

Biodiversity Net Gain Assessment

Document reference	AR179- GreenManPub.BNG
Site	Green Man Pub, Joelsfield Road, Partridge Green
Client	Mr N. Illes
Author	Alex Rosenfeld Ecologist (QCIEEM)
Revision Number	1
Report issue date	28.01.25

The assessment and appraisal are considered relevant for a maximum of 18 months due to the possibility of changes in the habitats on-site and scope of proposals. Should alterations to the proposals or site occur, the ecologist should be consulted to confirm that the appraisal is still valid.

Contents

SUMMARY.....	3
1.0 INTRODUCTION.....	4
2.0 METHODOLOGY	4
3.0 RESULTS	5
4.0 CONCLUSIONS.....	8
5.0 REFERENCES.....	9

SUMMARY

Mr N. Illes has commissioned a Biodiversity Net Gain (BNG) assessment for the proposed development at the Green Man Pub, Joelsfield Road, Partridge Green (located around central grid reference: TQ09611419– hereafter referred to as ‘the site’).

The following Biodiversity Net Gain Assessment has been undertaken using the Statutory Biodiversity Net Gain Metric Calculation Tool to assess whether the proposals accord with the Environment Act (2021) and local planning policy.

The baseline assessment was undertaken on 21st January 2025 and identified the following habitats:

- 0.024 hectares (ha) of Buildings
- 0.074 ha of Developed Land; Sealed Surface
- 0.057 ha of Vegetated Garden
- 0.0083 ha of Introduced Shrubs
- 0.28 ha of Scattered Trees

The Biodiversity Statutory Metric - Technical Supplement (Panks et al, 2024) was used to assess the habitat types and conditions and inputted into the current Statutory Biodiversity Net Gain Metric (Natural England, 2024).

The existing Habitat Units onsite equalled 3.53 which comprised of:

- 0.00 Habitat units of Developed Land; Sealed Surface (including buildings).
- 0.13 Habitat Units of Vegetated Garden.
- 0.02 Habitat Units of Introduced Shrubs.
- 3.39 Habitat Units of Scattered Trees (inputted to metric as Urban Trees).

The proposed site plan shall result in the following Habitat Units being provisioned:

- 0.08 Habitat Units of Vegetated Garden.
- 0.00 Habitat Units of Developed Land Sealed Surface (including buildings, parking and bin stores).
- 0.02 Modified Grassland.
- 0.02 Habitat Units of Mixed Scrub.
- 3.39 Habitat Units of Urban Trees (retained).

The delivery of the proposed habitats shall be achieved with the aid of a Landscape Ecological Management Plan.

1.0 INTRODUCTION

- 1.1 Mr N. Illes has commissioned a Biodiversity Net Gain Assessment for the development proposed at the Green Man Pub, Joelsfield Road, Partridge Green. (located around central grid reference: TQ 18759 19794– hereafter referred to as ‘the site’).
- 1.2 A baseline assessment was undertaken in accordance with the UK Habitat Classification Manual (*Butcher et al., 2023*) on 21st January 2025 by Alex Rosenfeld which identified the following habitats onsite:
- 1.3 The habitat types and conditions were assessed in accordance with the Biodiversity Statutory Metric - Technical Supplement (Panks et al, 2024) and inputted into the current Biodiversity Net Gain Statutory Metric (Natural England, 2024). Proposals are for the retention of the Urban Trees across the site.

Site Information

- 1.4 The survey area measures 0.16 hectares (ha). The northern half of the site consists of a carpark. The western section consists of a poorly vegetated grassy area. A more densely vegetated grassy area is in the southeastern corner. In the centre of the site lies a building surrounded by patio and brick paths. Introduced shrubs line the boundaries to an extent. Scattered trees were noted across the site.

Development Proposals

- 1.5 The development proposals involve converting the existing pub into housing with private gardens and parking areas.

2.0 METHODOLOGY

- 2.1 A baseline habitat appraisal survey was undertaken at the site to assess the extent, distribution, distinctiveness and condition of the habitats present. This survey was conducted in line with the UK Habitat Classification system (UKHab) (Butcher et al, 2020) and gathered condition assessment criteria in line with the Biodiversity Statutory Metric - Technical Supplement (Panks et al, 2024).
- 2.2 The field survey was undertaken on 21st January 2025 by Suitably Qualified Ecologist (Alex Rosenfeld, 6 years professional experience). Weather conditions were overcast and cold (c.3 °C) with no rain.
- 2.3 A BNG assessment was undertaken to establish the existing Habitat Unit Score of the onsite habitats which will help identify how a biodiversity net gain can be achieved.
- 2.4 The calculations considered the extent, condition and distinctiveness of the onsite habitats compared to those proposed. The calculations and field assessments were undertaken using the Statutory Biodiversity Metric, following the current guidance methodology (The Statutory Metric User Guide – Panks et al 2024).
- 2.5 The proposed landscapes were assessed using plans provided by the client.

