedgerows

Strategic Significance

- 1.4.1 The base 'Area/compensation not in local strategy/no local strategy' Strategic Significance category was applied to all existing hedgerows.

Irreplaceable Habitat

- 1.4.2 No hedgerow habitats are attributed Irreplaceable Habitat status under the Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024.

Baseline Data

- 1.4.3 The Sites contain an extensive network of approximately 84km of managed hedgerows (excluding Lines of Trees), roughly half of which contain occasional mature and semi-mature trees. Approximately 25km of the hedgerows are considered species-rich, although the majority are not, and are dominated by blackthorn *Prunus spinosa* and hawthorn *Crataegus monogyna* with occasional/frequent additional species.
- 1.4.4 A large proportion of the hedgerows are associated with drainage ditches which dry out for a portion of the year. Most hedgerows are frequently managed. Trees present generally comprised ash *Fraxinus excelsior* (often showing extensive signs of dieback), elder *Sambucus nigra*, holly *Ilex aquifolium*, field maple *Acer campestre*, and English oak *Quercus robur*.
- 1.4.5 The majority of hedgerows were in Moderate or Good condition, however, all conditions were represented across the hedgerows. Hedgerows of Poor condition were usually defunct and gappy, with no or less than 1m wide vegetated field margins and were presenting some signs of current damage, generally through inappropriate management. Some hedgerows of Moderate condition were also gappy but usually had at least >1m vegetated field margins, though these were dominated by plant species indicative of nutrient enrichment (such as nettles, cleavers and docks). Hedgerows of Good condition were intact and bordered with undisturbed fringes of vegetation.
- 1.4.6 An additional 10.5km of Lines of Trees were recorded across the Sites, however, only one of them qualified as being 'Ecologically Valuable' as defined within the Metric Technical Supplement document, as it supported at least one tree per 30m length of mature, veteran or ancient age class.
- 1.4.7 Lines of trees were generally of Poor or Moderate condition. Features in Poor condition were usually lacking mature trees and undisturbed naturally vegetated strips on either side of the trees to protect the trees from farming and other potentially damaging activities.

1.5 Baseline Watercourses

Strategic Significance

- 1.5.1 The base 'Area/compensation not in local strategy/no local strategy' Strategic Significance category was applied to all existing watercourses within the Sites.



Irreplaceable Habitats

- 1.5.2 No watercourse habitats are attributed Irreplaceable Habitat status under the Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024.

Baseline Data

Ditches

- 1.5.3 Flowing water occurs occasionally in the form of various feeder streams for more significant local watercourses and are managed as agricultural drainage ditches within or adjacent to the Sites, many of which regularly dry out.
- 1.5.4 The Ditch habitat category was only used for ditches which are likely to retain water for more than 4 months of the year as per the Statutory Metric User Guide (Ref.21) definition. Agricultural ditches which were considered unlikely to retain water for 4 months of the year were defined within the relevant hedgerow category (e.g. native hedgerow associated with bank or ditch), and therefore are not represented in the Baseline Watercourses section of the Metric.
- 1.5.5 Most wetted ditches featured grassy banks and were approximately 1-2m deep and 2-4m wide with very little emergent vegetation. Water quality appeared to vary, and in many cases was relatively poor, likely owing to frequent agricultural run-off.
- 1.5.6 The majority of Ditches were in Poor condition (approximately 74%), varyingly due to poor water quality, low water levels, high levels of shading by adjacent vegetation, and lack of emergent, submerged and marginal vegetation.

Other Rivers and Streams

- 1.5.7 Flowing water occurs in the form of significant local watercourses including the Swanspool Brook and Grendon Brook, as well as various unnamed tributaries that feed into them.
- 1.5.8 All watercourses within the 'Other Rivers and Streams' habitat category were found likely to be 'overdeep' and functionally isolated from the channel bed, which was reflected in a downgrade of their condition by one class as per RCA guidance (Ref.17).
- 1.5.9 The majority of the 'Other Rivers and Streams' watercourses within or adjacent to the Sites were found to be in 'Fairly Poor' condition (approximately 81.9% of the total length of this habitat type). The remainder of watercourses within this habitat category were found to be in Poor (approximately 13.5%) and Moderate (approximately 4.6%) condition; none were found to be in 'Fairly Good' or 'Good' condition. The condition score of the watercourses across the Site was principally negatively impacted by the agricultural land use within 10m of the bank top and extent of silt recorded within the channel bed.
- 1.5.10 Watercourses within the Site that form part of the Swanspool Brook were found to be in Fairly Poor or Poor condition. Watercourses that form part of the Grendon Brook were found to be mostly in Fairly Poor condition but with one section each in Moderate (BESSW2) and Poor (FW13a) condition. The only other two sections



of watercourse within the Site found to be in Moderate condition formed part of an unnamed tributary to the south of the Grendon Brook (FW3a and FW20).

- 1.5.11 The calculated 'river type' varied across stretches of watercourses within the Site. The majority of Swanspool and Grendon Brooks were found to be type 'H' – straight/sinuuous with gravel-pebble recorded as the coarsest substrate within the channel bed but generally dominated by sand substrate. Certain stretches of the brooks were found to be type 'F' which differs by cobble as the coarsest recorded substrate; for Swanspool Brook the upstream stretch at DW1 was found to be type F, whereas for Grendon Brook the downstream stretch (BESSW1 and BESSW2) was found to be type F. The watercourses within Green Hill BESS were found to be more naturalised with regard to sinuosity and deposition, and so larger substrate such as cobble was likely deposited here.
- 1.5.12 Other river types found within the Site included river type 'K' which was assigned to watercourses forming part of the unnamed tributary north of Swanspool Brook (EW1, EW1a, EW10 and EW2) which is characterised by fine sediment, with the coarsest substrate as 'sand', and average substrate as 'silt'.
- 1.5.13 The condition of each watercourse and its associated river type is provided in Table 1. Figures 9.13.1 to 9.13.12, showing the location of each watercourse within the Sites, are provided at the end of this document.


Table 1: Watercourse Conditions and River Types

River Name	Label	Condition	River Type
Unnamed Tributary - feeds into Pitsford Reservoir	AW8	Fairly Poor	F
	AW9	Fairly Poor	F
Unnamed Tributary - feeds into Sywell Reservoir	CW2	Poor	H
	CW3	Poor	H
Swanspool Brook	DW1	Fairly Poor	F
	EW3	Fairly Poor	H
	EW4	Fairly Poor	H
	EW5	Fairly Poor	H
	EW6	Poor	H
	EW7	Poor	H
Unnamed Tributary - feeds into Swanspool Brook	EW1	Fairly Poor	K
	EW10	Fairly Poor	K
	EW2	Fairly Poor	K
	EW1a	Fairly Poor	K
	EW8	Fairly Poor	F
	EW9	Fairly Poor	F
	EW11	Fairly Poor	F
	EW9 (2)	Fairly Poor	F
Grendon Brook	BESSW1	Fairly Poor	F
	BESSW2	Moderate	F
	FW10b	Fairly Poor	H
	FW11	Fairly Poor	H
	FW13	Fairly Poor	H
	FW14	Fairly Poor	H
	FW8	Fairly Poor	H
	FW9	Fairly Poor	H
	BESSW2	Fairly Poor	F
	FW10a	Fairly Poor	H
	FW13a	Poor	H
Unnamed Tributary - converges with another tributary to feed into Grendon Brook	FW23	Fairly Poor	H
	FW29	Poor	H
	FW29	Fairly Poor	H



River Name	Label	Condition	River Type
	FW29	Fairly Poor	H
	FW23	Fairly Poor	H
	FW23	Fairly Poor	H
Unnamed Tributary - converges with another tributary to feed into Grendon Brook	FW17	Fairly Poor	F
	FW25	Fairly Poor	H
	FW26	Poor	H
	FW27	Fairly Poor	H
Unnamed Tributary - feeds into Grendon Brook	FW20	Moderate	F
	FW21	Fairly Poor	F
	FW3b	Fairly Poor	H
	FW3a	Moderate	H
Unnamed Tributary - feeds into Grendon Brook	FW1	Fairly Poor	H
	FW2	Fairly Poor	H
	FW1	Poor	H
Unnamed Tributary - feeds into another tributary that ultimately feeds into Grendon Brook	FW4	Fairly Poor	H

Watercourse and Riparian Encroachment

- 1.5.14 According to the Statutory Biodiversity Metric User Guide, watercourse encroachment is ‘any feature or action that adversely affects the natural function of the watercourse, or results in localised changes in habitat, species and migratory pathways’. This multiplier accounts for development within a riverbank or channel that impacts the function of the river corridor, aside from culverts, which are marked as separate habitats in the Metric. No watercourse encroachment was recorded within the existing watercourses, and therefore the category ‘No Encroachment’ was applied to all watercourse features.
- 1.5.15 According to the Statutory Biodiversity Metric User Guide, riparian zone encroachment is ‘any feature or intervention within the riparian zone that reduces the quantity, quality or ecological function of the riparian habitat. This includes:
- Buildings or hardstanding
 - Management practice (including agriculture)
 - Structures that prevent wildlife from accessing the riverbank’
- 1.5.16 The riparian zone is considered to be 5m from the bank top for ditches, and 10m from the bank top for any other watercourse type.
- 1.5.17 The majority of watercourses at Baseline featured some level of riparian encroachment, primarily through the lack of adequate field margins and the



presence of arable farming within the riparian zone, although the severity of riparian zone encroachment varied across features.



1.6 Baseline Summary

1.6.1 Figures 9.13.1 – 9.13.12 at the end of this document show all baseline habitats recorded within each of the Sites.

1.6.2 Table 2 below shows the extent of each habitat type within the Sites and the percentages of the Order Limits taken up by each area-based habitat type; percentages are not given for hedgerows and watercourses as these are linear features, with no area value in the BNG assessment.

Table 2: Summary of Baseline Habitats

Habitat	Area (ha) / length (km)	% of Order Limits	Sites Where Recorded	Condition Assessment Score
Cropland	1031.4	87.7		
Cereal crops	690.6	58.8	A, A.2, BESS, D, E, F, G	N/A
Non-cereal crops	115.5	9.8	A, C, D, E	N/A
Temporary grass and clover leys	114.6	9.8	A, E, G	N/A
Winter stubble	73.3	6.2	C, E	N/A
Arable field margins game bird mix	8.3	0.7	A, C, E, F	N/A
Arable field margins pollen and nectar	14.5	1.2	A, B, C, E, F	N/A
Arable field margins tussocky	14.5	1.2	A, B, C, D, E, F	N/A
Grassland	115.2	9.8		
Modified grassland	94.1	8.0	A, B, C, D, E, F, G	Good – 23.2% Moderate – 19.0% Poor – 57.7%



Habitat	Area (ha) / length (km)	% of Order Limits	Sites Where Recorded	Condition Assessment Score
Other neutral grassland	21.1	1.8	A, C, E, F, G	Good – 1.8% Moderate – 76.2% Poor – 22.0%
Heathland and shrub	6.5	0.6		
Blackthorn scrub	1.2	0.1	E	Poor
Bramble scrub	3.4	0.3	D, E, F	N/A
Mixed scrub	1.9	0.2	A, B, C, E	Good – 8.9% Moderate – 91.1%
Willow scrub	0.05	0.004	A	Moderate
Woodland and forest	5.9	0.5		
Other woodland; broadleaved	3.4	0.3	A, BESS, C, E, F, G	Good – 7.0% Moderate – 73.5% Poor – 19.4%
Other woodland; mixed	2.5	0.2	A, C, E	Moderate – 24.0% Poor – 76.0%
Lakes	0.3	0.03		
Ponds (priority habitat)	0.3	0.03	A, B, E, F, G	Moderate – 57.4% Poor – 42.6%
Sparsely vegetated land	6.4	0.5		



Habitat	Area (ha) / length (km)	% of Order Limits	Sites Where Recorded	Condition Assessment Score
Ruderal/ephemeral	6.1	0.5	A, C, D, E, F	Good – 40.5% Moderate – 27.8% Poor – 31.7%
Tall forbs	0.2	0.02	C, E, F	Good – 78.4% Moderate – 21.6%
Urban	8.8	0.7		
Artificial unvegetated, unsealed surface	0.9	0.1	A, E, F	N/A
Bare ground	0.6	0.1	A.2, E	Good – 15.4% Poor – 84.6%
Developed land; sealed surface	7.3	0.6	A, B, C, F, G, BESS	N/A
Individual Trees	92 no.	-		
Individual Trees – Very large	27 no.	-	A, A.2, B, C, E, F, G, BESS	Good
Individual Trees - Large	34 no.	-	A, A.2, B, C, D, E, F, G	Good – 76.5% Moderate – 23.5%
Individual Trees – Medium	26 no.	-	A, A.2, C, D, E, F, G, BESS	Good – 61.5% Moderate – 38.5%
Individual Trees - Small	5 no.	-	E, G	Moderate
Hedgerows	84.2	-		



Habitat	Area (ha) / length (km)	% of Order Limits	Sites Where Recorded	Condition Assessment Score
Native hedgerow	25.9	-	A, B, C, D, E, F, G, BESS	Good – 57.7% Moderate – 35.8% Poor – 6.5%
Native hedgerow – associated with bank or ditch	12.0	-	A, B, C, D, E, F, G, BESS	Good – 72.7% Moderate – 25.9% Poor – 1.4%
Native hedgerow with trees	11.9	-	A, B, C, D, E, F, G, BESS	Good – 71.1% Moderate – 22.2% Poor – 6.7%
Native hedgerow with trees – associated with bank or ditch	9.0	-	A, A.2, B, C, D, E, F, G, BESS	Good – 70.4% Moderate – 26.6% Poor – 3.0%
Species-rich native hedgerow	4.2	-	A, A.2, C, D, E, F, G	Good – 87.4% Moderate – 12.6%
Species-rich native hedgerow – associated with bank or ditch	4.8	-	A, A.2, B, F, G	Good – 76.2% Moderate – 13.7% Poor – 10.0%
Species-rich native hedgerow with trees	7.4	-	A, A.2, B, C, D, E, F, G, BESS	Good – 49.9% Moderate – 40.2% Poor – 9.9%



Habitat	Area (ha) / length (km)	% of Order Limits	Sites Where Recorded	Condition Assessment Score
Species-rich native hedgerow with trees – associated with bank or ditch	9.0	-	A, A.2, B, C, D, G	Good – 90.1% Moderate – 9.9%
Lines of trees	11.1	-		
Line of trees	8.7	-	A, B, C, E, F, BESS	Good – 21.8% Moderate – 62.9% Poor – 15.3%
Line of trees – associated with bank or ditch	2.2	-	A, E, G	Moderate – 67.4% Poor – 32.6%
Ecologically valuable line of trees	0.1	-	F	Moderate
Watercourses	21.8	-		
Ditches	6.9	-	A, B, C, G, G, BESS	Good – 15.9% Moderate – 9.7% Poor – 74.4%
Other rivers and streams	14.7	-	A, B, C, D, E, F	Moderate – 4.6% Fairly Poor – 81.9% Poor – 13.5%
Culvert	0.2	-	F	N/A - Poor



1.7 Proposed Habitats

Habitat Loss and Retention

Irreplaceable Habitats

- 1.7.1 All existing Irreplaceable Habitats (comprising ancient and veteran trees only) will be retained through the Scheme.

Cropland Habitats

- 1.7.2 The vast majority of the habitat under the broad habitat classification ‘Cropland’ within the Sites will be lost as a result of the development, with the exception of single fields at Green Hill A and D which will continue to be sown with cereal crops to provide mitigation habitat for ground nesting birds, such as skylark. Arable field margins associated with these fields where ongoing arable management will occur have been treated as retained in the Metric.
- 1.7.3 It should be noted that the arable field margins (tussocky) elsewhere within the Sites will not directly be lost by development but rather, in the absence of an adjacent arable crop they cease to fit the habitat description of ‘arable field margin, tussocky’. Furthermore, it is not possible to enhance the condition of arable field margins whereas it is proposed to overseed these areas with a biodiverse seed mix to increase botanical diversity. Therefore, the arable field margins within the Sites are described as being lost and subsequently recreated as an Other Neutral Grassland in Moderate to Good condition (see Paragraph 1.7.20). This approach has consequences for the trading summary (see Paragraph 1.11.8).

Grassland Habitats

- 1.7.4 Approximately 71.5ha (approximately 76%) of existing Modified Grassland will be lost as a result of the Scheme, the majority of which is associated with whole fields of Modified Grassland where panels are proposed. Although Modified Grassland will be reinstated within the arrays following the completion of the construction phase, it is anticipated that there will be some ground disturbance within panel array areas (for example, to facilitate cable installation and through other construction related activities), and therefore grassland within these areas has been treated as ‘lost’ and then subsequently ‘created’ on a precautionary basis. Smaller sections of modified grassland will be lost to facilitate the creation of more ecologically valuable habitats, such as Other Neutral Grassland (ONG), Mixed Scrub and Other Broadleaved Woodland outside of the panel arrays.
- 1.7.5 The retention and enhancement of areas of existing Other Neutral Grassland has been a key objective of the design of the Scheme, and therefore losses of Other Neutral Grassland are only anticipated to be approximately 6.25ha, which constitutes approximately 29.5% of the existing ONG within the Sites. The remaining areas of ONG will either be retained (where it is considered that the baseline condition is unlikely to be improved), or enhanced in condition.

**Heathland and Shrub Habitats**

- 1.7.6 Bramble scrub areas have been treated as lost within the Metric where extensive bramble scrub has been recorded encroaching into field margins. It is generally proposed that bramble scrub in these areas will be cut back and managed to allow more diverse habitats to be created in the margins, such as tussocky grassland or areas of Mixed Scrub with greater species diversity. The cutting back of encroaching scrub in field margins will also facilitate ongoing access for the maintenance of other adjacent habitats (such as hedgerows) throughout the operational phase of the development. Where it is feasible to retain pockets of scrub (for example where scrub is present around ponds or derelict buildings within the Sites), these areas have been retained.

Lakes - Ponds (Priority Habitat)

- 1.7.7 All ponds within the Sites have been retained, and protective buffers of at least 20m applied during the construction and operational phases. Although it is considered likely that the quality and ecological condition of existing ponds will be enhanced (through measures such as wide protective vegetated buffers and the cessation of agricultural run-off from pesticide and herbicide use, for example), all ponds have been retained in their original condition in the Metric, on a precautionary basis.

Woodland and Forest Habitats

- 1.7.8 All established woodland within the Sites will be retained with no change, other than a small area of approximately 0.006ha of Other Broadleaved Woodland in Moderate condition at Green Hill BESS, which may be removed to facilitate abnormal load vehicle access into the BESS Site during construction. Should any tree losses in this area be required, these will be replaced with compensatory planting in the same location following the completion of the construction phase.
- 1.7.9 A minimum 20m ecological buffer will be incorporated between the footprint of the solar array and woodland edges, which has been extended to 30m for ancient woodland.
- 1.7.10 The only exception to this is in a strip of recently planted dense tree planting at Green Hill A (categorised as Other Mixed Woodland in Poor condition), within which approximately 0.0116ha will be lost to facilitate the construction of a permanent internal access track.

Other Habitat Types

- 1.7.11 Other habitats of relatively low ecological value (such as areas of Sparsely Vegetated Land and Urban habitats) will generally be lost through the Scheme, although existing tracks will generally be retained and utilized to facilitate vehicular movements around the Sites during construction and operation.

Rural Trees

- 1.7.12 The in-field trees will be retained within the Scheme and retained in their baseline condition. Such trees act as islands or stepping-stones for wildlife and these are



also to be buffered from development according to their ecological value (between 8m and 15m) and Root Protection Zones (whichever is greater).

- 1.7.13 Where trees associated with hedgerows are anticipated to be lost, these have been recorded as individual Rural Trees within the metric, provided that these trees are of Medium size class or greater, in accordance with the 'Recording individual trees at baseline' section of the Statutory Biodiversity Metric User Guide (Ref.21). Tree losses have been minimized as far as possible through sensitive design of the Scheme, however occasionally trees are proposed for removal to facilitate the widening of accesses or the installation of cables at Site boundaries where these adjoin the Cable Route Corridor.

Habitat Creation

- 1.7.14 Details of the objectives of habitat creation, as well as how created habitats will be managed throughout the operational phase of the Scheme, are provided within the OLEMP Revision A [EX1/GH7.4_A].
- 1.7.15 It has been necessary to make assumptions about the condition and distinctiveness of created habitats to complete the Metric. Habitat creation in the Metric is based on a realistic and achievable scenario, and has been informed through a combination of professional judgement, as well as local habitat context and Clarkson & Woods' extensive experience in conducting ecological monitoring and habitat surveys of active solar farms across the UK (Ref.22).

Strategic Significance

- 1.7.16 Elevated Strategic Significance scores have been applied to proposed habitats where these are in a location specified in the North Northamptonshire Local Nature Recovery Strategy Mapped Practical Action areas, and of a habitat type considered relevant to that particular Practical Action. The relevant Practical Actions are listed below, along with a summary of the created habitats that were considered relevant to each Practical Action, which were therefore considered to be eligible for a high Strategic Significance score.

IV 103 - Create riparian buffers along watercourses to minimise flooding in the catchment

- 1.7.17 This Practical Action was considered relevant to areas of proposed Other Neutral Grassland and Mixed Scrub which were associated with riparian corridors, within areas which had been identified within the LNRS mapping. The Strategic Significance category 'Formally identified in the local strategy' was therefore applied to approximately 1.48ha of Other Neutral Grassland creation at Green Hill E, and approximately 3.96ha of Mixed Scrub creation at Green Hill E.

IV 104 - Create new woodland in tributaries and headwaters and plant trees at the top of river catchments to hold water and slow the flow across the catchment

- 1.7.18 This Practical Action was considered relevant to any areas of newly created woodland habitat within areas identified within the LNRS mapping. The Strategic Significance category 'Formally identified in the local strategy' was therefore



applied to approximately 0.11ha of proposed Other Broadleaved Woodland within Green Hill E.

NV 64 - Buffer and connect ancient and priority habitat woodlands to reduce fragmentation and create wildlife corridors. This would support species such as the Woodcock and an assemblage of woodland bats

- 1.7.19 This Practical Action was considered relevant to any areas of newly created Other Neutral Grassland habitats which are immediately adjacent to woodlands present on the Habitats of Principal Importance in England (Ref.22) or Ancient Woodland Inventory (Ref.23) datasets. The Strategic Significance category 'Formally identified in the local strategy' was therefore applied to approximately 2.49ha of proposed Other Neutral Grassland within Green Hill F (adjacent to Horn Wood Local Wildlife Site) and 0.74ha of proposed Other Neutral Grassland within Green Hill C, adjacent to Sywell Wood (an ancient woodland).

Cropland Habitats

- 1.7.20 Areas of cropland habitat will be created within the Scheme primarily to deliver mitigation habitat for a variety of ground-nesting birds such as skylark, as well as to provide ongoing suitable habitat for arable weed species. Approximately 56ha of permanent set-aside habitat will be created across whole fields in Green Hill A, C, E and F. This has been categorized as 'Non-Cereal Crops' in the Metric. Although a permanent (for the duration of the Scheme) set-aside system does not fully fit the UKHab definition of 'C1d - Non-cereal crops', the other potentially suitable habitat types (including Sparsely Vegetated Land – Ruderal/Ephemeral) are more prescriptive in their habitat definitions, and would result in a higher Habitat Unit value for these areas. Using the precautionary principle, it was therefore considered that Non-Cereal Crop would be the most appropriate category for these areas on a precautionary basis.

