



Outline Biodiversity Net Gain (BNG) Summary

Land at West of Shoreham Road, Henfield

The Ecology Partnership, Thorncroft Manor, Thorncroft Drive, Leatherhead, Surrey KT22 8JB

T +44 (0) 1372 364133 **E** info@ecologypartnership.com **W** ecologypartnership.com

Contents

1.0	INTRODUCTION.....	3
2.0	DEFRA METRIC METHODOLOGY.....	4
3.0	DEFRA METRIC CALCULATIONS.....	4
4.0	CONCLUSIONS	9
	APPENDIX 1: CONDITION ASSESSMENT	21
	APPENDIX 2: QUADRAT DATA.....	24

LIABILITIES:

Whilst every effort has been made to guarantee the accuracy of this report, it should be noted that living animals and plants are capable of migration/establishing and whilst such species may not have been located during the survey duration, their presence may be found on a site at a later date.

This report provides a snap shot of the species that were present at the time of the survey only and does not consider seasonal variation. Furthermore, where access is limited or the site supports habitats which are densely vegetated only dominant species maybe recorded.

The recommendations contained within this document are based on a reasonable timeframe between the completion of the survey and the commencement of any works. If there is any delay between the commencement of works that may conflict with timeframes laid out within this document, or have the potential to allow the ingress of protected species, a suitably qualified ecologist should be consulted.

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

1.0 Introduction

- 1.1 The Ecology Partnership was commissioned by DMH Stallard to undertake an outline Biodiversity Net-gain calculation and outline Habitat Management and Maintenance Plan (HMMP) for the proposed development west of Shoreham Road, Henfield, hereafter referred to as 'the site'.
- 1.2 The site is located on the western side of the A2037, south of the town of Henfield, and is approximately 3.27ha in size. The site is a series of horse grazed pasture fields, bordered by a mixture of scrub and hedgerows. It is set on the boundary of agricultural landscape to the north and west, and new and established industrial developments to the east and south with Shoreham Road running along the east boundary. The agricultural land includes both pasture and arable, with areas of woodland, scrub and mature hedgerows/treelines, as well as low-density rural residential settlements. The industrial developments have minimal landscaping within the sites and are predominantly surfaced with concrete and tarmac.



Figure 1: Site red line boundary and survey area.

1.3 An accompanying Preliminary Ecological Appraisal (PEA) has been prepared by The Ecology Partnership in support of the current planning application (The Ecology Partnership, 2024). This report should be read in conjunction with the PEA.

1.4 The proposals for site are to redevelop the eastern and northern fields. Twelve new commercial units are planned, alongside their associated parking, access and landscaping. The westernmost field and a portion of the adjacent one are to be retained as green space for biodiversity net gain enhancement.

2.0 DEFRA Metric Methodology

2.1 Principal Ecologist Matt Pendry BSc (Hons) undertook a UK Hab survey, which included condition assessments of each habitat on the 22nd July 2024.

2.2 The Statutory Metric is used to calculate biodiversity losses and gains for terrestrial habitats within the application area, and supersedes version 4.0 of the Defra metric. This metric underpins the Environment Act's provisions for mandatory biodiversity net-gain in England and defines 'measurable' net-gains.

2.3 The Biodiversity Metric uses habitat as a proxy for wider biodiversity with different habitat types scoring different values according to their relative biodiversity value. These are dependent on the condition and location of the habitat, in order to calculate '**biodiversity units**'.

2.4 The site has been assessed in terms of the condition assessment of the baseline during both the July 2024 assessment by The Ecology Partnership, and through review of satellite imagery, following the standard metric guidelines.

2.5 The accompanying PEA report provides a wider site appraisal, with species lists provided. As such, the PEA should be read in conjunction with this report.

3.0 DEFRA Metric Calculations

3.1 The habitats currently present on site have been divided into a number of habitat types. These are shown in Table 1 and 2 and Figure 2 overleaf.

3.2 The habitats currently present on site have been assessed as having a value of **15.95 units**, and hedgerows a value of **7.44 units**. Figure 3 below shows the extent of these habitats.

