Appendix F2
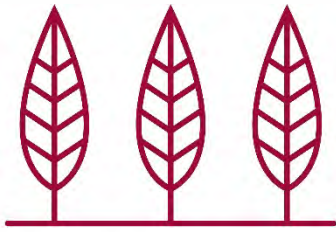
Biodiversity Net Gain Assessment Report

East Claydon Greener Grid Park

Biodiversity Net Gain Assessment

Client: Statkraft UK Ltd

Project number: AEL2270

Date: 21 April 2025

Document Information:

Version	Date	Version Details	Prepared by	Checked by	Approved by
1.0	13/03/2025	Draft final	NB	DP	DP
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Appendices

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1 Introduction

Background

1.1   Applied Ecology (AE) was appointed by Statkraft UK Ltd to prepare Statutory Biodiversity Metric calculations for the proposed development of a Greener Grid Park comprising]energy storage and grid balancing equipment and associated infrastructure including access, drainage, landscaping and other incidental works ("the Development"), on land north of East Claydon substation, Buckinghamshire, MK18 3NF ("the Site"). The Site location is shown by **Figure 1.1**.

1.2   The calculations presented are based on the General Arrangement Plan produced by Urban Green[1], which is presented in **Appendix A.**

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[1] Urban Green (2024) *General Arrangement Plan – East Claydon, Buckinghamshire.* Drawing no. UG_2507_LAN_GA_DRW_102 Rev. P06.

East Claydon Greener Grid Project

Site location

☐ Site boundary

Figure 1.1

Map Scale @ A4: 1:30,000

Surveyed by: n/a	
Survey date: n/a	
Drawn by: NB	APPLIED ECOLOGY
Checked by: DP	
Status: Final	

0   500   1,000 metres

N

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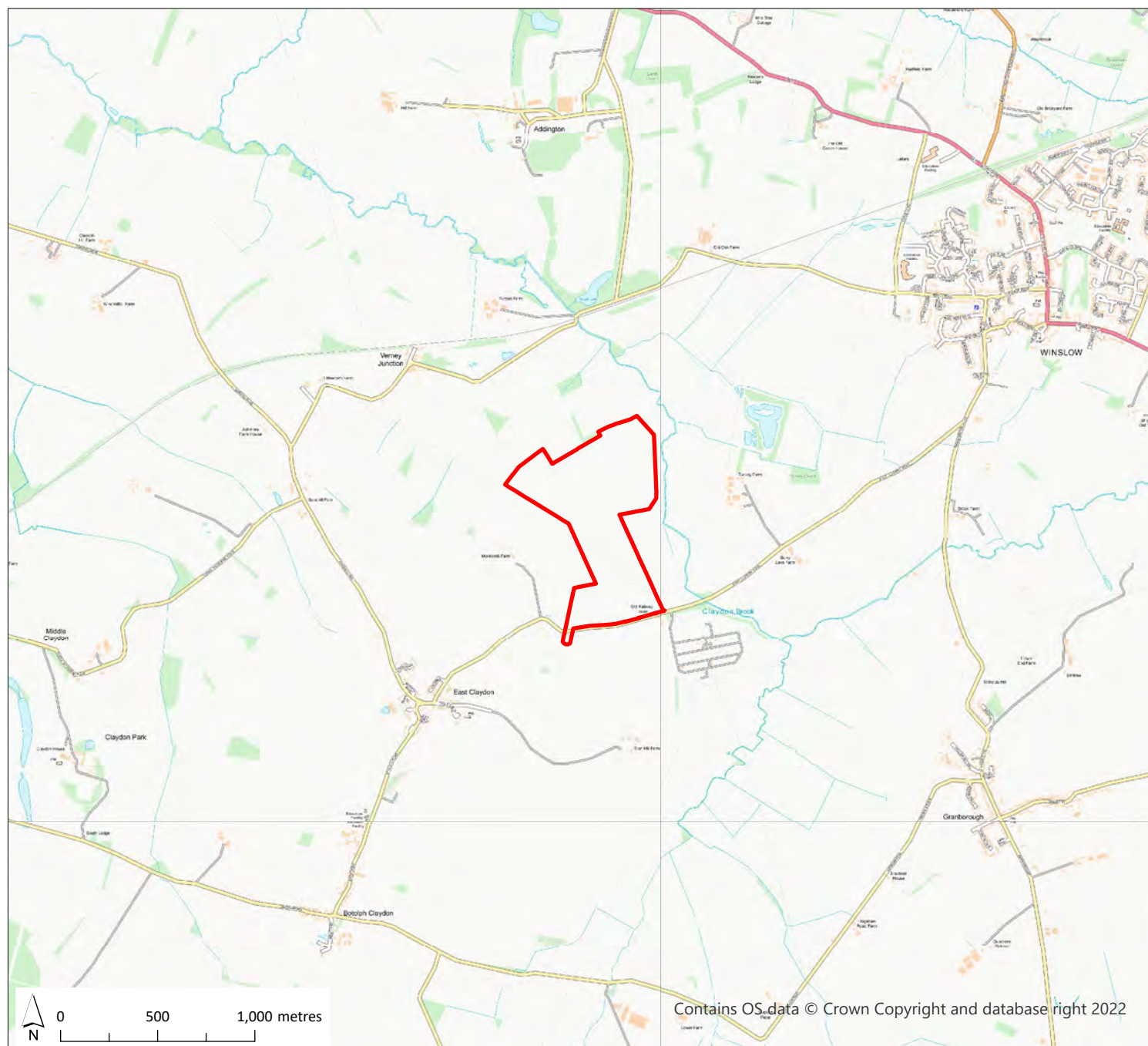
2 Biodiversity Metric Calculations