Grassland Habitats

- 1.7.21 Newly created grassland habitat types and conditions have been applied using the following criteria:
- Areas of grassland within panel arrays, comprising areas both directly under panels and between panel rows, have been assigned as Modified Grassland in Poor condition, owing to the potential impact of shading from the panels and the generally lower species diversity observed within panel arrays during operational phase ecological monitoring of solar sites. In addition, a short section of verge adjacent to a private access route at Green Hill F has been designated as Modified Grassland in Poor condition, owing to a preference to keep the grassland within this area short through regular cutting. Approximately 506ha of Modified Grassland in Poor condition will be created through the Scheme;
 - Areas of grassland within the security fencing, but outside of the panelled areas themselves (i.e. in easements and margins between the fenceline and the panels) have been assigned as Modified Grassland in Good condition. These areas will not be subject to shading impacts and will be more



accessible for ongoing management activities such as overseeding and cutting, but as they are within the fence line, have the potential to be subject to over-grazing (where grazing is implemented). Approximately 182ha of Modified Grassland in Good condition will be created through the Scheme;

- Areas of grassland outside of fencing where tussocky grassland margins, damp grassland, or grassland associated with riparian corridors are proposed (refer to the OLEMP Revision A **[EX1/GH7.4_A]** for further details) have been assigned as Other Neutral Grassland in Moderate condition. Approximately 162ha of Other Neutral Grassland in Moderate condition will be created through the Scheme, approximately 3.95ha of which is considered to be Strategically Significant;
- Areas of grassland outside of fencing which where wildflower meadow is proposed have been assigned as Other Neutral Grassland in Good condition. These areas are generally entire fields which have been designated for ecological mitigation, although occasionally comprise narrower strips of wildflower meadow at the edges of panelled fields (outside of the security fencing). These areas will be managed to maximise their species diversity and ecological value over the operational phase. Approximately 121 ha of Other Neutral Grassland in Good condition will be created through the Scheme, approximately 0.57ha of which is considered to be Strategically Significant.

Heathland and Shrub Habitats

- 1.7.22 Approximately 21.6ha of Mixed Scrub planting will be delivered, 3.6ha of which is considered to be Strategically Significant. Mixed Scrub areas have generally been proposed along riparian corridors for flood attenuation, but this habitat has also been proposed where existing scrub is present which is currently dominated by a single species (such as Bramble Scrub or Blackthorn Scrub). The intention would be for additional planting and management to increase the species and structural diversity of these areas. Areas of low density scrub are also proposed, which will provide suitable nesting and sheltering habitat for a range of birds and other species. All proposed Mixed Scrub creation will target a Moderate condition.

Lakes - Ponds

- 1.7.23 Although pond creation will be pursued through the Scheme (as highlighted in the OLEMP Revision A **[EX1/GH7.4_A]** and Landscape and Ecology Mitigation Plans **[APP-207 – APP-219]**, the precise locations of any newly created ponds have not currently been confirmed, and will likely be informed through soil percolation tests, and with the advice from a hydrologist, post-consent. Confirmed pond sizes and locations will be provided within the detailed LEMP when this is produced. Given that the areas of newly created ponds have not been confirmed, no pond creation has been accounted for in the BNG Metric, on a precautionary basis.



Woodland and Forest Habitats

- 1.7.24 Approximately 16.6ha of new woodland will be created through the Scheme, approximately 0.11ha of which is considered to be Strategically Significant. New woodland will generally be created to provide screening from sensitive visual receptors, although woodland planting has also been targeted in areas which would enhance the connectivity of existing woodland copses or directly increase the extent of existing woodlands. All woodland will comprise native broadleaved species (with a habitat category of Other Woodland; Broadleaved) and will target Moderate condition.

Other Habitat Types

- 1.7.25 The Scheme will result in the creation of areas of Urban habitats, including Developed Land; Sealed Surface (which primarily has been used in areas utilized for battery storage or for substations and other infrastructure within the Sites) and Artificial Unvegetated; Unsealed Surface (which has been used for permanent internal access tracks between fields).

Rural Trees

- 1.7.26 The creation of 271 rural trees has been accounted for in the Metric. These trees are outside of areas of hedgerow, scrub and woodland planting, and instead represent areas designated as River Corridor Planting for Ecology within the Landscape and Ecology Mitigation Plans [APP-207 – APP-219], where grassland habitats with scattered tree and shrub planting are proposed. Rural trees have therefore been used to represent the scattered tree planting, with a density of one rural tree every 20m within these areas. All newly planted rural trees have been prescribed a Tree Size class of Small, with a target condition of Moderate.

Habitat Enhancement

Grassland Habitats

- 1.7.27 Grassland has considered to be enhanced, rather than created, where the grassland type at baseline matches with the proposed type outlined in Section 1.7.19 above, and where these areas lie within protective ecological buffer zones or fields wholly designated for ecological mitigation, as it is considered that these areas will be adequately protected from damage and degradation during the construction phase.
- 1.7.28 With regard to Modified Grassland, enhanced areas generally comprise field margins within the proposed 15m protective buffers from hedgerows, however they also include an entire field at Green Hill B which has been designated as mitigation land for nesting birds, such as skylark. Enhanced areas of Modified Grassland were a mix of Poor and Moderate condition at baseline, and will generally target Modified Grassland in Good condition. A single area of baseline Modified Grassland in Green Hill A will target enhancement to Other Neutral Grassland in Moderate condition, as this is an entire field which has been designated as damp grassland as a form of ecological and hydrological



enhancement. Overall, approximately 19ha of Modified Grassland will be enhanced through the Scheme.

- 1.7.29 Areas of enhanced Other Neutral Grassland comprise whole fields of ecological mitigation which are designated as wildflower meadows or damp grassland through the Scheme, as well as smaller margins and easements which will lie outside of the security fencing. Approximately 11ha of Other Neutral Grassland will be enhanced through the Scheme, approximately 0.19ha of which was considered to be Strategically Significant.

1.8 Proposed Hedgerows

Hedgerow Loss and Retention

- 1.8.1 Hedgerow loss has been avoided wherever possible through sensitive design of the Scheme. This includes the utilisation of existing access points wherever possible, as well as the use of existing tracks to cross fields, in order to minimise hedgerow losses wherever this can be avoided.
- 1.8.2 Hedgerow losses are generally anticipated in the following areas:
- Where new Site access points from the adjacent highway are required, or where the widening of an existing access from the highway is required. Any access points have assumed to require a maximum width of 6.5m (or wider where abnormal load vehicle swept path analysis shows that a wider access is required), with any additional hedgerow losses from visibility splays also modelled. Vehicle swept path analysis and visibility splays were taken from detailed drawings of each access provided in the Transport Assessment **[APP-150]**.
 - Where permanent internal access tracks will need to cross existing hedgerows. Hedgerow losses at each crossing point have been assumed to be 6m in width.
 - Where a section of existing hedgerow between a Site boundary and the Cable Route Corridor will need to be removed to facilitate cable installation. Hedgerow losses in these areas have been assumed to be a maximum of 10m in width, to facilitate the cable trench (estimated to be a maximum of 3.5m wide) and an adjacent haul road for vehicular access (assumed to be 6m wide). Hedgerow losses associated with cable installation will be reinstated following the completion of cable works, and therefore these sections have also been included in the Hedgerow Creation tab.
- 1.8.3 Where temporary access tracks and routes are required during the construction phase (which do not follow the permanent internal access tracks on the Landscape and Ecology Mitigation Plans **[APP-207 – APP-219]**, it has been assumed that these will utilise existing field gates and gaps in hedgerows, and therefore no hedgerow losses associated with these features have been accounted for in the Metric.
- 1.8.4 In total, approximately 350m of existing hedgerow is anticipated to be lost across the Sites. All remaining hedgerows within the Sites will either be retained or enhanced.



Hedgerow Creation

Strategic Significance

- 1.8.5 The base 'Area/compensation not in local strategy/no local strategy' Strategic Significance category was applied to all newly created hedgerows.

Species-Rich Native Hedgerow with Trees

- 1.8.6 Newly created hedgerows will all target the hedgerow type 'Species-rich Native Hedgerow with Trees' in Moderate condition. Approximately 16km of new species rich hedgerows with trees will be created through the Scheme, comprising approximately 9km of entirely new hedgerows, and 7km of secondary hedgerows which will be created adjacent to existing hedgerows, with a gap between the two to permit access for the maintenance of both hedgerows. These secondary hedgerows will create 'green lane' features between the two hedgerows which will likely be of considerable ecological value.

Line of Trees

- 1.8.7 Lines of Trees in Moderate condition will be created where 'dense linear tree planting' is proposed in the Landscape and Ecology Mitigation Plans. Approximately 7.9km of new Lines of Trees will be created through the Scheme.

Other Hedgerows

- 1.8.8 Any hedgerow losses associated with cable installation will be reinstated following the completion of cable works, and therefore these sections have been included in the Hedgerow Creation tab as the same hedgerow type and condition as that present at baseline.

Hedgerow Enhancement

Hedgerows in Poor Condition

- 1.8.9 Any existing hedgerows in Poor condition were marked for enhancement to Moderate condition in the Metric. This will be achieved through the implementation of a sensitive management plan which will ensure that all hedgerows within the Sites are managed to maximise their value for biodiversity for the lifetime of the Scheme. General enhancement will take place across the Sites to plant up gaps in existing hedgerows, and to manage them to a greater height and width. In addition, the implementation of protective ecological buffers of 15m from all existing hedgerows (within which other ecologically valuable margin habitats will be created) will also enhance the value of the existing hedgerows.
- 1.8.10 Through the measures secured by the OLEMP Revision A [EX1/GH7.4_A], it is considered that the targeted Moderate condition will be realistically attainable for all existing hedgerows in Poor condition.

Supplementary Tree planting

- 1.8.11 The Landscape and Ecology Mitigation Plans [APP-207 – APP-219] include the enhancement of approximately 8km of existing hedgerows through the addition



of tree planting. Whilst this measure will predominately be implemented to increase the screening value of particular hedgerows, the addition of trees along the length of a hedgerow will result in a change to the Hedgerow Type, i.e. from a 'Native Hedgerow' to a 'Native Hedgerow with Trees'. No changes to the species richness category of affected hedgerows have been made, and therefore this is consistent with their species richness at Baseline.

1.9 Proposed Watercourses

Strategic Significance

- 1.9.1 The base 'Area/compensation not in local strategy/no local strategy' Strategic Significance category was applied to all watercourses throughout the assessment.

Irreplaceable Habitats

- 1.9.2 No watercourse habitats are attributed Irreplaceable Habitat status under the Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024.

Watercourse Loss/Retention

- 1.9.3 No watercourses will be lost through the Scheme, although new culverts will occasionally be installed where these are required. New culverts have been accounted for where permanent internal access tracks (as displayed on the Landscape and Ecological Mitigation Plans [APP-207 – APP-219]) cross watercourses where an existing access/culvert was not present. As the access tracks were designed to utilise existing field crossings wherever possible, new culverting has only been proposed in one location, at Green Hill F.
- 1.9.4 It should be noted that the Scheme retains the option to install culverts where required, however any temporary access tracks required during the construction of the Scheme will be designed to utilise existing access points and field entrances wherever possible, and therefore the requirement for new culverts to be constructed is likely to be minimal. As a result, no new culverts associated with temporary construction access tracks have been accounted for in this BNG assessment.

Watercourse Creation

- 1.9.5 No watercourse creation (other than the culvert creation discussed above in paragraph 1.9.3) has been proposed through the Scheme design.

Watercourse Enhancement

- 1.9.6 Although ditches and other watercourses within the Sites are likely to be enhanced in condition during the operational phase of the Scheme (principally through the reversion of largely arable land to permanent grassland, likely resulting in reduced sediment run-off, as well as the cessation of application of fertilisers and pesticides), no enhancements to the conditions of existing watercourses have been accounted for in the metric, on a precautionary basis. However, enhancements to watercourses through riparian zone encroachment have been accounted for.



- 1.9.7 The Scheme will result in the cessation of arable farming across almost all of the land within the Sites, excluding a single field in Green Hill A and D respectively which will continue to be in arable use to provide mitigation habitat for birds.
- 1.9.8 In addition to this, wide buffers will be implemented around watercourses and their associated habitats. These buffer zones will be maintained for the lifetime of the Scheme, within which no development or damaging management activities will occur. The buffer zones designed into the Scheme are as follows:
- 8m minimum from ditches;
 - 10m minimum from ditches with signs of otter or water vole;
 - 15m minimum from all hedgerows (including those associated with ditches) and minor watercourses;
 - 20m minimum from woodland, ponds and moderate watercourses; and
 - 30m minimum from ancient woodland and major watercourses (e.g. rivers).
- 1.9.9 Given the implementation of the above buffer zones, it is considered that any existing encroachment into the riparian zones of ditches (considered to be 5m from the bank tops) and other watercourses (considered to be 10m from the bank tops) will be eliminated within the Sites, and the watercourses will be enhanced as a result. Therefore, all watercourses within the Watercourse Enhancement tab of the Metric have been enhanced through the 'No Encroachment/No Encroachment' category being applied.
- 1.9.10 Where watercourses lie on the boundaries of a Site, it is not possible to control encroachment into the riparian zone on the side of the watercourse which is outside of the Order Limits. In these cases, the riparian zone encroachment value for the bank which is within the Order Limits was set to 'No Encroachment', and the existing level of riparian encroachment on the off-site side of the watercourse was left unchanged from the baseline value.

1.10 BNG Good Practice Principles for Development

- 1.10.1 Table 3 below provides full justification of how each of the 10 BNG Principles (Ref.1) have been applied as part of the BNG assessment.

Table 3: BNG Good Practice Principles and Justification

BNG Principle	Justifications
Principle 1. Apply the Mitigation Hierarchy	In the first instance, areas of elevated biodiversity importance have been identified through detailed baseline surveys. Where possible, these features have been retained within the Scheme design, following discussion with the design team. The Scheme design has evolved over time and the various design iterations reflect this process of avoiding impacts. Where areas of habitat loss are unavoidable, measures to minimise biodiversity loss and mitigate impacts have been designed into the Scheme, such as utilising existing access points, and the implementation of protective buffers, fencing and ecological watching briefs.



BNG Principle	Justifications
	Finally, new habitat creation and/or enhancement of existing habitats has been proposed to compensate for unavoidable losses. Sources of impacts, and avoidance, mitigation and compensation measures, are discussed in the Environmental Statement Chapter 9 – Ecology and Biodiversity Revision A [EX1/GH6.2.9_A]. Measures to avoid and minimise biodiversity impacts are defined and documented within the Outline Ecological Protection and Mitigation Strategy (OEPMS) Revision A [EX1/GH7.5_A]. Measures to restore and enhance existing habitats; create new habitats of biodiversity value; and manage all habitats within the Scheme for the duration of the Scheme, are defined and documented within the Outline Landscape and Ecological Management Plan (OLEMP) Revision A [EX1/GH7.4_A] and Landscape and Ecology Mitigation Plans [APP-207 – APP-219].
Principle 2. Avoid losing biodiversity that cannot be offset by gains elsewhere	No irreplaceable habitats are impacted by the Proposed Development. The only irreplaceable habitats within the Scheme are ancient and veteran trees, all of which are retained.
Principle 3. Be inclusive and equitable	Consultation has been undertaken with relevant stakeholders throughout the DCO process, at the scoping and statutory consultation stages. Stakeholders have included Natural England, Local Planning Authorities, Parish Councils, the Environment Agency and the Forestry Commission. Items of discussion and how these have been addressed are documented in Tables 1 and 2 of the Environmental Statement Chapter 9 – Ecology and Biodiversity Revision A [EX1/GH6.2.9_A]. This includes discussion over BNG directly (including targeting 10% Net Gain despite there being no statutory obligation for NSIPs) as well as opportunities to enhance the local landscape in alignment with local policy and local needs.
Principle 4. Address risks	Habitat retention has been considered carefully, acknowledging risks of damage during construction and habitat removal for access. Wide buffers have been designed into the Scheme, and the precautionary principle has been applied when selecting targeted post-development habitat types. The assessment of Biodiversity Net Gain has been made based on detailed landscape proposals, which have been formulated through consideration of locally appropriate species mixes with resilience to future pressures, such as climate change. It is acknowledged that there are logistical uncertainties over the supply of seed mixes and planting stock at the time of construction, particularly given the uncertainty around seed supply which can vary year on year depending on climate and the requirements of other large-scale projects. Therefore, flexibility has been built into the OLEMP to select an appropriate seed mix, rather than stipulate a specific supplier. Target habitat condition has been chosen conservatively, based on Clarkson & Woods' extensive experience in conducting ecological monitoring and habitat



BNG Principle	Justifications
	surveys of active solar farms across the UK (Ref.21). This has included a differentiation between the target condition of grassland within the array footprint and in open areas of habitat. The OLEMP Revision A [EX1/GH7.4_A] sets out a programme of regular monitoring for the lifetime of the Scheme to ensure that habitat creation and management objectives are met. The detailed LEMP (post-consent) will specify the roles and responsibilities of key personnel who will be appointed to deliver the measures of the LEMP throughout the duration of the Scheme. The OLEMP Revision A [EX1/GH7.4_A] also allows for the amendment and variation of management objectives and practices to best suit the conditions within the Sites, responding dynamically and proactively to specific practicalities and challenges which may arise over the life of the Scheme, and the findings of ecological monitoring.
Principle 5. Make a measurable Net Gain	The Statutory metric has been utilised to quantify all habitat values both at baseline and post-development, with at least 10% net gain demonstrated for each unit type (Habitat Units, Hedgerow Units and Watercourse Units).
Principle 6. Achieve the best outcomes for biodiversity	The BNG design has considered all Site survey data regarding the presence of particular species and habitats, to ensure that habitat provisions are locally appropriate and align with broader mitigation requirements. Additionally, desk study data have been examined to ensure that habitat creation and enhancement considers local conservation priorities (species and habitats), the presence of protected or notable species within the local landscape, and Local Nature Recovery Strategies (LNRSs). This includes consideration of the Northamptonshire Biodiversity Action Plan (BAP) and the recently released North Northamptonshire LNRS. The presence of locally and nationally designated sites for nature conservation in the local landscape have also been considered, along with opportunities to enhance connectivity with these features. The design enhances connectivity across the Site and with the wider landscape through strengthening existing hedgerows and creating new hedgerows and areas of woodland, scrub and grassland. Extensive grassland creation will establish a large swathe of contiguous habitat. Details are provided within the Revision A [EX1/GH7.4_A]. All net gain is proposed to be delivered on-site, with no offsite provision needed to achieve a 10% net gain. In particular, as set out in Chapter 9 of the Environmental Statement (ES) Revision A [EX1/GH6.2.9_A], the Scheme design will lead to beneficial effects on the following habitats and species: Other neutral grassland Woodland Ponds



BNG Principle	Justifications
	Hedgerows and lines of trees Ditches and Watercourses Badgers Bats Brown hare Harvest mouse, hedgehog and polecat Amphibians (including great crested newts) Reptiles Breeding birds Overwintering birds Invertebrates Plants Fish
Principle 7. Be additional	The proposed conservation gains will be caused by the Scheme activities and would not have occurred in other circumstances. The reversion from intensive agriculture to low (or no) input (fertiliser and soil improvers) grassland alone would be expected to provide a modest net gain in plant and invertebrate species diversity over time. The establishment of meadows within a predominately arable landscape will drive a diversification of local habitats toward that of historical land use patterns where agriculture in the region was characterised by a mix of arable and pasture farming, which supported a greater abundance of wildlife.
Principle 8. Create a Net Gain legacy	Stakeholders have been engaged from an early stage of the Scheme to deliver habitat creation which aligns with local priorities and needs. Delivery of BNG will be funded directly by the Scheme. The Scheme's lifetime of 60 years exceeds the minimum commitment of 30 years for BNG delivery. The measures in the OLEMP Revision A [EX1/GH7.4_A] are not rigidly set for the 60-year lifetime of the Scheme, but rather can be modified as necessary to respond and adapt to changing conditions and issues which may arise. A specified regime of monitoring will inform the need for changes to management. The Scheme design has taken into account climate change resilience through planting of species which will withstand projected climatic conditions. Consideration of disease threats, such as ash dieback, has also fed into the planting selection. Risks posed by other developments have been considered as part of a cumulative assessment.



BNG Principle	Justifications
	Minimum professional and technical requirements for those responsible for the delivery of the LEMP and BNG-related habitat management will be specified in the detailed LEMP. Site management may utilise local contractors and graziers, where viable.
Principle 9. Optimise sustainability	The design prioritises delivery of BNG, but other wider benefits will be delivered. New permissive paths will be provided for local amenity, and the Scheme is expected to give rise to flood attenuation benefits. Delivery of renewable energy aligns with a more sustainable future through reduced atmospheric pollution from fossil fuels. Local contractors and materials will be used as much as possible.
Principle 10. Be transparent	The commitment to BNG is stated by the applicant in this report and in the Environmental Statement Chapter 9 – Ecology and Biodiversity Revision A [EX1/GH6.2.9_A]. Any changes to this commitment during examination of the DCO will be clearly defined in revised documents. The OLEMP Revision A [EX1/GH7.4_A] specifies monitoring, the methodology for which follows published guidance (Ref.25), which has been designed to be part of a wider scientific study looking at environmental and ecological interactions on solar farms. The best practice guidance was prepared by ecologists, academics and those in the industry. The data collected during monitoring will be submitted as part of this study. Part of the LEMP's monitoring and reporting commitment will include the submission of findings to the Local Environmental Records Centres.

**1.11 BNG Metric**

- 1.11.1 The information provided in the Metric are directly related to the Habitat Baseline Plans (Figures 9.13.1 – 9.13.12) and the Proposed Habitats Plans (Figures 9.13.13 – 9.13.24).
- 1.11.2 The proposed development will result in a significant net gain of biodiversity units, including HU, HeU and RU, as shown in the headline results below.

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	<i>Area habitat units</i>	1925.10
	<i>Hedgerow units</i>	177.33
	<i>Watercourse units</i>	22.55
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	<i>Area habitat units</i>	70.66%
	<i>Hedgerow units</i>	18.55%
	<i>Watercourse units</i>	16.16%
Trading rules satisfied?	No - Check Trading Summaries ▲	

Figure 1: Headline Results (taken from Statutory Biodiversity Metric) – Sites only.

- 1.11.3 The proposals will result in a total net change of **1925.10 HU**, representing an increase of **70.66%**. The majority of HU will be delivered by the creation of Other Neutral Grassland within the Site, which will be managed to maximise biodiversity value.
- 1.11.4 The proposals will result in a total net change of **177.33 HeU**, representing an increase of **18.55%**. The net gain in HeU will be provided as a result of hedgerow creation and enhancement of existing hedgerows.
- 1.11.5 The proposals will result in a total net change of **22.55 WU**, representing an increase of **16.16%**. This net gain will solely be delivered by the watercourse enhancement measures principally through a reduction in riparian encroachment.

Trading Rules

- 1.11.6 The trading summary ensures that all changes in habitat type abide by trading rules set out within the Metric, described in Table 5 below. The trading rules within the metric are a set of rules that try to prevent the 'trading down' of habitat distinctiveness. Under the trading rules, losses of habitat are to be compensated for on a "like for like" or "like for better" basis.

Table 4: Statutory Biodiversity Metric Trading Rules

Distinctiveness Group	Trading Rule
Very High	Bespoke compensation likely to be required
High	Same habitat required
Medium	Same broad habitat type or a higher distinctiveness required (≥)



Low	Same distinctiveness or better habitat required ($\geq$)
1.11.7	The trading rules have been satisfied for all Very High, High and Low distinctiveness habitats, but the trading rules have not been satisfied for all Medium distinctiveness habitats. The failure is due to the loss of 'Cropland - Arable Field Margins, Tussocky', 'Cropland - Arable Field Margins, Game Bird Mix' and 'Cropland – Arable Field Margins, Pollen and Nectar', with a cumulative deficit in Habitat Units within the Cropland habitat type.
1.11.8	Medium distinctiveness habitat types require replacement by a habitat of equivalent distinctiveness within the broad habitat type (i.e. Cropland) or replacement with a habitat of higher distinctiveness.
1.11.9	As almost all existing Cropland habitats will be removed from the Sites and replaced with permanent grassland habitats, it is not possible to replace the Cropland with a habitat of equivalent distinctiveness from the same broad habitat type. Furthermore, no creation of additional high or very high distinctiveness habitat is proposed within the development.
1.11.10	It should be noted that the arable field margins will, in effect, not be directly lost. Any field margins within 15m of a hedgerow will, wherever possible, be protected from damage during construction and the proposal is to over-sow these habitats with a suitable seed mix to enhance their biodiversity. The habitat will therefore in practice be retained and enhanced. However, in the absence of an adjacent arable crop these areas cease to fit the habitat descriptions of arable field margins. Furthermore, it is not possible to enhance the condition of arable field margins in the Metric. Therefore, arable field margins within the Sites are described as being lost and subsequently recreated as other habitats, such as Other Neutral Grassland.
1.11.11	The permanent grassland habitats provided, particularly areas of Other Neutral Grassland, will also create opportunities for similar species as arable field margins, such as for pollinators, birds, mammals, reptiles and amphibians, whilst suitable habitat for arable weed species present within the arable field margins will be provided in the fields of set-aside.
1.11.12	The overall loss of rural trees is also considered to be an artefact of the Metric, as, in practice, tree planting will occur in high quantities across the Sites, but areas including tree planting have broadly been categorised as their overarching habitat type, such as Woodland or Scrub habitats, or Hedgerow types with trees.
1.11.13	In these instances it is therefore considered that whilst the metric reports a failure of the trading rules for Cropland and Individual Tree habitats, the proposed habitat creation onsite will actually result in the real-world provision of equivalent habitats for both of the above habitat types, and therefore, taking into account professional judgement, the BNG assessment is considered to be fully compliant with all trading rules.