Constraints

- 2.6 Mapping is only accurate to 0.001ha (10m²). A greater level of detail is not considered necessary for this development and would not change the outcome of the assessment.
- 2.7 The calculations do not include provision of enhancements such as wildlife boxes or log piles.

3.0 RESULTS

Strategic Significance

- 3.1 The site lies within an area identified in the Horsham District Nature Recovery Network as being of 'very high habitat potential'.

Existing Habitat Assessment

Site Habitat Baseline

- 3.2 The Biodiversity Net Gain (BNG) calculations showed that the baseline site consists of the following habitats:
- 0.024 ha of Buildings - *U1b5*. Condition assessment is not applicable.
 - 0.074 ha of Developed Land; Sealed Surface – *u1b*. Condition assessment is not applicable.
 - 0.057 ha of Vegetated Garden – *510*. Condition assessment is not applicable.
 - 0.0083 ha of Introduced Shrubs – *847*. Condition assessment is not applicable.
 - 0.21 ha of Urban Trees. Assessed as in 'good' condition. These trees meet criteria A, B, C, D and E but fail criteria F.
 - 0.07 ha of Urban Trees. Assessed as in 'moderate' condition. These trees meet criteria A, B, D and E but fail criteria C and F.
- 3.3 Appendix A contains the Assessment Criteria for each habitat.

Proposed Habitat Assessment

Habitat Retention

- 3.4 The existing building and some of the existing parking areas shall be retained. The Urban Trees and Vegetated Garden shall also be retained within the proposal.
- 3.5 This area shall equal:
- 0.06 ha of Developed Land; Sealed Surface (parking areas and building)
 - 0.057 ha of Vegetated Garden.
 - 0.28 ha of Urban Trees.

Proposed Habitat Creation

3.6 The proposed habitats shall cover the following areas:

- 0.039 ha of Vegetated Garden.
- 0.02 ha of Developed Land; Sealed Surface.
- 0.006 ha of Modified grassland.
- 0.048 ha of Mixed scrub.

3.7 Vegetated Garden shall be of low species diversity and be created in the northwestern area of the site. This habitat's condition will be 'N/A'.

3.8 A small area of hardstanding is to be provisioned for parking spaces.

3.9 Modified Grassland is to be laid along the northern boundary surrounding the parking areas for units 1 and 3 and is expected to achieve 'moderate' condition. This can be achieved by appropriate preparation of the area with harrowing, scarification and sowing of at least 8 forbes species within a grass mixture. The areas shall be subject to an appropriate management regime, to achieve 4 of the 6 criteria outlined in *Appendix A – Habitat Condition Assessment Criteria* for medium distinctive grassland habitat.

3.10 Mixed Native Scrub expected to achieve 'poor' condition is to be planted along the frontage and in the space between the building and the northern parking area. Native shrub species such as hawthorn and field maple will be planted to support wildlife. Implementation shall be achieved through an appropriate planting schedule and habitat creation and management plan, which ensures that the scrub meets at least 3 of the criteria outlined for scrub habitats in *Appendix A – Habitat Condition Assessment Criteria* to achieve moderate condition.

Biodiversity Net Gain Metric Results

3.11 The site visit and metric calculations have identified the current Habitat Units of the site to be 3.53. This consists of the following:

- 0.00 Habitat Units of Developed Land; Sealed Surface.
- 0.13 Habitat Units of Vegetated Garden.
- 0.02 Habitat Units of Introduced Shrub.
- 2.77 Habitat Units of large sized Urban Trees in 'good' condition.
- 0.53 Habitat Units of medium sized Urban Trees in 'moderate' condition.
- 0.09 Habitat Units of small sized Urban Trees in 'moderate' condition.

3.12 In addition to the proposed habitats below, 3.39 Habitat Units of Urban Trees and 0.013 Habitat Units of Vegetated Garden are to be retained.

3.13 The proposed site provisions 3.64 Habitat Units consisting of:

- 0.08 of Habitat Units Vegetated Garden.
- 0.00 of Habitat Units Developed Land, Sealed Surface.
- 0.02 of Habitat Units Modified Grassland.
- 0.02 of Habitat Units Mixed Scrub.

3.14 The results of the BNG calculations show that the proposal shall result in a Biodiversity Net Gain of +3.05%. Proposals will result in a net gain of +0.11 Habitat Units resulting in a total of 3.64 Habitat Units.