Introduction

2.1   The biodiversity impact of the proposed development has been assessed using the Statutory Biodiversity Metric calculation tool[2], which compares the relative biodiversity value of the habitats before and after development. The metric assesses the impact on hedgerows independently from area habitats. The full Statutory Biodiversity Metric calculator is provided as a separate Excel spreadsheet.

Baseline Conditions

2.2   The Site's habitat baseline was based on a habitat survey carried out by AE in May 2024 as part of an ecological assessment completed to inform development planning[3]. During this survey, condition assessments were carried out on all relevant habitats to enable a Biodiversity Net Gain (BNG) assessment to be carried out.

2.3   The baseline habitats were subsequently digitised using a Geographical Information System (ArcGIS Pro) as shown in **Figure 2.1**.

2.4   The Site comprised a central strip of **other woodland; broadleaved** (moderate condition), **arable field margins** (n/a) and **various hedgerows** that separated the eastern and western sections of the Site. The eastern section comprised sheep grazed pasture classed as **modified grassland** in poor condition, while the eastern sections comprised **cereal crops** (n/a). Occasional **individual trees** were present around the Site, but trees were mostly confined to hedgerows meaning they were only classed as individual trees if they were medium sized or larger and planned to be removed.

2.5   Habitat condition assessments of the baseline habitats are provided in **Appendix B**.

Habitat Units

2.6   Overall, the baseline habitat value of the Site was calculated as **90.09 habitat units** as detailed in **Table 2.1** below.

Table 2.1: Baseline habitats.

Habitat (UKHab)	Distinctiveness (score)	Condition (score)	Area (ha)	Habitat unit value
Cropland: Arable field margins cultivated annually	Medium (4)	Condition Assessment N/A	1.959	7.84
Cropland: Cereal crops	Low (2)	Condition Assessment N/A	27.431	54.86
Grassland: Modified grassland	Low (2)	Poor	14.638	29.28
Grassland: Modified grassland	Low (2)	Moderate	0.239	0.98
Urban: Developed land; sealed surface	V. Low (0)	N/A - Other	0.026	0.00

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[2] Availabel from [Statutory biodiversity metric tools and guides - GOV.UK (www.gov.uk)](#) Accessed on 07/03/2025.

[3] AE (2024) *East Claydon Greener Grid Project – Ecology Report.* Produced for Statkraft UK Ltd. Dated 15/20/2024.

Habitat (UKHab)	Distinctiveness (score)	Condition (score)	Area (ha)	Habitat unit value
Woodland and forest: Other woodland; broadleaved	Medium (4)	Moderate	0.648	5.18
Individual trees: Rural tree	Medium (4)	Good	0.037	0.44
Individual trees: Rural tree	Medium (4)	Moderate	0.065	0.52
Individual trees: Rural tree	Medium (4)	Poor	0.004	0.02
Total (Site area excludes area of individual trees)			**44.941**	**99.09**

Hedgerow Units

2.7   The baseline hedgerow value of the Site was calculated as **32.33 hedgerow units** as detailed in **Table 2.2** below, hedgerow numbers provided in **Table 2.2** relate to the condition assessment sheets in **Appendix B**.

Table 2.2: Baseline hedgerows.

Hedgerow Number	Hedgerow type (UKHab)	Distinctiveness (score)	Condition (score)	Length (km)	Hedgerow unit value
1	Native hedgerow	Low (2)	Poor (1)	0.830	1.66
2	Native hedgerow	Low (2)	Moderate (2)	0.169	0.68
3	Native hedgerow - associated with bank or ditch	Medium (4)	Poor (1)	0.048	0.19
4	Native hedgerow - associated with bank or ditch	Medium (4)	Moderate (2)	0.011	0.09
5	Native hedgerow with trees	Medium (4)	Moderate (2)	0.374	2.99
6	Native hedgerow with trees - associated with bank or ditch	High (6)	Moderate (2)	0.512	6.14
7	Species-rich native hedgerow with trees	High (6)	Moderate (2)	1.011	12.13
8	Species-rich native hedgerow with trees - associated with bank or ditch	V. High (8)	Moderate (2)	0.404	6.46
9	Species-rich native hedgerow with trees - associated with bank or ditch	V. High (8)	Poor (1)	0.248	1.98
Total					**32.33**

Development Impact and Post-Intervention Habitats

2.8   The new habitats that will be created are as indicated by the General Arrangement Plan presented in **Appendix A** and summarised in the post-intervention habitat plan shown in **Figure 2.2**. However, some assumptions have been made regarding additional habitat provision to ensure the Development complies with Metric trading rules.

