

FELBRIDGE

Biodiversity Net Gain Assessment



ECO20285
C
January 2024

REPORT

Document status

Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
A	Draft	Samuel Merriman-Johnson	Laura Taylor	Nick Betson	17/11/2023
B	Draft	Samuel Merriman-Johnson	Laura Taylor	Nick Betson	05/12/2023
C	Final	Samuel Merriman-Johnson	Hannah Knight	Hannah Knight	12/01/2024

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1 INTRODUCTION

1.1 Purpose and Scope of this Report

- 1.1.1 RPS were commissioned by Barratt David Wilson Homes, Southern Counties to undertake a Biodiversity Net Gain (BNG) assessment of the land off Crawley Down Road, Felbridge, East Grinstead RH19 2PS (henceforth referred to as The Site).
- 1.1.2 The Site is the subject of a full planning application, for the proposed development of 200 residential units, along with associated hard and soft landscaping.
- 1.1.3 In order to determine the habitats present on The Site, a Phase 1 Habitat Survey was undertaken on the 13th October 2023. This followed standard best-practice guidelines (JNCC 2010).
- 1.1.4 This BNG assessment report aims to:
- calculate and assess the baseline ecological status and condition of current habitats identified onsite;
 - calculate the biodiversity value of the Site post-development; and
 - provide a summary of the habitat enhancements and creation proposals designed to ensure net gain is achieved.
- 1.1.5 The recommendations included within this report are the professional opinion of an experienced ecologist and therefore the view of RPS.

1.2 Biodiversity Net Gain and Methods

- 1.2.1 Biodiversity Net Gain is defined in Baker *et al* (2019) as:
- "Development that leaves biodiversity in a better state than before"*
- 1.2.2 The requirement for developments to seek to achieve BNG arises from the National Planning Policy Framework (NPPF, 2023), which states in Para. 174 that:
- "Planning policies and decisions should contribute to and enhance the natural and local environment by ... minimising impacts on and providing net gains for biodiversity."*
- 1.2.3 As outlined in the Mid Sussex District Council Site Allocations Development Plan Document (MSDC 2022) it is required that developments:
- "Conserve and enhance areas of wildlife value and ensure there is a net gain to biodiversity overall... Avoid any loss of biodiversity through ecological protection and enhancement, and good design. Where this is not possible, mitigate and as a last resort, compensate for any loss."*
- 1.2.4 There is no single set method for quantifying the assessment of BNG, but one method is the use of biodiversity calculators to assess the biodiversity value of habitats pre- and post-development based on habitat type, distinctiveness and condition.
- 1.2.5 A biodiversity index is derived for the baseline and for the proposed development, and BNG is considered to be achieved where an increase in value is delivered (onsite or offsite), and where habitats of a higher value are not replaced exclusively with habitats of a lower value.
- 1.2.6 Defra made available its beta test update of its BNG assessment tool in April 2023 (to Version 4.0). This tool has been used for the assessment in this report. The tool and associated documents were downloaded from:

<http://publications.naturalengland.org.uk/publication/5850908674228224>.

Condition Assessment

- 1.2.7 Using the data collected from the Phase 1 Habitat Survey, a habitat condition assessment was undertaken for the habitats present within the project boundary. The appropriate 'condition sheet' was first selected via the Table TS1-1a in the technical supplement provided in the Biodiversity Metric 4.0 -Technical Annex 1: Condition Assessment Sheets and Methodology (Panks, *et al.*, 2023).
- 1.2.8 The condition sheet was then used to assess the individual habitats by comparing how they scored against pre-set condition assessment criteria. The criteria describe what components are needed for the habitat to be of good, moderate or poor value.
- 1.2.9 Each habitat was scored the following:
- 1 – Poor;
 - 2 – Moderate; and
 - 3 – Good.
- 1.2.10 The calculator allows these to be further divided and provides categories for fairly good and fairly poor. The ecologist undertaking the assessment used their professional judgement, considering the habitat condition assessment criteria, to decide when it was suitable to use these categories.
- 1.2.11 It should be noted that some habitats are given a fixed score and do not need assessing.

2 BASELINE DESCRIPTION

2.1.1 The baseline description is taken from the habitat assessment conducted during the Phase 1 Habitat Survey. Botanical assessment was carried out according to the DAFOR botanical scale. Only habitats that were deemed to have an ecological value are discussed further.

2.2 Phase 1 Habitat Survey – Overview

2.2.1 The Phase 1 Habitat Survey identified that the Site predominantly comprised two central fields of neutral grassland bisected by a public footpath running north-south between the two with surrounding hedgerows and lines of trees. The Site included a stream, Felbridge Water, which ran eastward along the entire southern boundary of the Site.