Table 1. On-Site Habitat Baseline

Habitat Type	Area (ha)	Distinctiveness	Condition	Strategic significance	Total units	Area retained	Area enhanced	Units lost	Comments
Modified grassland	0.636	Low	Poor	Low	1.27			1.27	Poor heavily grazed grassland in the northern fields
Other neutral grassland	1.765	Medium	Poor	Medium	7.06		0.886	3.52	Species-poor neutral grassland in the southern fields
Mixed scrub	0.86	Medium	Moderate	Low	6.88	0.488		2.98	Mature mixed scrub along boundaries of the fields
Bare ground	0.011	Low	Poor	Low	0.02			0.02	Trampled ground around stable
Developed land; sealed surface	0.003	V.Low	N/A - Other	Low	0.00			0.00	Horse stable
Rural tree	0.016	Medium	Moderate	Low	0.13			0.13	One medium tree to be lost within existing treelines
Rural tree	0.049	Medium	Good	Low	0.59			0.59	Three medium trees to be lost within existing treelines
Total habitat area	<u>0.5</u>	Totals			<u>15.95</u>	<u>0.49</u>	<u>0.89</u>	<u>8.5</u>	

Table 2. On-Site Habitat Baseline

Habitat Type	Length (km)	Distinctiveness	Condition	Strategic significance	Total units	Length retained	Units lost	Comments
Ecologically valuable line of trees	0.62	Medium	Good	Low	7.44	0.57	0.6	Line of mature trees along the field boundaries



Figure 3: Baseline habitats present on site

3.3 The habitat types and areas from the proposal are shown in Figure 4 below and Tables 3, 4 & 5 overleaf.



Figure 4: Habitats post construction

Table 3. On-Site Habitat Creation

Habitat Type	Area (ha)	Distinctiveness	Condition	Strategic significance	Time to target condition (years)	Difficulty of creation	Total units	Comments
Mixed scrub	0.199	Medium	Moderate	Low	5	Low	1.33	New mixed scrub planted around the site boundaries
Other neutral grassland	0.195	Medium	Moderate	Low	5	Low	1.31	New wildflower-rich grassland around the boundaries of the business park
Other neutral grassland	0.008	Medium	Poor	Low	2	Low	0.03	Flowering lawn areas within the business park
Ponds non-priority	0.039	Medium	Moderate	Low	3	Low	0.28	New attenuation basin to be designed as a wildlife pond
Developed land; sealed surface	1.297	V.Low	N/A - Other	Low	0	Low	0.00	Buildings and hardstanding
Rural tree	0.366	Medium	Moderate	Low	27	Low	1.12	90 new small native trees throughout the site
Total habitat area	<u>2.10</u>						Totals	<u>4.07</u>
Site Area (Excluding individual trees)	<u>1.74</u>							

Table 4. On-Site Habitat Enhancement

Habitat Type	Area (ha)	Distinctiveness	Condition	Strategic significance	Time to target condition (years)	Difficulty of creation	Total units	Comments
Other neutral grassland	0.77	Medium	Poor to Moderate	Low	10	Low	5.24	Enhance existing grassland through scarifying and seeding with suitable species-rich wildflower seed mix
Mixed scrub	0.425	Medium	Moderate to Good	Low	3	Low	4.93	Enhancing existing mixed scrub through establishment of small rides and additional planting

Table 5. On-Site Hedgerow creation

Habitat Type	Length (km)	Distinctiveness	Condition	Strategic significance	Time to target condition (years)	Difficulty of creation	Total units	Comments
Species-rich native hedgerow	0.191	Medium	Good	Low	12	Low	1.49	Create new species-rich native hedgerows around the edge of the business park.

3.4 The proposals for the site would result in the net gain of **+0.99 habitat units**, and **+0.89 hedgerow units** which equates to a **+6.23%** and **+12.02%** net-gain from the baseline respectively.

3.5 The headline results are shown in Figure 5 below.

FINAL RESULTS				
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)		Habitat units	0.99	
		Hedgerow units	0.89	
		Watercourse units	0.00	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)		Habitat units	6.23%	
		Hedgerow units	12.02%	
		Watercourse units	0.00%	
Trading rules satisfied?		No - Check Trading Summaries ▲		
Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	12.00%	15.95	17.86	0.92
Hedgerow units	12.00%	7.44	8.33	0.00
Watercourse units	12.00%	0.00	0.00	0.00

Figure 5: Headline results of the BNG calculation

3.6 In order to achieve this, the development will incorporate new wildflower grassland and mixed native shrub planting around the new business park area, with smaller verges to comprise flowering lawn. The western portion of the site will include a new SUDS attenuation basin which will be designed to hold water and function as a pond, whilst the remainder of the grassland will be enhanced through scarification and seeding of an appropriate species-rich wildflower mix and managed to a moderate condition. The thick bands of scrub in the area will be enhanced through the creation of alcoves and small rides behind them, resulting in a more diverse structure. Native trees will be planted throughout the entire site. Those in the grassland areas are to be sufficiently spaced out and comprise smaller species with sparser canopies such as birch, willow and alder, to ensure that they do not result in excessive shading in the long term.