2.9   The General Arrangement Plan as shown in **Appendix A** provides insufficient creation of medium distinctiveness arable field margins, resulting in a trading loss for this habitat. It has been assumed that 1.037 ha (4.00 units) of **Cropland: Arable field margins cultivated annually** (automatically assigned to poor condition) will be provided to the east of the retained cropland as part of the Development to resolve this trading loss.

2.10   Relevant guidance and professional judgement have been used to assign suitable habitat creation to achieve the best possible outcomes in terms of post-intervention value.

2.11   Created habitats are mostly confined to the north of the Site and include extensive areas of "Grassland: Other neutral grassland" and "Woodland and forest: Other woodland; broadleaved", with areas of "Urban: Developed land; sealed surface", "Urban: Bioswale", and "Urban: Sustainable Drainage Feature". The south of the Site is largely expected to be retained apart from the creation of a strip of Cropland: Arable field margins in the east of the retained cropland and an entrance track from the southern boundary.

Habitat Units

2.12   The post-intervention habitats have a value of **157.07 habitat units** as detailed in **Table 2.3.**

2.13   The General Arrangement Plan presents areas of "Proposed native trees and shrub mix", these areas will most likely develop into woodland, and as such have been mapped as 'Woodland and forest: Other woodland; broadleaved'. This means that the heavy standard trees proposed to be planted in these areas cannot be counted as 'individual trees' but will instead be seen as a component of the woodland.

Table 2.3: Post-intervention habitats.

Habitat (UKHab)	Distinctiveness (score)	Condition (score)	Area (ha)	Habitat unit value
Retained habitats				
Cropland: Arable field margins cultivated annually	Medium (4)	Poor (1)	0.971	3.88
Cropland: Cereal crops	Low (2)	Poor (1)	15.017	30.03
Grassland: Modified grassland	Low (2)	Poor (1)	1.154	2.31
Grassland: Modified grassland	Low (2)	Moderate (2)	0.215	0.86
Woodland and forest: Other woodland; broadleaved	Medium (4)	Moderate (2)	0.620	4.96
Individual tree: Rural tree	Medium (4)	Good (3)	0.037	0.44
Individual tree: Rural tree	Medium (4)	Poor (1)	0.004	0.02
Created habitats				
Grassland: Modified grassland	Low (2)	Poor (1)	0.005	0.01
Grassland: Other neutral grassland	Medium (4)	Good (3)	9.516	79.97
Urban: Bioswale	Low (2)	Moderate (2)	0.266	0.69
Urban: Developed land; sealed surface	V. Low (0)	N/A (0)	9.753	0.00
Urban: Sustainable drainage system	Low (2)	Moderate (2)	0.303	0.73
Woodland and forest: Other woodland; broadleaved	Medium (4)	Moderate (2)	6.083	28.52
Individual trees: Urban tree	Medium (4)	Moderate (2)	0.212	0.65
Cropland: Arable field margins cultivated annually *	Medium (4)	N/A (1)	1.037	4.00
Total (Site area excludes area of individual trees)			**44.941**	**157.07**
*Not shown on General Arrangement Plan but assumed to be created to resolve trading losses.				

2.14   There are many ways for each habitat type to achieve its required condition. As such, no specific management recommendations are provided; however, metric requirements are described below, and condition assessment sheets are provided in **Appendix C**.

Grassland: Modified grassland

2.15   The poor condition modified grassland does not need to meet any specific condition assessment requirements. However, the moderate condition modified grassland must have at least six species per m^2, including two forbs (criterion A), and meet three more condition assessment criteria.

Grassland: Other neutral grassland

2.16   For the other neutral grassland to achieve good condition it must support over 10 species per m^2 (criterion F), be a good example of other neutral grassland (criterion A) and also meet three additional condition assessment criteria.

Urban: Bioswale and Urban: Sustainable drainage system

2.17   For the drainage features to achieve moderate condition, they must meet at least three of the condition assessment criteria. While good condition may be possible in these areas, due to a lack of detailed management and planting descriptions, they have been assumed to achieve moderate condition.

Woodland and forest: Other woodland; broadleaved

2.18   The woodland condition assessment comprises 13 condition assessment criteria, these are each scored one to three depending on the extent that the woodland achieves the respective criterion. A minimum score of 26 is required to achieve moderate condition. This can generally be achieved by minimising browsing pressure and planting native species with a rotational coppice of the scrub and trees to provide a varied structure and areas of open space to increase floral species diversity. It is considered likely that this woodland will achieve moderate condition.

Individual trees: Urban tree

2.19   Individual trees must meet at least three condition assessment criteria to achieve moderate condition. It is recommended that native species are planted over areas of grassland and managed in a way that minimises human or agricultural activity, such as excessive pruning.

Cropland: Arable field margins cultivated annually

2.20   Arable field margins are assumed to be planted in the south of the Site to resolve trading losses from habitat loss in the north. However, any habitat within the 'Cropland' broad habitat type can be used and will result in the same BNG outcome. These habitats are:

- Arable field margins game bird mix,
- Arable field margins pollen and nectar,
- Arable field margins tussocky.