1.12 Cable Route Corridor

- 1.12.1 Under the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2021), BNG is mandatory for Town and Country Planning Act Applications. However, at the time of writing and of the submission of the DCO application for this Scheme, the provisions relating to Nationally Significant Infrastructure Projects (NSIPs) are not yet in force, and these provisions are expected to come into force until November 2025. It is therefore considered that this Scheme is not legally obliged to deliver a Biodiversity Net Gain. In addition, no formal guidance has been published by the Government or Natural England on the application of BNG to NSIPs at the time of writing.
- 1.12.2 Nevertheless, the project has committed to delivering BNG that is proportionate to the Scheme, and as a result, BNG assessments have been a key part of the design of the solar sites from an early stage. The BNG assessment in this Appendix has focussed on the areas of land within the solar Sites (Green Hill A-G) and the BESS site, to ensure a proportionate approach is taken to assessing BNG for the Scheme. It has also been demonstrated that a significant net gain for biodiversity will be delivered across the solar Sites.
- 1.12.3 The 50m wide Cable Route Corridor included in the DCO application is preliminary, with the intention of a narrower ‘working width’ within the Cable Route Corridor being micro-sited as part of a detailed design process post-consent. In addition, as the works relating to the installation of the underground cable within the Cable Route Corridor (which will include the export cables connecting Green Hill A-G to Grendon Substation) will be temporary and the land restored post-construction, it was not considered appropriate or proportionate to include the Cable Route Corridor within the main BNG assessment.
- 1.12.4 It is however understood that potential outcomes of a BNG assessment on the Cable Route may be requested during examination of the DCO application, and therefore an alternative BNG assessment has been undertaken, which included both the Scheme Sites and the Cable Route Corridor (and associated temporary construction compounds). A brief summary of the outcomes of this assessment are provided below.

Methods

- 1.12.5 A full ecological baseline was collected for all habitats within the Cable Route Corridor, excluding some small sections where access permission to collect baseline survey information could not be obtained, or where it was considered unsafe to do so (such as in the central reservation of busy roads along the Cable Route Corridor). Where habitats within the Cable Route Corridor have not been accessible, an assumption of the likely habitats present has been made, based on available desk study information (using satellite imagery and open-source datasets, where relevant), and the context of other habitats present within the local landscape. The precautionary principle has been applied to take account of the habitat type and condition of the highest ecological value which is likely to be present within these areas. Assumptions have also been made regarding the condition of particular habitats where these could not be fully surveyed. Given the



application of precautionary assessments where data are lacking, this limitation is not considered to be a significant impediment to the BNG assessment.

- 1.12.6 Where grassland habitats were present within the Cable Route Corridor which could not be fully characterised given the time of year that the Cable Route Corridor walkover surveys were completed (Winter 2024/25 – Spring 2025), these habitats were revisited (where access permission was provided) within the optimal survey window of May – August 2025 inclusive in order to acquire accurate habitat classification and condition information. This version of the Biodiversity Net Gain Assessment (Revision A) has therefore been informed by detailed grassland survey information along the Cable Route Corridor where this is relevant.
- 1.12.7 Modular River Physical surveys (MoRPh) of all accessible watercourses within the Cable Route Corridor were also undertaken, between March – April 2025 by accredited MoRPh surveyors. Where access permission was not in place, assumptions were made with regard to the likely watercourses present and their respective conditions, applying the precautionary principle in the same manner as with other habitat types within these areas.

Baseline Habitats

- 1.12.8 Table 5 below provides an overview of the habitats, hedgerows and watercourses recorded within the Cable Route Corridor. Where particular habitats could not be fully surveyed and assumptions of habitat types or conditions have been used, these rows have been highlighted in grey.
- 1.12.9 Where permanent grassland habitats were identified within the Cable Route Corridor which could not be surveyed (in two central reservations on the A45 and A4500 which were deemed unsafe to access, and a small area on an island between two channels of the River Nene where access permission could not be secured), these habitats have been categorised as Modified Grassland. On a precautionary basis, these areas were assigned a Good condition score.
- 1.12.10 Similarly, three areas of woodland were inaccessible for survey, due to a lack of access permission being secured. These were all assigned as 'Other Woodland; Broadleaved' in Good condition, on a precautionary basis.
- 1.12.11 Percentages of the Cable Route Corridor and Construction Compound Areas taken up by each area-based habitat type are given; percentages are not given for hedgerows and watercourses as these are linear features, with no area value in the BNG assessment.


Table 5: Summary of Baseline Habitats within the Cable Route Corridor and Construction Compound Areas

Habitat	Area (ha) / length (km)	% of Cable Route Corridor and Construction Compound Areas	Condition Assessment Score
Cropland	130.4	69.1	
Cereal crops	73.1	38.7	N/A
Cereal crops (assumed)	2.0	1.0	N/A
Non-cereal crops	20.5	10.9	N/A
Temporary grass and clover leys	13.7	7.3	N/A
Winter stubble	19.0	10.1	N/A
Arable field margins game bird mix	0.4	0.2	N/A
Arable field margins cultivated annually	0.1	0.1	N/A
Arable field margins tussocky	1.4	0.7	N/A
Arable field margins pollen and nectar	0.1	0.03	N/A
Grassland	43.9	23.2	
Modified grassland	28.2	15.0	Good – 28.8% Moderate – 15.5% Poor – 55.8%
Modified grassland (assumed)	0.3	0.2	Good (assumed)
Other neutral grassland	15.3	8.1	Good – 1.7% Moderate – 76.7%



Habitat	Area (ha) / length (km)	% of Cable Route Corridor and Construction Compound Areas	Condition Assessment Score
			Poor – 21.4%
Heathland and shrub	2.1	1.1	
Bramble scrub	0.4	0.2	N/A
Mixed scrub	1.7	0.9	Good – 15.3% Moderate – 78.6% Poor – 5.7%
Woodland and forest	1.9	1.0	
Other woodland; broadleaved	0.7	0.4	Moderate – 68.8% Poor – 32.0%
Other woodland; broadleaved (assumed)	1.0	0.5	Good (assumed)
Other coniferous woodland	0.1	0.04	Poor
Other woodland; mixed	0.1	0.1	Poor
Lakes	5.5	2.9	
Ponds (priority habitat)	2.8	1.4	Moderate – 97.3% Poor – 2.7%
Temporary lakes ponds and pools	2.7	1.5	Poor
Sparsely vegetated land	0.8	0.4	
Ruderal/Ephemeral	0.2	0.1	Good – 89.1%



Habitat	Area (ha) / length (km)	% of Cable Route Corridor and Construction Compound Areas	Condition Assessment Score
			Moderate – 10.9%
Ruderal/Ephemeral (assumed)	0.4	0.2	Poor
Tall forbs	0.2	0.1	Good – 81.1% Moderate – 18.9%
Urban	3.3	1.8	
Developed land; sealed surface	3.1	1.7	N/A
Artificial unvegetated; unsealed surface	0.2	0.1	N/A
Watercourse Footprint	0.9	0.5	N/A
Individual Trees	49 no.	-	
Individual Trees – Very large	6no.	-	Good
Individual Trees - Large	22 no.	-	Good – 98% Poor – 2%
Individual Trees – Medium	16 no.	-	Good
Individual Trees - Small	5 no.	-	Good
Hedgerows	25.8	-	
Native hedgerow	8.3	-	Good – 53.5% Moderate – 37.7% Poor – 8.8%
Native hedgerow (assumed)	0.1	-	Good (assumed)



Habitat	Area (ha) / length (km)	% of Cable Route Corridor and Construction Compound Areas	Condition Assessment Score
Native hedgerow – associated with bank or ditch	3.9	-	Good – 76.5% Moderate – 15.4% Poor – 8.1%
Native hedgerow with trees	2.3	-	Good – 43.4% Moderate – 51.4% Poor – 5.2%
Native hedgerow with trees – associated with bank or ditch	3.2	-	Good – 51.2% Moderate – 48.8%
Species-rich native hedgerow	0.8	-	Good – 78.9% Moderate – 21.1%
Species-rich native hedgerow – associated with bank or ditch	1.3	-	Good – 45.4% Moderate – 26.7% Poor – 27.9%
Species-rich native hedgerow with trees	2.7	-	Good – 69.7% Moderate – 30.3%
Species-rich native hedgerow with trees – associated with bank or ditch	3.1	-	Good
Non-native and ornamental hedgerow	0.08	-	Poor
Lines of trees	0.55	-	



Habitat	Area (ha) / length (km)	% of Cable Route Corridor and Construction Compound Areas	Condition Assessment Score
Line of trees	0.48	-	Moderate – 24.1% Poor – 75.9%
Line of trees – associated with bank or ditch	0.07	-	Moderate – 51.5% Poor – 48.5%
Watercourses	5.6	-	
Ditches	3.5	-	Moderate – 12.2% Poor – 87.8%
Other rivers and streams	1.6	-	Fairly Poor – 40.3% Poor – 59.7%
Other rivers and streams (assumed)	0.04	-	Good (assumed)
Priority Habitat	0.3	-	Fairly Poor
Priority Habitat (assumed)	0.1	-	Good (assumed)
Culvert	0.04	-	N/A - Poor



Proposed Habitats

- 1.12.12 The working width within the Cable Route Corridor (comprising all areas associated with construction work, including the cable trench itself, as well as a haul road, and material storage areas) will be a maximum of 30m in width. This working width will be reduced to a maximum of 10m at any hedgerow crossing points, in order to minimise unnecessary hedgerow and tree losses across the Cable Route Corridor. The working width will also be micro-sited within the Cable Route Corridor to avoid impacts to particularly valuable ecological features where this is practicable, and therefore any in-field trees within the Cable Route Corridor were considered to be retained in the Metric.
- 1.12.13 The cable installation works will be temporary and will occur progressively, with operations moving in one direction, and any affected habitats will be reinstated following the installation of the cables (these reinstatement measures are detailed in the OEPMS Revision A [EX1/GH7.5_A]). The vast majority of the cable route will be sited within arable land (of low general ecological value), and it is considered a priority to reinstate this land to arable use as quickly as possible following the installation of the underground cabling for a variety of reasons, including minimising the impact on farming activities and soil management.
- 1.12.14 For the above reasons, it is considered that the majority of the habitats affected by the installation of the cable route would be reinstated to their original baseline habitat type and condition within two years of the initial impact. This would meet the definition for temporary impacts (in accordance with the Statutory Biodiversity Metric User Guide), and therefore all area habitats within the Cable Route Corridor have been considered to be temporarily impacted and thus 'retained' in the Metric. It is however acknowledged that hedgerows where hedgerow removal is required may take over two years to reach their original type and condition, and therefore hedgerow losses have been accounted for in the Metric (as detailed in the 'Proposed Hedgerows' section below).
- 1.12.15 Given that the land within the Cable Route Corridor would be returned to the landowner immediately following the completion of cable route construction, the Applicant/Contractor would not have the ability to manage and monitor habitats within the Cable Route Corridor throughout the Operational Phase of the Scheme. As such, no habitat creation or enhancement measures are proposed within the Cable Route Corridor.

Proposed Hedgerows and Hedgerow Trees

- 1.12.16 With regard to the hedgerow impacts anticipated during the cable route installation, all cables will be buried, with the cable trenches measuring up to 3.5m wide. A haul road will also be installed adjacent to the cable trench to facilitate vehicular movements down the Cable Route Corridor, which will measure up to 6m wide. Although a general working width of 30m will be required within fields along the Cable Route Corridor, any hedgerow crossing points along the cable route will be narrowed to avoid unnecessary hedgerow losses, and therefore a working width of 10m at hedgerow crossing points has been committed to. The cable trench will also be micro-sited within the Cable Route Corridor to utilise existing agricultural field accesses where possible to further reduce hedgerow



losses. Nevertheless, for the purposes of this BNG assessment (and given that the precise route that the cable trench will follow has not yet been designed), it has been assumed that 10m of each hedgerow which intersects the Cable Route Corridor will be removed to facilitate cable installation on a precautionary basis, unless trenchless construction methods have been committed to at particular hedgerow/road crossing points to avoid impacts (the Crossing Schedule [APP-562] refers). In these cases, hedgerows and hedgerow trees at these locations have been assumed to be retained.

- 1.12.17 Hedgerow and tree losses presented in this assessment should be considered as indicative, as the working area within the Cable Route Corridor has not been finalised. The final working area will be micro-sited at the detailed design stage (post-DCO consent) to avoid and/or minimise impacts on hedgerows and trees wherever possible.
- 1.12.18 In line with the assumptions used for the Site access points, accesses into the Cable Route Corridor from the highway have been assumed to require a maximum width of 6.5m, with any additional hedgerow losses from abnormal load vehicle swept path analysis and/or visibility splays modelled from detailed drawings of each access [APP-150].
- 1.12.19 In the unlikely event that a cable needs to be replaced during the operational phase of the Scheme, temporary accesses which were used during construction and then reinstated may need to be re-opened or widened to facilitate cable replacement works in that section of the Cable Route Corridor. Given that this is considered unlikely to occur and any potential hedgerow losses associated with this action would be minimal and focussed on a low number of access points, this would have no material effect on this BNG assessment and so this eventuality has not been accounted for.
- 1.12.20 Across the entirety of the Cable Route Corridor, it is anticipated that 867m of existing hedgerow will be removed to facilitate cable installation. This hedgerow will be reinstated following the completion of installation work, and therefore any hedgerow sections listed in the Metric as Lost are also listed under the Hedgerow Creation tab as Created. No changes to the hedgerow type or condition have been applied to re-planted hedgerows, to reflect the fact that replacement hedgerow planting will aim to recreate what was lost, by using a similar diversity of species to that which was present at Baseline.
- 1.12.21 Given that the land within the Cable Route Corridor would be returned to the landowner immediately following the completion of cable route construction, the Applicant/Contractor would not have the ability to manage and monitor habitats within the Cable Route Corridor throughout the Operational Phase of the Scheme. As such, no hedgerow creation (beyond the reinstatement of hedgerows affected during cable route construction) or enhancement measures are proposed within the Cable Route Corridor.

Proposed Watercourses

- 1.12.22 Impacts on watercourses of particular ecological or hydromorphological value within the Cable Route Corridor will be avoided entirely, through the use of



specialist construction techniques such as Horizontal Directional Drilling (HDD). Using HDD, cables would be installed beneath key watercourses, thereby avoiding potential impacts to watercourses and their associated riparian habitats from open-cut trenching. A full crossing schedule detailing where HDD will be utilised is provided in **[APP-562]**.

- 1.12.23 Where HDD is not utilised, impacts to watercourses will be more significant, as open-cut trenching would likely be utilised to install cables across these features. However, given the small working width and temporary nature of the work, it is anticipated that any damage to watercourses where open-cut trenching is used could be repaired, and the watercourses could be reinstated to their original type and condition within 2 years of the impact occurring. This would meet the definition for temporary impacts (in accordance with the Statutory Biodiversity Metric User Guide), and therefore all area watercourses within the Cable Route Corridor have been considered to be temporarily impacted and thus 'retained' in the Metric.
- 1.12.24 Given that the land within the Cable Route Corridor would be returned to the landowner immediately following the completion of cable route construction, the Applicant/Contractor would not have the ability to manage and monitor habitats within the Cable Route Corridor throughout the Operational Phase of the Scheme. As such, no watercourse creation (beyond the reinstatement of watercourses affected during cable route construction) or enhancement measures are proposed within the Cable Route Corridor.

BNG Metric

- 1.12.25 When assessing all impacts associated with the solar Sites (Green Hill A – G and Green Hill BESS) as well as those associated with the Cable Route Corridor and the temporary cable route construction compounds, the Scheme will result in a significant net gain of biodiversity units, including HU, HeU and WU, as shown in the headline results below.

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Area habitat units	1922.12
	Hedgerow units	173.45
	Watercourse units	22.55
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Area habitat units	58.36%
	Hedgerow units	13.83%
	Watercourse units	13.22%
Trading rules satisfied?	No - Check Trading Summaries ▲	

Figure 2: Headline Results (taken from Statutory Biodiversity Metric) – Sites and Cable Route Corridor



- 1.12.26 The proposals will result in a total net change of **1922.12 HU**, representing an increase of **58.36%**. Given that no habitat loss, creation or enhancement will occur within the Cable Route Corridor, this net gain will solely be delivered by the habitat creation and enhancement measures within the Sites themselves.
- 1.12.27 The proposals will result in a total net change of **173.45 HeU**, representing an increase of **13.83%**. Although hedgerow losses are anticipated within the Cable Route Corridor to facilitate cable installation, these losses will be reinstated following construction. The net gain in HeU will principally be provided through hedgerow creation and the enhancement of existing hedgerows within the Sites.
- 1.12.28 The proposals will result in a total net change of **22.55 WU**, representing an increase of **13.22%**. Given that no watercourse loss, creation or enhancement will occur within the Cable Route Corridor, this net gain will solely be delivered by the watercourse enhancement measures within the Sites themselves, principally through a reduction in riparian encroachment.
- 1.12.29 Although the net gains in habitat, hedgerow and watercourse are slightly lower when including the Cable Route Corridor in the assessment, a net gain of over 10% of each unit type will still be achieved. Given that all habitats and watercourses have been accounted for in the Metric as retained (as they meet the definition for temporary impacts, in accordance with the Statutory Biodiversity Metric User Guide), the reduction in % net gain in each unit type is considered to principally be due to the ‘dilution’ effect of a larger baseline, whereby a larger quantum of units at baseline increases the level of habitat creation and enhancement required to reach a 10% net gain.

Trading Rules

- 1.12.30 See Section 1.11 for details about the Trading Rules, which are also of relevance to the Cable Route Corridor.



1.13 References

- Ref.1 Biodiversity Net Gain: Good Practice Principles for Development (CIEEM, CIRA, IEMA 2016). Available at: [Biodiversity-Net-Gain-Principles.pdf \(cieem.net\)](https://www.cieem.net/biodiversity-net-gain-principles.pdf) [Accessed 19 June 2024]
- Ref.2 National Planning Policy Framework (2012) *Section 15: Conserving and enhancing the natural environment*. Available at: <https://www.gov.uk/guidance/national-planning-policy-framework/15-conserving-and-enhancing-the-natural-environment> [Accessed 16th April 2025]
- Ref.3 Department for Energy Security & Net Zero (January 2024) *National Policy Statement for Renewable Energy Infrastructure (EN-3)*. Available at: <https://assets.publishing.service.gov.uk/media/65a7889996a5ec000d731aba/nps-renewable-energy-infrastructure-en3.pdf> [Accessed 28th Feb 2024]
- Ref.4 Department for Energy Security & Net Zero (January 2024) *Overarching National Policy Statement for Energy (EN-1)*. Available at: <https://assets.publishing.service.gov.uk/media/65bbfbd709fe1000f637052/overarching-nps-for-energy-en1.pdf> [Accessed 28th Feb 2024]
- Ref.5 Department for Energy Security & Net Zero (January 2024) *National Policy Statement for Electricity Networks Infrastructure (EN-5)*. Available at: [Electricity Networks National Policy Statement - EN-5 \(publishing.service.gov.uk\)](https://assets.publishing.service.gov.uk/media/65a7889996a5ec000d731aba/nps-electricity-networks-infrastructure-en5.pdf) [Accessed 19th June 2024]
- Ref.6 Environment Act 2021, c. 30. Available at: <https://www.legislation.gov.uk/ukpga/2021/30/contents>
- Ref.7 Milton Keynes Council Plan: MK 2016-2031 (adopted March 2019). Available at: <https://www.milton-keynes.gov.uk/planning-and-building/developingmk/planmk> [Accessed 20th May 2024]
- Ref.8 MK City Plan 2050 (draft). Available at: [Microsoft Word - MK City Plan 2050 Regulation post-DD version Clean](#) [Accessed 14th October 2024]
- Ref.9 The Plan for the Borough of Wellingborough - Adopted Plan (adopted February 2019). Available at: <https://wellingborough-consult.objective.co.uk/kse/event/34092/section/> [Accessed 28th Feb 2024]
- Ref.10 Settlements and Countryside Local Plan for Daventry District 2011-2029 (adopted February 2020). Available at: [Daventry Local Plan \(Part 2\) | West Northamptonshire Council](#) [Accessed 28th Feb 2024]
- Ref.11 *Biodiversity Supplementary Planning Document: Annexes For Northamptonshire (2015)*. Available at: <https://cms.northnorthants.gov.uk/media/3829/download> [Accessed 17 Feb 2024]
- Ref.12 Northamptonshire Biodiversity Action Plan (3rd edition, 2015-2020). Available at: <https://www.northnorthants.gov.uk/conservation-and-protection/biodiversity> [Accessed 15th April 2024].
- Ref.13 North Northamptonshire Local Nature Recovery Strategy (2025). Available at: <https://www.northnorthants.gov.uk/conservation-and-protection/local-nature-recovery-strategy> [Accessed 25th March 2025]



- Ref.14 Biodiversity Net Gain Report & Audit Templates (Version 1). CIEEM. July 2021 [Biodiversity Net Gain Report and Audit Templates | CIEEM](#) [Accessed 16th April 2025]
- Ref.15 British Standard BS 8683:2021. Process for designing and implementing Biodiversity Net Gain. Specification (31/08/2021).
- Ref.16 <https://cartographer.io/>
- Ref.17 Gurnell *et al.* (2022) A GUIDE TO ASSESSING RIVER CONDITION: Part of the Rivers and Streams Component of the Biodiversity Net Gain Metric. Available at: <https://modularriversurvey.org/wp-content/uploads/A-GUIDE-TO-ASSESSING-RIVER-CONDITION-Nov22.pdf> [Accessed 24th April 2025]
- Ref.18 https://modularriversurvey.org/wp-content/uploads/MoRPh-Manual-ver-14_Oct22.pdf, based on Shuker, L.J *et al* (2017) MoRPh: a citizen science tool for monitoring and appraising physical habitat changes in rivers. *Water and Environment Journal*, 31(3): 418-424.
- Ref.19 Gurnell *et al.* (2022). A Guide to Assessing River Condition: Part of the Rivers and Streams Component of the Biodiversity Net Gain Metric.
- Ref.20 The Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024. Available at: <https://www.legislation.gov.uk/ukxi/2024/48/contents/made> [Accessed 16th April 2025].
- Ref.21 The Statutory Biodiversity Metric User Guide First published: February 2024. Last updated: July 2024. (DeFRA) Available at: [The Statutory Biodiversity Metric](#) [Accessed 17th April 2025]
- Ref.22 Solar Energy UK (2023). Solar Habitat: Ecological trends on solar farms in the UK. Available at: <https://solarenergyuk.org/resource/solar-habitat-2024-ecological-trends-on-solar-farms-in-the-uk/> [Accessed 29 Apr 2025]
- Ref.23 Available at: <https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::priority-habitats-inventory-england/about>
- Ref.24 Available at: <https://naturalengland-defra.opendata.arcgis.com/datasets/ancient-woodland-england/explore>
- Ref.25 <https://solarenergyuk.org/resource/solar-energy-uk-guidance-a-standardised-approach-to-monitoring-biodiversity/>



1.14 Annex A: Extracts/ Summaries of Relevant Legislation

National Planning Policy Framework (December 2024) (Ref.2)

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

- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*
- b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*
- c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;*
- 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 and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs;*
- e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and*
- f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.*

192. To protect and enhance biodiversity and geodiversity, plans should:

- a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity⁶⁸; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation⁶⁹; and*
- 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.*

193. When determining planning applications, local planning authorities should apply the following principles:

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely*



impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons⁷⁰ and a suitable compensation strategy exists; and

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.