2.2.2 A full list of the onsite habitats identified in the Phase 1 Habitat Survey on the Site is provided below, with the associated habitat represented in the BNG assessment:

- A3.3 Mixed Parkland / Scattered trees;
- B2.2 Other neutral grassland (Semi-improved neutral grassland);
- B4 Improved grassland (Modified grassland);
- G2 Running water (Rivers and streams);
- J2.1.2 Intact species poor hedgerow;
- J2.2.2 Defunct species poor hedgerow;
- J2.3.1 Native species rich hedgerow with trees; and
- *J3.6 Buildings and J5 hardstanding / developed land; sealed surface.*

2.2.3 The habitats in italics were to be impacted by the development and so are included in BNG calculations within the metric, however, they were considered to be of no ecological value and therefore are not discussed further in this report.

2.2.4 The Phase 1 Habitat Plan is shown on Figure 2.1.

2.3 Habitat Condition Assessment

- 2.3.1 The assessments below relate to the condition of the habitats present onsite at the time of the Phase 1 Habitat Survey undertaken in October 2023 (as shown on Figure 2.1). The extent, distinctiveness and condition of the baseline habitats onsite are summarised respectively in Table 2.1 and Table 2.2 overleaf.
- 2.3.2 Numbers in the tables in this section are copied from those generated by the Defra 4.0 metric. Note that the spreadsheet rounds the figures of credits to two decimal places which occasionally generates apparent minor discrepancies due to rounding errors when numbers are placed into tables.
- 2.3.3 The full results of the condition assessments and subsequent achieved, and not achieved, criteria per assessed habitat can be found in Appendix A.

Other Neutral Grassland (Semi-Improved Neutral Grassland)

- 2.3.4 The Site was dominated by two large grasslands separated into eastern (G1) and western (G2) parcels by a public footpath which ran north-south that appeared to be under a regular management regime and had been recently mown when surveys were conducted. Numerous molehills were noted within G2 as well as several macro fungi species including panther cap *Amanita 4antherine*, ink stain bolete *Cyanoboletus pulverulentus*, ruby bolete *Hortiboletus rubellus* and evidence of browsing by deer was noted in G1 grassland.
- 2.3.5 The graminoid species recorded in the grasslands included false oat *Arrhenatherum elatius* as dominant and abundant perennial rye grass *Lolium perenne*. Herb species present included creeping buttercup *Ranunculus repens* and red clover *Trifolium pratense* occurring frequently, , dandelion *Taraxacum sp.*, broadleaved plantain *Plantago major* and green alkanet *Pentaglottis sempervirens* occasional, and greater birdsfoot trefoil *Lotus pedunculatus*, nettle *Urtica dioica*, and common vetch *Vicia sativa* occurring rarely.
- 2.3.6 Given that the grasslands satisfied five criteria but failed the essential criteria, following the Natural England condition assessment, they would be categorised as 'poor' condition.

Modified Grassland (Improved Grassland)

- 2.3.7 Areas of modified grassland G3 and G4 were present within residential vegetated gardens to the north of G1 and G2 respectively, extending northwards to roadside verges adjacent to Crawley Down Road.
- 2.3.8 There was no public access to the garden spaces, limiting the extent of condition assessment, however, some larger ornamental species such as red hot poker *Knifophia uvaria* were visible in and around G3, north of G1.
- 2.3.9 Graminoid species present in the roadside verge G3 included perennial rye grass occurring dominantly and false oat grass occurring frequently. Dominant herb species included broadleaved plantain and dandelion, with cleavers *Galium aparine*, hogweed *Heraclium spondylium*, and bramble occurring occasionally.
- 2.3.10 Graminoid and herb species present in G4, directly north of G2, appeared continuous with this grassland. Graminoid species present in the G4 roadside verges included perennial rye grass and false oat grass. Dominant herb species included broadleaved plantain, dandelion, and occasional hogweed and daisy *Bellis perennis*.
- 2.3.11 Given that G3 and G4 satisfied the same five criteria but failed the essential criteria, following the Natural England condition assessment they would be categorised as 'poor' condition.

Defunct Species Poor Hedgerow

- 2.3.12 Two species-poor hedgerows were present within the Site.
- 2.3.13 A defunct hedgerow (H1.1) delineated the northern boundary of G1. It was maintained as an approximately 1.5m tall box hedge for the majority of its length, containing three mature trees. This hedgerow did not meet the definition of a hedgerow with trees as there was an absence of tall trees for the majority of its length.
- 2.3.14 Species present within the hedge included holly *Ilex aquifolium*, hazel *Corylus avellana*, ash blackthorn *Prunus spinosa* and hawthorn *Crataegus monogyna* as well as occasional presence of bramble. The mature tree species included oak *Quercus robur* and cherry *Prunus sp.*
- 2.3.15 Given that H1 satisfied only three criteria and failed more than five criteria, following the Natural England condition assessment this would be categorised as 'poor' condition.