Hedgerow Units

2.21   The post-intervention hedgerow value for the Site is **35.64 hedgerow units** as detailed in **Table 2.4** below and presented in **Figure 2.2**.

Table 2.4: Post-intervention hedgerows.

Hedgerow type (UKHab)	Distinctiveness (score)	Condition (score)	Length (km)	Hedgerow unit value
Enhanced hedgerows				
Native hedgerow to Species-rich native hedgerow	Low (2) to medium (4)	Poor (1) to Good (3)	0.398	4.13
Native hedgerow with trees - associated with bank or ditch to Species-rich native hedgerow with trees - associated with bank or ditch	High (6) to V. High (8)	Moderate (2) to good (3)	1.162	3.57
Retained hedgerows				
Native hedgerow	Low (2)	Poor (1)	0.175	0.35
Native hedgerow	Low (2)	Moderate (2)	0.169	0.68
Native hedgerow - associated with bank or ditch	Medium (4)	Poor (1)	0.048	0.19
Native hedgerow - associated with bank or ditch	Medium (4)	Moderate (2)	0.011	0.09
Native hedgerow with trees	Medium (4)	Moderate (2)	0.366	2.93
Native hedgerow with trees - associated with bank or ditch	High (6)	Moderate (2)	0.342	4.10
Species-rich native hedgerow with trees	High (6)	Moderate (2)	0.991	11.89
Species-rich native hedgerow with trees - associated with bank or ditch	V. High (8)	Moderate (2)	0.366	5.86
Species-rich native hedgerow with trees - associated with bank or ditch	V. High (8)	Poor (1)	0.244	1.95
Total				**35.64**

On-Site Outcome

2.22   The BNG assessment for the Development, using the General Arrangement Plan with additional creation of arable field margins, results in a **net gain of +57.97 habitat units**, which corresponds to a **net biodiversity gain of +58.50 %.**

2.23   The assessment also results in a **net gain of 3.31 hedgerow units**, which represents a **net biodiversity gain of +10.24 %.**

2.24   It is important to note, this result is dependent on the provision of 1.037 ha of medium distinctiveness cropland habitat such as 'Cropland: Arable field margins cultivated annually'. If this is not created, the Development will be associated with a trading loss for medium distinctiveness cropland habitat.

East Claydon Greener Grid Project

Baseline habitat map

- ▭ Site boundary
- Cropland: Arable field margins cultivated annually (n/a)
- Cropland: Cereal crops (n/a)
- Grassland: Modified grassland (moderate)
- Grassland: Modified grassland (poor)
- Urban: Developed land; sealed surface (n/a)
- Woodland and forest: Other woodland, broadleaved (moderate)
- Native hedgerow (moderate)
- Native hedgerow (poor)
- Native hedgerow associated with bank or ditch (poor)
- Native hedgerow associated with bank or ditch (moderate)
- Native hedgerow with trees (moderate)
- Native hedgerow with trees associated with bank or ditch (moderate)
- Species-rich native hedgerow with trees (moderate)
- Species-rich native hedgerow with trees associated with bank or ditch (moderate)
- Species-rich native hedgerow with trees associated with bank or ditch (poor)
- ● individual tree: Rural tree

