

Report

Old Inn House, Redhill

## **Biodiversity Gain Information**

For G2 Architecture and Design

30 August 2024

## Document Control

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# 1 Introduction

## 1.1 Background

Logika consultants were commissioned by G2 Architecture and Design ('G2') to provide Biodiversity Gain Information in support of a proposed development consisting of 30 solar panels and associated electrical equipment within a horse paddock at Old Inn House, Redhill, Hertfordshire, SG9 0TH. The Site is approximately 0.08 hectares (ha) in size, with a central grid reference of TL 3010 3311. The Site is shown in Figure 1.1, below.

Figure 1.1 – Site Location



The proposed development of solar panels at this location is not exempt from Schedule 7A of the Town and Country Planning Act 1990 (as inserted by the Environment Act 2021).

## 1.2 Purpose of the report

This document sets out the baseline biodiversity at the Site, the Biodiversity Net Gain (BNG) strategy and the principles for the delivery of BNG within the Site and includes the methods and results of the analysis using the Department for Environment, Food and Rural Affairs (DEFRA) Statutory Biodiversity Metric ('the metric') to demonstrate how the development will deliver biodiversity net gain.

## 2 Policy and Legislative Context

The UK Government has repeatedly expressed the need to reverse the current trend in biodiversity loss being suffered across the UK, with a move towards a transitional position of no net loss followed by a realisation of BNG within various strategy documents. The "Natural Environment White Paper - The natural choice: securing the value of nature" (2011) and related strategy document "Biodiversity 2020: A system for England's wildlife and ecosystems services" (2011) first described a transition towards BNG (to be achieved by 2020) to be implemented via government policy (for example through describing the concept robustly in the National Planning Policy Framework). However, there has been a realisation that the voluntary and arbitrary system failed to deliver the aims of the strategy. Therefore, a universal system for delivering BNG in England was described in DEFRA's "A Green Future: Our 25-year plan to improve the environment" (2018). This has culminated in a mandatory system for BNG, for the majority of development projects, being written into legislation in the Environment Act 2021.

The mandatory provision of BNG was enacted on the 12th February 2024 (for most projects, unless exempt) consented under the Town & Country Planning Act 1990 (as amended).

### 2.1 National Planning Policy

The National Planning Policy Framework (2023) (the NPPF) states that (paragraph 180) '*Planning policies and decisions should contribute to and enhance the natural local environment by (d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures*'.

It goes on to state that (paragraph 186(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.*' At least in part, the compensation contributes to BNG (typically considered to be reaching a position of no net loss) and therefore it needs to be addressed quantitatively, with the Statutory Biodiversity Metric currently being the best available tool to achieve this.

### 2.2 Local Planning Policy

A review of relevant local policy outlined within the North Hertfordshire Local Plan 2011 - 2031 outlined the following relevant policy.

SP12 – Green infrastructure, landscape and biodiversity states:

*'We will accommodate significant growth during the plan period whilst ensuring the natural environment is protected and enhanced. We will:*

- a) Protect, identify, manage and where possible enhance a strategic multi-functional network of green infrastructure;*
- b) Consider and respect landscape character, scenic beauty and locally sensitive features, particularly in relation to the Chilterns Area of Outstanding Natural Beauty;*
- c) Protect, enhance and manage designated sites in accordance with the following hierarchy of designations and features:*
  - *Internationally designated sites*

- *Nationally designated sites*
- *Locally designated sites;*
- *Non-designated sites that include important habitats and species*

*d) Protect, enhance and manage biodiversity networks including wildlife corridors, ancient woodlands and hedgerows, wetland and riverine habitats, Local Geological Sites, protected species, priority species and habitats, and non-designated sites of ecological value and ensure measurable net gains for biodiversity; and*

*e) Protect other open spaces and support provision of new and improved open space.'*

These guiding principles are addressed specifically within the biodiversity gain information presented below.

### 3 Measuring BNG

BNG is a concept that in principle is simple, i.e. provide more biodiversity than that which is lost to development. However, to deliver a unified mandatory system it has been necessary for DEFRA to develop the Statutory Biodiversity Metric. The metric works by considering:

- extent of habitat (measured in hectares (ha) or kilometres dependent on whether the habitat is linear or area-based)
- how distinctive the habitat is (i.e., its complexity, rarity, diversity etc.)
- its condition (i.e., its structure and management)
- its strategic location.

These elements are used both to determine the biodiversity value (measured in habitat units, hedgerow units and/or river units) of the losses due to a particular development, but also the gains made from its proposed habitat enhancement and creation measures.

