

Biodiversity Net Gain Assessment

Adastra Park

February 2026

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Appendix A – On Site Baseline & On Site Post Development Map

Appendix B – Offsite Baseline & Offsite Post Development Map

1. Introduction

Project Background

- 1.1 Phlorum Limited was commissioned by Ross Watkins to compile a Biodiversity Net Gain Assessment in relation to the proposed development of Adastra Park (hereafter referred to as “the site”). The site address is Orchard Lane, Hassocks, Keymer, Mid Sussex, West Sussex, England, BN6 8QE.

Site Description and Context

- 1.2 The onsite baseline comprised of modified grassland in poor condition.
- 1.3 The offsite baseline comprised of modified grassland in poor condition.
- 1.4 The site is surrounded by playing fields, and residential houses.
- 1.5 The National Grid Reference for the centre of the site is TQ 31094 15501. The survey area extended over approximately 240m².

Description of Development

- 1.6 It is understood that the development proposals are for the creation of cricket nets at the site.

2. Methodology

Establishing the Baseline Habitat

- 2.1 Phlorum carried out a site walkover visit on 10th November 2025 and 05th February 2026 to assess the baseline habitat conditions of the site, following the guidance set by the Joint Nature Conservation Committee, handbook for Phase 1 surveys (JNCC 2010).
- 2.2 However, the description of the site habitats has used the code/referencing from The UK Habitat Classification User Manual Version 2.0 (UKHab 2023). UKHab uses primary habitat codes, either on their own or followed by one or more secondary codes. Each individual code is separated by a space. Habitats were described and mapped (Figure 1: Appendix A).
- 2.3 A review of Google Earth aerial images was carried out to assess the habitats on site since 30th January 2020 and now.

Calculating Biodiversity Net Gain/Loss

- 2.4 A Biodiversity Net Gain (BNG) assessment involves making a comparison between the biodiversity value of the present habitat, prior to development (i.e. the baseline) and the predicted biodiversity value of the habitats following completion of the development (i.e. post-development). The comparison is made in terms of 'biodiversity units', with a 'biodiversity metric' providing the mechanism to allow biodiversity values to be calculated and compared.
- 2.5 If the baseline habitat has recently been disturbed/cleared then the baseline is taken as 30th January 2020.
- 2.6 The calculation of Biodiversity Net Gain (BNG) was undertaken using The Statutory Biodiversity Metric (DEFRA 2023, as amended). The metric uses site habitats, as areas and linear lengths, to calculate a score for the site. Each habitat is scored according to its relative biodiversity value. This value is then adjusted depending on various factors, to calculate the 'biodiversity units' for each habitat.

Baseline Calculation

- 2.7 Site baseline habitats are assessed based on the following:
 -  Area habitat units;
 -  Hedgerow units (linear length); and
 -  Watercourse units (linear length).
- 2.8 The baseline habitat map from the site walk over is used to calculate the individual parcels of habitats on the site, such as terrestrial areas (e.g. woodland, grassland), terrestrial lengths (e.g. hedgerows) and aquatic lengths (e.g. streams, rivers). Each area is measured in *hectares* and each linear feature in *kilometres*.

- 2.9 The Statutory Biodiversity Metric calculator requires habitats present on site to be described using the UKHabs Classification System. As a result, the calculator in the technical data section includes a tool to translate Phase 1 habitats into UKHabs habitats.
- 2.10 Once the UKHabs habitat names, and areas/lengths have been measured the parcels need to be assessed against the following criteria:
-  Habitat Distinctiveness – The calculator creates an automated score based on the type of habitat present. Highly diverse habitats, particularly those habitats of Principal Importance under the NERC Act (2006) or Annex 1 habitats in the Habitats Directive (1992) score 'high', whilst sites with low diversity such as arable crops have 'low' scores.
 -  Habitat Condition – An assessment of the quality of the habitat parcel assessed during the baseline surveys.
 -  Strategic Significance – An assessment based on the information set out in local plans or policies.

Post Development Calculation

- 2.11 The post development areas have been calculated by initially assessing the area of habitats created plus any offsite areas created.
- 2.12 A 'Habitat Condition' and 'Strategic Significance' assessment are carried out on the post-development habitats. Where habitats have been created or enhanced, additional factors are considered, such as time taken for each of these habitats to reach target condition (temporal multiplier) and the difficulty of recreating these habitats (difficulty multiplier).
- 2.13 The baseline biodiversity score and post-development score are then calculated and compared the biodiversity impact loss or gain is calculated for each habitat (e.g. terrestrial habitat, terrestrial linear and /or linear aquatic habitat).
- 2.14 If needed offsite enhancement and/or creation of habitats can be carried out and assessed.
- 2.15 The site, and if needed the offsite enhancement, are then managed for at least 30 years via legal agreements, such as planning obligations or conservation covenants.