Figure 2.1

Map Scale @ A4:   1:7,250

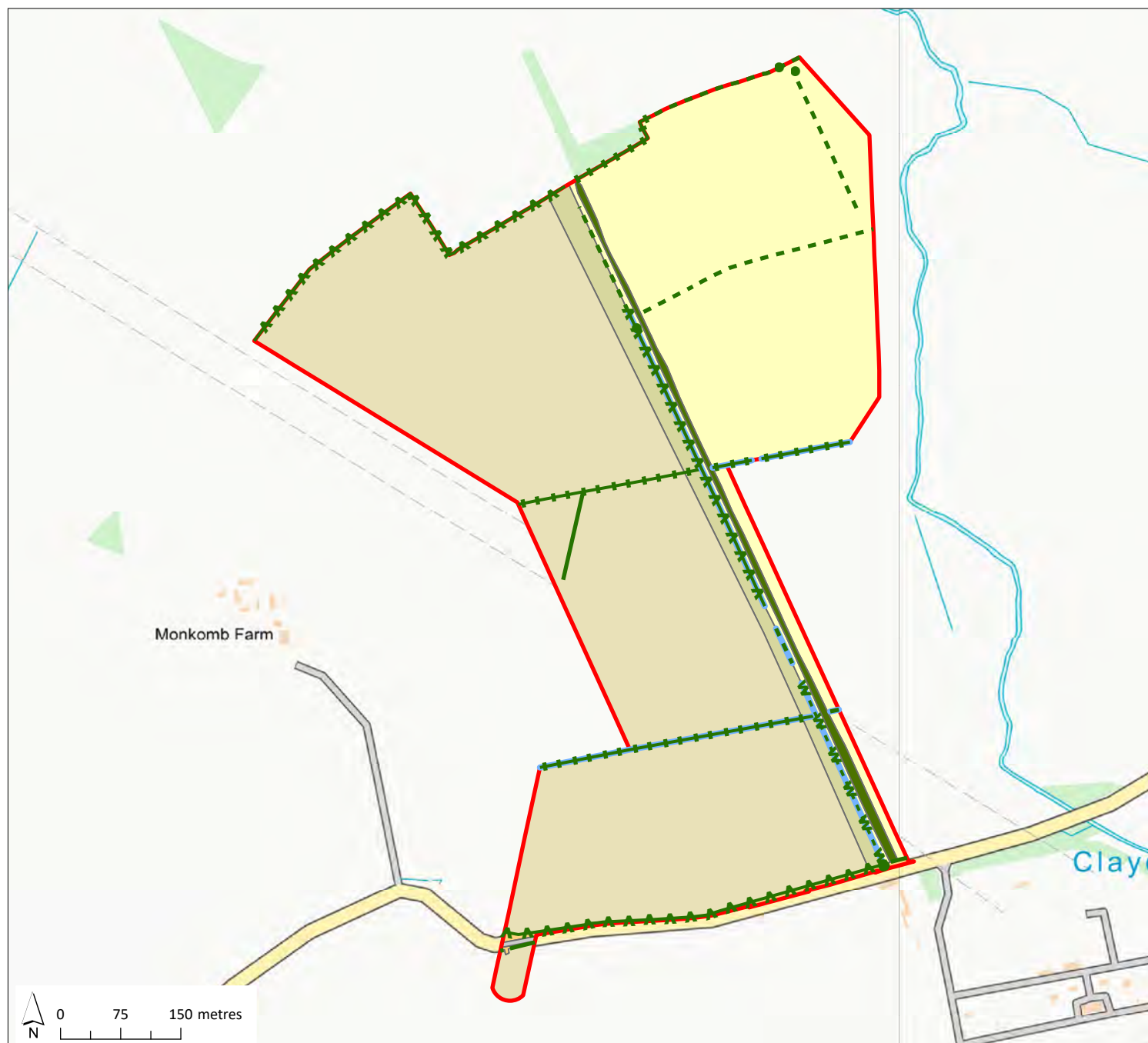| Surveyed by: RD, DP	
Survey date: 10 May 2024	
Drawn by: NB	APPLIED ECOLOGY
Checked by: DP	
Status: Final	

Monkomb Farm

Clayd

0   75   150 metres

N

AEL2270_01-13-04_BaselineMap_20250411 A4 11/04/2025

East Claydon Greener Grid Project

Post-intervention habitat map

— Site boundary
retained - Cropland: Arable field margins cultivated annually (n/a)
new - Cropland: Arable field margins cultivated annually (n/a)
retained - Cropland: Cereal crops (n/a)
retained - Grassland: Modified grassland (moderate)
new - Grassland: Modified grassland (moderate)
retained - Grassland: Modified grassland (poor)
new - Grassland: Other neutral grassland (good0
new - Urban: Bioswale (moderate)
new - Urban: Developed land; sealed surface (n/a)
new - Urban: Sustainable drainage feature (moderate)
new - Woodland and forest: Other woodland; broadleaved (moderate)
retained - Woodland and forest: Other woodland; broadleaved (moderate)
retained - Native hedgerow (moderate)
retained - Native hedgerow (poor)
retained - Native hedgerow associated with bank or ditch (poor)
retained - Native hedgerow associated with bank or ditch (moderate)
retained - Native hedgerow with trees (moderate)
retained - Native hedgerow with trees associated with bank or ditch (moderate)
retained - Species-rich native hedgerow with trees (moderate)
retained - Species-rich native hedgerow with trees associated with bank or ditch (moderate)
retained - Species-rich native hedgerow with trees associated with bank or ditch (poor)
enhanced - Native hedgerow to Species-rich native hedgerow (poor to good)
enhanced - Native hedgerow with trees associated with bank or ditch to Species-rich native hedgerow with trees associated with bank or ditch (moderate to good)
new - Individual tree: Rural tree
retained - Individual tree: Rural tree

Figure 2.2

Map Scale @ A4:   1:7,250

| Surveyed by: n/a |
| Survey date: n/a |
| Drawn by: NB |
| Checked by: DP |
| Status: Final |

APPLIED ECOLOGY

AEL2270_01-12-05_PostDevMap_20250411 A4 11/04/2025

Appendix A

General Arrangement Plan

KEY

—— **Application Site Boundary**

Hard Landscape

Vehicular Asphalt Surface
To engineer specification & recommendation

Proposed Permeable Gravel
To engineer specification & recommendation

Natural Looking Surface Material
To engineer specification & recommendation

Noise Attenuation Wall
To engineer specification & recommendation

Palisade Fence
To engineer specification & recommendation

Stockproof Fence
To engineer specification & recommendation

Soft Landscape

Existing Mature Vegetation
Approximate, extent to be confirmed.

Existing Vegetation Removed
Approximate, extent to be confirmed.

Proposed Native Tree and Shrub Mix

Proposed Wildflower Meadow
Seeded mix.