The biodiversity value of the gains is refined based on a number of risk multipliers that account for the difficulty of habitat creation (e.g. it is easier to create 'medium distinctiveness' habitats such as a semi-improved grassland, than a 'very high distinctiveness' active raised bog), the time it takes for a habitat to reach target condition (e.g. a grassland reaches target condition quicker than a woodland), the location of delivery (i.e. habitat creation local to the biodiversity loss is worth more than habitat creation unrelated to the impact) and the time of delivery (e.g. before, during or after the losses have occurred).

The metric is also framed by a set of principles that seek to ensure:

- Adherence to the mitigation hierarchy (i.e., avoid, mitigate, compensate, enhance).
- The exclusion of designated sites and irreplaceable habitats from the main calculations (encouraging their avoidance and ensuring any losses are compensated for on a case-by-case basis).
- The "like for like or better" replacement of high value habitats (e.g., removal of valuable woodland, requires replacement of woodland habitat, as opposed to replacement with grassland or other habitats that may provide more biodiversity unit value per hectare of creation). These elements are known as the "trading rules" (see Table 3-1).
- Habitats provided to deliver BNG will be managed for a minimum period of 30 years.

**Table 3-1 Trading rules within the Statutory Metric**

| Habitat distinctiveness (baseline) | Distinctiveness of replacement habitat required                                                                                                                                                                                                                              |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Very high                          | Priority should be given to replacing losses with area units of the same habitat type. Losses of hedgerow units must be replaced with hedgerow units of the same habitat type. Priority should be given to replacing losses with watercourse units of the same habitat type. |

| Habitat distinctiveness (baseline) | Distinctiveness of replacement habitat required                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>High</b>                        | Losses must be replaced with area habitat units of the same habitat type. Losses of hedgerow units must be replaced with hedgerow units of the same habitat type or of a higher distinctiveness band. Losses of watercourse units must be replaced with watercourse units of the same habitat type.                                                                                                                                                                                                                                                                                                                                                             |
| <b>Medium</b>                      | Losses of area units must be replaced by area habitat units of either medium band habitats within the same broad habitat type or, any habitat from a higher distinctiveness band (from any broad habitat type). Losses of Hedgerow must be replaced with hedgerow units of the same or of a higher band and losses of watercourse units must be replaced with watercourse units of the same habitat type.<br>NB: woodland of medium distinctiveness should be replaced with other woodland, as opposed to a different broad habitat type as there is a presumption against loss of woodland cover in 'The England Trees Action Plan 2021 – 2024' (Defra, 2021). |
| <b>Low</b>                         | Losses of area-based and hedgerow units must be replaced with units of the same or higher distinctiveness band. Watercourse units must be replaced with watercourse units of a higher distinctiveness band.                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Very low</b>                    | No applicable trading rules for area-based units or watercourse units. Losses of hedgerow units must be replaced with hedgerow units of the same or higher distinctiveness band.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

It is also notable that this system does not remove the legal obligations with regard to protected or notable species, or statutorily designated sites.

The adoption of the metric for this project results in the provision of a calculation of biodiversity losses due to permanent infrastructure and temporary construction works (based on a realistic worst-case scenario), and gains associated with creation of habitats subject to temporary works on the Site. The outcome of the calculations demonstrates how the Site will deliver at least 10% BNG across the development.

## 4 Statutory Biodiversity Metric Outputs

### 4.1 Baseline conditions

Baseline conditions for the site were assessed during a site visit undertaken on 16th August 2024 by Louis Bikeri Morwani, a suitably qualified and experienced ecologist. The timing of the survey visit and the conditions at the time of the survey were considered optimal for establishing the baseline.

The survey visit enabled the ecologist to gather requisite information on both the habitats present, and habitat condition following the condition assessment criteria as outlined in the Statutory Biodiversity Metric – Technical Annex 1: Condition Assessment Sheets and Methodology<sup>1</sup>.

At the time of survey, the Site was being used as a horse paddock mainly enabling movement of animals between larger areas of grazing and a manège (riding arena). This usage was evident by worn areas of grass and bare earth on commonly used routes and invasion by weeds which would typically be under greater control in areas where horses were expected to graze. The paddock was bounded to the west and the north by hedgerow (comprising mainly hawthorn, blackthorn, elder, hazel bramble) although these are outside of the planning boundary. The paddock itself was grass dominated (other than in areas of bare ground) although with a large component of other flora. Grasses included perennial rye-grass, red fescue, timothy, Yorkshire fog, cock's foot and common bent, whilst other flora was dominated by broadleaved dock. Other flora present included greater plantain, selfheal, dandelion, chicory, ragwort, white clover and common mallow.