3.7 In order to satisfy the trading rules, an additional **0.49 units** of medium distinctiveness 'Grassland' habitat, or a higher distinctiveness habitat is required. In order to meet the

remaining deficit and reach a target of +10% an additional **0.11 units** of any habitat type would also be required.

3.8 Once the detailed landscape design has been finalised, the remaining deficit will need to be purchased from an offsite provider, such as the Environment Bank.

3.9 It should be noted the biodiversity units calculated for the site post-development do not take into consideration enhancement features which could be added such as log piles, bird nesting boxes, or bat boxes. All of these could be incorporated into the final design of the site, adding additional gains to biodiversity, albeit not measurable.

4.0 Outline Habitat Management & Maintenance Plan (HMMP)

4.1 A full HMMP will be developed at the detailed design stage to detail the long-term management of the proposed habitats to achieve the targeted habitat conditions, over a 30 year timespan. An outline version of this HMMP is presented below to aid in the determination of this application.

Roles and responsibilities

4.2 The roles and responsibilities will be confirmed at a later date once planning is approved.

Land use summary

4.3 The grassland is currently managed through horse grazing intermittently throughout the year. The scrub around the edges is managed occasionally to avoid excessive encroachment into the pasture.

4.4 The proposed site will be mainly used for business purposes in the east, with biodiversity enhancement targeted around the edges and within the south-west field. Grassland areas will be managed through mowing, with different frequency and mow heights.

Baseline Environmental Information

4.5 Detailed baseline environmental for the site is presented in the accompanying EcIA.

Summary of planned management activities

- 4.6 The overall aim for the management of the site is to protect and maintain the ecological value of retained features such as scrub, and mature boundary trees, and ensure that enhanced and newly created habitats successfully establish and achieve their target condition within a set timeframe. It will also ensure that specific wildlife features, such as bird and bat boxes remain functional throughout the 30 year timeframe of the HMMP.

Habitats and condition targets

- 4.7 Table 6 overleaf presents a summary of what will be delivered based on the biodiversity metric. These habitat condition targets form the basis of what the management plan is setting out to achieve throughout a period of 30 years. The specific management to achieve these targets is detailed for each habitat on Tables 7 to 12, with a collated table of management prescriptions on Table 13. It should be noted that this excludes habitats with a 0 value such as buildings and road.

Habitats retention

- 4.8 The retained trees and scrub have been protected through the design of the scheme, avoiding root protection areas where possible and using protective measures where unavoidable. Information on this can be found within the tree protection plan. Retained scrub is mature dense and thorny and not considered of risk of damage.

Monitoring

- 4.9 Full detail of the monitoring on site will be detailed in the full and final version of the HMMP. The general proposal for monitoring is for annual assessments of each habitat on site in the first five years and then a single visit every five years thereafter. All trees will be monitored by an arboriculturist and all other habitats will be monitored by an ecologist.

Table 6. Habitat and condition targets summary

Target Habitat Type	Targeted Condition	Years to Targeted Condition	Condition Assessment Targets	Comments
Other neutral grassland	Poor	2	Passes for criteria D & E desirable	Flowering lawn areas within the business park
Other neutral grassland	Moderate	5-10	Passes for criteria A, C, D minimum Passes for criteria E and F desirable	New wildflower-rich grassland around the boundaries of the business park, as well as enhanced grassland in the south,-west of the site.
Ponds non-priority	Moderate	3	Passes for criteria B, C, F, G, H & I minimum Passes for criteria A & E desirable	New attenuation basin to be designed as a wildlife pond
Species-rich native hedgerow	Good	12	Passes for criteria A1/2, B1/2, C1, D1/2 minimum	Create new species-rich native hedgerows around the edge of the business park.
Mixed scrub	Moderate	5	Passes for criteria A, B, C, & D	New mixed scrub planted around the site boundaries
Mixed scrub	Good	3	Passes for all five criteria	Enhancing existing mixed scrub through establishment of small rides and additional planting.
Rural tree	Moderate	27	Passes for criteria A, B, and F only	90 new native tree planting on site

