

Biodiversity Net Gain Assessment

Land at Girders Bridge

Gay Street Lane

North Heath

Horsham

RH20 2HW

NGR: TQ 06909 21521



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Sylvatica Ecology Ltd

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<https://se-planning.com>

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It should be borne in mind that the behaviour of animals can be unpredictable and may not conform to standard patterns recorded in scientific literature. Therefore, this report cannot predict with absolute certainty that animal species will occur in apparently suitable locations or habitats, or that they will not occur in locations or habitats that appear unsuitable.

In order to minimise the likelihood of adverse effects on protected animal species over time, it is accepted good practice, in accordance with Natural England (NE) (formerly English Nature) guidance for ecological surveys to be repeated should works be deferred for over 12 - 18 months from the date of initial survey.

It is the duty of the landowner, developer and operations managers to act responsibly and to comply with current environmental legislation if protected species are suspected or found prior to, or during works.

The recommendations and information contained within this report are based on the information provided on the development works prior to the surveys being carried out. Should the development proposals change then the findings and recommendations contained within would potentially require revision.

The findings within this report do not constitute legal advice. Should this be required, then a suitably qualified professional practitioner should be contacted.

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1.0 INTRODUCTION

1.1 This document presents the small sites biodiversity net gain (BNG) assessment relating to land at Girders Bridge, Gay Street Lane, North Heath, Horsham, West Sussex, RH20 2HW, NGR: TQ 06909 21521. This assessment aims to quantify the predicted change in ecological value of the site following the proposed development works to be carried out at this location.

1.2 BNG became effective in January 2024 (April 2024 for smaller sites) following the Environmental Act 2021, which states that a target of 10% net gain in biodiversity should be achieved, with biodiversity value being maximised on site whenever possible.

1.3 Should any changes to the design of the development be made then the BNG score and metric would need to be updated in-line with any such changes. The measures would be carried forward for a period of 30 years after planning permission has been granted and also during the construction phase.

Previous Surveys

1.4 A site walkover to map the habitats was conducted in accordance with guidance on the UK Habitat Classification System (UKHab) and the Chartered Institute of Ecological and Environmental Management (CIEEM) (2017) Guidelines for Preliminary Ecological Appraisal, in accordance with BS42020:2013 Biodiversity.

1.5 A walkover was conducted by Sylvatica Ecology Ltd on the 7th March 2025.

Development Proposal

1.6 It is proposed that six pitched residential traveller sites are installed at this location. This will include associated access, parking, landscaping and hedgerow planting.

Site Description and Adjacent Habitat

1.7 Girder Bridge was situated within a rural location within West Sussex along Gay Street Lane off the A29. To the immediate south of the main area of land, was an already occupied section of land utilised as accommodation, storage and vehicle parking. There were other areas of private residential accommodation in the wider surroundings, with associated private gardens and mature deciduous trees present. The main land use within the surrounding landscape comprised of agricultural land, notably pasture. These fields were sectioned using barbed wire fencing and hedgerows which provided a degree of connectivity to the survey area. There were also mature deciduous trees present along the hedge lines within the surrounding area.

1.8 **Figure 1: Site Survey Location (Red Line Boundary)**



2.0 METHODOLOGY

Good Practice Principles

- 2.1 To calculate the ecological value of the pre and post development site, the Department for Environmental, Food & Rural Affairs (DEFRA) Small Sites Statutory Biodiversity Metric (4.0) was used, following best practice from DEFRA and Natural England. The completed statutory biodiversity metric is provided as a separate document and this report provides additional information on how the calculations have been undertaken.
- 2.2 Good practice guidance from the Chartered Institute for Ecology and Environmental Management (CIEEM) provides a framework that helps to improve the UK's biodiversity by contributing towards strategic principles to conserve and enhance nature while progressing with sustainable development. **Table 1** provides additional information on each of these principles and how the development has or can achieve these requirements.