Proposed SUD Basin
To drainage engineer's specification.

Proposed Swale
Wet wildflower meadow seeded mix

Minimum 560m of existing hedge to be retained and enhance

Minimum 560m of existing hedge to be retained and enhance

Minimum 560m of existing hedge to be retained and enhance

400kV 25m easement

132kV 12m easement

Monkomb Farm

East Claydon Road

East Claydon Road

Notes:-

REV.	DATE	DESCRIPTION	DRAWN	CHK'D
P07	23/04/25	UPDATE	IG	SW
P06	10/04/25	UPDATE	TH	ME
P05	10/03/25	UPDATE	TH	ME
P04	05/03/25	UPDATE	TH	ME
P03	16/12/24	UPDATE TO SITE BOUNDARY	ME	SW
P02	10/10/24	UPDATE	TH	SW
P01	09/10/24	FIRST ISSUE	TH	SW

Client:	STATKRAFT	
Project:	EAST CLAYDON, BUCKINGHAMSHIRE	
Drawn:	TH	
Checked:	SW	
Approved:	SA	
Date:	09/10/24	
Issue:	PLANNING	
Title:	GENERAL ARRANGEMENT PLAN	
Dwg No:	UG_2507_LAN_GA_DRW_102	
Scale @ A1:	1:2000	
Revision:	P07	

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Appendix B

Baseline Habitat Condition Assessments

Grassland: Modified grassland – poor

Condition assessment criterion		Criterion passed?
A	Six to eight vascular plant species per m2 including at least two forbs?	n
B	Varied sward height?	n
C	Scrub accounts for <20 % of total grassland area?	y
D	Physical damage evident in <5 % of total grassland area?	n
E	Bare ground cover between 1 % and 10 %?	n
F	<20 % bracken Pteridium aquilinum cover?	y
G	Absence of invasive non-native plant species?	y
	Condition:	Poor (1)

Grassland: Modified grassland – moderate

Condition assessment criterion		Criterion passed?
A	Six to eight vascular plant species per m2 including at least two forbs?	y
B	Varied sward height?	n
C	Scrub accounts for <20 % of total grassland area?	y
D	Physical damage evident in <5 % of total grassland area?	n
E	Bare ground cover between 1 % and 10 %?	y
F	<20 % bracken Pteridium aquilinum cover?	y
G	Absence of invasive non-native plant species?	y
	Condition:	Moderate (2)

Woodland and forest: Other woodland; broadleaved - moderate

Condition assessment criterion		Score
A	Age distribution of trees.	2
B	Wild, domestic, and feral herbivore damage.	1
C	Presence of invasive plant species.	3
D	Number of native tree species.	3
E	Cover of native tree and shrub species.	3
F	Open space within woodland.	3
G	Woodland regeneration.	1
H	Tree health (mortality, pests, diseases, and crown dieback).	2
I	Vegetation and ground flora.	1
J	Vertical structure of woodland.	2
K	Presence of veteran trees.	2
L	Amount of deadwood.	3
M	Woodland disturbance (nutrient enrichment and damaged ground).	1
Total score		27

Condition (score)	Moderate (2)

Individual tree: Rural tree – poor

	Condition assessment criterion	Criterion passed?
A	Native tree?	y
B	Continuous tree canopy? (individual trees automatically pass this criterion).	n
C	Tree is mature?	n
D	Little or no evidence of an adverse impact on tree health by human activities?	n
E	Natural ecological niches present?	n
F	More than 20 % canopy is oversailing vegetation?	y
	Condition:	Poor (1)

Individual tree: Rural tree – moderate

	Condition assessment criterion	Criterion passed?
A	Native tree?	y
B	Continuous tree canopy? (individual trees automatically pass this criterion).	n
C	Tree is mature?	y
D	Little or no evidence of an adverse impact on tree health by human activities?	y
E	Natural ecological niches present?	n
F	More than 20 % canopy is oversailing vegetation?	y
	Condition:	Moderate (2)

Individual tree: Rural tree – good

	Condition assessment criterion	Criterion passed?
A	Native tree?	y
B	Continuous tree canopy? (individual trees automatically pass this criterion).	y
C	Tree is mature?	y
D	Little or no evidence of an adverse impact on tree health by human activities?	y
E	Natural ecological niches present?	y
F	More than 20 % canopy is oversailing vegetation?	y
	Condition:	Good (3)

Native hedgerows

Hedgerow number		1	2	3	4
Condition assessment criterion		**Criterion passed?**	**Criterion passed?**	**Criterion passed?**	**Criterion passed?**
A1	Average height >1.5 m?	y	y	y	y
A2	Average width > 1.5 m?	y	y	n	y
B1	Gap between ground and base of canopy <0.5 m for >90 % of length?	n	n	n	n
B2	Gaps make up <10 % of total length; and no canopy gaps >5 m?	n	y	n	y
C1	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90 % of length?	n	y	y	y
C2	Plant species indicative of nutrient enrichment of soils dominate <20 % cover of undisturbed ground?	n	n	n	n
D1	>90 % of hedgerow and undisturbed ground free of invasive non-native plant species?	y	y	y	y
D2	>90% of hedgerow or undisturbed ground free of damage caused by human activities?	n	n	n	n
	Condition:	Moderate (2)	Moderate (2)	Moderate (2)	Moderate (2)