Table 7. Management and condition targets – Other neutral grassland

Modified grassland - Condition Assessment Criteria		Targeted	Creation/ enhancement Approach	Management Approach
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. Note – this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.	No	n/a	n/a
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	No	n/a	n/a
C	Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	No	n/a	n/a
D	Cover of bracken <i>Pteridium aquilinum</i> less than 20% and cover of scrub (including bramble) less than 5%.	Yes	n/a	Flowering lawn areas will be mown to a height of c.40mm once a month between March and May, and again between August and October, within no cutting taking place in June/July to enable greater flowering opportunities.
E	Combined cover of species indicative of suboptimal condition and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging activities) accounts for less than 5% of total area. If any invasive non-native species (as listed on Schedule 9 of WCA) are present, this criterion is automatically failed.	Yes	n/a	Damaged areas will be taped off scarified and re-seeded in the autumn.
F	There are 10 or more vascular plant species per m ² present, including forbs that are characteristic of the habitat type. Note – this criterion is essential for achieving Good condition for non-acid grassland types only.	No	n/a	n/a

Table 8. Management and condition targets – Other neutral grassland (not SUDS)

Other neutral grassland (not SUDS) Condition Assessment Criteria		Targeted	Creation/ enhancement Approach	Management Approach
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. Note – this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.	Yes	Graze/cut existing grass to ground level (and remove cuttings) in autumn. Scarify the ground and seed with EM5 seedmix at 4g/m ² . And gently roll the area.	Starting the following August cut to c.40mm and collect and remove cuttings, where possible. Repeat this process in September and October. On all subsequent years the sward will be cut to c.40mm once in March, and again in September, with cuttings removed.
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	No	n/a	n/a
C	Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	Yes	n/a	After each September cut, the ground will be scarified to ensure between 1 and 5% of the area comprises bare ground.
D	Cover of bracken <i>Pteridium aquilinum</i> less than 20% and cover of scrub (including bramble) less than 5%.	Yes	n/a	The management described for A&B will ensure bracken and scrub remain below these thresholds.
E	Combined cover of species indicative of suboptimal condition and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging activities) accounts for less than 5% of total area. If any invasive non-native species (as listed on Schedule 9 of WCA) are present, this criterion is automatically failed.	Yes, but not essential	n/a	The above management will help suppress certain undesirable species.
F	There are 10 or more vascular plant species per m ² present, including forbs that are characteristic of the habitat type.	Yes, but not essential	The proposed seed mix, includes at least 28 different species.	The above management will help maintain species-richness, although it may not be possible for all areas to maintain above a species richness of 10 species/m ² .

Table 9. Management and condition targets – Ponds (Non-Priority)

Other neutral grassland (SUDS) Condition Assessment Criteria		Targeted	Creation/ enhancement Approach	Management Approach
A	The pond is of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution. Turbidity is acceptable if the pond is grazed by livestock.	No	n/a	n/a
B	There is semi-natural habitat (moderate distinctiveness or above) complete surrounding the pond, for at least 10 m from the pond edge for its entire perimeter.	Yes	The pond is positioned more than 10m from any artificial habitats.	n/a
C	Less than 10% of the water surface is covered with duckweed <i>Lemna spp.</i> or filamentous algae.	Yes	n/a	During June-August remove duckweed from the pond on a weekly basis with use of a net to ensure coverage is below 5%. Depositing material c.1m from the pond edge, so invertebrates/amphibians can make there way back into the pond.
D	The pond is not artificially connected to other waterbodies, such as agricultural ditches or artificial pipework.	No	n/a	n/a
E	Pond water levels can fluctuate naturally throughout the year. No obvious artificial dams ² , pumps or pipework.	No	n/a	n/a
F	There is an absence of listed non-native plant and animal species ²	Yes	n/a	The pond will be monitored for presence of invasive non-native species on a monthly basis between April & Sep
G	The pond is not artificially stocked with fish. If the pond naturally contains fish, it is a native fish assemblage at low densities.	Yes	n/a	n/a
H	Emergent, submerged or floating plants (excluding duckweed) ⁴ cover at least 50% of the pond area which is less than 3m deep.	Yes	Sow the edges of the basin with EP1 Pond Edge Mixture .	Cut back small sections every 3 years, targeting species which are more dominant.
I	The pond surface is no more than 50% shaded by adjacent trees and scrub.	Yes	The pond is located in the centre of the field away from mature trees	Trees in the area surrounding the pond will be pruned if needed to ensure shading does not exceed 50%.