2.3 **Table 1: Good Practice Principles and Discussion**

Good Practice Principle	Discussion
<i>1: Apply the Mitigation Hierarchy</i>	The habitats present within the works impact zone were modified grassland, ruderal, mixed scrub and bare ground.
<i>2: Avoid Losing Biodiversity that Cannot be Offset by Gains Elsewhere</i>	The woodland areas are considered as irreplaceable habitat, but measures to protect and maintain these areas have been incorporated into the design of the scheme.
<i>3: Be Inclusive and Equitable</i>	The project proposal will result on a habitat net gain of 10.84% with a hedgerow net gain of 26.26%.
<i>4: Address Risks</i>	The ecologists at Sylvatica Ecology have provided input to both protect and improve biodiversity. The statutory biodiversity metric also included inbuilt risk factors with contribute towards calculating overall biodiversity value.
<i>5: Make a Measurable Net Gain Contribution</i>	The overall design of the scheme will create an overall loss of biodiversity with a gain of hedgerow units.
<i>6: Achieve the Best Outcomes for Biodiversity</i>	The landscape design has incorporated habitat retention and planting of scrub and hedgerows.
<i>7: Be Additional</i>	The proposed plans are designed to avoid impacts where at all possible and to retain habitats. Additionally, mixed scrub and modified grassland will be both enhanced and installed.
<i>8: Create a Net Gain Legacy</i>	The planting of species rich hedgerow will add further enhancement to the site biodiversity value.
<i>9: Optimise Sustainability</i>	The installation of the hedgerow and mixed scrub will contribute to biodiversity improving over the 30-year management time frame.
<i>10: Be Transparent</i>	Advice on enhancing the ecological value of the site was provided within the preliminary ecological assessment.

Habitat Mapping, Condition Assessment and Baseline Calculation Methods

- 2.4 Habitat mapping was carried out QGIS V 3.22.14-Bailowieza for MasOS 14.1. Habitat areas were calculated using this QGIS software.
- 2.5 The tree helper within the statutory metric was used to determine the area of the trees based on their size at diameter at breast height (dbh). Trees smaller than 7.5cm dbh were not included in the calculations.
- 2.6 The site survey data used for the calculations was March 2025 as this appeared to be a good representation of the habitats present on site with an earlier date not required.

Successful Habitat Creation and Condition

- 2.7 The time that will elapse between site habitat clearance and habitat re-creation is, as yet, unknown. This time is recorded within the Statutory Biodiversity Metric as a temporal multiplier called 'delay in starting habitat', which is added to each post development habitat type, and increases 'time to target condition'. As a general pattern, the longer the time elapsed between habitat clearance and creation, the longer it takes to achieve the targeted habitat condition, which can lower the metric score.
- 2.8 Currently it is assumed that a 0-year delay has currently been used for each post-development habitat type. The target habitat conditions for the created habitats post development are normally given as moderate/ good.

Competencies

- 2.9 The survey work and reporting has been led by Richard Law BSc MRes CEnv MCIEEM FLS. Richard has been undertaking ecological survey work within the last 18 years on many different locations throughout the United Kingdom, for a variety of protected species, including bats (Class 2 2015-12576), reptiles, amphibians including great crested newt *Triturus cristatus* (Class 1 2016-20290) and terrestrial mammals including dormice *Muscardinus avellanarius* (Class 1 2015-13188) and birds including barn owl *Tyto alba* licence (CL29/00236).

3.0 RESULTS

3.1 This section presents the findings of the biodiversity net gain calculation, the units present onsite prior to development (baseline), the units present post development and the total biodiversity net gain change in units as a percentage calculation.

Baseline Conditions

3.2 **Table 2: Onsite Baseline Conditions**

Onsite Baseline	Habitat Units	4.62
	Hedgerow Units	2.36

3.3 The size and condition of habitats present onsite (within the development footprint) at the time of the survey gives a total of 4.62 habitat units and 2.36 hedgerow units.

