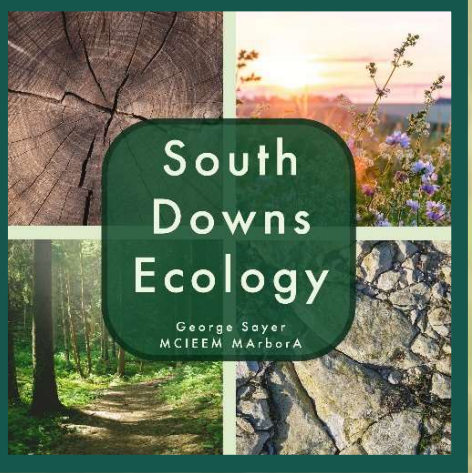
Biodiversity
Net Gain
Baseline Assessment

Proposals at Nutbourne Place Farm



Biodiversity Net Gain Assessment

Proposals at Nutbourne Place Farm, Nutbourne, Pulborough

Version 3 – 13th January 2025

Proposal for Conversion to Residential and Solar PV Array

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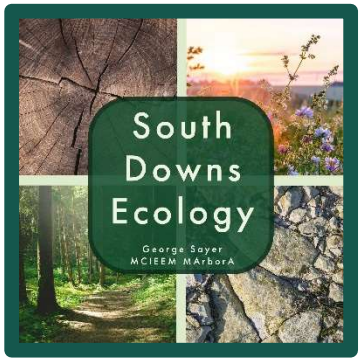

Summary

Mr and Mrs Gillen have commissioned a Biodiversity Net Gain Baseline Assessment of land at Nutbourne Place Farm, Nutbourne, Pulborough. The purpose of this assessment is to ascertain whether proposals would achieve the mandatory 10% net gain demanded by The Environment Act 2021.

The assessment confirms that no irreplaceable habitats are present on the site and that no degradation has taken place which might lower the baseline of the site.

A quantitative assessment of the ecological value of the site has been undertaken through use of the Natural England Statutory Metric (2023). The assessment determines that the proposals are likely to achieve a 10.05% gain in habitats and a 26.03% gain in linear features. As such the proposals accord with Local and National Policy.

1.0 Introduction

1.1 Mr and Mrs Gillen have commissioned a Biodiversity Net Gain Baseline Assessment of proposals for conversion of the tearooms to residential accommodation, and a new solar PV array at Nutbourne Place Farm, Nutbourne, Pulborough. The purpose of this assessment is to ascertain whether proposals would achieve the mandatory 10% net gain demanded by The Environment Act 2021.

1.2 A UKHabs survey was carried out on the 7th June 2024 by George Sayer (BSc (Hons) Environmental Sciences, PgDip Endangered Species Recovery, MArborA, MCIEEM, NE Licence Holder – Bats Level 2 and GCN - Ecologist). Habitats on-site were classified using the UKHabs classification system, v2.01 (UKHab Ltd. 2023). This assessment focuses on habitats rather than linear features.

Site Description and Surrounding Area

1.3 The site areas consist of areas of developed land, building, vacant land, horticulture and grassland at Nutbourne Place Farm, surrounded by further grassland and horticulture, a Christmas tree nursery, pond and areas of woodland.

The wider site consists of a fruit and vegetable farm, with polytunnels, grassland fields, ponds, growing beds, buildings and yards. The assessment confirms that no irreplaceable habitats are present on the site and that no degradation has taken place which might lower the baseline of the site.

1.4 The site is located to the northern edge of the small village of Nutbourne, east of Pulborough. The immediate surroundings are predominantly arable and pastoral land, with areas of woodlands, lakes, and relatively dispersed settlement. The residential areas of Pulborough and West Chiltington are both approximately 1.5 km away.

1.5 Within 500.0 m there are: a single lined pond and a redundant pond on the site; and two linear lakes (hammer ponds) c.400m east and 420.0 m south-east.

1.6 Soils on-site are classed as ‘freely draining slightly acid loamy soils’. The main land cover are grassland and arable. Characteristic habitats include neutral and acid pastures and deciduous woodlands; acid communities such as bracken and gorse in the uplands.

2.0 Scope of Assessment

1. *Assess the current baseline habitat and linear value of the site*
2. *Assess the likely habitat and linear features retained, removed and enhanced*
3. *Calculate the change in habitat and linear biodiversity value*
4. *Provide recommendations for management to ensure habitats proposed are achieved*

2.1 This appraisal and assessment is deemed to be relevant for a maximum of one year due to the possibility of changes in the habitats on-site and the methodology used to calculate Biodiversity Net Gain. Should the site conditions, methodologies or proposals alter, the ecologist should be consulted to confirm that the assessment is still valid.