Table 10. Management and condition targets – Native hedgerows

Native hedgerows Condition Assessment Criteria		Targeted	Creation/ enhancement Approach	Management Approach
A1	Height >1.5m average along length.	Yes	Hedges will be planted as whips 0.8-1m in height, and protected by tree guards.	Once established the hedgerows will be trimmed to a height of no lower than 2m in the winter period.
A2	Width >1.5m average along length.	Yes	Whips will be planted in two offset parallel lines at least 1m apart	Once established the hedgerows will be trimmed to a width of no thinner than 2m in the winter period.
B1	Gap – hedge base Gap between ground and base of canopy <0.5m for >90% of length.	Yes	n/a	If a gap of at the base of the hedge develops to an extent which causes this condition to fail, the hedgerow will be subject to a hedge laying process by a sufficiently experienced contractor.
B2	Gap – hedgerow canopy continuity Gaps make up <10% of total length; and no canopy gaps >5m.	Yes	Whips will be planted at 1m intervals to ensure a continuous and dense hedge can develop	If gaps form in the hedge due to failed shrubs, these will be removed and new whips planted, and protected with tree guards.
C1	Undisturbed ground and perennial vegetation >1m 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 hedge (at least)	Yes	All hedgerows are positioned with undisturbed ground on at least one site.	1m buffer to hedgerows to left unmanaged on at least one side.
C2	Nutrient-enriched perennial vegetation Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	No	n/a	n/a
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) and recently introduced species.	Yes	Prior to planting the planting area will be inspected for invasive species , . If any are identified, a specialist contractor will be employed to safely kill or legally dispose of it	Visual inspection annually during mid-summer. If any are identified, a specialist contractor will be employed to safely kill or legally dispose of it
D2	Current damage >90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	Yes	n/a	Areas of hedgerow that become significantly damaged will be removed (if necessary) and replanted.

Table 11. Management and condition targets – Mixed scrub

Mixed scrub Condition Assessment Criteria		Targeted	Creation/ enhancement Approach	Management Approach
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). - At least 80% of scrub is native, - There are at least three native woody species, No single species comprising more than 75% of the cover (except hazel <i>Corylus avellana</i>, common juniper <i>Juniperus communis</i>, sea buckthorn <i>Hippophae rhamnoides</i> or box <i>Buxus sempervirens</i>, which can be up to 100% cover).	Yes	All scrub planting will incorporate seven different native species, planted at 1.5m intervals.	Until establishment scrub will be watered as required to ensure success.
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran) shrubs are all present.	Yes	n/a	Every 10 years 30% of the scrub area will be coppiced to ground level to allow opportunities for new seedlings to emerge and create a variety of age classes in the long term.
C	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA) and species indicative of suboptimal condition make up less than 5% of ground cover.	Yes	Prior to planting the area will be stripped of existing turf and a mulch applied around the whips to suppress weed growth.	Undesirable species will be controlled as required to ensure they do not exceed 5% of ground cover. Herbicides should be avoided as a treatment however.
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	Yes	n/a	The management for other neutral grassland will ensure this criteria is passed, for all scrub targeting medium and good condition.
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	Yes	n/a	The enhanced scrub around the western part of the site, which is targeting a good condition will have a pathway running through it that will be managed through cuts twice a year. This will ensure a ride is maintained.