3.4 There were two internationally statutory designated sites within the 5km search area and no national statutory designed sites within the 2.0km search radius. These were the Arun Valle SAC and Ramsar Site. Designated for the presence of wetland habitats, wintering birds and for the presence of ramshorn snail and the Mens SAC which was designated for Atlantic beech forests and for the presence of barbastelle *Barbastella barbastellus* bats.

3.5 There was not any officially designated priority habitat immediately adjacent to the site, but there was an area of deciduous woodland to the immediate northwest. There were other priority habitats within 500m of the site, which were wood pasture & parkland, ancient seminatural woodland, deciduous woodland and good quality semi-improved grassland.

Baseline Habitat Types Impacted by the Scheme and Condition Assessment

3.6 **Lowland Deciduous Woodland (W1F)** – Throughout the length of the survey area were areas of deciduous tree growth. The species within this habitat comprised mainly of pedunculate oak *Quercus robur* and ash *Fraxinus excelsior*. This habitat had a shrub layer of *elder Sambucus nigra*, *hawthorn Crataegus monogyna*, *hazel Corylus avellana* and *bramble Rubus fruticosus* agg.

3.7 Ground flora consisted of stands of false oat grass *Arrhenatherum elatius* and Yorkshire fog *Holcus lanatus* around the periphery of this habitat area. Otherwise, the ground flora was restricted by the density of the scrub layer, notably the bramble, with thin stands of ivy *Hedera helix* growing on some of the trees.

3.8 This habitat was assessed as being in a **Good** condition, achieving a score of 36 overall, but failing three criteria (C, I and M):

- **Criteria C** - *Rhododendron Rhododendron ponticum or cherry laurel Prunus laurocerasus not present, and other invasive species <10% cover.*
- **Criteria I** - *Recognisable woodland NVC plant community¹⁰ at ground layer present.*
- **Criteria M** - *Less than 1 hectare in total of nutrient enrichment across woodland area, and or less than 20% of woodland area has damaged ground¹⁴.*

3.9 **Modified Grassland** – This habitat had not been grazed or managed for at least an estimate of five years, and therefore had grown tussocky and thick in places. This habitat exhibited the characteristic of modified grassland, with very limited broad leaved plants observed. There was minimal bare ground or evidence of forb diversity, suggesting a low structural and botanical diversity. This condition is typical of grassland on moist, compacted, or nutrient enriched soils where a competitive dominant species has taken hold. The grassland species present were Perennial ryegrass *Lolium perenne*, cock's-foot *Dactylis glomerata*, false oatgrass *Arrhenatherum elatius*, red fescue *Festuca rubra*, common nettle *Urtica dioica*, creeping buttercup *Ranunculus repens*, dandelion *Taraxacum agg.*, ribwort plantain *Plantago lanceolata*, white dead-nettle *Lamium album*. Some of the wetter areas of this habitat had soft rush *Juncus effusus* present. Five 1m by 1m quadrats recorded an average of 4.3 species per m². This habitat was assessed to be in **Poor** condition, having failed criteria A:

- **Criteria A** - *The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type (and relative to suboptimal species which may be listed in the UKHab description). Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.*

3.10 **Mixed Scrub:** This habitat was beginning to encroach into the site, becoming dominant throughout. Species present were grey willow *Salix cinerea*, blackthorn and hawthorn along with species such as hogweed *Heracleum sphondylium*, ivy, and wood avens *Geum urbanum*. This habitat was assessed to be in **Moderate** condition, having failed two criteria (B and E)

- **Criteria B** - *Seedlings, saplings, young shrubs and mature (or ancient or veteran)³ shrubs are all present.*
- **Criteria E** - *There are clearings, glades or rides present within the scrub, providing sheltered*

- *edges.*

3.11 **Ruderal Habitat** - This habitat structure is common where management has been reduced or delayed, allowing for a build-up of litter and dominant species, which can suppress diversity if unmanaged. Scrub and ruderal species were present. These were bramble *Rubus fruticosus*, rosebay willow herb *Chamaenerion angustifolium*, nettle *Urtica dioica*, field bindweed *Convolvulus arvensis* and hogweed *Heracleum sphondylium*. This habitat was assessed to be in **Good** condition, having failed none of the criteria.