National Policy Statement for Renewable Energy Infrastructure (EN-3) (November 2023) (Ref.3)

The National Policy Statement for Renewable Energy Infrastructure (EN-3) (November 2023), Paragraph 2.10.128 to 130 states that:

'In England, proposed enhancements should take account of the above factors and as set out in Sections 4.6 and 5.4 of EN-1 aim to achieve environmental and biodiversity net gain in line with the ambition set out in the Environmental Improvement Plan and any relevant measures and targets, including statutory targets set under the Environment Act or elsewhere.⁹⁷ This might include maintaining or extending existing habitats and potentially creating new important habitats, for example by installing cultivated strips/plots for rare arable plants, rough grassland margins, bumble bee plant mixes, and wild bird seed mixes. Applicants are advised to develop an ecological monitoring programme to monitor impacts upon the flora of the site and upon any particular ecological receptors (such as bats and wintering birds). Results of the monitoring will then inform any changes needed to the land management of the site, including, if appropriate, any livestock grazing regime.'

Overarching National Policy Statement for Energy (EN-1) (Ref.4)

Section 4.3 – Environmental Effects/Considerations – This section states that proposals must be accompanied by an Environmental Statement (ES) describing the aspects of the environment likely to be significantly affected by the project, and sets out that information submitted with the application should be proportionate to the scale of the project.

Section 4.6 – Environmental and Biodiversity Net Gain – This section states that Energy NSIP proposals should seek opportunities to contribute to and enhance the natural environment by providing net gains for biodiversity, and the wider environment where possible. Where possible, this should include a completed biodiversity metric calculation. This section also states that applications should be accompanied by a statement demonstrating how opportunities for delivering wider environmental net gains have been considered, and where appropriate, incorporated into proposals as part of good design.

Section 5.4 – Biodiversity and Geological Conservation – This section states that applicants should ensure that the ES clearly sets out any effects on international, national and local designated sites of ecological interest, as well as on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity, including irreplaceable habitats. It also states that applicants should consider any reasonable opportunities to maximise the restoration, creation and enhancement of wider biodiversity.

National Policy Statement for Electricity Networks Infrastructure (EN-5) (Ref.5)

Section 2.5 – Environmental and Biodiversity Net Gain – This section recognises that the linear nature of electricity networks infrastructure can provide excellent opportunities to provide green corridors and biodiversity stepping stones, thereby strengthening the connectivity of habitats in the local landscape.

Section 2.9 – Applicant Assessment – This section outlines the information that should be submitted with an application, including the consideration of impacts of Electric and Magnetic Fields (EMFs).



Section 2.11 – Secretary of State Decision Making – This section states that where biodiversity impacts are identified, the Secretary of State should be satisfied that all feasible options for mitigation have been considered and evaluated appropriately.

Environment Act (2021) (Ref.6)

The Environment Act (2021) was passed into law in November 2021. Under this act, BNG became mandatory in England under Schedule 14 of the Act. This means that all planning permissions granted in England (with a few exemptions) must deliver at least 10% biodiversity net gain (for all Biodiversity Units type – HU, HeU and WU) from January 2024, and small sites from April 2024. BNG must be measured using the Statutory biodiversity metric and habitats will need to be secured for at least 30 years. The Act sets out the following key components to mandatory BNG:

- Minimum 10% gain required calculated using Biodiversity Metric & approval of net gain plan;
- Habitat secured for at least 30 years via obligations/ conservation covenant;
- Habitat can be delivered on-site, off-site or via statutory biodiversity credits;
- There will be a national register for net gain delivery sites;
- The mitigation hierarchy still applies of avoidance, mitigation and compensation for biodiversity loss;
- Will also apply to Nationally Significant Infrastructure Projects (NSIPs);
- Does not apply to marine development; and
- Does not change existing legal environmental and wildlife protections.

Milton Keynes Council Plan: MK 2016-2031 (adopted March 2019) (Ref.7)

Policy SD1 PLACE-MAKING PRINCIPLES FOR DEVELOPMENT

19. Development should result in a net gain in biodiversity through use of strategic, connected green infrastructure, in line with policies NE1-6 and ensure consideration is given to the historic environment in accordance with HE1.

MK City Plan 2050 (not adopted) (Ref.8)

Policy CEA9 Biodiversity and Habitats Network

A. Development proposals that provide a higher than 10% net gain in biodiversity will be strongly supported provided the proposed habitat types/species selected are appropriately integrated with the wider landscape proposals and suitable to the end use of the development.

The Plan for the Borough of Wellingborough - Adopted Plan (adopted February 2019) (Ref.9)

GI 1 Protect and enhance existing and future

Objective: Local Green Infrastructure Corridors.

Indicator: Net loss/gain in Green Infrastructure across the borough.

Targets: A net gain in Green Infrastructure across the borough



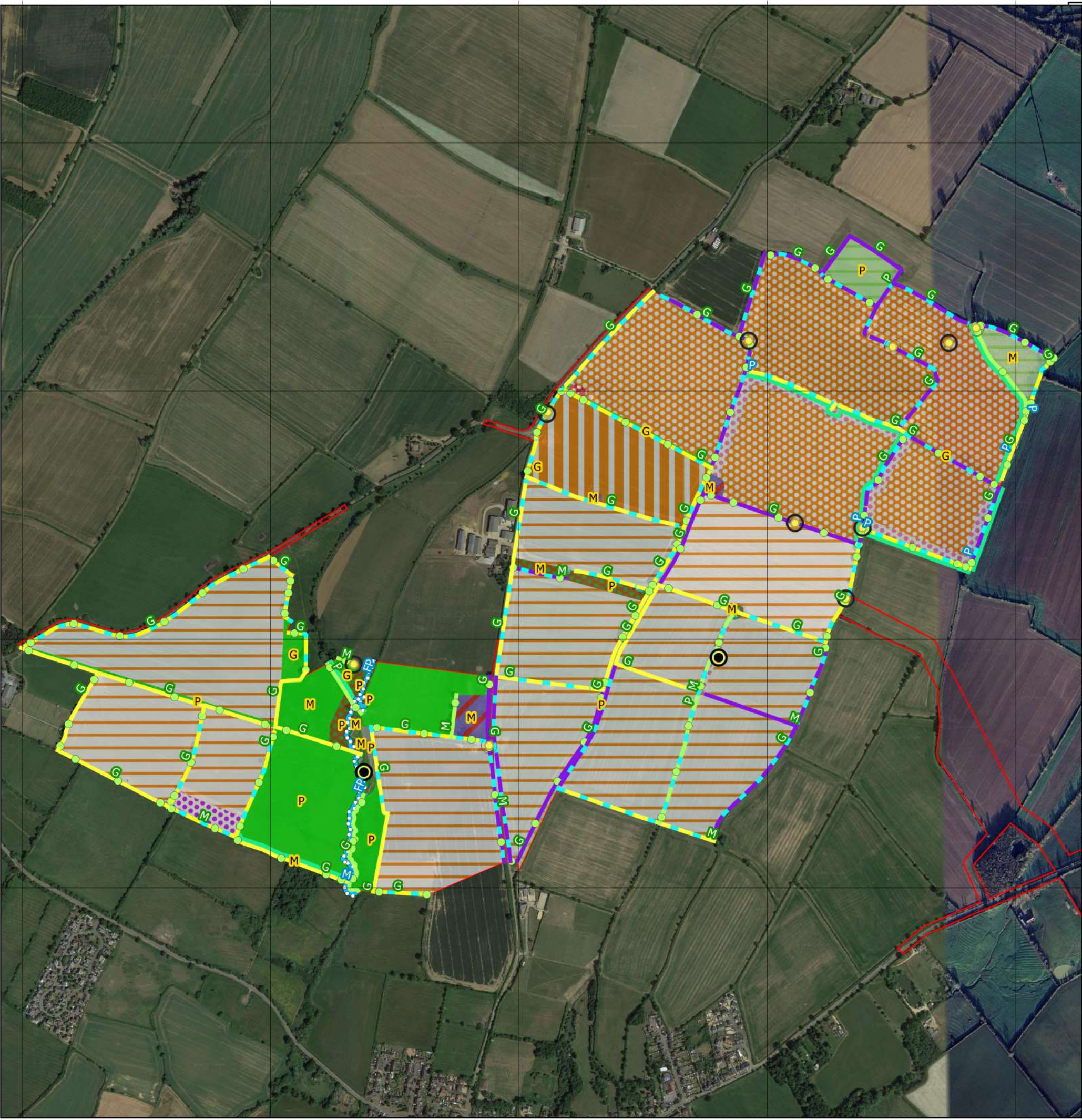
Settlements and Countryside Local Plan for Daventry District 2011-2029 (adopted February 2020) (Ref.10)

ENV5 – Biodiversity

C. Proposals should seek to achieve a net gain for biodiversity, including the creation and management of new habitats, strengthening existing networks of habitats, avoiding the fragmentation of habitats and links and addressing the Northamptonshire Biodiversity Action Plan local priorities for habitats and species.

Northamptonshire Biodiversity Supplementary Planning Document - August 2015 (Ref.11)

All development should where possible deliver a net gain in biodiversity.



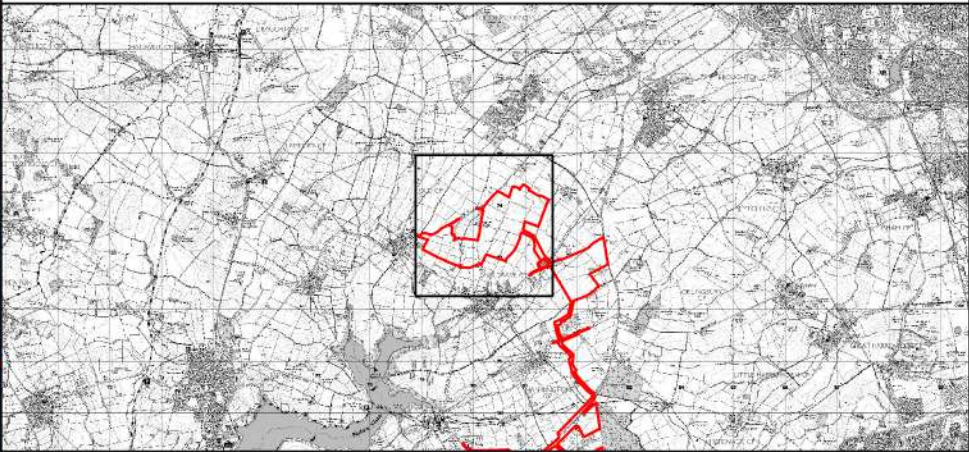
Title: Figure 9.13.1 Biodiversity Net Gain Baseline (Green Hill A)

Document: Volume 2
Appendix 9.13 - Biodiversity Net Gain Assessment
Environmental Statement (ES)

- Legend:**
- | | |
|---|--|
| Order Limits | Arable field margins game bird mix |
| Existing Very Large Rural Tree | Arable field margins pollen and nectar |
| Existing Large Rural Tree | Arable field margins tussocky |
| Existing Medium Rural Tree | Artificial unvegetated, unsealed surface |
| Line of trees | Cereal crops |
| Line of trees - associated with bank or ditch | Developed land; sealed surface |
| Native hedgerow | Mixed scrub |
| Native hedgerow - associated with bank or ditch | Modified grassland |
| Native hedgerow with trees | Non-cereal crops |
| Native hedgerow with trees - associated with bank or ditch | Other neutral grassland |
| Species-rich native hedgerow | Other woodland; broadleaved |
| Species-rich native hedgerow - associated with bank or ditch | Other woodland; mixed |
| Species-rich native hedgerow with trees | Ponds (priority habitat) |
| Species-rich native hedgerow with trees - associated with bank or ditch | Watercourse footprint |
| Ditches | Ruderal/Ephemeral |
| Other rivers and streams | Temporary grass and clover leys |
| | Willow scrub |

Data: IGP, 2025
Base Maps: © Crown copyright and database rights 2024
Ordnance Survey 0100031673
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The letter codes G, FG, M, FP and P refer to the condition of the habitat where G = Good, F = Fairly good, M = Moderate, R = Fairly Poor, P = Poor. Green refers to hedgerows, blue to watercourses and yellow to habitats.

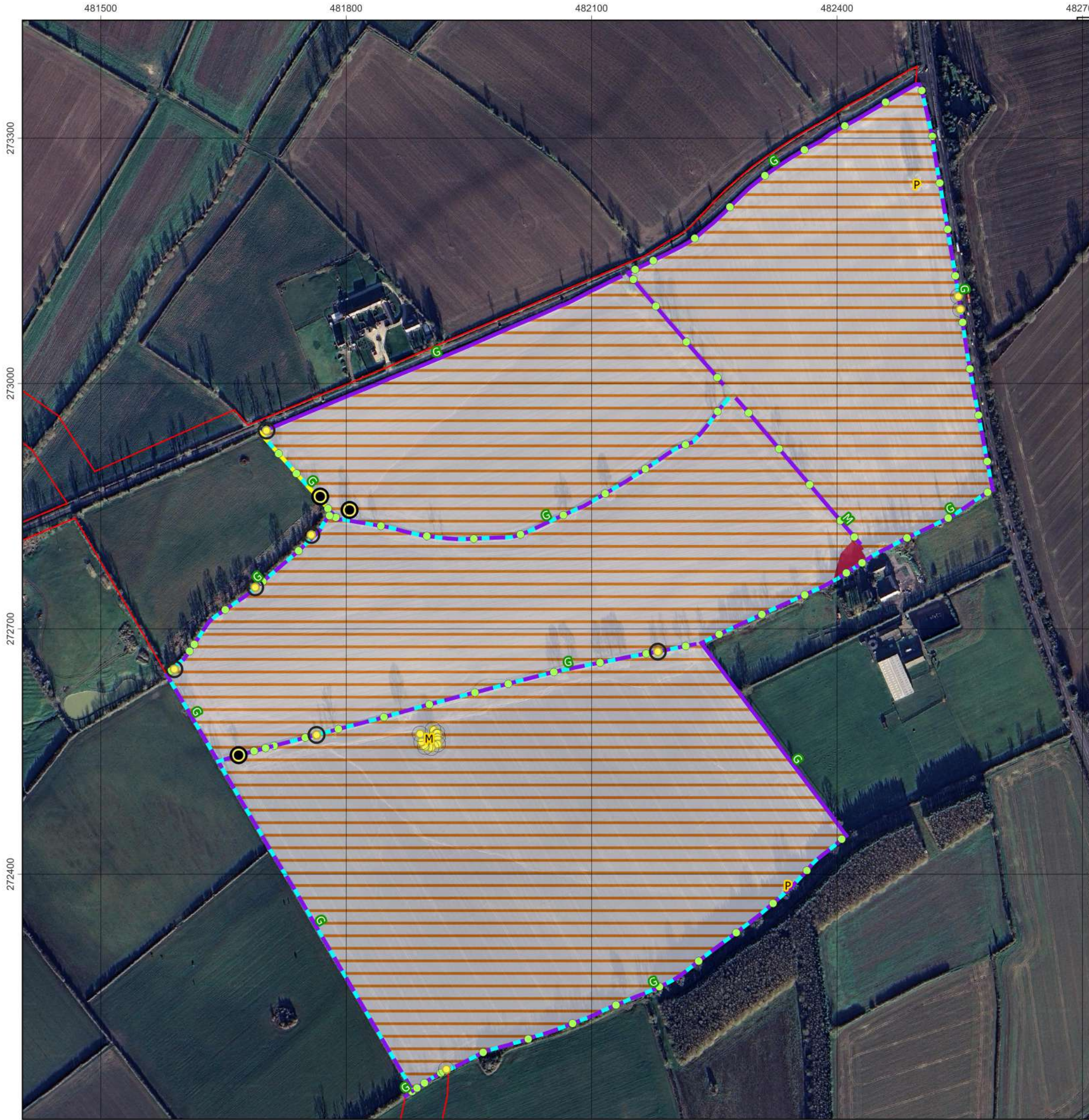


APFP Regulation: 5(2)(a)
Application Doc no.: EN010170/APP/GH6.3.9.13
Drawing no.: CW.ES.BNG.1



Co-ordinate system: OSGB36 / British National Grid
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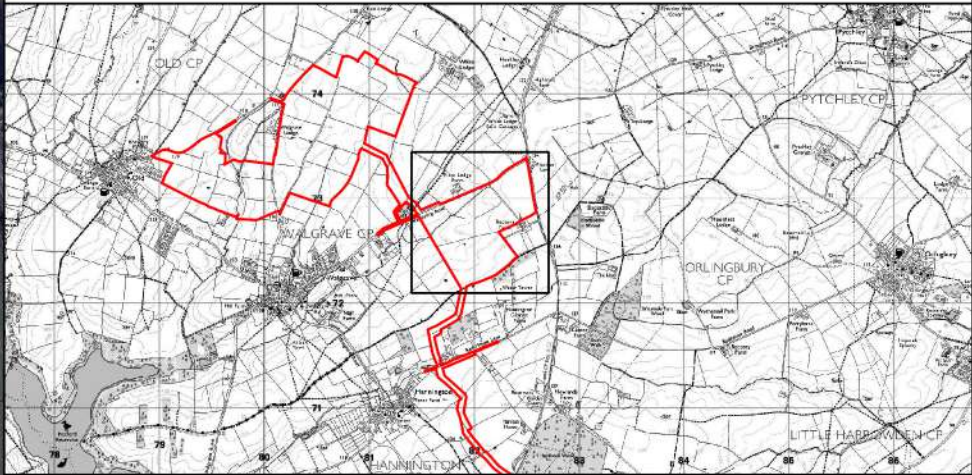
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Document: Volume 2
Appendix 9.13 - Biodiversity Net Gain Assessment
Environmental Statement (ES)

- Legend:
- | | |
|---|--------------------------|
| Order Limits | Cereal crops |
| Existing Very Large Rural Tree | Ponds (priority habitat) |
| Existing Large Rural Tree | Bare ground |
| Existing Medium Rural Tree | |
| Native hedgerow with trees - associated with bank or ditch | |
| Species-rich native hedgerow | |
| Species-rich native hedgerow - associated with bank or ditch | |
| Species-rich native hedgerow with trees | |
| Species-rich native hedgerow with trees - associated with bank or ditch | |

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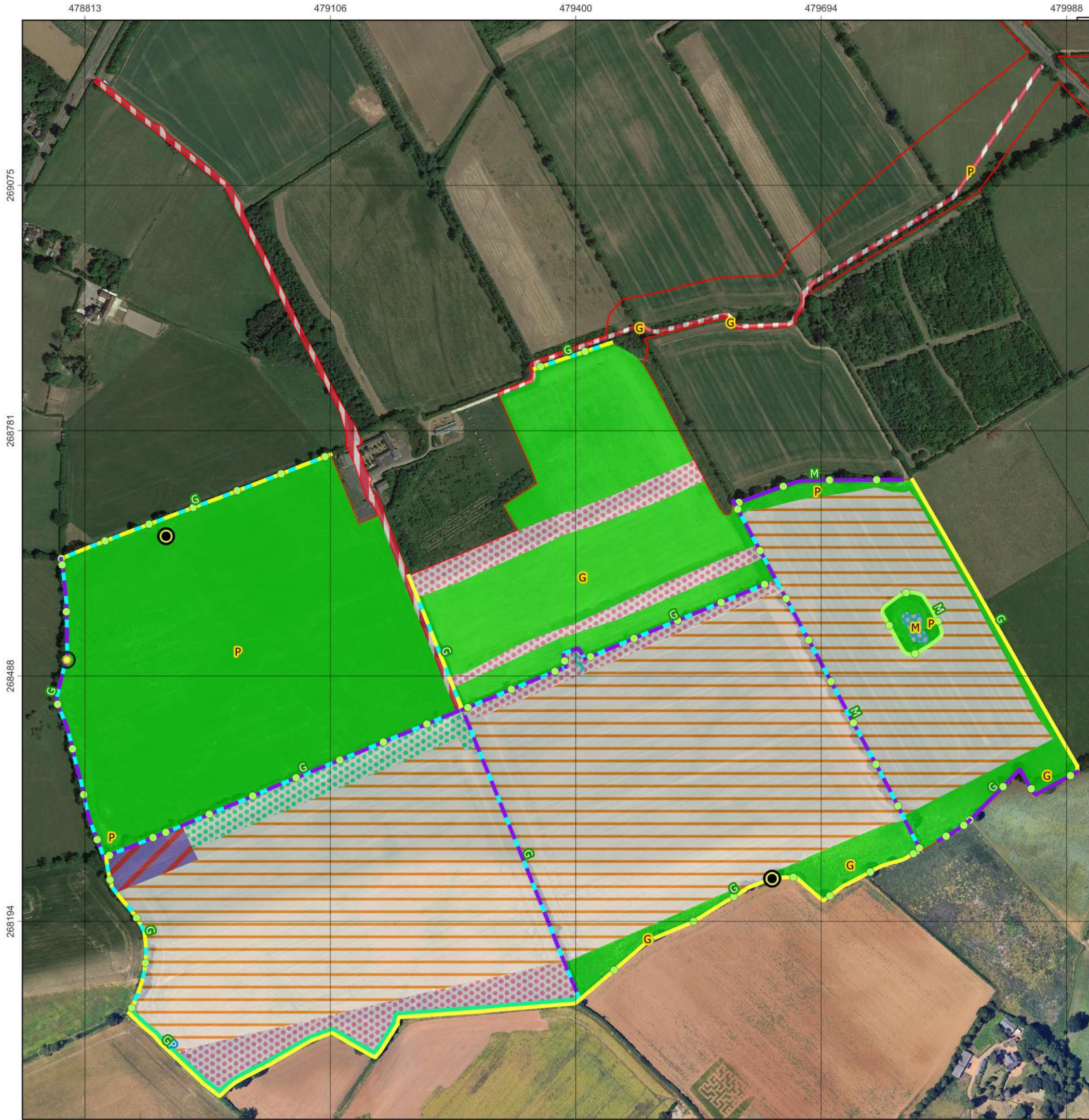
The letter codes G, FG, M, FP and P refer to the condition of the habitat where G = Good, F = Fairly good, M = Moderate, R = Fairly Poor, P = Poor. Green refers to hedgerows, blue to watercourses and yellow to habitats.