3.0 Planning Policy and Legislation

National Planning Policy

3.1 In England, BNG is mandatory from 12 February 2024 under Schedule 7A of the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2021). Developers must deliver a BNG of 10%. Where this cannot be achieved on-site developers may purchase off-site units. These will be secured through either planning Section 106 agreements or through Conservation Covenants.

3.2 The National Planning Policy Framework (NPPF, 2023) Paragraph 174 states:

"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;

(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.

Local Planning Policy

3.4 The Horsham District Local Plan (2020) is currently under review, with Regulation-19 approval postponed due to changes to the NPPF and Natural England concerns over the Arun Valley SPA and further delay due to changes within the Council. The Horsham District Planning Framework (2015) contains Policy 31 - Green Infrastructure and Biodiversity, which details the following:

3.5 Development will be supported where it can demonstrate that it maintains or enhances the existing network of green infrastructure. Proposals that would result in the loss of existing green infrastructure will be resisted unless it can be demonstrated that new opportunities will be provided that mitigates or compensates for this loss and ensures that the ecosystem services of the area are retained.

3.6 Development proposals will be required to contribute to the enhancement of existing biodiversity and should create and manage new habitats where appropriate. The Council will support new development which retains and /or enhances significant features of nature conservation on development sites. The Council will also support development which makes a positive contribution to biodiversity through the creation of green spaces, and linkages between habitats to create local and regional ecological networks.

3.7 Where felling of protected trees is necessary, replacement planting with a suitable species will be required.

3.8 Particular consideration will be given to the hierarchy of sites and habitats in the district as follows: i. Special Protection Area (SPA) and Special Areas of Conservation (SAC) ii. Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs) iii. Sites of Nature Conservation Importance (SNCIs), Local Nature Reserves (LNRs) and any areas of Ancient woodland, local geodiversity or other irreplaceable habitats not already identified in i & ii above.

3.9 Where development is anticipated to have a direct or indirect adverse impact on sites or features for biodiversity, development will be refused unless it can be demonstrated that: i. The reason for the development clearly outweighs the need to protect the value of the site; and, ii. That appropriate mitigation and compensation measures are provided.

3.10 Any development with the potential to impact Arun Valley SPA or the Mens SAC will be subject to HRA to determine need for Appropriate Assessment. In addition, development will be required to be in accordance with necessary mitigation measures for development set out in HRA of this plan.

3.11 Development proposals should be accompanied by a biodiversity appraisal that assesses the level of existing ecological value of the site through adequate and proportionate information, and demonstrates that any adverse impacts are avoided or reduced in line with the mitigation hierarchy through an avoidance or mitigation plan:

- *Where an adverse impact on biodiversity is unavoidable, and no other option is available, this will only be supported where it has been demonstrated that the impact has been minimised as far as possible and, as a last resort, appropriate compensation provided for any remaining adverse impacts;*
- *Opportunities to conserve, protect and enhance biodiversity and contribute to wildlife and habitats connectivity should be undertaken, including the preservation, restoration and recreation of priority habitats, ecological networks and the protection and recovery of priority species populations.*

Development proposals that will have an impact on international, national, locally designated and irreplaceable habitats will be required to meet the following requirements:

- *Internationally Protected Sites (as shown on the policies map), including SPAs, SACs and Ramsar sites, or candidate and formally proposed versions of these designations:*
- *Development proposals with the potential to impact on one or more international site(s) will be subject to a HRA to determine the potential for likely significant effects. Where likely significant effects may occur, development proposals will be subject to Appropriate Assessment.*
- *Nationally Protected Sites (as shown on the policies map), including SSSIs, NNRs, MCZs:*
    I. *Development proposals considered likely to have a significant effect on nationally protected sites will be required to assess the impact by means of an EIA;*
    II. *Development proposals should avoid impacts on these nationally protected sites. Development proposals where any adverse effect on the site's notified special interest is likely and which cannot be either avoided or adequately mitigated will be refused, unless the benefits of the development at this site clearly outweigh the likely impact to the notified features of the site and any broader impacts on the network of nationally protected sites.*
- *Irreplaceable habitats including ancient woodland (as shown on the policies map), and veteran trees:*
    I. *Development proposals which result in the loss or deterioration of irreplaceable habitats, including ancient woodland and veteran trees, will be refused unless there are wholly exceptional reasons and a suitable compensation strategy exists.*

4.0 Methodology

Assessment Methodology

4.1 A quantitative assessment of the ecological impact of the proposals has been undertaken through use of the Natural England Statutory Metric (2023), downloaded from the Natural England website on 7th June 2024. The calculations have been undertaken by George Sayer (BSc (Hons) Environmental Sciences, PgDip Endangered Species Recovery, MArborA, MCIEEM, NE Licence Holder – Bats Level 2 and GCN - Ecologist) who has extensive experience of undertaking BNG Metric Calculations.