3.12 **Individual Trees** – There were a number of medium sized native trees present within the site. These were oak and ash trees. This habitat was assessed to be in **Good** condition, not having failed any of the qualifying criteria

3.13 **Bare Ground** – An access track from the road to the main site area comprised of a heavily eroded and muddy track. There was not any plant species that were present within this habitat area. This habitat was assessed to be in **Poor** condition, with all criteria failed – *No vegetation growth or ecological value.*

3.14 **Invasive Species**- There was a line of cotoneaster *Cotoneaster* sp. along the edge of the access track on the eastern edge. This was approximately 30m in length.

3.15 **Treeline** – this habitat was assessed as being in **Moderate** condition, having failed Criteria D:

- **Criteria D** - *There is an undisturbed naturally-vegetated strip of at least 6m on both sides to protect the line of trees from farming and other human activities (excluding grazing).*
- *Where veteran trees are present, root protection areas should follow standing advice2.*

Post Development Habitats

3.8 **Table 3: Post Development Habitats**

	Habitat Units	5.12
Onsite Post Intervention	Hedgerow Units	2.98

3.9 With the post development habitats created and the associated target conditions achieved, this gives a total 5.12 habitat units and 2.98 hedgerow units.

- 3.10 This will, in part, be achieved through the retention of parts of the scrub and modified grassland habitat. This habitat that is to be retained will be enhanced to obtain a 'good' condition through management prescriptions (which would be detailed within a Habitat Management and Monitoring Plan (HMMP)).
- 3.11 Retention of irreplaceable habitat will be prioritised through the installation of the development away from the deciduous woodland habitat and protection measures carried out during the development works. The medium sized tress will also be retained.
- 3.12 Habitat creation will focus on the replanting of mixed scrub, which will then be managed (detailed within any HMMP) to achieve a condition score of (good).
- 3.13 As an additional enhancement, species rich-native hedgerow planting will be carried out around the periphery of the static caravan plots.

4.0 LONG TERM MANAGEMENT

- 4.1 Hedgerow planting, scrub enhancement and habitat creation, woodland protection measures and management techniques to and any habitat measures will require a Habitat Management and Monitoring Plan (HMMP) to be drafted to ensure the long-term viability of these over the required 30-year time-period.

5.0 NET GAIN SUMMARY & CONCLUSIONS

- 5.1 The baseline habitats present on site provides 4.62 habitat units and 2.36 hedgerow unit. At the post development stage taking into account the retained and newly created habitat with target conditions achieved, it is anticipated that there will be 5.12 habitat units and 2.98 hedgerow units following implementation of the scheme. **Table 4** below is a summary of the change in habitat and hedgerow units present on site. Full headline results are also shown in **Appendix C**.

5.2 **Table 4: Total Net Unit Change and Percentage Change**

Total Net % Change	Habitat Units	0.50 (+10.84%)
	Hedgerow Units	+0.62 (+26.26%)

5.3 The post development habitat creation within the design of the scheme has resulted a net gain of +0.50 habitat units which give a biodiversity net gain of +10.84% and a gain of 0.62 hedgerow units, giving a net gain of +26.26% hedgerow units.