Table 12. Management and condition targets – Allotments

Urban trees		Targeted	Creation/ enhancement Approach	Management Approach
Condition Assessment Criteria				
A	The tree is a native species (or more than 70% within the block are native species).	Yes	90 native trees will be planted.	n/a
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).	Yes	n/a	n/a
C	The tree is mature (or more than 50% within the block are mature).	No	n/a	n/a
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.	No	n/a	n/a.
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	No	n/a	n/a
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Yes	All trees are planted within soft landscaped areas	n/a

Table 13. Management prescriptions and timings

Habitat	Management action/prescription	Timing
Other neutral grassland (flowering lawns)	Mow to a height of 30-40 mm twice a month	Monthly March -May and August to October
	Scarify and reseed damaged areas once annually	September/October
	Visual inspection for invasive non-native species prior to cutting. If any are identified, a specialist contractor will be employed to safely kill or legally dispose of it	Monthly March -October
Other neutral grassland (excluding flowering lawns)	Graze/cut existing grass to ground level (and remove cuttings) in autumn. Scarify the ground and seed with EM4 seedmix at 4g/m ² . And gently roll the area.	September/October <i>First year only</i>
	Cut grassland to c.30mm and collect and remove cuttings	Twice a year: March and, September,
	After each September cut, the ground will be scarified to ensure between 1 and 5% of the area comprises bare ground.	September
Pond (Non-priority)	Seed bottom of basin or around water margin with EP1 seedmix at 4g/m ² and gently roll the area.	First September after creation only
	Remove duckweed using net to ensure less than 5% coverage and deposit 1m from waters edge.	Weekly June to August
	Cut back c.20% of marginal vegetation to 50mm and remove from site.	Year 3 and every 3 years thereafter in September
	Prune trees shading pond if pond shading exceeds 45%	As required in September
Native hedgerows	Plant whips in double staggered rows at 1m intervals	First autumn only
	Trim 1/3 of established hedgerows to a height and width of at least 2m	Once annually Nov-Feb, with a different hedge section each year.

	If a gap of at the base of the hedge develops to an extent which causes this condition to fail, the hedgerow will be subject to a hedge laying process by a sufficiently experienced contractor.	Only if required: Nov-Feb
	If gaps form in the hedge due to failed shrubs, these will be removed and new whips planted, and protected with tree guards.	Only if required: Autumn or spring
	Visual inspection for invasive non-native species. If any are identified, a specialist contractor will be employed to safely kill or legally dispose of it	Annually summer months
Scrub	Prior to planting the area will be stripped of existing turf and a mulch applied. Whips planted at 1.5m intervals	First spring or autumn only
	Every 10 years 30% of the scrub area will be coppiced to ground level	Every 10 years: Nov-Feb
	Control undesirable species to ensure they make up less than 5% of ground cover.	As required
	Maintain c2m ride through scrub in the west of the site	Twice a year in Feb and September
Urban trees	Plant trees and apply mulch to bases	First spring or autumn only
All trees and shrub	Water to saturation of ground at base of shrub/tree	Weekly June-August in first three years, and as required outside of this (e.g. weekly in times of drought)
	Monitor health of trees/shrub and replace where necessary	Annually: summer months
All habitats	Identify and remove litter	Monthly
Bird boxes	Clean out old nests and other material from bird boxes with stiff brush, to remove potential parasites.	Annually Sep-Feb
Bird and bat boxes	Confirm they are still attached and in good condition. If broken, they should be replaced by a comparable model. An ecologist should be consulted prior to removal of bat boxes.	Annually Oct to Feb

5.0 Conclusions

- 5.1 The current ecological baseline value of habitats on site is **15.95 habitat units**, and **7.44 hedgerow units**, comprising modified grassland, other neutral grassland, scrub, and ecologically valuable tree lines.
- 5.2 The proposals for the site will achieve, a **+6.23% (0.99 unit)** biodiversity net-gain in habitat units, with a total unit deficit of **-0.6 units** from the +10% BNG target.
- 5.3 The proposals for the site will achieve, a **+12.02% (0.89 unit)** biodiversity net-gain in hedgerow units.
- 5.4 In order to satisfy the trading rules, an additional **0.49 units** of medium distinctiveness 'Grassland' habitat, and **0.11 units** of any habitat type is required.
- 5.5 This deficit will need to be offset through purchase of credits from an offsite provider such as the Environment Bank once the application has been approved and detailed landscape design finalised.