Intact Species Poor Hedgerow

- 2.3.16 An, intact species poor hedgerow (H2.1) delineated the western boundary of G2 and the footpath running through the centre of the Site. This hedgerow was maintained as an approximately 1.5m high box hedge, and also contained mature trees, comprising two oak, located towards its centre. This hedgerow was oversailed by the hedgerow with trees on the opposite side of the footpath.
- 2.3.17 Species present within the hedgerow included hawthorn, holly, hazel and oak.
- 2.3.18 Given that H2.1 satisfied five criteria and failed more than one criterion in the same functional group, following the Natural England condition assessment this would be categorised as 'moderate' condition.

Native Species Rich Hedgerow with Trees

- 2.3.19 A hedgerow with trees Ht1.2 demarcated the east aspect of G1 and the footpath running through the centre of the Site. The hedgerow storey was approximately 2.5m high. The tree canopy over sailed the intact, species-poor, hedge on the opposite side of the footpath in G2. Several mature trees were noted as having veteran features by the surveyor, including cover of ivy *Hedera helix* and attached deadwood.
- 2.3.20 Species present within the hedge included holly, hazel, oak, ash, hawthorn, and occasional incursions of bramble. The mature trees comprised oak and hawthorn.
- 2.3.21 Given that Ht2.1 satisfied all criteria, following the Natural England condition assessment this would be categorised as 'good' condition.
- 2.3.22 A second, adjacent, hedgerow with trees Ht1.1 ran east-west along the south aspect of G1. The hedgerow storey was approximately 2.5 high.
- 2.3.23 Species present within the hedgerow included holly, oak, hazel, hawthorn and ash. The mature trees comprised oak, holly and hawthorn.
- 2.3.24 Given that Ht1.1 satisfied eight criteria but failed more than one criterion in the same functional group, following the Natural England condition assessment this would be categorised as 'moderate' condition.
- 2.3.25 The full results of the condition assessment and subsequent achieved and not achieved criteria per hedgerow have been provided in Appendix A.

Mixed Parkland / Scattered Trees

- 2.3.26 Several lines of trees occurred around the north-east, south and west perimeters of the Site.

- 2.3.27 A treeline TL1.1 demarcated the western edge of G1. The majority of trees' canopies in the northern end of the treeline fell outside of the Site boundary. Towards the middle of the treeline, several semi-mature clusters of hawthorn were within the Site boundary. The density of plant cover within the Site boundary was greater towards the southern end of the tree line until the canopy merged with Ht1.1 which ran east-west along the southern border of G1.
- 2.3.28 The treeline comprised hawthorn, holly, mature oak and hazel.
- 2.3.29 A treeline (TL2.1) ran along the northern perimeter, and southward within the centre of G2, comprising mature oak *Quercus robur*, and young hawthorn, holly and hazel. The section of treeline within the centre of G2 included a short, approximately 10m section of degraded hedge planting between a gap in the canopy of two mature oaks in the centre of the treeline.
- 2.3.30 The mature tree species comprised oak and ash. The understory plantings and section of degraded hedge comprised hazel, hawthorn and holly.
- 2.3.31 The treelines T1.1, 2.1 and 2.2 were discontinuous; however, given that they each satisfied the same four criteria and failed the same remaining criteria, following the Natural England condition assessment these treelines would be categorised as 'moderate' condition.

Running Water (Rivers and Streams)

- 2.3.32 A slow-flowing stream, Felbridge Water, ran eastward along the entire southern border of the Site. The watercourse had natural banks and was between 30 – 50cm in depth. The substrate was sediment with little aquatic vegetation, owing to shading by a canopy of hedgerows and trees along both banks.
- 2.3.33 No development is to take place adjacent to this watercourse, therefore it is not considered further in this report.

FELBRIDGE - BNG ASSESSMENT

Table 2.1: Baseline assessment of biodiversity value of onsite habitats

Existing area habitats			Distinctiveness		Condition		Strategic significance			Required Action to Meet Trading Rules	Ecological baseline
Broad Habitat	Habitat Type	Area (hectares)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic Significance multiplier		Total habitat units
Grassland	Other neutral grassland	8.49	Medium	4	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same broad habitat or a higher distinctiveness habitat required ($\geq$)	33.96
Grassland	Modified grassland	0.18	Low	2	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required $\geq$	0.36
Urban	Developed land; sealed surface	0.04	V.Low	0	N/A – Other	0	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Compensation Not Required	0.00
Urban	Developed land; sealed surface	0.33	V.Low	0	N/A – Other	0	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Compensation Not Required	0.00
	Total habitat area	9.04									34.32
	Site Area (Excluding area of Individual trees and Green walls)	9.04									