The grassland was typical of modified grassland (defined using UK Habitats Classification V2.0 (UKHab)<sup>2</sup>) that has received relatively limited management in recent times but is heavily trafficked. It is in poor condition (based on the DEFRA criteria for low distinctiveness grassland) as:

- There are less than 6 to 8 vascular plant species per square metre (fail – diversity is below six species per square metre)
- Sward height is varied (pass – sward height is varied due to usage)
- Any scrub accounts for less than 20% of the total grassland area (pass – there is no scrub within the paddock)
- Physical damage is less than 5% of the total grassland area (fail – more than 5% of the area is worn by livestock traffic)
- Cover of bare ground is between 1% and 10% (fail – more than 10% of the paddock is bare ground)
- Cover of bracken is less than 20% (pass – there is no bracken)
- There is an absence of invasive non-native species (pass – no invasive non-native species are present).

There are no other habitats within the Site boundary. Although bare ground was present this was not considered as a separate habitat as it was distributed within the wider grassland area. Photographs of the habitat are provided in Appendix A.

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<sup>1</sup> [Statutory biodiversity metric tools and guides - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/statutory-biodiversity-metric-tools-and-guides)

<sup>2</sup> UKHab Ltd (2023). *UK Habitat Classification Version 2.0*. Available at <https://www.ukhab.org>

Tables 4.1 and 4.2 show summary information of the data input to the metric as a result of the proposed development.

**Table 4-1 Baseline inputs to the Statutory Biodiversity Metric**

| Habitat type       | Habitat condition | Extent (ha) | Habitat units | Area retained (ha) | Notes                                                                                                                                                                                                                                                                                  |
|--------------------|-------------------|-------------|---------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Modified grassland | Poor              | 0.08        | 0.16          | 0.07               | Majority of area would be retained. Even if construction resulted in temporary disturbance of habitat this would be re-established by seeding to at least the same condition well within the 2 year period identified by Defra for temporary works that can be considered as retained. |
| <b>Total</b>       |                   | 0.08        | 0.16          | 0.07               |                                                                                                                                                                                                                                                                                        |

**Table 4-2 Post-development inputs to the Statutory Biodiversity Metric**

| Habitat type                    | Habitat condition | Extent (ha) | Habitat units delivered | Created or enhanced | Notes                                                                                              |
|---------------------------------|-------------------|-------------|-------------------------|---------------------|----------------------------------------------------------------------------------------------------|
| Modified grassland              | Poor              | 0.009       | 0.02                    | Created             | Grassland re-established through seeding underneath the solar panels                               |
| Developed land / sealed surface | N/A               | 0.001       | 0.00                    | Created             | Footings of the solar panels                                                                       |
| Rural trees                     | Moderate          | 0.0081      | 0.02                    | Created             | Two small trees. To be planted within or close to the planning boundary (e.g. neighbouring fields) |
| <b>Total</b>                    |                   | 0.0181      | 0.04                    |                     |                                                                                                    |

Table 4.2 outlines the BNG strategy for the Site and how a biodiversity net gain will be achieved. All habitats created, including both the modified grassland and rural trees will be managed in perpetuity ensuring the habitats remain for a minimum of a 30-year period to deliver net gain for the Site.

## 5 Securing Biodiversity Net Gain

The scenario presented above provides evidence that 10% BNG can be achieved within the Site boundary (or immediately adjacent to it with regards the tree planting) based on the current parameter / illustrative plans. With BNG calculated at 13.83% as a result of the proposed development.

The Scenario is considered easy to deliver onsite, with no pre-development enhancements or habitat creation required. Time to condition is achievable for habitats that will be created.

The modified grassland has a target condition of poor based on its use as an area through which horses will still be moved and its small size.

The habitats to be delivered on-site will be managed by landowner in perpetuity and they will therefore be responsible for maintenance and ensuring the habitats remain within the habitat types outlined within the metric.

Ecological monitoring should be undertaken post-development and then in years 2, 5, 10, 15, 20, 25 and 30 to ensure the habitats remain compliant with the metric.