Appendix 1: Condition Assessment

Condition Sheet: GRASSLAND Habitat Type (medium, high & very high distinctiveness)		
UKHab Habitat Type(s): All other grassland types and tall ruderal (ie. not amenity/modified)		
Condition Assessment Criteria		Other neutral grassland
1	The grassland is a good representation of the habitat type it has been identified as, based on its UKHab description - the appearance and composition of the vegetation closely matches the characteristics of the specific grassland habitat type. Indicator species listed by UKHab for the specific grassland habitat type are consistently present. Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.	Fail Species-poor with lack of indicator species
2	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 insects, birds and small mammals to live and breed.	Fail All manged to uniform sward height
3	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens (Footnote 1)	Pass <i>Localised poaching from horses</i>
4	Cover of bracken is less than 20% and cover of scrub (including bramble) is less than 5%.	Pass
5	Combined cover of species indicative of sub-optimal condition (Footnote 2) and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species (as listed on Schedule 9 of WCA) are present, this criterion is automatically failed.	Fail Greater than 5% combined cover of, creeping buttercup and white clover
Additional Criterion - must be assessed for all non-acid grassland types		
6	There are 10 or more vascular plant species per m ² present, including forbs that are characteristic of the habitat type (species referenced in Footnote 2 and 4 cannot contribute towards this count). <i>Note - ths criterion is essential for achieving Good condition for non-acid grassland types only.</i>	Fail 6.86 species per m ² (based on 7 quadrats ¹)
		Condition
		Poor
Condition Assessment Result		
Good	Passes 5 of 6 criteria, including essential criterion 1 and 6	
Moderate	Passes 3 or 4 of 6 criteria, including essential criterion 1	
Poor	Passes 0, 1, 2 criteria of 6 criteria; OR Passes 3 or 4 criteria excluding criterion 1 and 6	
Footnote 1. For example, this could include small, scattered areas of bare ground allowing for plant colonisation, or localised patches not exceeding 5% cover. Footnote 2. Species indicative of sub-optimal condition for this habitat type include: Creeping thistle, spear thistle, curled dock, broad-leaved dock, common nettle, creeping buttercup, greater plantain, white clover, cow parsley.		

¹ For quadrat data see appendix 2

Condition Sheet: SCRUB Habitat Type		
UKHab Habitat Type(s): All forms of scrub		
Condition Assessment Criteria		Mixed scrub
1	The scrub is a good representation of the habitat type it has been identified as, based on its UKHab description (where in its natural range). The appearance and composition of the vegetation closely matches the characteristics of the specific scrub type. At least 80% of scrub is native, and there are at least three native woody species ¹ , with no single species comprising more than 75% of the cover (except hazel, common juniper, sea buckthorn or box, which can be up to 100% cover).	Pass
2	Seedlings, saplings, young shrubs and mature (or ancient or veteran ²) shrubs are all present.	Pass
3	There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴) and species indicative of sub-optimal condition ⁵ make up less than 5% of ground cover.	Pass
4	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	Pass
5	There are clearings, glades or rides present within the scrub, providing sheltered edges.	Fail
Condition		Moderate
Condition Assessment Result		
Good	Passes 5 of 5 criteria	
Moderate	Passes 3 or 4 of 5 criteria	
Poor	Passes 2 or fewer criteria	
Footnote 1 - Native woody species as defined and listed in the Hedgerow Survey Handbook: DEFRA (2007) Hedgerow Survey Handbook: A standard procedure for local surveys in the UK. 2nd ed. [online]. Defra, London. PB1195. Available from: Hedgerow Survey Handbook (publishing.service.gov.uk).		
Footnote 2 - See gov.uk standing advice on ancient and veteran species. Available from: Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk) Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk)		
Footnote 3 - Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement.		
Footnote 4 - Wildlife and Countryside Act 1981 (as amended).		
Footnote 5 - Species indicative of sub-optimal condition for this habitat type may include: non-native conifers, tree-of-heaven, holm oak, European turkey oak, cherry laurel, snowberry, shallon, American skunk cabbage, buddleia, cotoneaster, Spanish bluebell and hybrid bluebells. There may be additional relevant species local to the region and or site.		

Appendix 2: Quadrat data

The table overleaf lists the species recorded in each quadrat during the baseline habitat survey and condition assessment. The number columns represent the quadrat numbers, with ticks for any species found in that quadrat. Species highlighted in red are considered undesirable species for the purpose of the relevant condition assessment. Those highlighted in bold are considered indicator species (for neutral grassland). The location of the quadrat points are shown in the figure below. A full species list, including species recorded outside the quadrats and in other habitat types is presented in the Appendices of the accompanying PEA.