Native hedgerows with trees

Hedgerow number		5	6	7	8	9
Condition assessment criterion		Criterion passed?	Criterion passed?	Criterion passed?	Criterion passed?	Criterion passed?
A1	Average height >1.5 m?	y	y	y	y	y
A2	Average width > 1.5 m?	y	y	y	y	y
B1	Gap between ground and base of canopy <0.5 m for >90 % of length?	y	y	y	y	n
B2	Gaps make up <10 % of total length; and no canopy gaps >5 m?	y	y	y	y	y
C1	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90 % of length?	y	y	n	y	y
C2	Plant species indicative of nutrient enrichment of soils dominate <20 % cover of undisturbed ground?	n	n	n	n	n
D1	>90 % of hedgerow and undisturbed ground free of invasive non-native plant species?	y	y	y	y	y
D2	>90% of hedgerow or undisturbed ground free of damage caused by human activities?	n	n	n	n	n
E1	>1 age class of tree and at least one mature, ancient, or veteran tree per 20 m - 50 m on average?	n	n	n	n	n
E2	At least 95 % of hedgerow trees in healthy condition?	y	y	n	n	n
	Condition:	Moderate (2)	Moderate (2)	Moderate (2)	Moderate (2)	Poor (1)

Appendix C

Habitat Condition Assessment criteria

Grassland: Modified grassland

Condition Sheet: GRASSLAND Habitat Type (low distinctiveness)	
Condition Assessment Criteria	
A	There are 6–8 vascular plant species per m^2 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. 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 insects, birds and small mammals to live and breed.
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble *Rubus fruticosus* 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 *Pteridium aquilinum* is less than 20%.
G	There is an absence of invasive non-native plant species[3] (as listed on Schedule 9 of WCA[4])

Condition Assessment Result (out of 7 criteria)	Condition Assessment Score
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)

Notes
Footnote 1 – Creeping thistle *Cirsium arvense*, spear thistle *Cirsium vulgare*, curled dock *Rumex crispus*, broad-leaved dock *Rumex obtusifolius*, common nettle *Urtica dioica*, creeping buttercup *Ranunculus repens*, greater plantain *Plantago major*, white clover *Trifolium repens* and cow parsley *Anthriscus sylvestris*.
Footnote 2 – For example, this could include small, scattered areas of bare ground allowing establishment of new species, or localised patches where not exceeding 10% cover.
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).

Grassland: Other neutral grassland

Condition Sheet: GRASSLAND Habitat Type (medium, high and very high distinctiveness)	
Condition Assessment Criteria	
A	The parcel represents a good example of its habitat type with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type (and relevant to Footnote 3 suboptimal species which may be listed in the UKHab description)[1]. Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.
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 insects, birds and small mammals to live and breed.
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens[2].
D	Cover of bracken *Pteridium aquilinum* is less than 20% and cover of scrub (including bramble *Rubus fruticosus* agg.) is less than 5%.
E	Combined cover of species indicative of sub-optimal condition[3] 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[4] (as listed on Schedule 9 of WCA[5]) are present, this criterion is automatically failed.
Additional criterion – must be assessed or all non-acid grassland types	
F	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 3 and 4 cannot contribute towards this count). Note - this criterion is essential for achieving Good condition for non-acid grassland types only

Condition Assessment Result	Condition Assessment Score
Acid Grassland Types (Result out of 5 criteria)	
Passes 5 criteria	Good (3)
Passes 3 or 4 criteria	Moderate (2)
Passes 2 or fewer criteria	Poor (1)
Non-acid Grassland Types (Result out of 6 criteria)	
Passes 5 or 6 criteria, including essential criterion A and additional criterion F.	Good (3)
Passes 3–5 criteria, including essential criterion A.	Moderate (2)
Passes 2 or fewer criteria; OR Passes 3 or 4 criteria excluding criterion A and F.	Poor (1)

Notes
Footnote 1 – Professional judgment should be used alongside the UKHab description.   **Footnote 2** – For example, this could include small, scattered areas of bare ground allowing for plant colonisation, or localised patches not exceeding 5% cover.   **Footnote 3** – Species indicative of sub-optimal condition for this habitat type include: creeping thistle *Cirsium arvense*, spear thistle *Cirsium vulgare*, curled dock *Rumex crispus*, broad-leaved dock *Rumex obtusifolius*, common nettle *Urtica dioica*, creeping buttercup *Ranunculus repens*, greater plantain *Plantago major*, white clover *Trifolium repens* and cow parsley *Anthriscus sylvestris*. There may be additional relevant species local to the region and or site.   **Footnote 4** – 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, by applying professional judgement.   **Footnote 5** – Wildlife and Countryside Act 1981 (as amended).