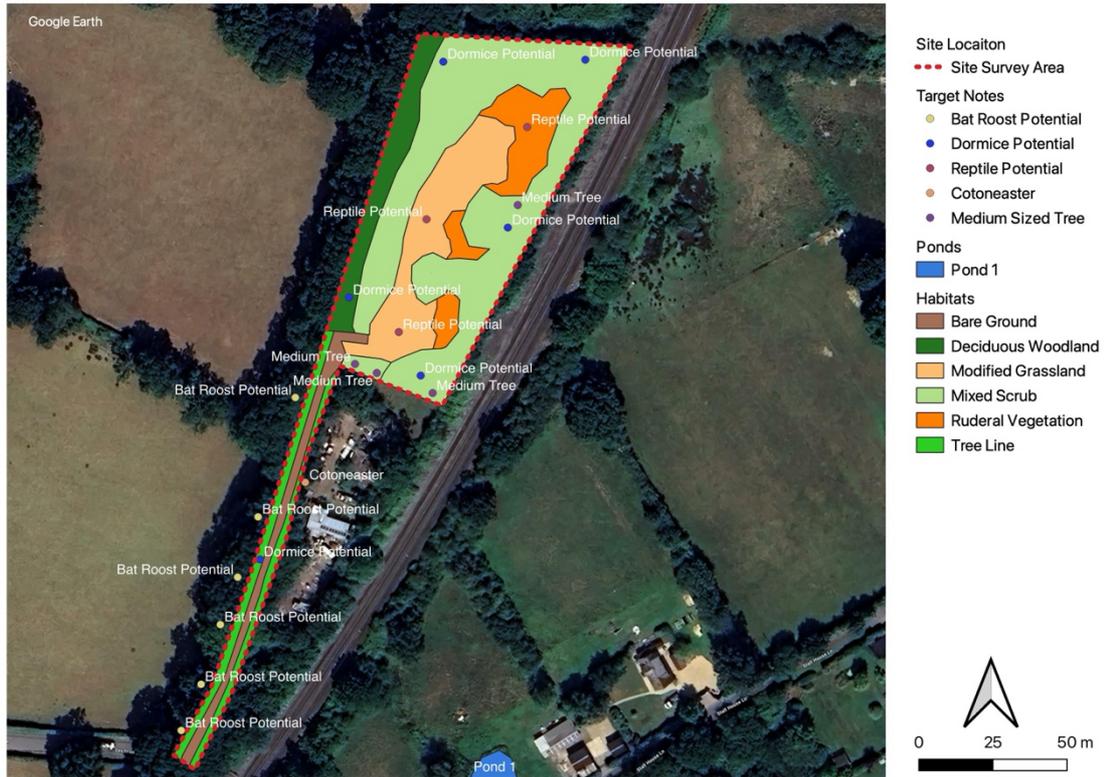
6.0 REFERENCES

CIEEM (2016) Biodiversity Net Gain – Good Practice Principles for Development

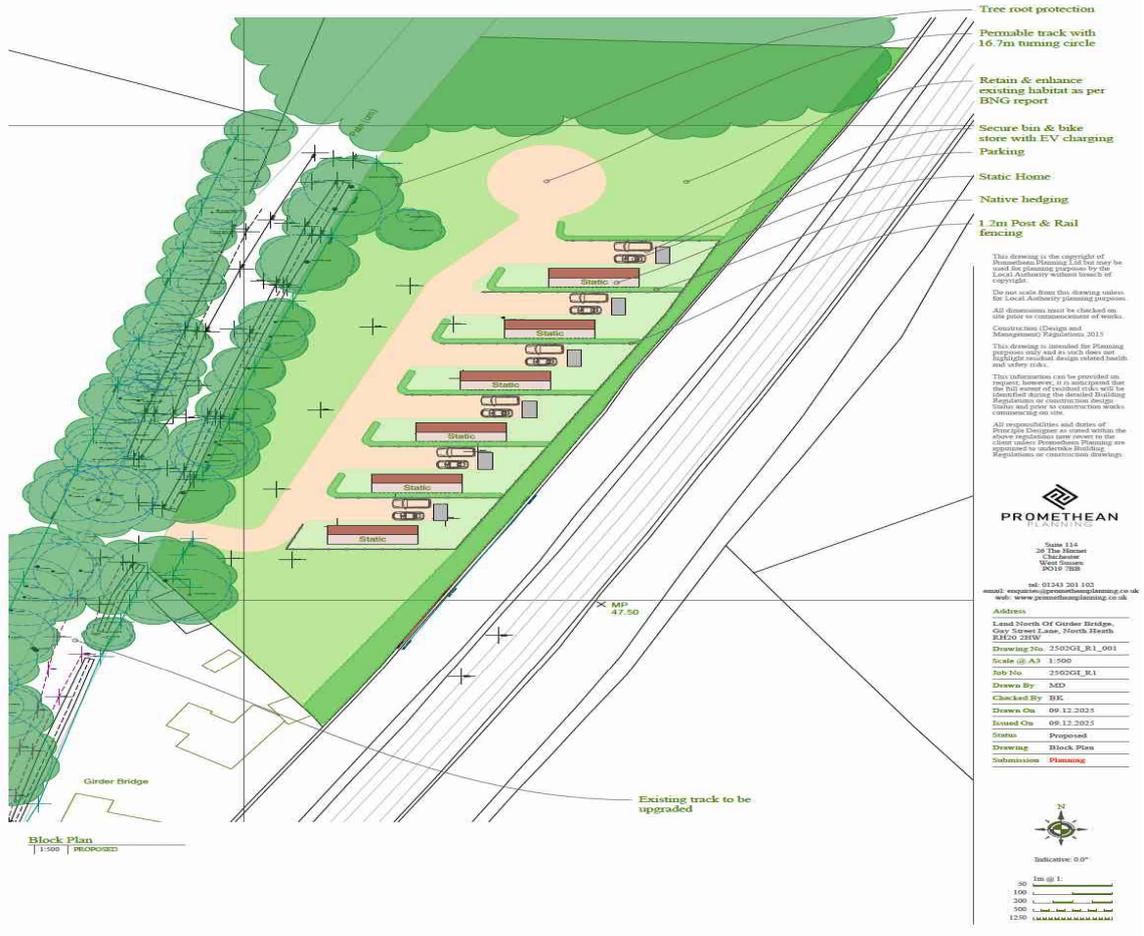
DEFRA (2023) Statutory Biodiversity Metric Draft User Guide