Table 2.2: Baseline assessment of onsite linear hedgerows and treelines

Existing hedgerow habitats			Distinctiveness		Condition		Strategic significance			Required Action to Meet Trading Rules	Ecological baseline
Hedge number	Hedgerow type	Length (km)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic position multiplier		
1	Line of trees	0.79	Low	2	Moderate	2	Location ecologically desirable but not in local strategy	Medium strategic significance	1.1	Same distinctiveness band or better	3.48
2	Native hedgerow	0.1	Low	2	Moderate	2	Location ecologically desirable but not in local strategy	Medium strategic significance	1.1	Same distinctiveness band or better	0.44
3	Native hedgerow	0.18	Low	2	Poor	1	Location ecologically desirable but not in local strategy	Medium strategic significance	1.1	Same distinctiveness band or better	0.40
4	Species-rich native hedgerow with trees	0.25	High	6	Moderate	2	Location ecologically desirable but not in local strategy	Medium strategic significance	1.1	Like for like or better	3.30
5	Species-rich native hedgerow with trees	0.17	High	6	Good	3	Location ecologically desirable but not in local strategy	Medium strategic significance	1.1	Like for like or better	3.37
		1.49									10.98

3 POST-DEVELOPMENT HABITAT ASSESSMENT

3.1 Onsite Habitat Creation

- 3.1.1 This section of the report looks at the habitats which are to be created during the construction phase of the development and provides reasoning as to their habitat classification and condition category, as was completed for the pre-development habitats.
- 3.1.2 The habitats described below are labelled as they are on the Barratt David Wilson Homes Landscape Masterplan, for ease of understanding; their subsequent Phase 1 / BNG classification is given within the text.

Grassland Mix

- 3.1.3 Areas of species-rich neutral grassland are to be created across the development, associated with open spaces and the ecological buffers to hedgerows, treelines and the stream onsite. The wildflower meadow mix used will be the Emorsgate Special Meadow Mix (EM3), or similar. This mix is composed of 20% native wildflowers and 80% slow growing grasses (by weight), and it, based on the composition, would most reasonably fall into the habitat condition category 'other, semi-improved neutral grassland'.
- 3.1.4 The target condition of '**moderate**' has been used to allow for the inclusion of management practices to achieve condition assessment criteria for this habitat. This would deliver 13.99 habitat units.
- 3.1.5 In order to achieve 'moderate' condition, the following criteria will be targeted to be achieved:
- There are 6-8 vascular plant species per m² present (it is expected that the seed mix will provide a sufficiently varied species mix to achieve this);
 - Sward height is varied (it is expected that this will occur naturally through the diversity of species);
 - Cover of scattered scrub less than 20%
 - Cover of bare ground between 1%-5%;
 - Cover of bracken less than 20% and scrub less than 5%; and
 - The absence of non-native, invasive species.

Amenity Grass to Rear Gardens

- 3.1.6 Areas of modified grassland will be created within the Site, largely associated with formal landscaping around the attenuation basin, play areas, paths and rear gardens.
- 3.1.7 Due to the proposed management regime required for this habitat, the grassland will require regular cutting and be sown with a species poor mix such as a lawn mix.
- 3.1.8 The target condition of 'poor' has been used to allow for the inclusion of management practices to achieve condition assessment criteria for this habitat. This condition would be achieved as the proposed habitat will not meet the essential criterion A that requires more than six species per metres squared. This would deliver 3.57 habitat units.
- 3.1.9 Targeted condition assessment criteria that will be achieved through management regime include:
- Cover of scattered scrub less than 20%
 - Cover of bare ground between 1%-5%;
 - Cover of bracken less than 20% and scrub less than 5%; and

- Absence of non-native, invasive species.

Shrubs (including native and ornamental)

- 3.1.10 Proposed plantings of introduced shrub will include native and ornamental species. This groundcover will provide suitable foraging and nesting habitat and opportunities for invertebrates and foraging opportunities for bats.
- 3.1.11 Target conditions are not applicable for this habitat type. This would deliver 1.81 habitat units.

Native Hedge (internal) with Post and Wire

- 3.1.12 A total length of 1.14 km of native species rich hedgerow is included in the proposed development, this will consist of seven hedgerows.
- 3.1.13 Hedgerows across the Site are to be planted alongside new, species-rich grassland plantings to enrich ground flora. Appropriate management practices and placement to establish undisturbed ground buffers and minimise the effects of nutrient enrichment will help plantings will allow them to achieve a 'good' condition.
- 3.1.14 The target condition of 'good' has been used to allow for the inclusion of management practices to achieve condition assessment criteria for this habitat. This would deliver 18.20 hedgerow units.
- 3.1.15 Targeted condition assessment criteria that will be achieved through management regime include:
- >1.5 m average height along length;
 - >1.5 m average width along length;
 - Gap between ground and base of canopy <0.5 m for >90% of length;
 - Gaps make up <10% of total length; and No canopy gaps >5 m;
 - >1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length; and
 - <20% of plant cover dominated by species indicative of nutrient enrichment.