Caveats

- 2.16 The BNG calculates habitats and only provide a score to represent the biodiversity on site. As a result, compensation and mitigation should be designed using appropriate expertise and common sense.

- 2.17 As only habitats are calculated an increase in biodiversity due to increase in fauna (e.g. birds, bats, insects, reptiles, amphibians, or other mammals) is not included. The creation of bird/bat/insect boxes, log piles, and/or hibernacula's can significantly enhance the ecosystems on a site, but these enhancement are not calculated by the BNG calculator. The BNG calculator is a good guide to help increase biodiversity but habitats need both flora (plants) and fauna (animals) enhanced to ensure healthy and sustainable ecosystems.
- 2.18 The existing levels of protection provided to certain habitats or protected species are not changed by this calculator. The impact on protected species are not considered by the calculator, and must be assessed separately.
- 2.19 In nature the boundaries between ecological habitats are not usually an easily defined line, unless human impact such a hard surface (e.g. buildings/roads), fences, ploughing, and/or felling has occurred. As a result, the habitat areas used are based on best judgement and therefore are subjective.
- 2.20 The calculator requires area measurements in *hectares* and linear measurements in *kilometres*, which for small sites can result in smaller areas/lengths not being recorded when only 2 decimals places area used.
- 2.21 Any isolated trees are measured separately, therefore the overall area of all the habitat parcels can be greater than the actual site area.
- 2.22 The calculator cannot take account of all site-specific features and circumstances that may affect the true value of certain habitats or dictate the nature of habitat creation and enhancement. Such features and circumstances may make it impossible to satisfy trading rules for medium and high distinctiveness habitats, even where a clear net gain for biodiversity is being delivered. Under The Statutory Biodiversity Metric meeting the Trading Rules is a requirement and irreplaceable habitats cannot be lost on site.
- 2.23 Whilst the calculator provides a valuable guide as to how a development will affect biodiversity, it should be considered as a guide to be used in combination with pragmatic and knowledge-based judgement when reaching conclusions as to how effective biodiversity enhancement will be delivered.

3. Biodiversity Net Gain Assessment

Historic Aerial Image Review of Habitats

- 3.1 A Google Earth review of the site back to 30th January 2020 (or as close as Google Earth imagery provides) was carried out. This showed no significant change in the habitat types and areas on site compared to the current survey.

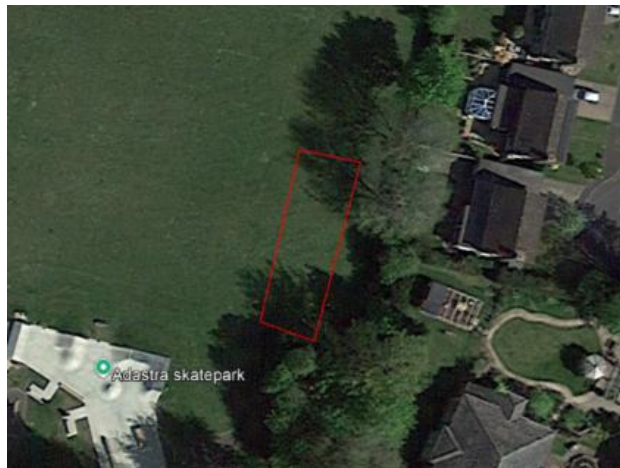


Image 1: Showing April 2020 Google Earth imagery of the onsite area.



Image 2: Showing August 2025 Google Earth imagery of the onsite area.



Image 3: Showing April 2020 Google Earth imagery of the offsite area.



Image 4: Showing August 2025 Google Earth imagery of the offsite area.

Existing Habitats

- 3.2 The existing habitats identified on site during the walk over was modified grassland. The habitat map can be seen in Appendix A, Figure 1. The existing habitats identified during the offsite assessment was modified grassland. See appendix A, Figure 3.
- 3.3 Where relevant, the following habitats will be referred to using the UK Habitat Classification¹ to help inform the Biodiversity Net Gain (BNG) for the site.
- 3.4 The following habitats will be lost within the onsite baseline:
-  **Modified grassland:** an area of approximately 240m² will be lost of poor quality modified grassland.

¹ UKHab Ltd (2023) The UK Habitat Classification Version 2.0 (at <https://www.ukhab.org>)
14380 Bng V1

3.5 The following habitats will be within the onsite post development:

-  **Artificial vegetated; unsealed surface:** An area for cricket nets will be created. This will replace the modified grassland from the onsite baseline.