Figure 1. Quadrat locations

Table 1. Quadrat data _Other Neutral Grassland

Quadrat data		1	2	3	4	5	6	7	Frequency
Species	Latin Name								
Yorkshire fog	<i>Holcus lanatus</i>	✓	✓	✓	✓	✓	✓	✓	7
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>	✓	✓			✓	✓	✓	5
Common Bent	<i>Agrostis capillaris</i>		✓	✓	✓	✓		✓	5
Meadow Foxtail	<i>Alopecurus pratensis</i>			✓	✓	✓	✓	✓	5
Creeping Buttercup	<i>Ranunculus repens</i>		✓			✓	✓	✓	4
Red Fescue	<i>Festuca rubra</i>		✓	✓		✓	✓		4
Creeping Bent	<i>Agrostis stolonifera</i>			✓	✓	✓	✓		4
Greater bird's-foot-trefoil	<i>Lotus pendunculatus</i>	✓	✓				✓		3
White clover	<i>Trifolium repens</i>					✓	✓		2
Marsh Foxtail	<i>Alopecurus geniculatus</i>				✓	✓			2
Crested Dog's-tail	<i>Cynosurus cristatus</i>						✓	✓	2
Hard rush	<i>Juncus inflexus</i>	✓							1
Common fleabane	<i>Pulicaria dysenterica</i>						✓		1
Rough meadow-grass	<i>Poa trivialis</i>	✓							1
Meadow Buttercup	<i>Ranunculus acris</i>		✓						1
Smooth Tare	<i>Vicia tetrasperma</i>		✓						1
Timothy Grass	<i>Phleum pratense</i>				✓				1
Clustered Dock	<i>Rumex conglomeratus</i>							✓	1
Selfheal	<i>Prunella vulgaris</i>						✓		1
Silverweed	<i>Potentilla anserina</i>						✓		1
Jointed Rush	<i>Juncus articulatus</i>							✓	1
Perennial rye-grass	<i>Lolium perenne</i>						✓		1
Hemlock water dropwort	<i>Oenanthe crocata</i>								0
Common knapweed	<i>Centaurea nigra</i>								0
Greater willowherb	<i>Epilobium hirsutum</i>								0
Ground Ivy	<i>Glechoma hederacea</i>								0
Marsh Woundwort	<i>Stachys palustris</i>								0
Sedge	<i>Carex spp.</i>								0
False Fox Sedge	<i>Carex otrubae</i>								0
Meadow Vetchling	<i>Lathyrus pratensis</i>								0
Greater Plantain	<i>Plantago major</i>								0
Tufted Vetch	<i>Vicia cracca</i>								0
Hairy Sedge	<i>Carex hirta</i>								0
Ragwort	<i>Senecio jacobaea</i>								0
Bristly Ox Tongue	<i>Helminthotheca echioides</i>								0
Primrose	<i>Primula vulgaris</i>								0
Total excluding undesirables		5	7	5	6	7	11	7	6.86 average

Table 2. Quadrat data _Modified Grassland

Quadrat data		8	9	10	11	12	Frequency
Species	Latin Name						
Perennial rye-grass	<i>Lolium perenne</i>	✓	✓	✓	✓	✓	5
White clover	<i>Trifolium repens</i>	✓	✓	✓	✓	✓	5
Creeping Bent	<i>Agrostis stolonifera</i>	✓	✓	✓	✓	✓	5
Silverweed	<i>Potentilla anserina</i>	✓	✓		✓	✓	4
Timothy Grass	<i>Phleum pratense</i>		✓	✓			2
Creeping Buttercup	<i>Ranunculus repens</i>				✓	✓	2
Annual meadow-grass	<i>Poa annua</i>	✓					1
Meadow barley	<i>Hordeum secalinum</i>			✓			1
Marsh Foxtail	<i>Alopecurus geniculatus</i>				✓		1
Marsh Cudweed	<i>Gnaphalium uliginosum</i>					✓	1
Scentless mayweed	<i>Tripleurospermum inodorum</i>					✓	1
Field bindweed	<i>Convolvulus arvensis</i>						0
Spiny sowthistle	<i>Sonchus asper</i>						0
Red clover	<i>Trifolium pratense</i>						0
Total Species		5	5	5	6	7	5.6 average

The Ecology Partnership

Thorncroft Manor

Thorncroft Drive

Leatherhead

KT22 8JB

Tel: 01372 364 133

www.ecologypartnership.com

Approved: Matt Pendry BSc (Hons) MCIEEM

Date: 13/11/2024