## 6 Appendices

## A1 Site Photographs



Photograph of the paddock looking west



Photograph of the paddock looking

## A2 Statutory Biodiversity Metric

| Headline Results                                                                                                               |                                                                                         | results menu          |                       |                     |                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------|-----------------------|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Scroll down for final results                 |                                                                                         |                       |                       |                     |                                                                                                                                                |
| On-site baseline                                                                                                               | Habitat unit                                                                            | 0.16                  |                       |                     |                                                                                                                                                |
|                                                                                                                                | Hedgerow unit                                                                           | 0.00                  |                       |                     |                                                                                                                                                |
|                                                                                                                                | Watercourse unit                                                                        | 0.00                  |                       |                     |                                                                                                                                                |
| On-site post-intervention<br><small>(including habitat creation, creation &amp; enhancement)</small>                           | Habitat unit                                                                            | 0.18                  |                       |                     |                                                                                                                                                |
|                                                                                                                                | Hedgerow unit                                                                           | 0.00                  |                       |                     |                                                                                                                                                |
|                                                                                                                                | Watercourse unit                                                                        | 0.00                  |                       |                     |                                                                                                                                                |
| On-site net change<br><small>(units &amp; percentage)</small>                                                                  | Habitat unit                                                                            | 0.02                  | 13.43%                |                     |                                                                                                                                                |
|                                                                                                                                | Hedgerow unit                                                                           | 0.00                  | 0.00%                 |                     |                                                                                                                                                |
|                                                                                                                                | Watercourse unit                                                                        | 0.00                  | 0.00%                 |                     |                                                                                                                                                |
| Off-site baseline                                                                                                              | Habitat unit                                                                            | 0.00                  |                       |                     |                                                                                                                                                |
|                                                                                                                                | Hedgerow unit                                                                           | 0.00                  |                       |                     |                                                                                                                                                |
|                                                                                                                                | Watercourse unit                                                                        | 0.00                  |                       |                     |                                                                                                                                                |
| Off-site post-intervention<br><small>(including habitat creation, creation &amp; enhancement)</small>                          | Habitat unit                                                                            | 0.00                  |                       |                     |                                                                                                                                                |
|                                                                                                                                | Hedgerow unit                                                                           | 0.00                  |                       |                     |                                                                                                                                                |
|                                                                                                                                | Watercourse unit                                                                        | 0.00                  |                       |                     |                                                                                                                                                |
| Off-site net change<br><small>(units &amp; percentage)</small>                                                                 | Habitat unit                                                                            | 0.00                  | 0.00%                 |                     |                                                                                                                                                |
|                                                                                                                                | Hedgerow unit                                                                           | 0.00                  | 0.00%                 |                     |                                                                                                                                                |
|                                                                                                                                | Watercourse unit                                                                        | 0.00                  | 0.00%                 |                     |                                                                                                                                                |
| Combined net unit change<br><small>(including all on-site &amp; off-site habitat creation, creation &amp; enhancement)</small> | Habitat unit                                                                            | 0.02                  |                       |                     |                                                                                                                                                |
|                                                                                                                                | Hedgerow unit                                                                           | 0.00                  |                       |                     |                                                                                                                                                |
|                                                                                                                                | Watercourse unit                                                                        | 0.00                  |                       |                     |                                                                                                                                                |
| Spatial risk multiplier (SRM) deductions                                                                                       | Habitat unit                                                                            | 0.00                  |                       |                     |                                                                                                                                                |
|                                                                                                                                | Hedgerow unit                                                                           | 0.00                  |                       |                     |                                                                                                                                                |
|                                                                                                                                | Watercourse unit                                                                        | 0.00                  |                       |                     |                                                                                                                                                |
| <b>FINAL RESULTS</b>                                                                                                           |                                                                                         |                       |                       |                     |                                                                                                                                                |
| Total net unit change<br><small>(including all on-site &amp; off-site habitat creation, creation &amp; enhancement)</small>    | Habitat unit                                                                            | 0.02                  |                       |                     |                                                                                                                                                |
|                                                                                                                                | Hedgerow unit                                                                           | 0.00                  |                       |                     |                                                                                                                                                |
|                                                                                                                                | Watercourse unit                                                                        | 0.00                  |                       |                     |                                                                                                                                                |
| Total net % change<br><small>(including all on-site &amp; off-site habitat creation, creation &amp; enhancement)</small>       | Habitat unit                                                                            | 13.43%                |                       |                     |                                                                                                                                                |
|                                                                                                                                | Hedgerow unit                                                                           | 0.00%                 |                       |                     |                                                                                                                                                |
|                                                                                                                                | Watercourse unit                                                                        | 0.00%                 |                       |                     |                                                                                                                                                |
| Trading rules satisfied?                                                                                                       | Yes  |                       |                       |                     |                                                                                                                                                |
| <b>Unit Type</b>                                                                                                               | <b>Target</b>                                                                           | <b>Baseline Units</b> | <b>Units Required</b> | <b>Unit Deficit</b> |                                                                                                                                                |
| Habitat unit                                                                                                                   | 10.00%                                                                                  | 0.16                  | 0.18                  | 0.00                | No additional area habitat units required to meet target  |
| Hedgerow unit                                                                                                                  | 10.00%                                                                                  | 0.00                  | 0.00                  | 0.00                | No additional hedgerow units required to meet target      |
| Watercourse unit                                                                                                               | 10.00%                                                                                  | 0.00                  | 0.00                  | 0.00                | No additional watercourse units required to meet target   |