Lines of Trees and Scattered Trees

- 3.1.16 176 scattered trees are included in the proposed development. The native tree planting will provide foraging, nesting and commuting opportunities for a wide range of species including invertebrates, birds, bats and small mammals.
- 3.1.17 The tree planting will strengthen the green corridors through, and around, the Site boundaries once the trees reach a more mature life stage.
- 3.1.18 The target condition of 'moderate' has been used to allow for the inclusion of management practices to achieve condition assessment criteria for this habitat. This would deliver 2.42 habitat units.
- 3.1.19 Targeted condition assessment criteria that will be achieved through management regime include:
- The tree is a native species (or at least 70% within the block are native species);
 - The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area (individual trees automatically pass this criterion);
 - There is little or no evidence of an adverse impact on tree health by human activities; and
 - More than 20% of the tree canopy area is oversailing vegetation beneath.

4 CONCLUSIONS / SUMMARY

- 4.1.1 The post-development plans for the Site include the planting of higher quality habitat (i.e. – neutral grassland, modified grassland, scattered trees and hedgerows), which accounts for the majority of the post development score.
- 4.1.2 The assessment above indicates that the development proposals for the Site will deliver a net loss of **-36.49%** for habitats by utilising onsite habitat and linear habitat creation. The total units delivered by the proposals is **45.3** habitat units, and the following Trading Rules below have/have not been satisfied. A summary screenshot from the calculator tool is provided in Figure 4.1 below.
- 4.1.3 The change in hedgerow habitat units onsite within the proposals result in an overall gain of 18.89 hedgerow units (172.06%).
- 4.1.4 Proposed habitats include targeted conditions and the score provided is based on the delivery of habitats that meet the criteria for these conditions. To ensure the targeted condition criteria for created habitats are met, it is recommended that a Landscape Ecology and Management Plan be produced. This would detail the requirements for habitat management during the construction and operational phase of the proposed development.
- 4.1.5 It is recommended that the habitats be audited at various stages throughout the life cycle of the project, to ensure that the habitat units and conditions have been delivered as intended.
- 4.1.6 It is recommended that to fully offset this loss, financial offsetting payments are made to Mid Sussex District Council, in line with MSDC's District Plan 2014-2031.
- 4.1.7 It is recommended that the LPA be engaged to determine the final offsetting payment, which would be secured via a S106 agreement.