Site Visit

4.2 A UKHabs survey was carried out on the 7th June 2024 by George Sayer (BSc (Hons) Environmental Sciences, PgDip Endangered Species Recovery, MArborA, MCIEEM, NE Licence Holder – Bats Level 2 and GCN - Ecologist). Habitats on-site were classified using the UKHabs classification system, as described within the UK Habitats Manual v2.01 (UKHab Ltd. 2023) with background and desktop research enabling determination of strategic significance from other sources such as aerial imagery and DEFRA MAGIC Maps. All habitats present on-site were recorded on a baseline map (GS172.NutbournePlaceFarm.SBHP.v1). Proposed habitats are recorded on a proposal map (GS172.NutbournePlaceFarm.SPHP.v1).

4.3 A minimum mappable unit of 25 square metres in accordance with UKHabs has been adopted. Habitats and linear features are generally rounded to the nearest 10 square metres other than trees which are given exactly as noted in the Tree Helper Tool.

Constraints and Considerations

4.4 Due to the site visit being carried out over one day, it is possible that some floral species may have been overlooked. This is a constraint recognised within the Survey Guidelines and all reasonable effort has been made to identify the habitats with appropriate accuracy. Early June is an optimal time of year for grassland survey, when grasses should be visible, flowering and most forbs also in flower.

4.5 The majority of the site is not listed within any particular Nature Recovery Strategy or Strategic Wildlife Corridor Policy and have been classified as ‘low strategic significance’.

4.6 Habitat scores are a combination of the habitat type, the ‘strategic significance’ as detailed in 4.6, and the ‘condition’ of the habitat. Habitat condition has been assessed using the Statutory Condition Assessment Sheets as attached and all habitats assigned either poor, moderate or good condition. Species richness and composition of each habitat has been assessed using 1m² quadrats randomly spaced around each habitat. For habitats under 1Ha 5no. quadrats were sampled and for those above 1ha, 10no. quadrats were sampled. Comprehensive species lists were also made of each habitat as this provides useful context as to the habitat type and helps identify rarer species which may not be found within the quadrat sampling.

5.0 Summary of Baseline and Proposed Ecological Conditions

Area Habitats

5.1 The assessment confirms that no irreplaceable habitats are present on the site and that no degradation has taken place which might lower the baseline of the site.

5.2 The existing site is formed of the following habitats:

- 0.152 Ha of Modified Grassland, assessed as 'good' condition
- 0.047 Ha of Modified Grassland, assessed as 'poor' condition
- 0.1674 Ha of Developed Land, Sealed Surface (Building and Decking)
- 0.006 of Vacant or Derelict Land, assessed as 'poor' condition
- 0.012 of Horticulture, condition N/A

5.3 It has been determined that, of the above habitats, all would remain unchanged other than the good modified grassland (which would have a solar PV array installed above it) and the horticulture, which would likely become vegetated garden. Grassland and other habitats would be retained as they are and following latest guidelines are considered as retained.

5.4 The proposal will then create the following:

- 0.152 Ha of Other Neutral Grassland, 'moderate' condition
- 0.012 Ha of vegetated gardens

5.5 Whilst the solar PV array location would remain as grassland, the fact that this is currently considered 'good' condition (which would mean enhancement would have to provide neutral grassland of good condition) would be heavily modified during works and that enhancement would be fairly significant, this has been shown as lost and new grassland created rather than existing grassland enhanced.

5.6 The original baseline score of 1.04 biodiversity units will increase to 1.15 units, representing a gain of 10.05%.

Linear Habitats

5.7 The existing site contains 90.0 m of native treelines lining the access. These lie on the edge of the redline area and have been included as they may be impacted. These are both in moderate condition.

5.8 The proposal includes a 0.013 km species-rich native hedge along the southern edge of site, to delineate this from other areas. The hedge planting would result in a hedge gain from 0.36 to 0.45 units, or 26.03%.

6.0 Management

6.1 The proposals involve only retention and creation of garden habitats on and surrounding the building, which are non-significant and do not require securing through a management plan.