APFP Regulation: 5(2)(a)
Application Doc no.: EN010170/APP/GH6.3.9.13
Drawing no.: CW.ES.BNG.2

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:4800 @ A3





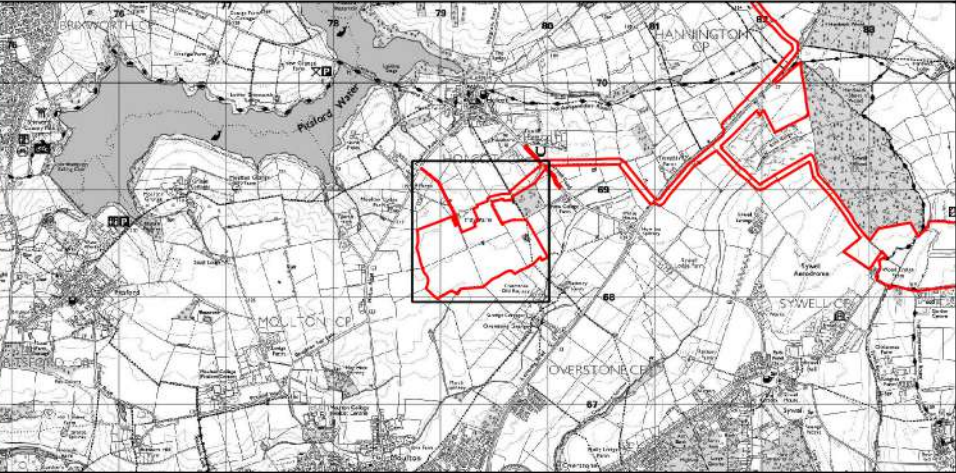
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Document: Volume 2
Appendix 9.13 - Biodiversity Net Gain Assessment
Environmental Statement (ES)

- Legend:
- | | |
|---|--|
| Order Limits | Ditches |
| Existing Very Large Rural Tree | Arable field margins pollen and nectar |
| Existing Large Rural Tree | Arable field margins tussocky |
| Line of trees | Cereal crops |
| Native hedgerow | Developed land; sealed surface |
| Native hedgerow - associated with bank or ditch | Mixed scrub |
| Native hedgerow with trees | Modified grassland |
| Native hedgerow with trees - associated with bank or ditch | Ponds (priority habitat) |
| Species-rich native hedgerow - associated with bank or ditch | Bare ground |
| Species-rich native hedgerow with trees | |
| Species-rich native hedgerow with trees - associated with bank or ditch | |

Data: IGP, 2025
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The letter codes G, FG, M, FP and P refer to the condition of the habitat where G = Good, F = Fairly good, M = Moderate, R = Fairly Poor, P = Poor. Green refers to hedgerows, blue to watercourses and yellow to habitats.



APFP Regulation: 5(2)(a)
Application Doc no.: EN010170/APP/GH6.3.9.13
Drawing no.: CW.ES.BNG.3

Co-ordinate system: OSGB36 / British National Grid
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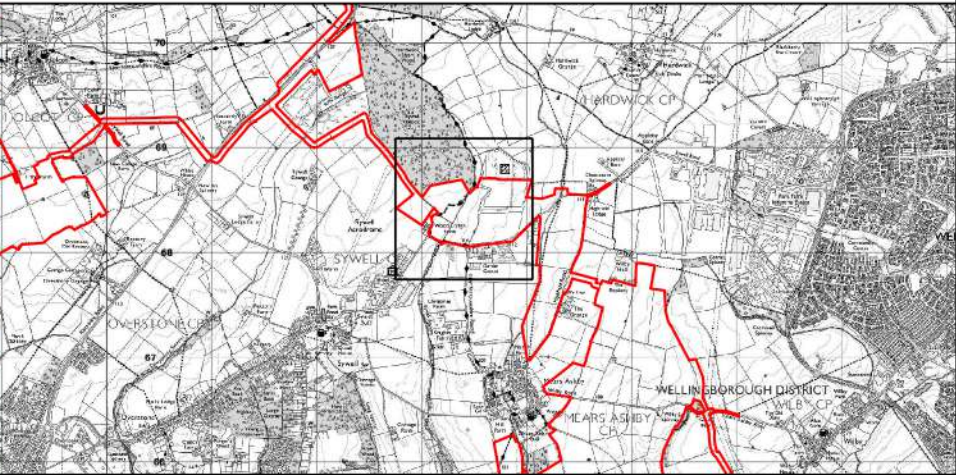
Title: Figure 9.13.4 Biodiversity Net Gain Baseline (Green Hill C)

Document: Volume 2
Appendix 9.13 - Biodiversity Net Gain Assessment
Environmental Statement (ES)

- Legend:
- Order Limits
 - Existing Very Large Rural Tree
 - Existing Large Rural Tree
 - Existing Medium Rural Tree
 - Line of trees
 - Native hedgerow
 - Native hedgerow - associated with bank or ditch
 - Native hedgerow with trees
 - Native hedgerow with trees - associated with bank or ditch
 - Species-rich native hedgerow
 - Species-rich native hedgerow with trees
 - Species-rich native hedgerow with trees - associated with bank or ditch
 - Ditches
 - Other rivers and streams
 - Arable field margins game bird mix
 - Arable field margins pollen and nectar
 - Arable field margins tussocky
 - Winter stubble
 - Developed land; sealed surface
 - Mixed scrub
 - Modified grassland
 - Non-cereal crops
 - Other neutral grassland
 - Other woodland; broadleaved
 - Other woodland; mixed
 - Ruderal/Ephemeral
 - Tall forbs

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The letter codes G, FG, M, FP and P refer to the condition of the habitat where G = Good, F = Fairly good, M = Moderate, R = Fairly Poor, P = Poor. Green refers to hedgerows, blue to watercourses and yellow to habitats.



APFP Regulation: 5(2)(a)
Application Doc no.: EN010170/APP/GH6.3.9.13
Drawing no.: CW.ES.BNG.4

Co-ordinate system: OSGB36 / British National Grid
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0 100 200 300 m





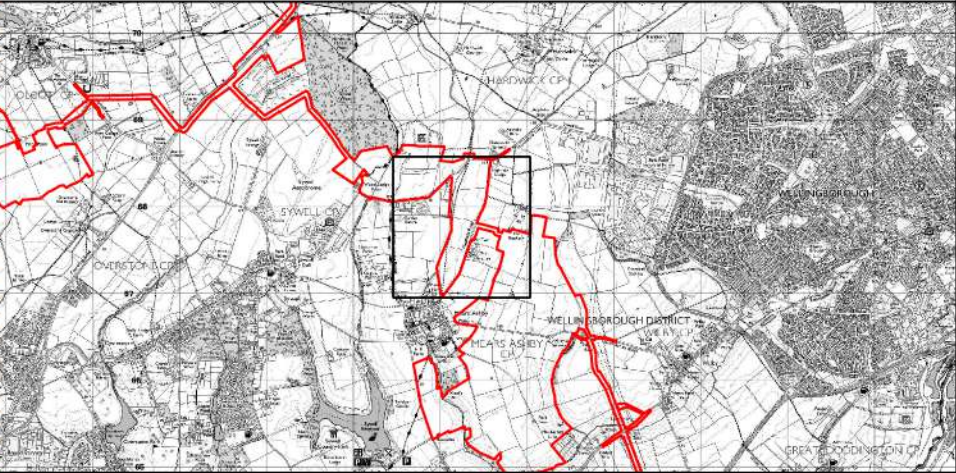
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Document: Volume 2
Appendix 9.13 - Biodiversity Net Gain Assessment
Environmental Statement (ES)

- Legend:
- | | |
|---|--|
| Order Limits | Arable field margins game bird mix |
| Existing Very Large Rural Tree | Arable field margins pollen and nectar |
| Existing Large Rural Tree | Arable field margins tussocky |
| Existing Medium Rural Tree | Blackthorn scrub |
| Line of trees | Bramble scrub |
| Native hedgerow | Cereal crops |
| Native hedgerow - associated with bank or ditch | Winter stubble |
| Native hedgerow with trees | Developed land; sealed surface |
| Native hedgerow with trees - associated with bank or ditch | Mixed scrub |
| Species-rich native hedgerow | Modified grassland |
| Species-rich native hedgerow with trees | Non-cereal crops |
| Species-rich native hedgerow with trees - associated with bank or ditch | Other neutral grassland |
| Ditches | Other woodland; broadleaved |
| Other rivers and streams | Other woodland; mixed |
| | Ponds (priority habitat) |
| | Ruderal/Ephemeral |
| | Tall forbs |

Data: IGP, 2025
Base Maps: © Crown copyright and database rights 2024
Ordnance Survey 0100031673
Imagery ©2024 Landsat / Copernicus, Maxar Technologies, Map Data ©2024

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APFP Regulation: 5(2)(a)
Application Doc no.: EN010170/APP/GH6.3.9.13
Drawing no.: CW.ES.BNG.5

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:5800 @ A3





Title: Figure 9.13.6 Biodiversity Net Gain Baseline (Green Hill E) (1 of 2)

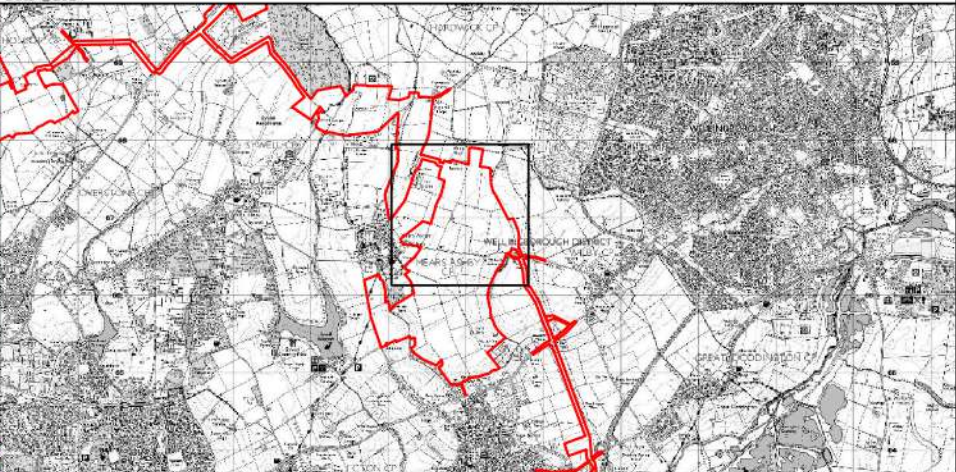
Document: Volume 2
Appendix 9.13 - Biodiversity Net Gain Assessment
Environmental Statement (ES)

Legend:

Order Limits	Arable field margins pollen and nectar
Existing Very Large Rural Tree	Arable field margins tussocky
Existing Large Rural Tree	Artificial unvegetated, unsealed surface
Existing Medium Rural Tree	Blackthorn scrub
Existing Small Rural Tree	Bramble scrub
Line of trees	Cereal crops
Line of trees - associated with bank or ditch	Winter stubble
Native hedgerow	Developed land; sealed surface
Native hedgerow - associated with bank or ditch	Mixed scrub
Native hedgerow with trees	Modified grassland
Native hedgerow with trees - associated with bank or ditch	Non-cereal crops
Species-rich native hedgerow	Other neutral grassland
Species-rich native hedgerow with trees	Other woodland; broadleaved
Species-rich native hedgerow with trees - associated with bank or ditch	Ponds (priority habitat)
Culvert	Ruderal/Ephemeral
Other rivers and streams	Temporary grass and clover leys
Arable field margins game bird mix	Tall forbs
	Bare ground

Data: IGP, 2025
Base Maps: © Crown copyright and database rights 2024
Ordnance Survey 0100031673
Imagery © 2024 Landsat / Copernicus, Maxar Technologies, Map Data © 2024

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APFP Regulation: 5(2)(a)
Application Doc no.: EN010170/APP/GH6.3.9.13
Drawing no.: CW.ES.BNG.6

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:6500 @ A3





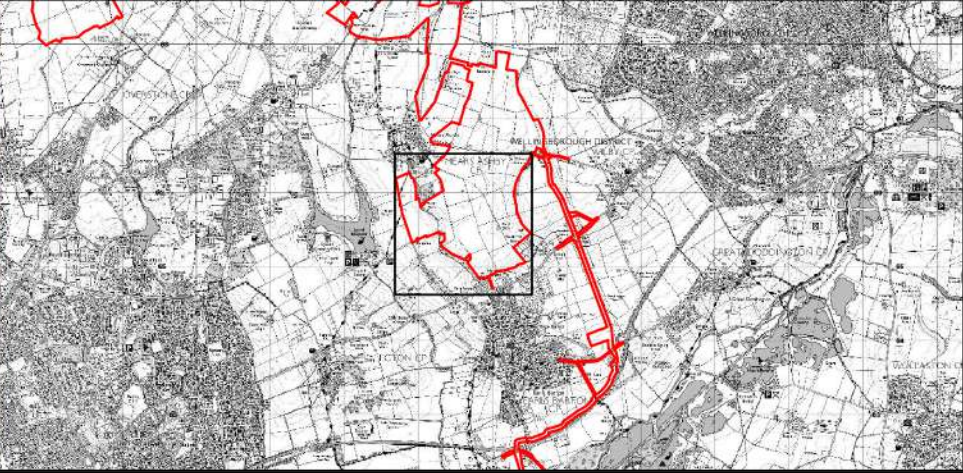
Title: Figure 9.13.7 Biodiversity Net Gain Baseline (Green Hill E) (2 of 2)

Document: Volume 2
Appendix 9.13 - Biodiversity Net Gain Assessment
Environmental Statement (ES)

- Legend:
- | | |
|---|---------------------------------|
| Order Limits | Blackthorn scrub |
| Existing Very Large Rural Tree | Bramble scrub |
| Existing Large Rural Tree | Cereal crops |
| Existing Small Rural Tree | Winter stubble |
| Line of trees | Developed land; sealed surface |
| Native hedgerow | Mixed scrub |
| Native hedgerow - associated with bank or ditch | Modified grassland |
| Native hedgerow with trees | Non-cereal crops |
| Species-rich native hedgerow | Other neutral grassland |
| Species-rich native hedgerow with trees | Other woodland; broadleaved |
| Other rivers and streams | Other woodland; mixed |
| Arable field margins game bird mix | Ponds (priority habitat) |
| Arable field margins pollen and nectar | Ruderal/Ephemeral |
| Arable field margins tussocky | Temporary grass and clover leys |
| Artificial unvegetated, unsealed surface | Tall forbs |
| | Bare ground |

Data: IGP, 2025
Base Maps: © Crown copyright and database rights 2024
Ordnance Survey 0100031673
Imagery ©2024 Landsat / Copernicus, Maxar Technologies, Map Data ©2024

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APFP Regulation: 5(2)(a)
Application Doc no.: EN010170/APP/GH6.3.9.13
Drawing no.: CW.ES.BNG.7

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:6800 @ A3





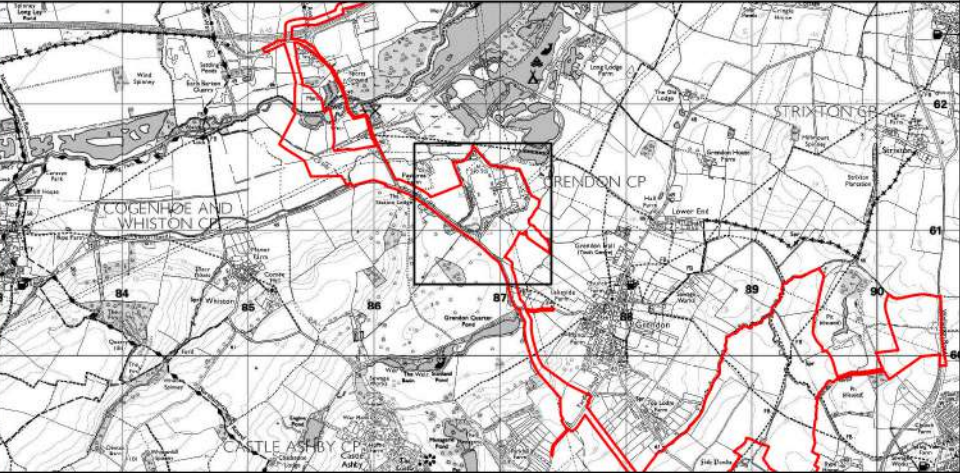
Title: Figure 9.13.8 Biodiversity Net Gain Baseline (Green Hill BESS)

Document: Volume 2
Appendix 9.13 - Biodiversity Net Gain Assessment
Environmental Statement (ES)

- Legend:
- | | |
|--|---|
| Order Limits | Species-rich native hedgerow with trees |
| Existing Very Large Rural Tree | Ditches |
| Existing Medium Rural Tree | Other rivers and streams |
| Line of trees | Cereal crops |
| Native hedgerow | Winter stubble |
| Native hedgerow - associated with bank or ditch | Developed land; sealed surface |
| Native hedgerow with trees | Modified grassland |
| Native hedgerow with trees - associated with bank or ditch | Other woodland; broadleaved |

Data: IGP, 2025
Base Maps: © Crown copyright and database rights 2024
Ordnance Survey 0100031673
Imagery ©2024 Landsat / Copernicus, Maxar Technologies, Map Data ©2024

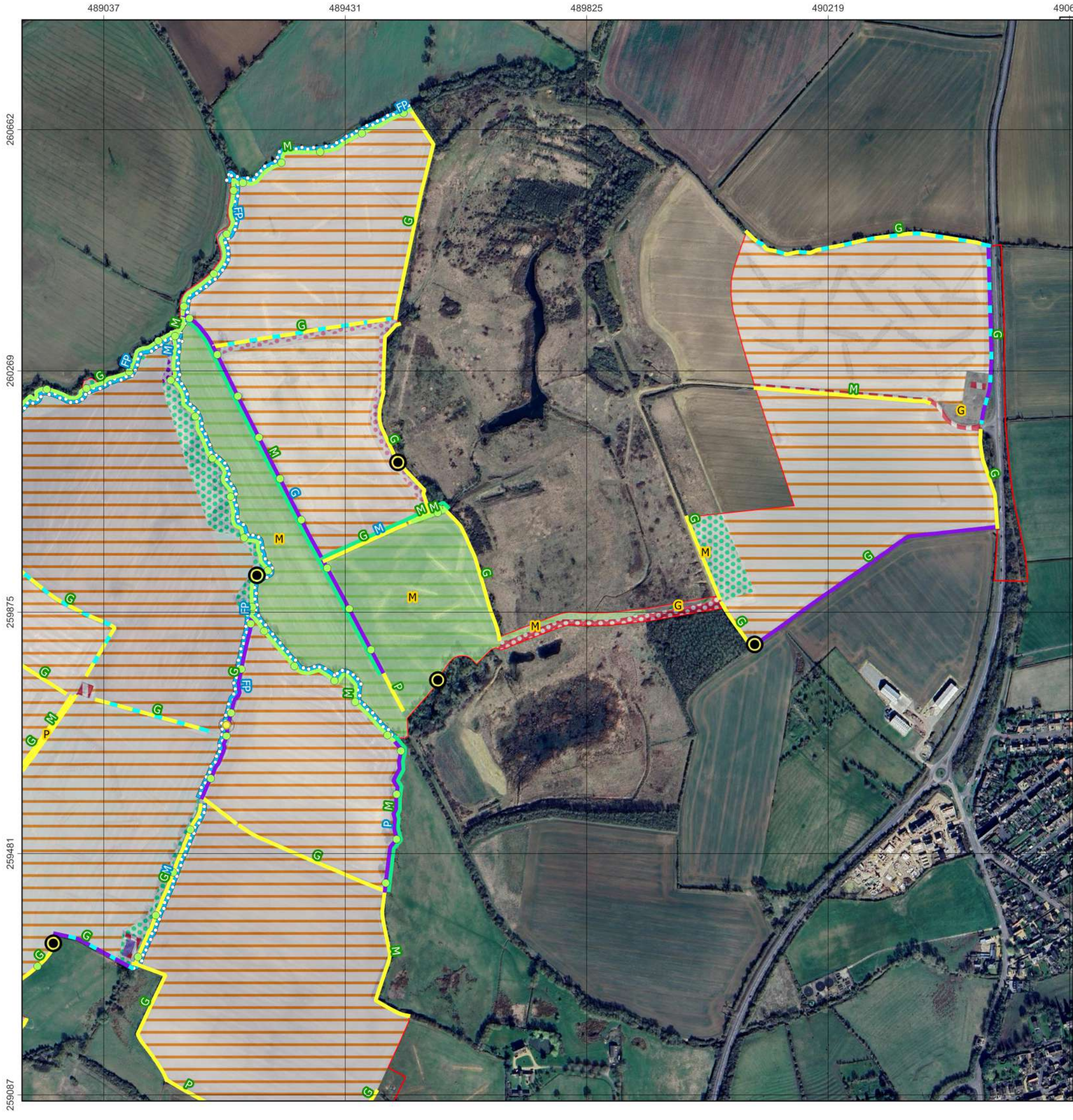
The letter codes G, FG, M, FP and P refer to the condition of the habitat where G = Good, F = Fairly good, M = Moderate, R = Fairly Poor, P = Poor. Green refers to hedgerows, blue to watercourses and yellow to habitats.



APFP Regulation: 5(2)(a)
Application Doc no.: EN010170/APP/GH6.3.9.13
Drawing no.: CW.ES.BNG.8

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:4000 @ A3





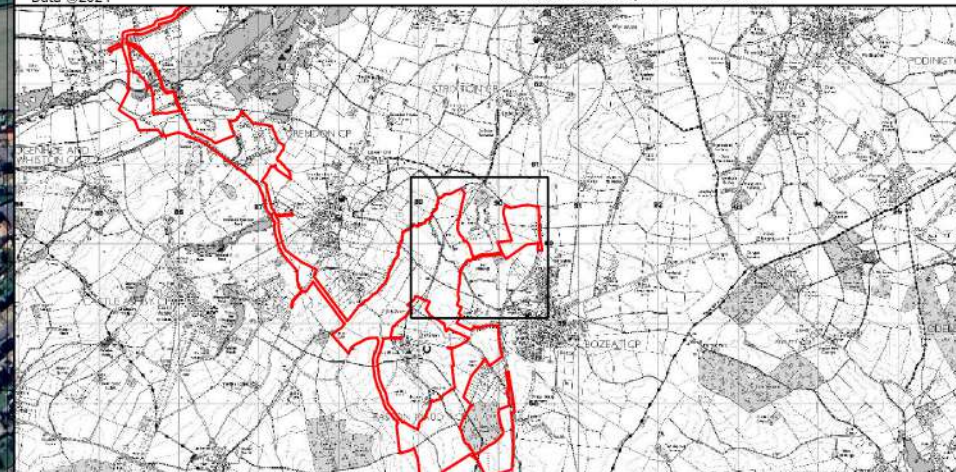
Title: Figure 9.13.9 Biodiversity Net Gain Baseline (Green Hill F) (1 of 3)

Document: Volume 2
Appendix 9.13 - Biodiversity Net Gain Assessment
Environmental Statement (ES)

- Legend:
- | | |
|--|--|
| Order Limits | Arable field margins pollen and nectar |
| Existing Very Large Rural Tree | Arable field margins tussocky |
| Existing Medium Rural Tree | Artificial unvegetated, unsealed surface |
| Line of trees | Bramble scrub |
| Native hedgerow | Cereal crops |
| Native hedgerow - associated with bank or ditch | Developed land; sealed surface |
| Native hedgerow with trees | Modified grassland |
| Species-rich native hedgerow | Other neutral grassland |
| Species-rich native hedgerow - associated with bank or ditch | Ponds (priority habitat) |
| Species-rich native hedgerow with trees | Watercourse footprint |
| Ditches | Ruderal/Ephemeral |
| Other rivers and streams | Tall forbs |
| Arable field margins game bird mix | |

Data: IGP, 2025
Base Maps: © Crown copyright and database rights 2024
Ordnance Survey 0100031673
Imagery © 2024 Landsat / Copernicus, Maxar Technologies, Map Data © 2024

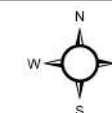
The letter codes G, FG, M, FP and P refer to the condition of the habitat where G = Good, F = Fairly good, M = Moderate, R = Fairly Poor, P = Poor. Green refers to hedgerows, blue to watercourses and yellow to habitats.