3.15 In addition to the metric calculation gains, ecological enhancements not measured within the metric will be included in the design. These include incorporation of bird boxes, bat boxes, log piles and fence holes to allow hedgehog movement across the site into the scheme. This shall aim to increase the roosting, foraging and nesting potential for a range of species.

3.16 The proposed habitats must be retained and maintained at the proposed conditions for at least 30 years to satisfy the BNG rules and guidelines.

3.17 A site assessment shall be undertaken every year from years 1-3 post development and then once every 5 years from then on to ensure the habitats are still meeting the criteria for the proposed condition of each habitat.

4.0 CONCLUSIONS

4.1 The development proposals involve converting the existing pub into housing with private gardens and parking areas.

4.2 As part of the proposals, the existing trees must be retained to ensure the results stated in this report are accurate.

4.3 The existing site consists of:

- 0.024 ha of Buildings - U1b5. Condition assessment is not applicable.
- 0.074 ha of Developed Land; Sealed Surface – u1b. Condition assessment is not applicable.
- 0.057 ha of Vegetated Garden – 510. Condition assessment is not applicable.
- 0.0083 ha of Introduced Shrubs – 847. Condition assessment is not applicable.
- 0.21 ha of Urban Trees. Assessed as in ‘good’ condition.
- 0.07 ha of Urban Trees. Assessed as in ‘moderate’ condition.

4.4 The proposals involve the provision of:

- 0.039 ha of Vegetated Garden
- 0.002 ha of Developed Land; Sealed Surface
- 0.006 ha of Modified Grassland
- 0.048 ha of Mixed Scrub

4.5 The proposals also involve the retention of:

- 0.28 ha of Urban Trees
- 0.057 ha of Vegetated Garden
- 0.06 ha of Developed Land; Sealed Surface

4.6 As the proposals do not reach the 10% net gain, the remaining 0.35 Habitat Units required to achieve 10% Biodiversity Net Gain shall be achieved by acquiring Biodiversity Credits from a local habitat bank such as the Iford Estate or Statutory Credits.

5.0 REFERENCES

Butcher. B., Carey. P., Edmonds. R., Norton. L. & Treweek., J. (2023) *UK Habitat Classification – Habitat Definitions V2.0* at <http://ukhab.org> [last accessed 20/01/2025]

CIEEM. (2017). *Guidelines on Ecological Report Writing*. Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM. (2019). *Biodiversity Net Gain: Good Practice Principles for Development*. Winchester

Panks, S., White. N., Newsome. A., Potter. J., Heydon. M., Mayhew. E., Alvarez. M., Russell. T., Scott. J. S., Heaver. M., Scott. H. S., Treweek. J., Butcher. B. and Stone. D. (2022). *Biodiversity metric 3.1: Auditing and accounting for biodiversity – Technical Supplement*. Natural England. ISBN 978-1-78354-779-1

Ministry of Housing, Communities & Local Government. (2021). *National Planning Policy Framework*. Fry Building, 2 Marsham Street, London. This publication is available [online] at www.gov.uk/government/publications

Natural England. (2023). *The Statutory Biodiversity Metric*. Published by Natural England on 15th December 2023. *The Statutory Biodiversity metric – Calculation Tool Available online:* <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides> [Last Accessed 20/01/2025]

APPENDIX A – HABITAT CONDITION ASSESSMENT CRITERIA

APPENDIX B – HEADLINE STATUTORY BIODIVERSITY NET GAIN METRIC RESULTS

Condition Sheet: GRASSLAND Habitat Type (low distinctiveness)											
UK Habitat Classification (UKHab) Habitat Type											
Grassland - Modified grassland											
Habitat Description											
ukhab – UK Habitat Classification											
On-site or off-site, site name and location	Survey date and Surveyor name			Survey reference (if relating to a wider survey)							
Limitations (if applicable)	Habitat parcel reference								Notes (such as justification)		
	Grid reference										
Condition Assessment Criteria			Criterion passed (Yes or No)								Notes (such as justification)
A			There are 6-8 vascular plant species per m ² present, including at least 2 forbs (these may include those listed in Footnote 1). Note - this criterion is essential for achieving Moderate or Good condition. Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m ² (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.								
B			Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.								
C			Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.								
D			Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.								
E			Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) ² .								
F			Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.								
G			There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴).								
Essential criterion achieved (Yes or No)											
Number of criteria passed											
Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved x/√									
Passes 6 or 7 criteria including passing essential criterion A	Good (3)										
Passes 4 or 5 criteria including passing essential criterion A	Moderate (2)										
Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A)	Poor (1)										
Suggested enhancement interventions to improve condition score											