6.2 The following habitat creation and management are proposed on the edges of site, as described above:

- Creation of neutral grassland in 'moderate' condition
- Planting of new native hedge in 'moderate' condition.

6.3 Following comments from the Horsham District Council Ecological Consultee, further discussion of the methods of creation and management of the grassland are provided below. The provision of these habitats would be secured through the provision of a Habitat Management and Monitoring Plan, as part of a planning condition.

6.4 The grassland would be under the solar PV array and as such subject to a moderately high degree of shading. To ensure at least moderate condition is achieved, a high-diversity heavy shade mix such as the Boston Seeds *Woodland & Heavy Shade Wildflower Seed BS8P 80/20%* would be used directly under panels. This includes 24 native wildflowers and 6 grasses, which should at the least achieve 8 species per square metre once established. Moderate condition is considered very feasible - Condition A states: "The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present..." Species in this seed mix include typical neutral grassland species such as common bent, red fescue, tufted hair grass and sweet vernal-grass as well as a range of forbs which are tolerant to shade.

6.5 The new grassland is proposed to be created rather than enhanced. This allows for the possibility of stripping the top turf layer off, installing the PV then seeding over the top. This would remove the dominant grasses and allow establishment of the new seed mix.

6.6 A detailed layout of the PV array has not yet been provided; as they are c.3m front-to-back, there will be at least 3m between rows which will allow for a small ride on mower or push mower to cut the grass. The areas under panels are more restricted, but given the area a single push-mow in autumn with removal of arisings would be sufficient to prevent a dense thatch forming. The panels appear to be c.1m off the ground; as such shading from grass species would be negligible, provided these were maintained to prevent e.g. scrub or high-nutrient species such as nettle or mallow from growing. This would be detailed within the condition-stage Habitat Management and Monitoring Report.

6.7 The shade under the panels would make encroachment by surrounding grasses difficult. In any case the surrounding grassland is in good condition and on the verge of becoming a neutral grassland itself. As such some minor encroachment is unlikely to significantly impact the habitat type or condition.

6.8 The tracks between panel rows, and the margin where a fence would be installed would be relatively open and only partially shaded; as such some variation in seed mix would be beneficial. A more general neutral grassland mix would be used here, such as the "Dry, Sandy Loam Soils Wildflower Seed BS3M 80/20" which contains a more standard neutral grassland mix. This will easily achieve moderate condition and will be gradually mixed with the shade mix in partially-shaded areas to ensure a good diversity regardless of the conditions. Across the habitat this would result in a varied matrix of species, of good value to wildlife. Neutral grassland has fairly broad criteria and as such achieving this is not considered complex for experienced land managers such as these. As an alternative, a specialist supplier of Solar PV seed mixes such as Habitat Aid www.habitataid.co.uk could be engaged to determine a more specific seed mix suited to the soil type here. This would be detailed within the condition-stage Habitat Management and Monitoring Report.

6.9 The modified grassland immediately surrounding should be regularly mown to ground level until establishment, to prevent the surrounding vigorous grasses from seeding into this area. This would be detailed within the condition-stage Habitat Management and Monitoring Report. The existing and surrounding grassland is dominated by common bent and cocksfoot, both species which could become dominant and yet not fail the criteria for neutral grassland. Both are listed on this habitat definition. There is very little perennial ryegrass in the vicinity, and whilst white clover is currently abundant, provided this is controlled below 30% the grassland would remain a neutral grassland. To ensure this, the neutral grassland shall be enlarged by several metres on all sides beyond the fence, which will reduce wind-blown seed dispersal and slow vegetative spread of vigorous grasses.

6.10 Should vigorous grasses start to dominate the sward, gentle harrowing and addition of yellow rattle (which would parasitise the grass roots and reduce its vigour) over the discrete area of the PV array would help control these. Such measures will be included within the condition-stage Habitat Management and Monitoring Report as a contingency measure.

7.0 Conclusions

7.1 The proposals result in an on-site gain of 10.05% in area habitats and 26.03% gain in linear habitats. Provided habitat creation and management is undertaken and agreed with the LPA, the proposals are considered to have satisfied the requirements of the NPPF (2023) Paragraph 174 and the requirements of the recent Environment Act (2021).

8.0 References

CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM (2018) Guidelines for Ecological Impact Assessment, 1st edition. Chartered Institute of Ecology and Environmental Management, Winchester.

Natural England (2024)The Statutory Biodiversity Metric Calculation Tool, Condition Assessments and User Guide. Available Online: https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides (accessed 10th May 2024)

UK Hab Ltd. (2023). The Habitat Classification Version 2.01. Available online: https://www.ukhab.org