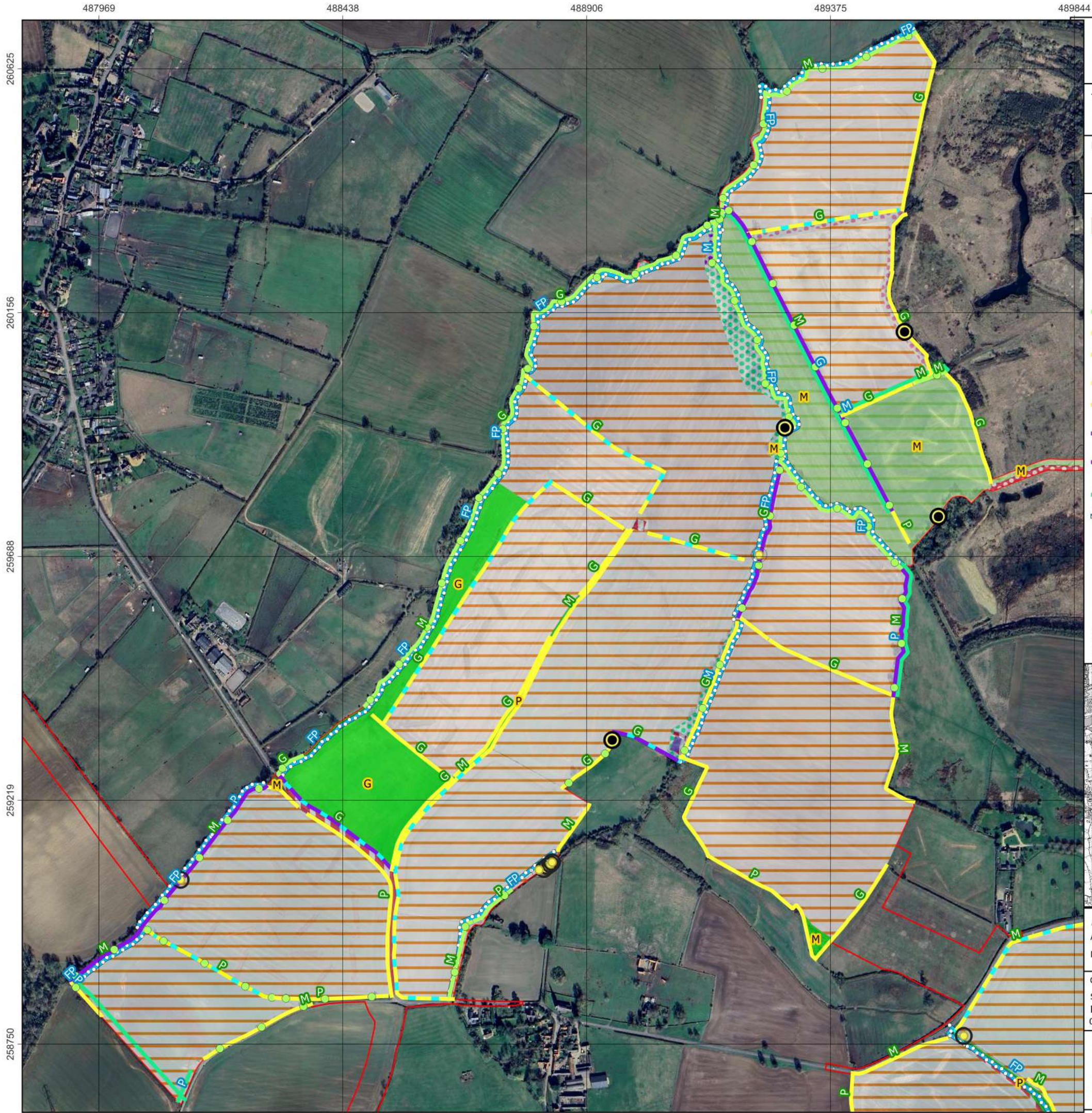


APFP Regulation: 5(2)(a)
Application Doc no.: EN010170/APP/GH6.3.9.13
Drawing no.: CW.ES.BNG.9

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:6300 @ A3

0 150 300 450 m





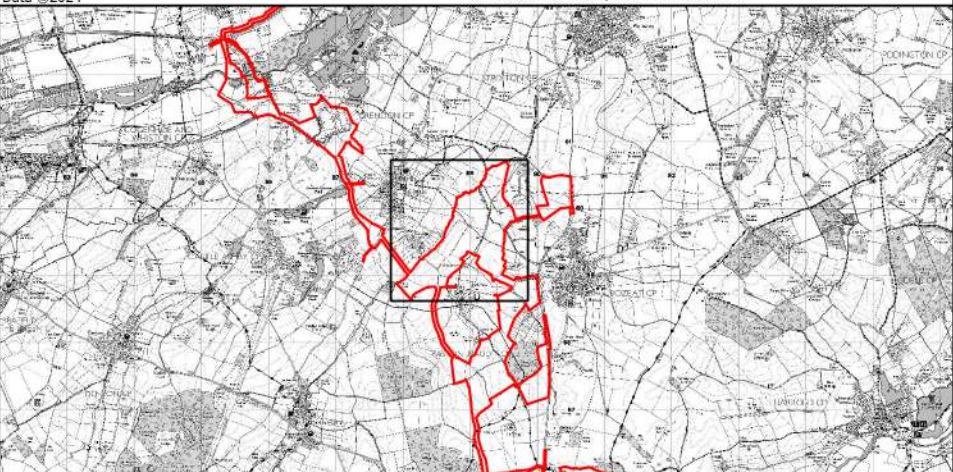
Title: Figure 9.13.10 Biodiversity Net Gain Baseline (Green Hill F) (2 of 3)

Document: Volume 2
Appendix 9.13 - Biodiversity Net Gain Assessment
Environmental Statement (ES)

- Legend:
- | | |
|--|--|
| Order Limits | Arable field margins game bird mix |
| Existing Very Large Rural Tree | Arable field margins pollen and nectar |
| Existing Large Rural Tree | Arable field margins tussocky |
| Existing Medium Rural Tree | Artificial unvegetated, unsealed surface |
| Line of trees | Bramble scrub |
| Native hedgerow | Cereal crops |
| Native hedgerow - associated with bank or ditch | Developed land; sealed surface |
| Native hedgerow with trees | Modified grassland |
| Native hedgerow with trees - associated with bank or ditch | Other neutral grassland |
| Species-rich native hedgerow - associated with bank or ditch | Other woodland; broadleaved |
| Species-rich native hedgerow with trees | Ponds (priority habitat) |
| Ditches | Watercourse footprint |
| Other rivers and streams | |

Data: IGP, 2025
Base Maps: © Crown copyright and database rights 2024
Ordnance Survey 0100031673
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APFP Regulation: 5(2)(a)
Application Doc no.: EN010170/APP/GH6.3.9.13
Drawing no.: CW.ES.BNG.10

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:7500 @ A3





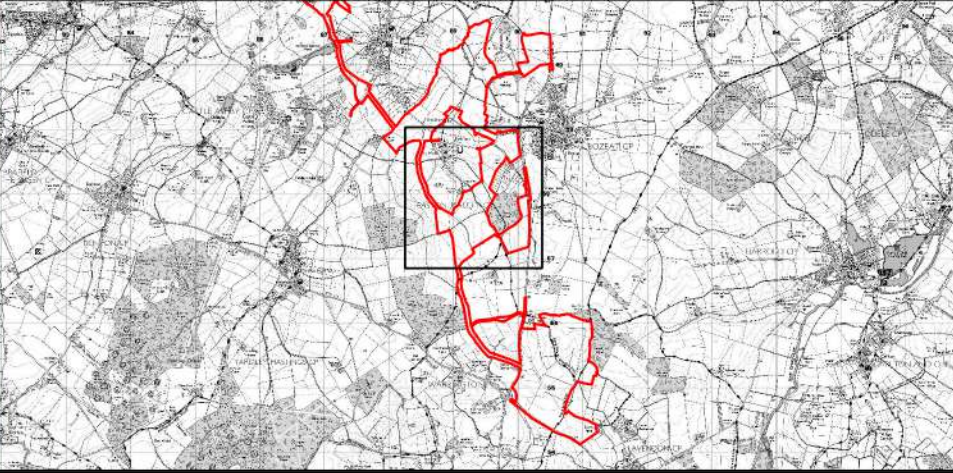
Title: Figure 9.13.11 Biodiversity Net Gain Baseline (Green Hill F) (3 of 3)

Document: Volume 2
Appendix 9.13 - Biodiversity Net Gain Assessment
Environmental Statement (ES)

- Legend:
- | | |
|--|--|
| Order Limits | Species-rich native hedgerow - associated with bank or ditch |
| Existing Very Large Rural Tree | Culvert |
| Existing Large Rural Tree | Ditches |
| Existing Medium Rural Tree | Other rivers and streams |
| Line of trees | Cereal crops |
| Ecologically valuable line of trees | Developed land; sealed surface |
| Native hedgerow | Modified grassland |
| Native hedgerow - associated with bank or ditch | Ponds (priority habitat) |
| Native hedgerow with trees | |
| Native hedgerow with trees - associated with bank or ditch | |

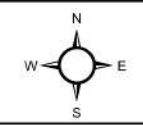
Data: IGP, 2025
Base Maps: © Crown copyright and database rights 2024
Ordnance Survey 0100031673
Imagery ©2024 Landsat / Copernicus, Maxar Technologies, Map Data ©2024

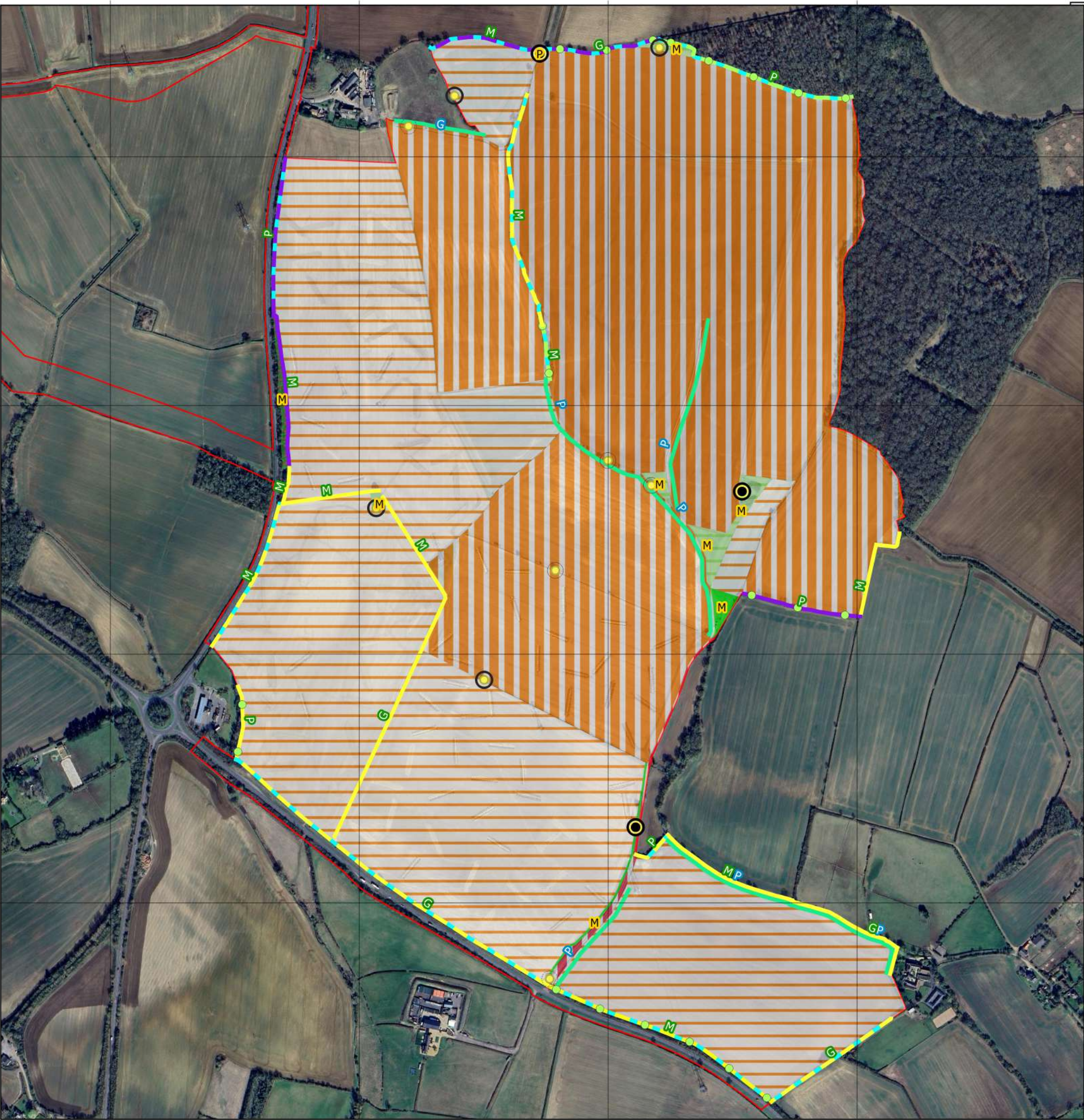
The letter codes G, FG, M, FP and P refer to the condition of the habitat where G = Good, F = Fairly good, M = Moderate, R = Fairly Poor, P = Poor. Green refers to hedgerows, blue to watercourses and yellow to habitats.



APFP Regulation: 5(2)(a)
Application Doc no.: EN010170/APP/GH6.3.9.13
Drawing no.: CW.ES.BNG.11

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:7800 @ A3





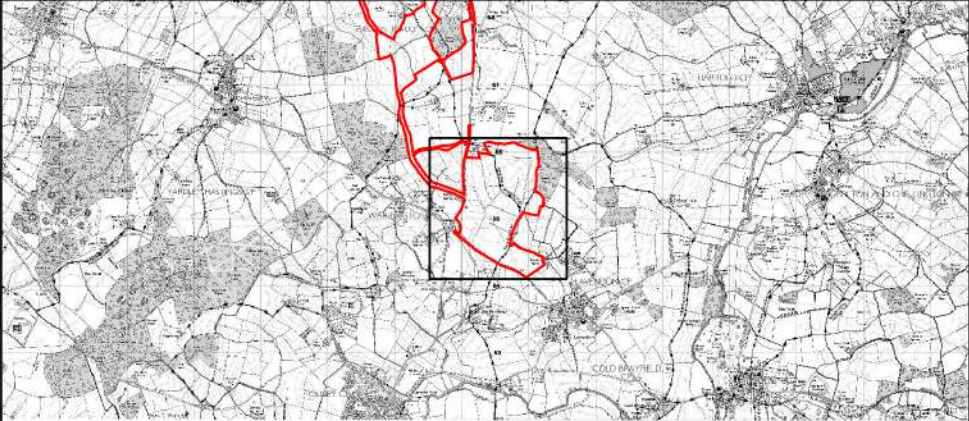
Title: Figure 9.13.12 Biodiversity Net Gain Baseline (Green Hill G)

Document: Volume 2
Appendix 9.13 - Biodiversity Net Gain Assessment
Environmental Statement (ES)

- Legend:
- | | |
|--|---|
| Order Limits | Species-rich native hedgerow - associated with bank or ditch |
| Existing Very Large Rural Tree | Species-rich native hedgerow with trees |
| Existing Large Rural Tree | Species-rich native hedgerow with trees - associated with bank or ditch |
| Existing Medium Rural Tree | Ditches |
| Existing Small Rural Tree | Cereal crops |
| Line of trees - associated with bank or ditch | Developed land; sealed surface |
| Native hedgerow | Modified grassland |
| Native hedgerow - associated with bank or ditch | Other neutral grassland |
| Native hedgerow with trees | Other woodland; broadleaved |
| Native hedgerow with trees - associated with bank or ditch | Ponds (priority habitat) |
| Species-rich native hedgerow | Temporary grass and clover leys |

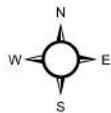
Data: IGP, 2025
Base Maps: © Crown copyright and database rights 2024
Ordnance Survey 0100031673
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The letter codes G, FG, M, FP and P refer to the condition of the habitat where G = Good, F = Fairly good, M = Moderate, R = Fairly Poor, P = Poor. Green refers to hedgerows, blue to watercourses and yellow to habitats.



APFP Regulation: 5(2)(a)
Application Doc no.: EN010170/APP/GH6.3.9.13
Drawing no.: CW.ES.BNG.12

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:7527 @ A3





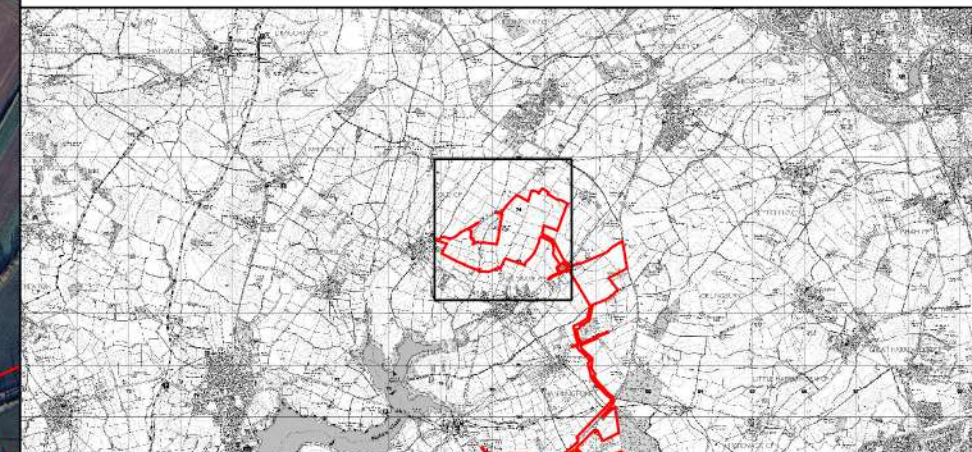
Title: Figure 9.13.13 Biodiversity Net Gain Proposed (Green Hill A)

Document: Volume 2
Appendix 9.13 - Biodiversity Net Gain Assessment
Environmental Statement (ES)

- Legend:
- | | |
|---|--|
| Order Limits | Ditches |
| Proposed Small Rural Tree | Other rivers and streams |
| Retained Very Large Rural Tree | Artificial unvegetated, unsealed surface |
| Retained Large Rural Tree | Cereal crops |
| Retained Medium Rural Tree | Developed land; sealed surface |
| Line of trees | Mixed scrub |
| Line of trees - associated with bank or ditch | Modified grassland |
| Native hedgerow | Non-cereal crops |
| Native hedgerow - associated with bank or ditch | Other neutral grassland |
| Native hedgerow with trees | Other woodland; broadleaved |
| Native hedgerow with trees - associated with bank or ditch | Other woodland; mixed |
| Species-rich native hedgerow | Ponds (priority habitat) |
| Species-rich native hedgerow - associated with bank or ditch | Watercourse footprint |
| Species-rich native hedgerow with trees | |
| Species-rich native hedgerow with trees - associated with bank or ditch | |

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Base Maps: © Crown copyright and database rights 2024
Ordnance Survey 0100031673
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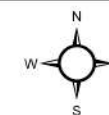
The letter codes G, FG, M, FP and P refer to the condition of the habitat where G = Good, F = Fairly good, M = Moderate, R = Fairly Poor, P = Poor. Green refers to hedgerows, blue to watercourses and yellow to habitats.

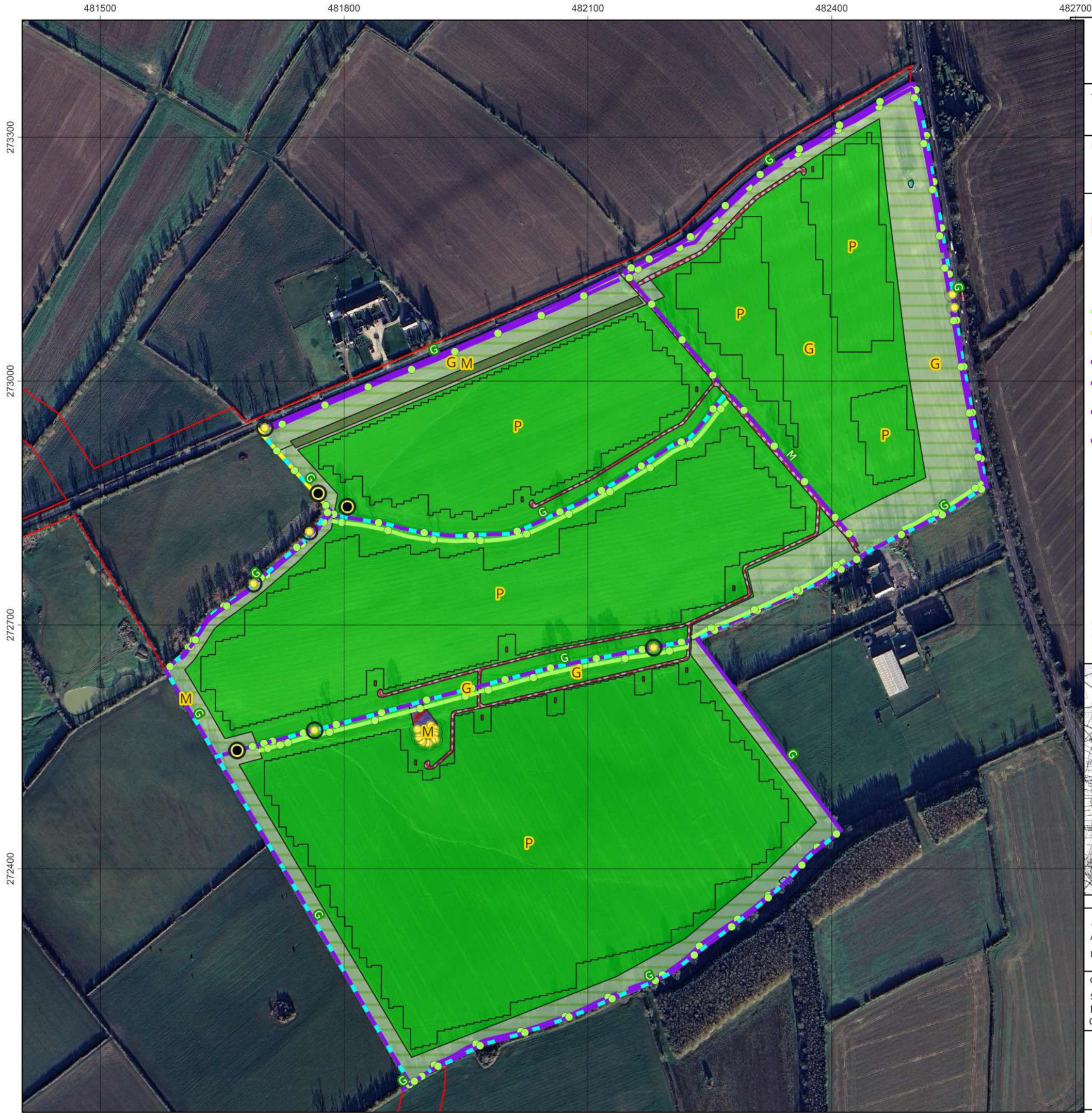


APFP Regulation: 5(2)(a)
Application Doc no.: EN010170/APP/GH6.3.9.13
Drawing no.: CW.ES.BNG.13

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:9700 @ A3

0 250 500 750 m





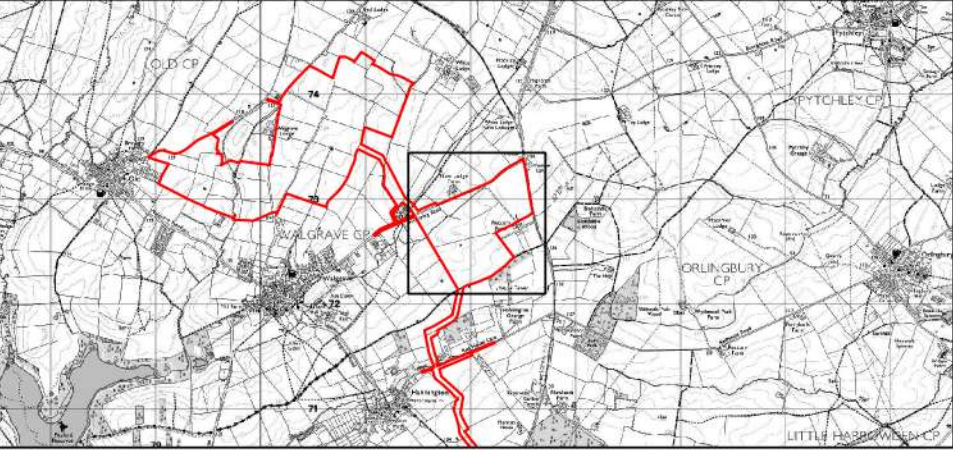
Title: Figure 9.13.14 Biodiversity Net Gain Proposed (Green Hill A.2)

Document: Volume 2
Appendix 9.13 - Biodiversity Net Gain Assessment
Environmental Statement (ES)