Condition Sheet: SCRUB Habitat Type			
Habitat Types			
Heathland and shrub - Blackthorn scrub Heathland and shrub - Gorse scrub Heathland and shrub - Hawthorn scrub Heathland and shrub - Hazel scrub Heathland and shrub - Mixed scrub Heathland and shrub - Dunes with sea buckthorn (H2160) Heathland and shrub - Willow scrub			
Habitat Description			
For Dunes with sea buckthorn see:	Dunes with sea-buckthorn (Dunes with Hippophae rhamnoides) - Special Areas of Conservation (jncc.gov.uk)		
For other scrub types see:	ukhab – UK Habitat Classification		
On-site or off-site, site name and location		Survey date and Surveyor name	
Limitations (if applicable)		Survey reference (if relating to a wider survey)	
Grid reference		Habitat parcel reference	
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	The parcel represents a good example of its habitat type - the appearance and composition of the vegetation closely matches its UKHab description (where in its natural range). ¹ - At least 80% of scrub is native, - There are at least three native woody species ² , - No single species comprises more than 75% of the cover (except hazel <i>Corylus avellana</i> , common juniper <i>Juniperus communis</i> , sea buckthorn <i>Hippophae rhamnoides</i> (only in its restricted native range), or box <i>Buxus sempervirens</i> , which can be up to 100% cover).		
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran ³) shrubs are all present.		
C	There is an absence of invasive non-native plant species ⁴ (as listed on Schedule 9 of WCA ⁵) and species indicative of suboptimal condition ⁶ make up less than 5% of ground cover.		
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.		
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.		
		Number of criteria passed	
Condition Assessment Result (out of 5 criteria)	Condition Assessment Score	Score Achieved x/√	
Passes 5 criteria	Good (3)		
Passes 3 or 4 criteria	Moderate (2)		
Passes 2 or fewer criteria	Poor (1)		
Suggested enhancement interventions to improve condition score			

Condition Sheet: INDIVIDUAL TREES Habitat Type														
Habitat Types														
Individual trees – Urban trees Individual trees – Rural trees Complete a condition sheet for each tree or block of trees. <i>Please see the separate Line of trees condition sheet for a line of <u>rural</u> trees. You should only use the Line of trees condition assessment and record that habitat type in <u>rural</u> locations.</i>														
Habitat Description														
Individual trees (description applied to the urban or rural environment): Young trees over 7.5 cm in diameter at breast height whose canopies are not touching. Urban Perimeter / Linear Blocks and Groups (description applied to the urban environment only): Groups or stands of trees (size requirement as defined above) within and around the perimeter of urban land. This includes those along urban streets, highways, railways and canals, and also former field boundary trees incorporated into developments. Canopies should predominantly overlap continuously. Groups of urban trees that don't match the descriptions for woodland may be assessed within this category.														
On-site or off-site, site name and location					Survey date and Surveyor name									
					Survey reference (if relating to a wider survey)									
Limitations (if applicable)					Habitat parcel reference									
				Grid reference										
Condition Assessment Criteria					Criterion passed (Yes or No)								Notes (such as justification)	
A	The tree is a native species (or at least 70% within the block are native species).													
B	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).													
C	The tree is mature (or more than 50% within the block are mature) ¹ .													
D	There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.													
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.													
F	More than 20% of the tree canopy area is oversailing vegetation beneath.													
Number of criteria passed														
Condition Assessment Result (out of 6 criteria)	Condition Assessment Score	Score Achieved x/√												
Passes 5 or 6 criteria	Good (3)													
Passes 3 or 4 criteria	Moderate (2)													
Passes 2 or fewer criteria	Poor (1)													
Note that 'Fairly Good and Fairly Poor' condition categories are not available for this broad habitat type.														
Suggested enhancement interventions to improve condition score ²														

APPENDIX B

Green Man Pub				Return to results menu
Headline Results				
Scroll down for final results				
On-site baseline	Habitat units	3.53		
	Hedgerow units	0.00		
	Watercourse units	0.00		
On-site post-intervention <small>(Including habitat retention, creation & enhancement)</small>	Habitat units	3.64		
	Hedgerow units	0.00		
	Watercourse units	0.00		
On-site net change <small>(units & percentage)</small>	Habitat units	0.11	3.05%	On-site net gain is less than target set A
	Hedgerow units	0.00	0.00%	
	Watercourse units	0.00	0.00%	
Off-site baseline	Habitat units	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Off-site post-intervention <small>(Including habitat retention, creation & enhancement)</small>	Habitat units	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Off-site net change <small>(units & percentage)</small>	Habitat units	0.00	0.00%	
	Hedgerow units	0.00	0.00%	
	Watercourse units	0.00	0.00%	
Combined net unit change <small>(Including all on-site & off-site habitat retention, creation & enhancement)</small>	Habitat units	0.11		
	Hedgerow units	0.00		
	Watercourse units	0.00		