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FIGURES

Figure 2.1: Phase 1 Habitat Plan

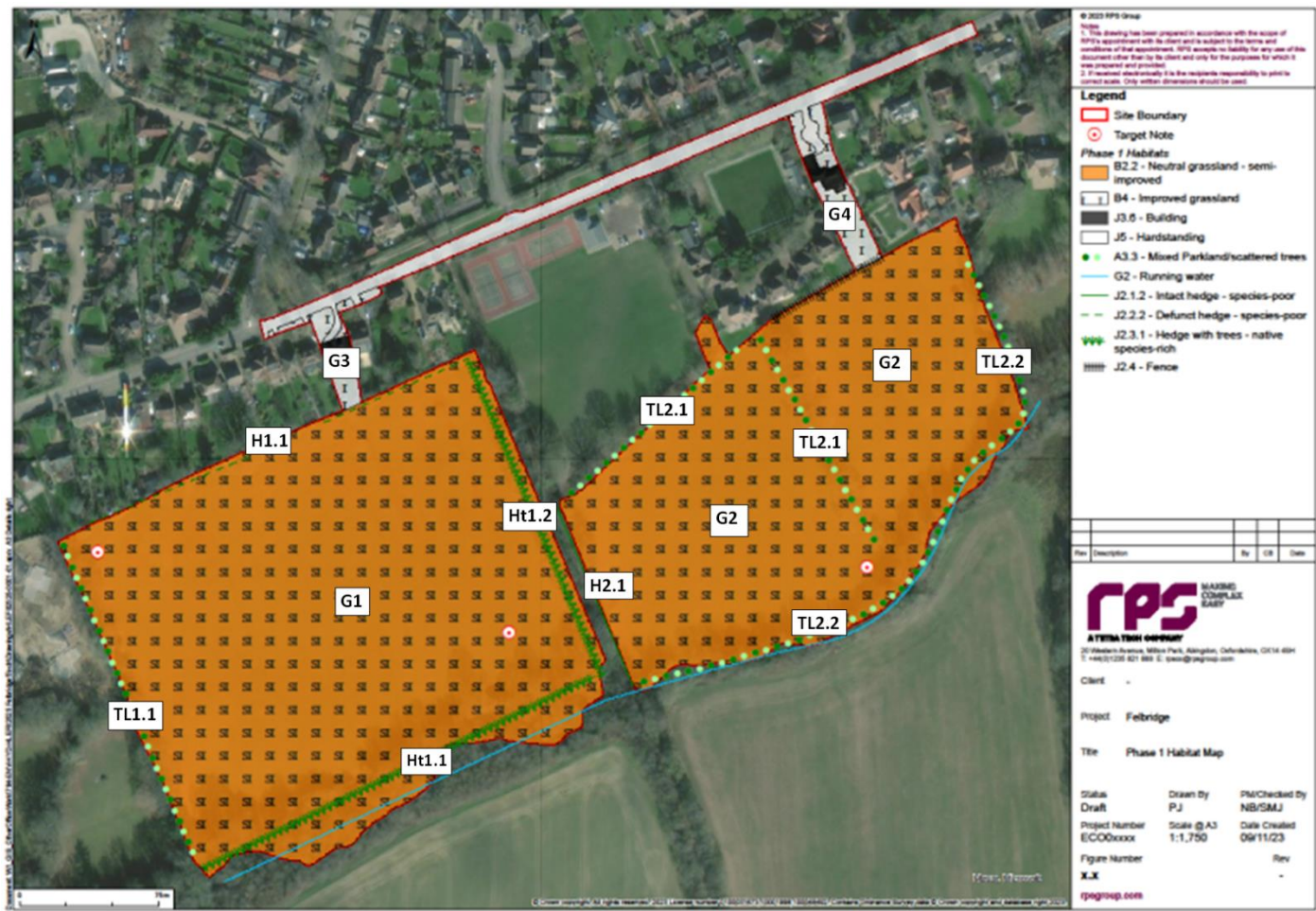
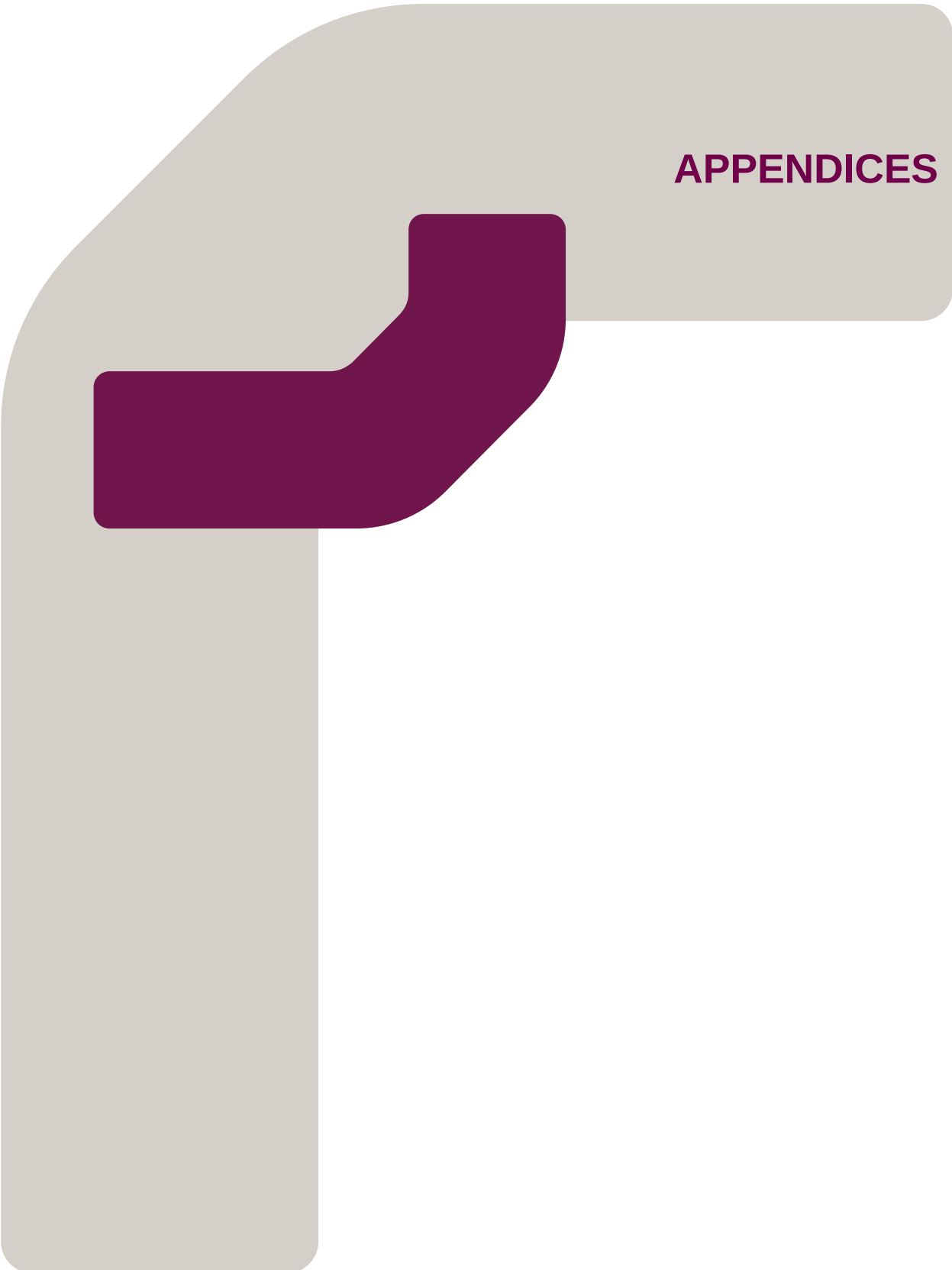