- Legend:
- | | |
|---|--|
| Order Limits | Artificial unvegetated, unsealed surface |
| Retained Very Large Rural Tree | Developed land; sealed surface |
| Retained Large Rural Tree | Mixed scrub |
| Retained Medium Rural Tree | Modified grassland |
| Line of trees | Other neutral grassland |
| Native hedgerow with trees - associated with bank or ditch | Other woodland; broadleaved |
| Species-rich native hedgerow | Ponds (priority habitat) |
| Species-rich native hedgerow - associated with bank or ditch | |
| Species-rich native hedgerow with trees | |
| Species-rich native hedgerow with trees - associated with bank or ditch | |

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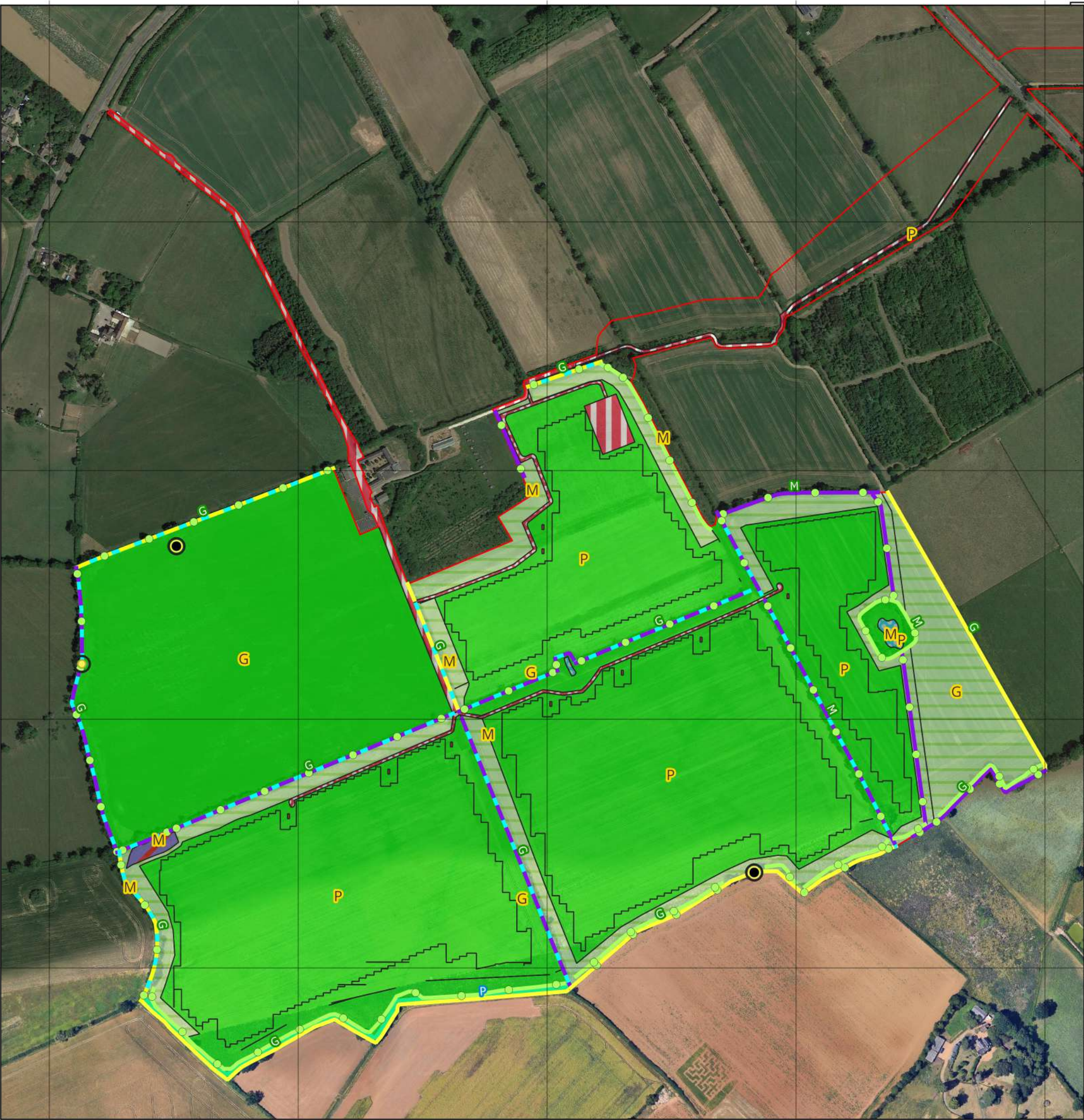


APFP Regulation: 5(2)(a)
Application Doc no.: EN010170/APP/GH6.3.9.13
Drawing no.: CW.ES.BNG.14



Co-ordinate system: OSGB36 / British National Grid
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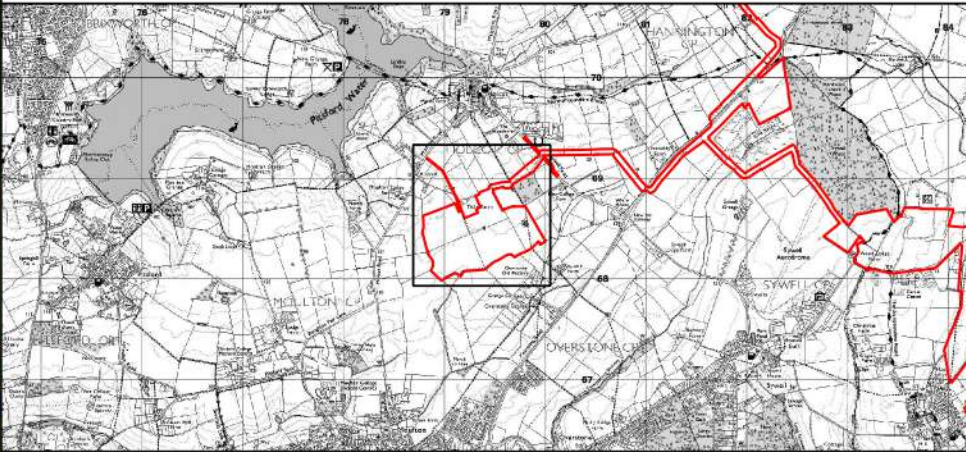
Title: Figure 9.13.15 Biodiversity Net Gain Proposed (Green Hill B)

Document: Volume 2
Appendix 9.13 - Biodiversity Net Gain Assessment
Environmental Statement (ES)

- Legend:
- | | |
|---|--|
| Order Limits | Ditches |
| Retained Very Large Rural Tree | Artificial unvegetated, unsealed surface |
| Retained Large Rural Tree | Developed land; sealed surface |
| Line of trees | Mixed scrub |
| Native hedgerow | Modified grassland |
| Native hedgerow - associated with bank or ditch | Other neutral grassland |
| Native hedgerow with trees | Ponds (priority habitat) |
| Native hedgerow with trees - associated with bank or ditch | Bare ground |
| Species-rich native hedgerow - associated with bank or ditch | |
| Species-rich native hedgerow with trees | |
| Species-rich native hedgerow with trees - associated with bank or ditch | |

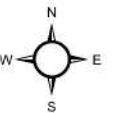
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Base Maps: © Crown copyright and database rights 2024
Ordnance Survey 0100031673
Imagery ©2024 Landsat / Copernicus, Maxar Technologies, Map Data ©2024

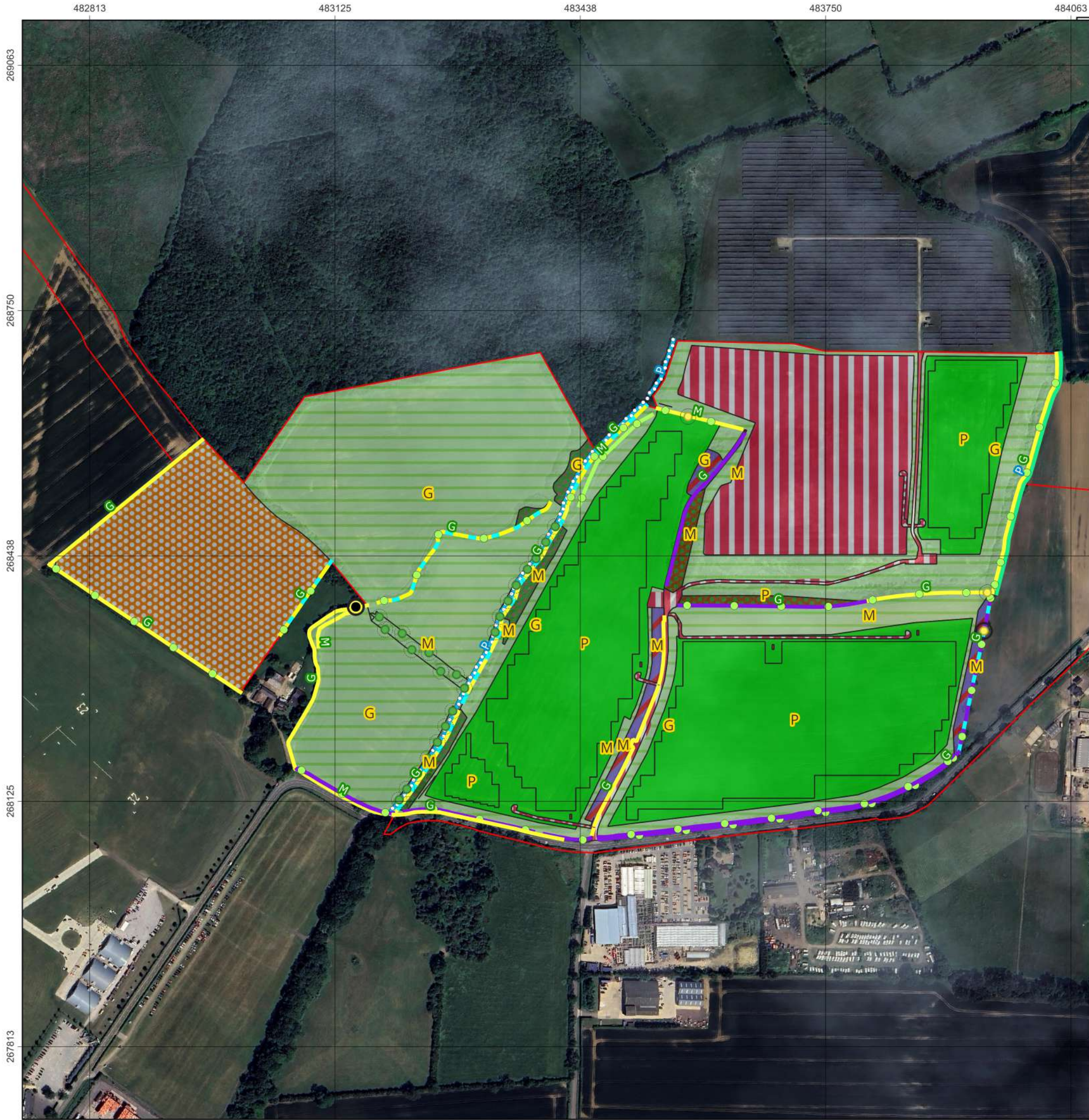
The letter codes G, FG, M, FP and P refer to the condition of the habitat where G = Good, F = Fairly good, M = Moderate, R = Fairly Poor, P = Poor. Green refers to hedgerows, blue to watercourses and yellow to habitats.



APFP Regulation: 5(2)(a)
Application Doc no.: EN010170/APP/GH6.3.9.13
Drawing no.: CW.ES.BNG.15

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:5000 @ A3





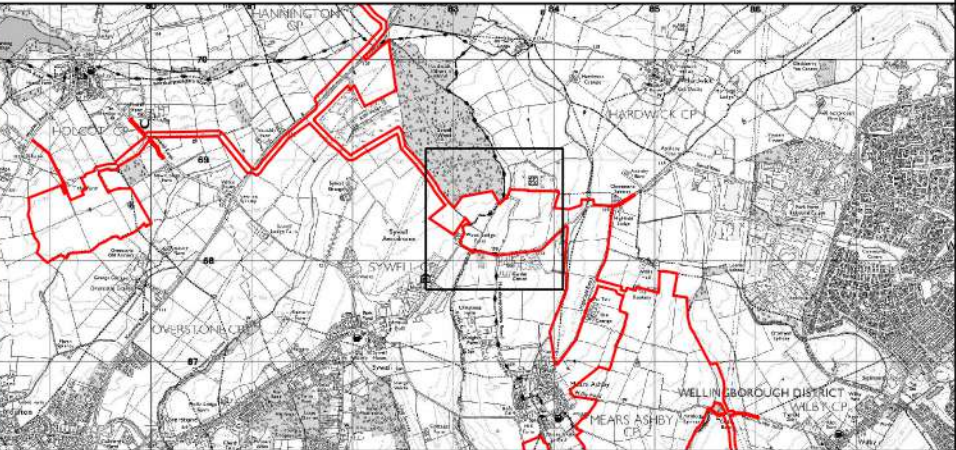
Title: Figure 9.13.16 Biodiversity Net Gain Proposed (Green Hill C) - Rev A

Document: Volume 2
Appendix 9.13 - Biodiversity Net Gain Assessment
Environmental Statement (ES)

- Legend:
- | | |
|---|--|
| Order Limits | Ditches |
| Proposed Small Rural Tree | Other rivers and streams |
| Retained Very Large Rural Tree | Artificial unvegetated, unsealed surface |
| Retained Large Rural Tree | Developed land; sealed surface |
| Retained Medium Rural Tree | Mixed scrub |
| Line of trees | Modified grassland |
| Native hedgerow | Non-cereal crops |
| Native hedgerow - associated with bank or ditch | Other neutral grassland |
| Native hedgerow with trees | Other woodland; broadleaved |
| Native hedgerow with trees - associated with bank or ditch | Other woodland; mixed |
| Species-rich native hedgerow | |
| Species-rich native hedgerow with trees | |
| Species-rich native hedgerow with trees - associated with bank or ditch | |

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Ordnance Survey 0100031673
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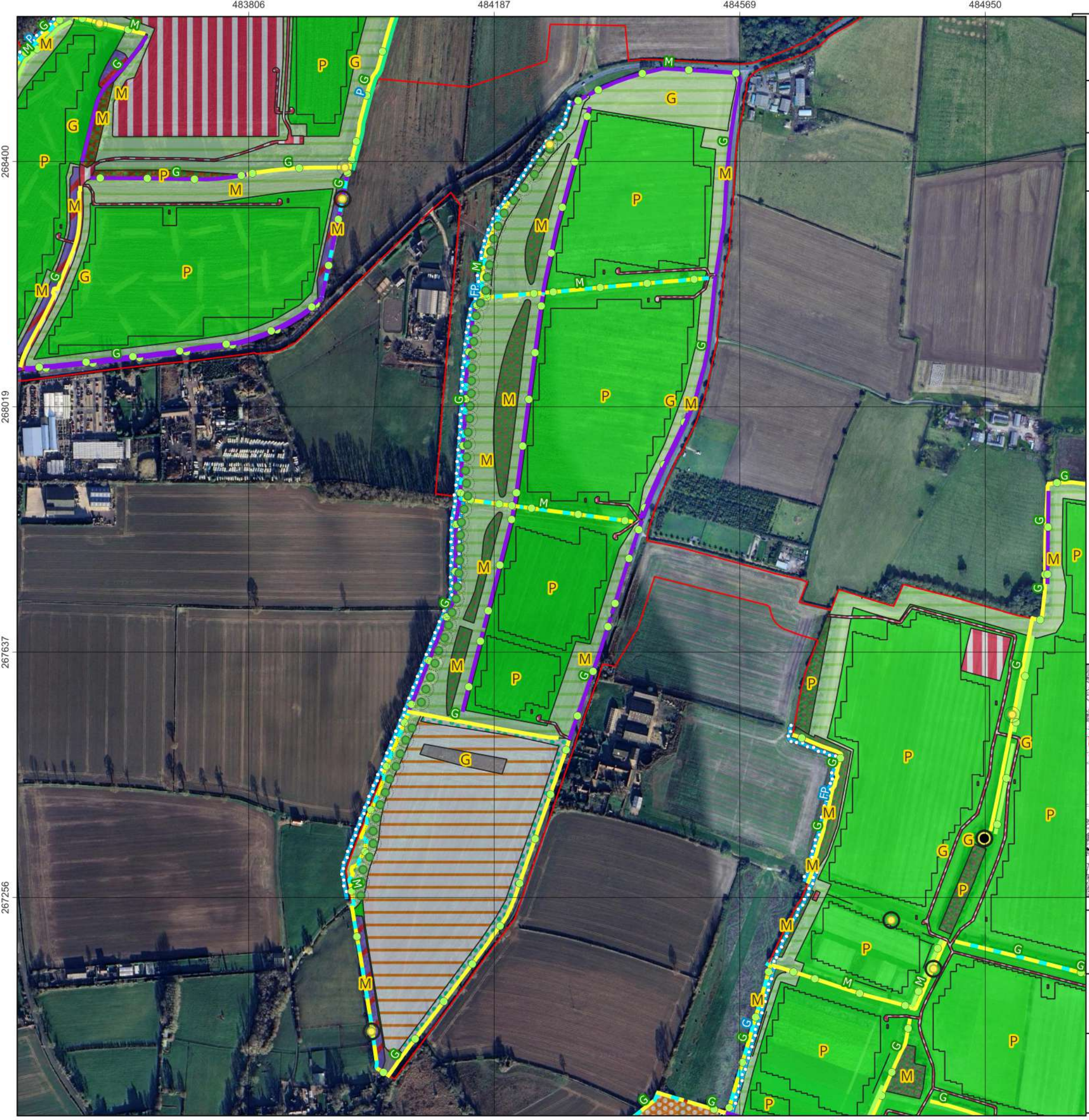


APFP Regulation: 5(2)(a)
Application Doc no.: EN010170/APP/GH6.3.9.13
Drawing no.: CW.ES.BNG.16.Rev A

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:5000 @ A3

0 100 200 300 m





268400
268019
267637
267256

483806

484187

484569

484950



Title: Figure 9.13.17 Biodiversity Net Gain Proposed (Green Hill D)

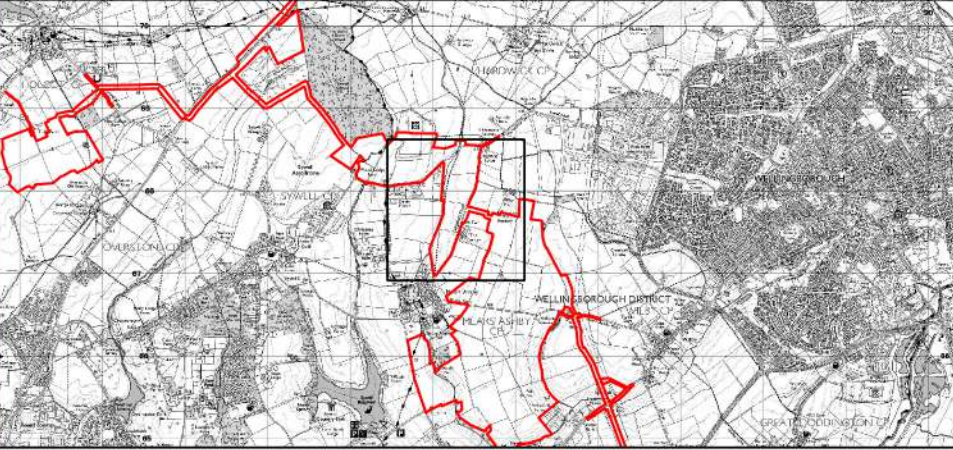
Document: Volume 2
Appendix 9.13 - Biodiversity Net Gain Assessment
Environmental Statement (ES)

Legend:

Order Limits	Arable field margins tussocky
Proposed Small Rural Tree	Artificial unvegetated, unsealed surface
Retained Very Large Rural Tree	Cereal crops
Retained Large Rural Tree	Developed land; sealed surface
Retained Medium Rural Tree	Mixed scrub
Line of trees	Modified grassland
Native hedgerow	Non-cereal crops
Native hedgerow - associated with bank or ditch	Other neutral grassland
Native hedgerow with trees	Other woodland; broadleaved
Native hedgerow with trees - associated with bank or ditch	Other woodland; mixed
Species-rich native hedgerow	Ponds (priority habitat)
Species-rich native hedgerow with trees	Ruderal/Ephemeral
Species-rich native hedgerow with trees - associated with bank or ditch	
Culvert	
Ditches	
Other rivers and streams	

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APFP Regulation: 5(2)(a)
Application Doc no.: EN010170/APP/GH6.3.9.13
Drawing no.: CW.ES.BNG.17

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:6100 @ A3



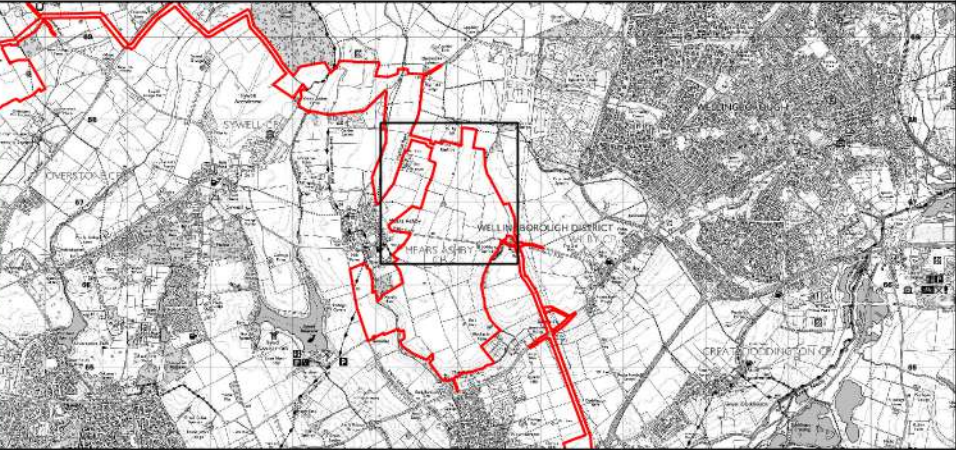
Title: Figure 9.13.18 Biodiversity Net Gain Proposed (Green Hill E) (1 of 2)

Document: Volume 2
Appendix 9.13 - Biodiversity Net Gain Assessment
Environmental Statement (ES)

- Legend:
- | | |
|---|--|
| Order Limits | Culvert |
| Proposed Small Rural Tree | Other rivers and streams |
| Retained Very Large Rural Tree | Arable field margins tussocky |
| Retained Large Rural Tree | Artificial unvegetated, unsealed surface |
| Retained Medium Rural Tree | Cereal crops |
| Line of trees | Developed land; sealed surface |
| Line of trees - associated with bank or ditch | Mixed scrub |
| Native hedgerow | Modified grassland |
| Native hedgerow - associated with bank or ditch | Non-cereal crops |
| Native hedgerow with trees | Other neutral grassland |
| Native hedgerow with trees - associated with bank or ditch | Other woodland; broadleaved |
| Species-rich native hedgerow | Ponds (priority habitat) |
| Species-rich native hedgerow with trees | Ruderal/Ephemeral |
| Species-rich native hedgerow with trees - associated with bank or ditch | |

Data: IGP, 2025
Base Maps: © Crown copyright and database rights 2024
Ordnance Survey 0100031673
Imagery ©2024 Landsat / Copernicus, Maxar Technologies, Map Data ©2024

The letter codes G, FG, M, FP and P refer to the condition of the habitat where G = Good, F = Fairly good, M = Moderate, R = Fairly Poor, P = Poor. Green refers to hedgerows, blue to watercourses and yellow to habitats.