Natural England (2023) The Statutory Biodiversity Metric and Small Sites Metric – QGIS Template and QGIS Import Tool User

APPENDIX A: BASELINE HABITATS



APPENDIX B: HABITATS POST DEVELOPMENT



APPENDIX C: HEADLINE RESULTS OF NET GAIN ASSESSMENT

Girders Bridge					
Headline Results					
Scroll down for final results					
On-site baseline		Area habitat units	4.62		
		Hedgerow units	2.36		
		Watercourse units	0.00		
On-site post-intervention (Including habitat retention, creation & enhancement)		Area habitat units	5.12		
		Hedgerow units	2.98		
		Watercourse units	0.00		
On-site net change (units & percentage)		Area habitat units	0.50	10.84%	
		Hedgerow units	0.62	26.26%	
		Watercourse units	0.00	0.00%	
Off-site baseline		Area habitat units	0.00		
		Hedgerow units	0.00		
		Watercourse units	0.00		
Off-site post-intervention (Including habitat retention, creation & enhancement)		Area habitat units	0.00		
		Hedgerow units	0.00		
		Watercourse units	0.00		
Off-site net change (units & percentage)		Area habitat units	0.00	0.00%	
		Hedgerow units	0.00	0.00%	
		Watercourse units	0.00	0.00%	
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)		Area habitat units	0.50		
		Hedgerow units	0.62		
		Watercourse units	0.00		
Spatial risk multiplier (SRM) deductions		Area habitat units	0.00		
		Hedgerow units	0.00		
		Watercourse units	0.00		
FINAL RESULTS					
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)		Area habitat units	0.50		
		Hedgerow units	0.62		
		Watercourse units	0.00		
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)		Area habitat units	10.84%		
		Hedgerow units	26.26%		
		Watercourse units	0.00%		
Trading rules satisfied?		Yes ✓			
Unit Type	Target	Baseline Units	Units Required	Unit Deficit	
Area habitat units	10.00%	4.62	5.08	0.00	No additional area habitat units required to meet target ✓
Hedgerow units	10.00%	2.36	2.60	0.00	No additional hedgerow units required to meet target ✓
Watercourse units	10.00%	0.00	0.00	0.00	No additional watercourse units required to meet target ✓