3.6 The following habitats will be lost within the offsite baseline:

-  **Modified grassland:** an area of approximately 300m² will be lost of poor quality modified grassland.

3.7 The following habitats will be within the offsite post development:

-  **Other neutral grassland:** An area of approximately 300m² of other neutral grassland in moderate condition will be created offsite. This will replace the modified grassland within the offsite baseline.

Headline Results

3.8 The headline results, including total unit and percentage change are shown in Table 1 below.

Table 1: Results

	Habitat Area Units (Terrestrial area)	Habitat Length Units (Terrestrial linear length)	Aquatic Length Units (Aquatic linear length)
On-site Baseline	0.05	n/a	n/a
On-site post- intervention	0.00	n/a	n/a
Off-site Baseline	0.06	n/a	n/a
Off-site Post- intervention	0.20	n/a	n/a
Total net unit change	0.09	n/a	n/a
Total net % change	193.41%	n/a	n/a

3.9 The Trading Rules requirement of the BNG assessment are satisfied for the site.
Results Summary

3.10 The existing area habitats onsite are considered by the Biodiversity Net Gain assessment to have a value of **0.05 units**. The post-development area habitats on site are considered by the Biodiversity Net Gain Assessment to have a value of **0.00 units**. The existing area habitats offsite are considered to have a value of **0.06 units**. The post development area habitats offsite is considered to have a value of **0.20**. Therefore, overall, within the onsite and offsite habitats this is a **+0.09 net change** in habitat units which equates to a **193.41% net gain**.

- 3.11 This reflects the replacement of modified grassland with artificial unvegetated, unsealed surfaces within the onsite habitat and the replacement of modified grassland with moderate condition other neutral grassland within the offsite habitats.
- 3.12 There are no linear/aquatic habitat features on the site pre- or post-development within the onsite or offsite areas. This includes no aquatic habitat within 10m of either the onsite habitat or offsite habitat.
- 3.13 Trading Rules for the site are satisfied.

4. Discussion

- 4.1 A Biodiversity Net Gain Assessment has been carried out for the proposed development of Adastra Park. The onsite baseline comprised of modified grassland. The offsite baseline comprised of modified grassland.
- 4.2 It is understood that development proposals are for the creation of cricket nets.
- 4.3 An overall net gain of 193.41% in habitat units from the existing baseline has been calculated. The net gain reflects the replacement of onsite modified grassland with artificial unvegetated; unsealed surface, and the replacement of offsite modified grassland with other neutral grassland.
- 4.4 It is understood that the offsite land will sit outside of the root protection of the adjacent hedgerow and trees and over 10m away from the bank top of the stream. It is also noted that the area to be used for offsite creation will sit outside of the football field boundary lines.
- 4.5 Trading Rule requirement of the BNG assessment are satisfied.
- 4.6 A Habitat Management and Monitoring Plan (HMMP) may be required to demonstrate how the post development habitat will be maintained, who is responsible for creating and enhancing it, and who is responsible for its maintenance, management and monitoring over a 30-year period. This monitoring and management will be needed every year for five years and then once every five years after that up to thirty years (i.e. years 1, 2, 3, 4, 5, 10, 15, 20, 25, 30).

5. Conclusions and Recommendations

Conclusions

- 5.1 A Biodiversity Net Gain Assessment has been carried out for the proposed development of Adastra Park. An overall net gain of 193.41% in habitat units from the existing baseline has been calculated.
- 5.2 It should be noted that the BNG assessment does not capture other methods of ecological enhancement such as the inclusion of bat and bird boxes.

Recommendations

- 5.3 To achieve a biodiversity net gain on the site, the following recommendation are made:
 -  Creation of other neutral grassland offsite in moderate condition.
- 5.4 It is recommended that a Habitat Management and Monitoring Plan (HMMP) is produced for the site.

6. References

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Figures and Appendices

Appendix A

On Site Baseline & On Site Post Development Map



Legend



Site Boundary

BNG (Pre-Dev)

Baseline Areas



Modified Grassland (g4)

Figure 1: Onsite Baseline BNG Map V1

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Figure 2: Onsite Post Development BNG Map V1

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Appendix B

Off Site Baseline & Off Site Post Development Map



Legend



Site Boundary

BNG (Pre-Dev)

Baseline Areas



Modified Grassland (g4)

Figure 3: Offsite Post Development BNG Map V1

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Figure 4: Offsite Post Development BNG Map V1



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