APFP Regulation: 5(2)(a)
Application Doc no.: EN010170/APP/GH6.3.9.13
Drawing no.: CW.ES.BNG.18

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:6100 @ A3





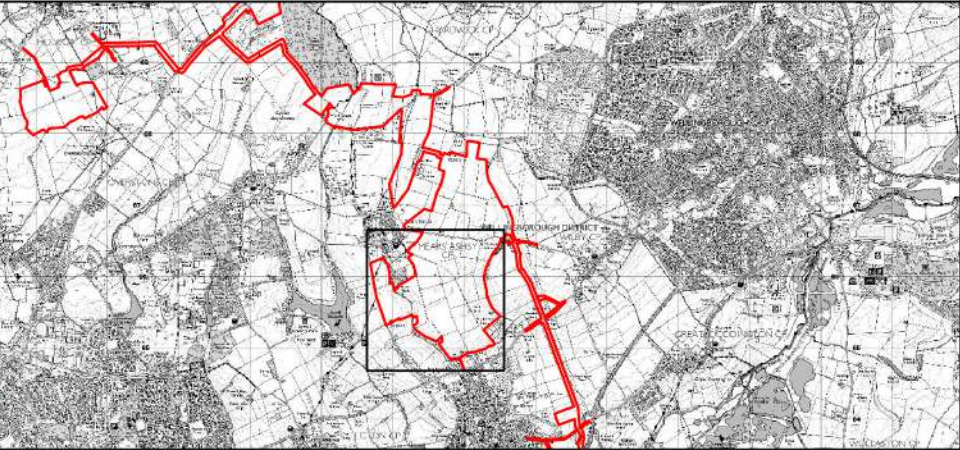
Title: Figure 9.13.19 Biodiversity Net Gain Proposed (Green Hill E) (2 of 2)

Document: Volume 2
Appendix 9.13 - Biodiversity Net Gain Assessment
Environmental Statement (ES)

- Legend:
- | | |
|--|--|
| Order Limits | Artificial unvegetated, unsealed surface |
| Proposed Small Rural Tree | Bramble scrub |
| Retained Very Large Rural Tree | Developed land; sealed surface |
| Retained Large Rural Tree | Mixed scrub |
| Retained Small Rural Tree | Modified grassland |
| Line of trees | Non-cereal crops |
| Line of trees - associated with bank or ditch | Other neutral grassland |
| Native hedgerow | Other woodland; broadleaved |
| Native hedgerow - associated with bank or ditch | Other woodland; mixed |
| Native hedgerow with trees | Ponds (priority habitat) |
| Native hedgerow with trees - associated with bank or ditch | Ruderal/Ephemeral |
| Species-rich native hedgerow | |
| Species-rich native hedgerow with trees | |
| Other rivers and streams | |

Data: IGP, 2025
Base Maps: © Crown copyright and database rights 2024
Ordnance Survey 0100031673
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The letter codes G, FG, M, FP and P refer to the condition of the habitat where G = Good, F = Fairly good, M = Moderate, R = Fairly Poor, P = Poor. Green refers to hedgerows, blue to watercourses and yellow to habitats.



APFP Regulation: 5(2)(a)
Application Doc no.: EN010170/APP/GH6.3.9.13
Drawing no.: CW.ES.BNG.19

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:7062 @ A3





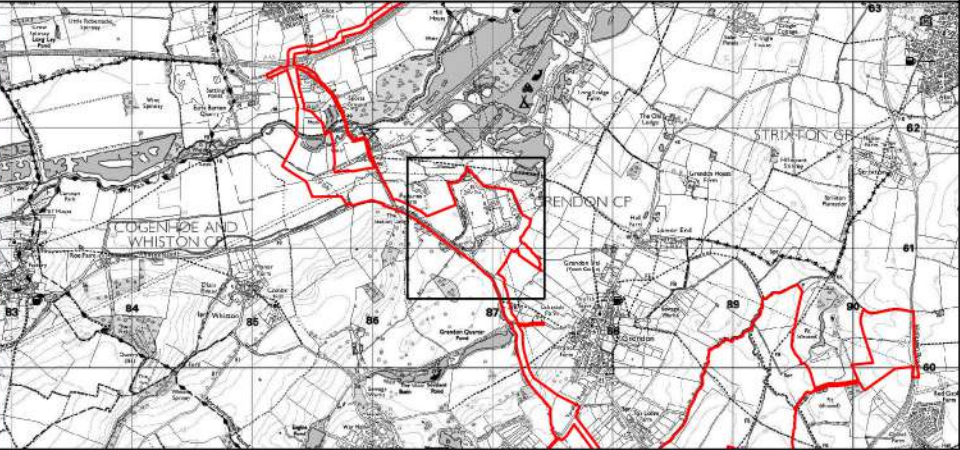
Title: Figure 9.13.20 Biodiversity Net Gain Proposed (Green Hill BESS)

Document: Volume 2
Appendix 9.13 - Biodiversity Net Gain Assessment
Environmental Statement (ES)

- Legend:
- | | |
|--|--------------------------------|
| Order Limits | Winter stubble |
| Proposed Small Rural Tree | Developed land; sealed surface |
| Retained Very Large Rural Tree | Mixed scrub |
| Ditches | Modified grassland |
| Other rivers and streams | Other neutral grassland |
| Line of trees | Other woodland; broadleaved |
| Native hedgerow | |
| Native hedgerow - associated with bank or ditch | |
| Native hedgerow with trees | |
| Native hedgerow with trees - associated with bank or ditch | |
| Species-rich native hedgerow with trees | |

Data: IGP, 2025
Base Maps: © Crown copyright and database rights 2024
Ordnance Survey 0100031673
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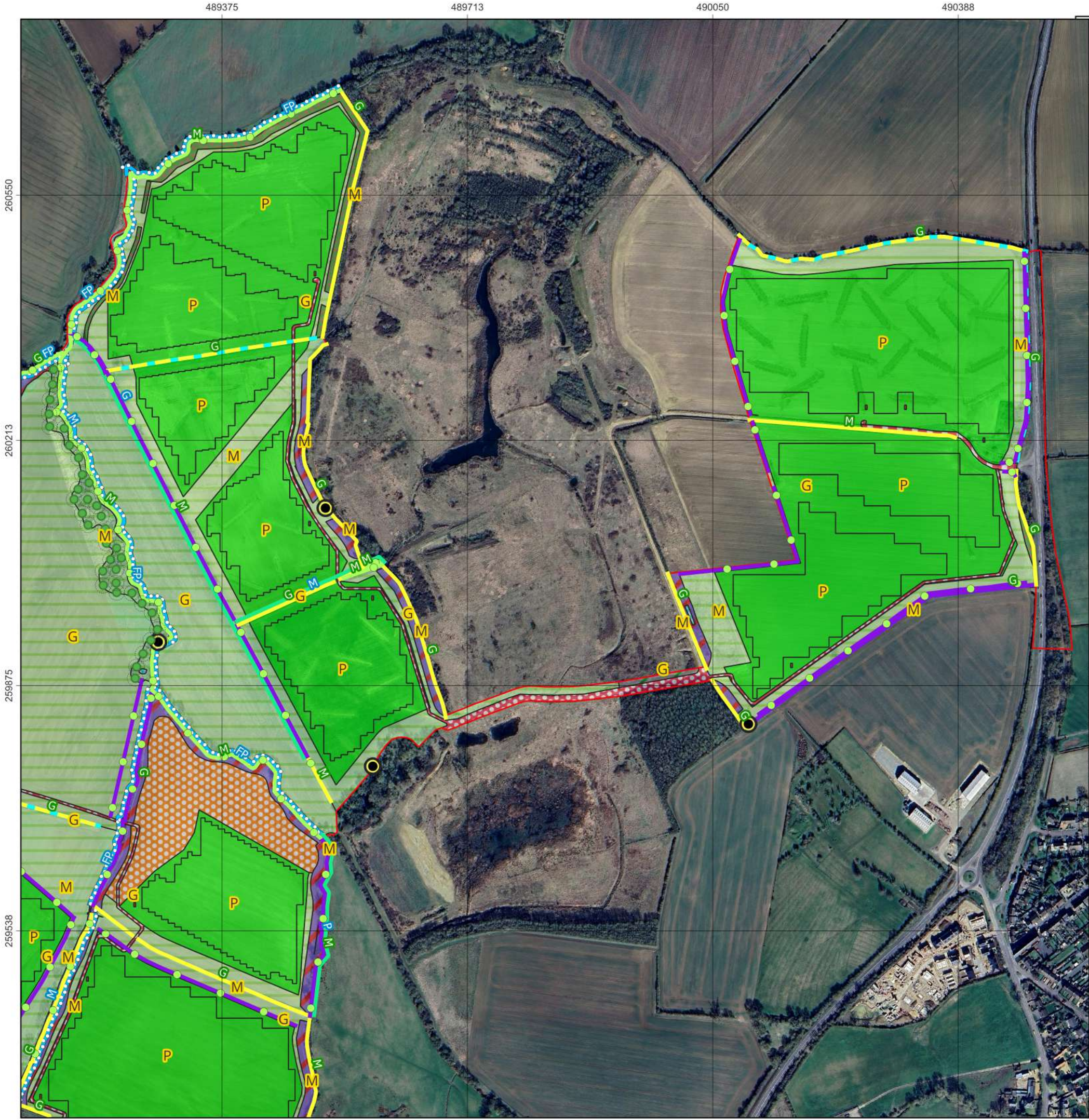
The letter codes G, FG, M, FP and P refer to the condition of the habitat where G = Good, F = Fairly good, M = Moderate, R = Fairly Poor, P = Poor. Green refers to hedgerows, blue to watercourses and yellow to habitats.



APFP Regulation: 5(2)(a)
Application Doc no.: EN010170/APP/GH6.3.9.13
Drawing no.: CW.ES.BNG.20

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:4190 @ A3





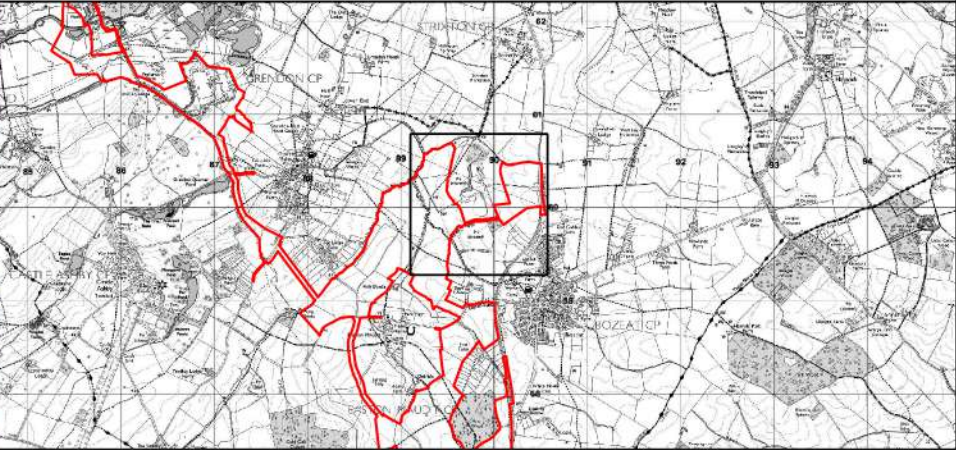
Title: Figure 9.13.21 Biodiversity Net Gain Proposed (Green Hill F) (1 of 3)

Document: Volume 2
Appendix 9.13 - Biodiversity Net Gain Assessment
Environmental Statement (ES)

- Legend:
- | | |
|--|--|
| Order Limits | Artificial unvegetated, unsealed surface |
| Proposed Small Rural Tree | Developed land; sealed surface |
| Retained Very Large Rural Tree | Mixed scrub |
| Line of trees | Modified grassland |
| Native hedgerow | Non-cereal crops |
| Native hedgerow - associated with bank or ditch | Other neutral grassland |
| Native hedgerow with trees | Other woodland; broadleaved |
| Species-rich native hedgerow | Ponds (priority habitat) |
| Species-rich native hedgerow - associated with bank or ditch | Watercourse footprint |
| Species-rich native hedgerow with trees | Tall forbs |
| Ditches | |
| Other rivers and streams | |

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Ordnance Survey 0100031673
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The letter codes G, FG, M, FP and P refer to the condition of the habitat where G = Good, F = Fairly good, M = Moderate, R = Fairly Poor, P = Poor. Green refers to hedgerows, blue to watercourses and yellow to habitats.



APFP Regulation: 5(2)(a)
Application Doc no.: EN010170/APP/GH6.3.9.13
Drawing no.: CW.ES.BNG.21

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:5400 @ A3





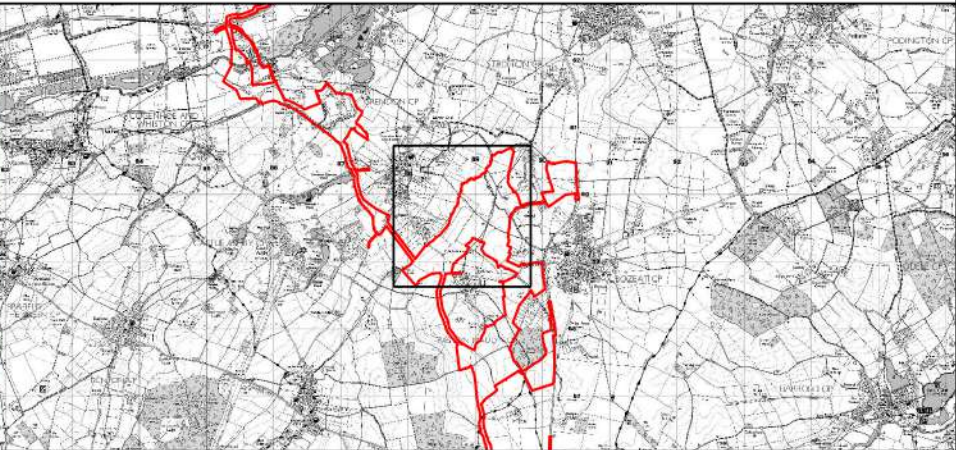
Title: Figure 9.13.22 Biodiversity Net Gain Proposed (Green Hill F) (2 of 3)

Document: Volume 2
Appendix 9.13 - Biodiversity Net Gain Assessment
Environmental Statement (ES)

- Legend:
- | | |
|--|--|
| Order Limits | Culvert |
| Proposed Small Rural Tree | Ditches |
| Retained Very Large Rural Tree | Other rivers and streams |
| Retained Large Rural Tree | Artificial unvegetated, unsealed surface |
| Retained Medium Rural Tree | Bramble scrub |
| Line of trees | Developed land; sealed surface |
| Native hedgerow | Mixed scrub |
| Native hedgerow - associated with bank or ditch | Modified grassland |
| Native hedgerow with trees | Non-cereal crops |
| Native hedgerow with trees - associated with bank or ditch | Other neutral grassland |
| Species-rich native hedgerow - associated with bank or ditch | Other woodland; broadleaved |
| Species-rich native hedgerow with trees | Ponds (priority habitat) |
| | Watercourse footprint |

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Ordnance Survey 0100031673
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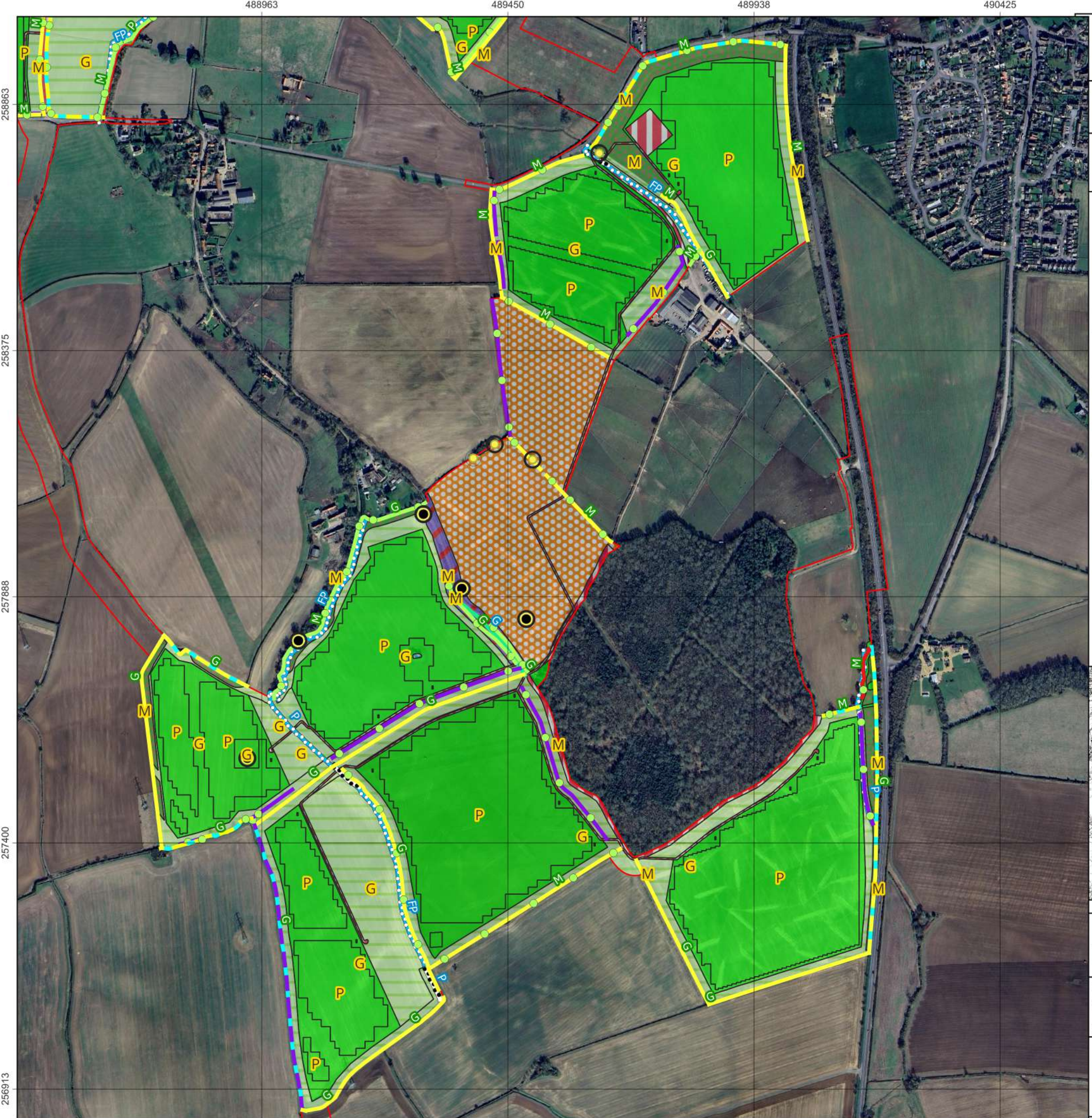
The letter codes G, FG, M, FP and P refer to the condition of the habitat where G = Good, F = Fairly good, M = Moderate, R = Fairly Poor, P = Poor. Green refers to hedgerows, blue to watercourses and yellow to habitats.



APFP Regulation: 5(2)(a)
Application Doc no.: EN010170/APP/GH6.3.9.13
Drawing no.: CW.ES.BNG.22

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:7500 @ A3





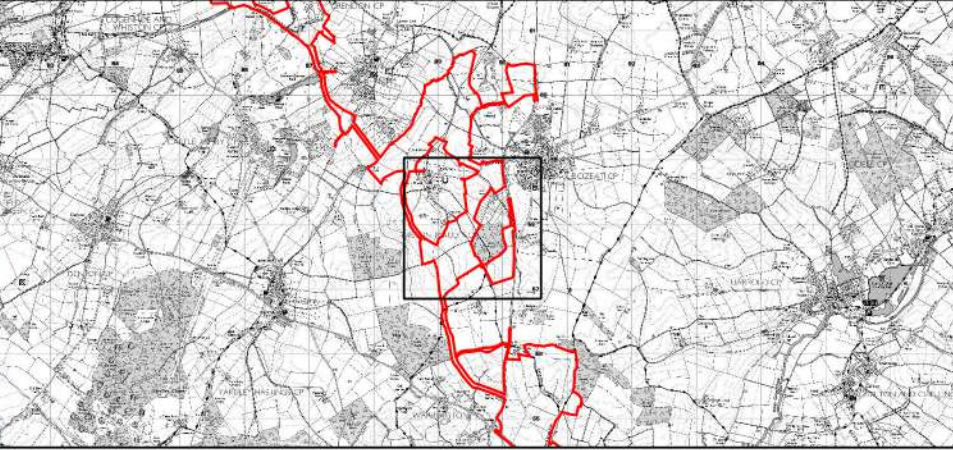
Title: Figure 9.13.23 Biodiversity Net Gain Proposed (Green Hill F) (3 of 3) - Rev A

Document: Volume 2
Appendix 9.13 - Biodiversity Net Gain Assessment
Environmental Statement (ES)

- Legend:
- | | |
|--|--|
| Order Limits | Culvert |
| Retained Very Large Rural Tree | Ditches |
| Retained Large Rural Tree | Other rivers and streams |
| Retained Medium Rural Tree | Artificial unvegetated, unsealed surface |
| Line of trees | Developed land; sealed surface |
| Ecologically valuable line of trees | Mixed scrub |
| Native hedgerow | Modified grassland |
| Native hedgerow - associated with bank or ditch | Non-cereal crops |
| Native hedgerow with trees | Other neutral grassland |
| Native hedgerow with trees - associated with bank or ditch | Other woodland; broadleaved |
| Species-rich native hedgerow - associated with bank or ditch | Ponds (priority habitat) |
| Species-rich native hedgerow with trees | |

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Ordnance Survey 0100031673
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The letter codes G, FG, M, FP and P refer to the condition of the habitat where G = Good, F = Fairly good, M = Moderate, R = Fairly Poor, P = Poor. Green refers to hedgerows, blue to watercourses and yellow to habitats.



APFP Regulation: 5(2)(a)
Application Doc no.: EN010170/APP/GH6.3.9.13
Drawing no.: CW.ES.BNG.23.Rev A

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:7800 @ A3



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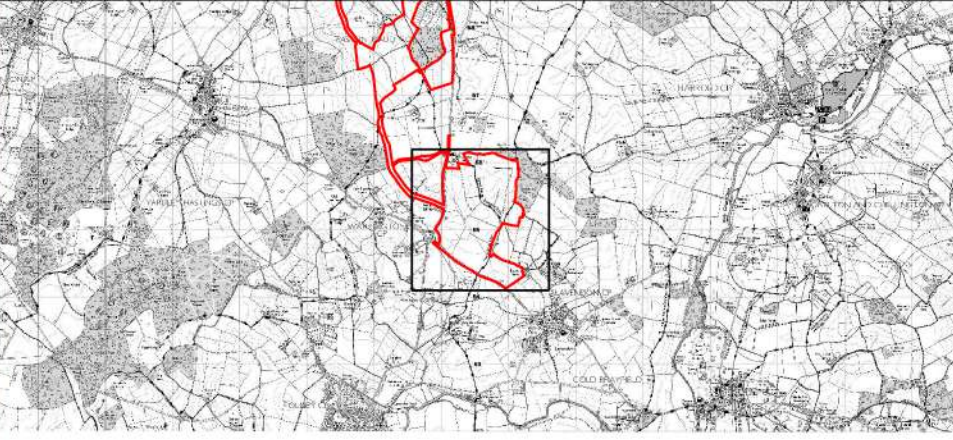
Title: Figure 9.13.24 Biodiversity Net Gain Proposed (Green Hill G)

Document: Volume 2
Appendix 9.13 - Biodiversity Net Gain Assessment
Environmental Statement (ES)

- Legend:
- | | |
|---|--|
| Order Limits | Ditches |
| Retained Very Large Rural Tree | Artificial unvegetated, unsealed surface |
| Retained Large Rural Tree | Developed land; sealed surface |
| Retained Medium Rural Tree | Mixed scrub |
| Retained Small Rural Tree | Modified grassland |
| Line of trees | Other neutral grassland |
| Line of trees - associated with bank or ditch | Other woodland; broadleaved |
| Native hedgerow | Ponds (priority habitat) |
| Native hedgerow - associated with bank or ditch | |
| Native hedgerow with trees | |
| Native hedgerow with trees - associated with bank or ditch | |
| Species-rich native hedgerow | |
| Species-rich native hedgerow - associated with bank or ditch | |
| Species-rich native hedgerow with trees | |
| Species-rich native hedgerow with trees - associated with bank or ditch | |

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APFP Regulation: 5(2)(a)
Application Doc no.: EN010170/APP/GH6.3.9.13
Drawing no.: CW.ES.BNG.24

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:7500 @ A3