Figure 4.1: Biodiversity Net Gain Headline Results

On-site baseline	Habitat units	34.32		
	Hedgerow units	10.98		
	Watercourse units	0.00		
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	21.80		
	Hedgerow units	29.87		
	Watercourse units	0.00		
On-site net change (units & percentage)	Habitat units	-12.52	-36.49%	On-site net gain is less than target set A.
	Hedgerow units	18.89	172.06%	
	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 (Including habitat retention, creation & enhancement)	Habitat units	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Off-site net change (units & percentage)	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)	Habitat units	-12.52		
	Hedgerow units	18.89		
	Watercourse units	0.00		
Spatial risk multiplier (SRM) deductions	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)	Habitat units	-12.52		
	Hedgerow units	18.89		
	Watercourse units	0.00		
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-36.49%	Total net gain achieved is less than target set A.	
	Hedgerow units	172.06%		
	Watercourse units	0.00%		
Trading rules satisfied?	No - Check Trading Summaries ▲			
Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	34.32	37.75	15.95
Hedgerow units	10.00%	10.98	12.08	0.00
Watercourse units	10.00%	0.00	0.00	0.00
				Unit requirement met or surpassed ✓
				Unit requirement met or surpassed ✓



APPENDICES

A.1 Habitat Conditions – Criteria

Table A1.1 – Condition Assessments

Condition Sheet: GRASSLAND Habitat Type (low distinctiveness)						
UK Habitat Classification (UKHab) Habitat Type(s)						
Grassland – Other Neutral Grassland						
Grassland - Modified grassland						
Habitat Description						
ukhab – UK Habitat Classification						
Site name and location	Felbridge	On-site or off-site	Onsite			
		Survey reference (if relating to a wider survey)				
Limitations (if applicable)		Habitat parcel reference				
		G1 Neutral grassland (west)	G2 Neutral grassland (east)	G3 Improved grassland (west)	G4 Improved grassland (east)	
		Grid reference				
Condition Assessment Criteria		TQ 36308 39252	TQ 36563 39317	TQ 36329 39411	TQ 36583 39462	Notes (such as justification)
		Criterion passed (Yes or No)				
A	There are 6-8 vascular plant species per m² present, including at least 2 forbs (this may include those listed in Footnote 1). Note - this criterion is essential for achieving Moderate or Good condition.	N	N	N	N	3-4 sp/m²
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	N	N	N	N	All swards mown

FELBRIDGE - BNG ASSESSMENT

	opportunities for vertebrates and invertebrates to live and breed.					
C	Some scattered scrub (including bramble <i>Rubus fruticosus</i> agg.) may be present, but scrub accounts for less than 20% of total grassland area.	Y	Y	Y	Y	Minor bramble from within hedges/ understory only
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.	Y	Y	Y	Y	Photos
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) ² .	Y	Y	Y	Y	Photos
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Y	Y	Y	Y	Photos
G	There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴).	Y	Y	Y	Y	
Essential criterion achieved (Yes or No)		N	N	N	N	
Number of criteria passed		5	5	5	5	
Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved ×/✓				

FELBRIDGE - BNG ASSESSMENT

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)	✓	✓	✓	✓	

REPORT

	Habitat Type						
	Species-rich native hedgerow Species-rich native hedgerow with trees						
	Habitat Description						
	See the Biodiversity Metric 4.0 User Guide Section 9. Each attribute is assigned to one of five functional groups (A – E) and the condition of a hedgerow is assessed according to the number of attributes from these functional groups which pass or fail the ‘favourable condition’ criteria.						
Site name and location	Felbridge	On-site or off-site	Onsite				
Limitations (if applicable)		Survey reference (if relating to a wider survey)					
	Condition Assessment Criteria						
	A series of ten attributes, representing key physical characteristics are used for this assessment. This assessment is based on the Hedgerow Survey Handbook ¹ and Favourable Conservation Status document ² . For further clarification please refer to the Hedgerow Survey Handbook. Each attribute is assigned to one of five functional groups (A – E) and the condition of a hedgerow is assessed according to the number of attributes from these functional groups which pass or fail the ‘favourable condition’ criteria.						
	Hedgerow favourable condition attributes						
Attributes and functional groupings (A, B, C, D and E)	Criteria - the minimum requirements for ‘favourable condition’	Criteria description	Habitat parcel reference				
			H1.1 Species poor Hedgerow, Defunct	Ht1.1 Species Rich Hedgerow w/ Trees	Ht1.2 Species Rich Hedgerow w/ Trees	H2.1 Species poor Hedgerow, Intact	

REPORT

				(North G1)	(South G1)	(East G1)	(West G2)	
				Grid reference				
				TQ 36285 39335	TQ 36346 39158	TQ 36420 39280	TQ 36452 39260	
Core groups - applicable to all hedgerow types				Criterion passed (Yes or No)				Notes (such as justification)
A1.	Height	>1.5 m average along length	The average height of woody growth estimated from base of stem to the top of the shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees. Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). A newly planted hedgerow does not pass this criterion (unless it is >1.5 m height).	N	Y	Y	Y	

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A2.	Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (such as blackthorn <i>Prunus spinosa</i> suckers) are only included in the width estimate when they are >0.5 m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).	N	Y	Y	N	
B1.	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length	This is the vertical 'gappiness' of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).	Y	Y	Y	Y	
B2.	Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	This is the horizontal 'gappiness' of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small). Access points and gates contribute to the overall 'gappiness' but are not subject to the >5 m criterion (as this is the typical size of a gate).	N	Y	Y	Y	

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C1.	Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: · Measured from outer edge of hedgerow; and · Is present on one side of the hedgerow (at least).	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedgerow. Undisturbed ground is present for at least 90% of the hedgerow length, greater than 1 m in width and must be present along at least one side of the hedgerow. This criterion recognises the value of the hedgerow base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches.	Y	N	Y	N	
C2.	Nutrient-enriched perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	The indicator species used are nettles <i>Urtica</i> spp., cleavers <i>Galium aparine</i> and docks <i>Rumex</i> spp. Their presence, either singly or together, does not exceed the 20% cover threshold.	N	N	Y	N	

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D1.	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA ³) and recently introduced species.	Recently introduced species refer to plants that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives. For information on archaeophytes and neophytes see the JNCC website ⁴ , as well as the BSBI website ⁵ where the 'Online Atlas of the British and Irish Flora' ⁶ contains an up-to-date list of the status of species. For information on invasive non-native species see the GB Non-Native Secretariat website ⁷ .	Y	Y	Y	Y	
D2.	Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (e.g., excessive hedgerow cutting).	N	Y	Y	Y	
Additional group - applicable to hedgerows with trees only								
E1.	Tree class	There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient ⁸), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow.	This criterion addresses if there are a range of age-classes or morphologies which allow for replacement of trees and provide opportunities for different species.	-	Y	Y	-	

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E3.	Tree health	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens.	-	Y	Y	-	
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The hedgerow condition assessment generates a weighting (score) ranging from 1 - 3, which is used within the metric. The scores for each are set out in the tables below.

Condition categories for hedgerows without trees			
Category	Category Requirements	Metric Score	
Good	No more than 2 failures in total; AND No more than 1 failure in any functional group.	3	
Moderate	No more than 4 failures in total; AND <u>Does not fail both attributes</u> in more than one functional group (e.g. fails attributes A1, A2, B1 and C2 = Moderate condition).	2	
Poor	Fails a total of more than 4 attributes; OR <u>Fails both attributes</u> in more than one functional group (e.g. fails attributes A1, A2, B1 and B2 = Poor condition).	1	
Score achieved:		H1.1 = 1	H2.1 = 2
Condition categories for hedgerows with trees			
Category	Category Requirements	Metric score	

REPORT

Good		No more than 2 failures in total; AND No more than 1 failure in any functional group.	3		
Moderate		No more than 5 failures in total; AND <u>Does not fail both attributes</u> in more than one functional group (e.g., fails attributes A1, A2, B1, C2 and E1 = Moderate condition).	2		
Poor		Fails a total of more than 5 attributes; OR <u>Fails both attributes</u> in more than one functional group (e.g. fails attributes A1, A2, B1 and B2 = Poor condition).	1		
Score achieved:			Ht1.1 = 2	Ht1.2 = 3	

Site name and location	Felbridge	On-site or off-site		
		Survey reference (if relating to a wider survey)		
		TL1.1 (West G1)	TL2.1 (North+ Central G2)	TL2.2 (South + East G2)
Condition Assessment Criteria		TQ 36197 39199	TQ 36478 39341	TQ 36608 39245

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A	At least 70% of trees are native species.	Y	Y	Y
B	Tree canopy is predominantly continuous with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide.	Y	Y	Y
C	One or more trees has veteran features and or natural ecological niches for vertebrates and invertebrates, such as presence of standing and attached deadwood, cavities, ivy or loose bark.	Y	Y	Y
D	There is an undisturbed naturally-vegetated strip of at least 6 m 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 advice ² .	N	N	N
E	At least 95% of the trees are in a healthy condition (deadwood or veteran features valuable for wildlife are excluded from this). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	Y	Y	Y
Number of criteria passed		4	4	4
Condition Assessment Result (out of 5 criteria)	Condition Assessment Score			
Passes 5 criteria	Good (3)			
Passes 3 or 4 criteria	Moderate (2)	✓	✓	✓
Passes 2 or fewer criteria	Poor (1)			