Urban: Bioswale and Urban: Sustainable drainage feature

Condition Sheet: URBAN Habitat Type	
Condition Assessment Criteria	
A	Vegetation structure is varied, providing opportunities for vertebrates and invertebrates to live, eat and breed. A single structural habitat component or vegetation type does not account for more than 80% of the total habitat area.
B	The habitat parcel contains different plant species that are beneficial for wildlife, for example flowering species providing nectar sources for a range of invertebrates at different times of year.
C	Invasive non-native plant species (listed on Schedule 9 of WCA[1]) and others which are to the detriment of native wildlife (using professional judgement)[2] cover less than 5% of the total vegetated area[3]. Note - to achieve Good condition, this criterion must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).
D2	The parcel contains pools of water such as permanent and ephemeral waterbodies.
Additional Criteria – must be assessed for Bioswale and SuDS habitat types only:	
E1	Plant species are mostly native. If non-native species are present, they should not be detrimental to the habitat or native wildlife[4].
E2	The vegetation is comprised of plant species suited to wetland or riparian situations.

Condition Assessment Result	Condition Assessment Score
Results for Bioswale or SuDS (requiring assessment of 5 criteria – core criteria plus additional criteria specified for habitat type)	
Passes all 3 core criteria; AND Meets the requirements for Good condition within criterion C; AND Passes all additional criteria relevant to specific habitat type (E).	Good (3)
Passes 3 or 4 of 5 criteria; OR Passes 5 of 5 criteria but does not meet the requirements for Good condition within criterion C.	Moderate (2)
Passes 2 or fewer of 5 criteria.	Poor (1)

Notes
Footnote 1 – Wildlife and Countryside Act 1981 (as amended).. **Footnote 2** – Sources of information about detrimental non-native species can be found on the GB Non-native Species Secretariat (GBNNSS) website: Home » NNSS (nonnativespecies.org) and Natural England Access to Evidence page should also be checked for up-to-date information: Horizon-scanning for invasive non-native plants in Great Britain - NECR053 (naturalengland.org.uk) For criterion C – For green roof habitat types only – buddleia *Buddleja davidii* should be assessed alongside Schedule 9 species. This species impairs the health of the local ecosystem and reduces the biodiversity potential of the roof. It is also a sign that a roof has not been planted and seeded correctly in subsequent years. **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** – Use professional judgement. Sources of additional information about non-native wildlife can be found online at the GBNNSS website: Alternative plants » NNSS (nonnativespecies.org)

Woodland and forest: Other woodland; broadleaved

Condition Sheet: WOODLAND Habitat Types			
Condition Assessment Criteria			
Indicator	**Good (3 points)**	**Moderate (2 points)**	**Poor (1 point)**
A	**Age distribution of trees**	Three age-classes[1] present.	Two age-classes[1] present.	One age-class[1] present.
B	**Wild, domestic and feral herbivore damage**	No significant browsing damage evident in woodland[2].	Evidence of significant browsing pressure is present in 40% or less of whole woodland[2].	Evidence of significant browsing pressure is present in 40% or more of whole woodland[2].
C	**Invasive plant species**	No invasive species[3] present in woodland.	Rhododendron Rhododendron ponticum or cherry laurel Prunus laurocerasus not present, other invasive species[3] <10% cover.	Rhododendron or cherry laurel present, or other invasive species[3] >10% cover.
D	**Number of native tree species**	Five or more native tree or shrub species[4] found across woodland parcel.	Three to four native tree or shrub species[4] found across woodland parcel.	Two or less native tree or shrub species[4] across woodland parcel.
E	**Cover of native tree and shrub species**	>80% of canopy trees and >80% of understory shrubs are native[5].	50 - 80% of canopy trees and 50–80% of understory shrubs are native[5].	<50% of canopy trees and <50% of understory shrubs are native[5].
F	**Open space within woodland**	10–20% of woodland has areas of temporary open space[6].	21–40% of woodland has areas of temporary open space[6].	"<10% or >40% of woodland has areas of temporary open space[6].
G	**Woodland regeneration**	All three classes present in woodland[8]; trees 4–7 cm Diameter at Breast Height (DBH), saplings and seedlings or advanced coppice regrowth.	One or two classes only present in woodland[8].	No classes or coppice regrowth present in woodland[8].
H	**Tree health**	Tree mortality less than 10%, no pests or diseases and no crown dieback[9].	11% to 25% mortality and/or crown dieback or low-risk pest or disease present[9].	Greater than 25% tree mortality and or any high-risk pest or disease present[9].
I	**Vegetation and ground flora**	Recognisable NVC plant community[10] at ground layer present, strongly characterised by ancient woodland flora specialists.	Recognisable woodland NVC plant community[10] at ground layer present.	No recognisable woodland NVC plant community[10] at ground layer present.
J	**Woodland vertical structure**	Three or more storeys across all survey plots or a complex woodland[11].	Two storeys across all survey plots[11].	One or less storey across all survey plots[11].
K	**Veteran trees**	Two or more veteran trees[12] per hectare.	One veteran tree[12] per hectare.	No veteran trees[12] present in woodland.
L	**Amount of deadwood**	50% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, branch stubs and stumps,	Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, stubs and stumps,	Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, stubs and stumps,

		or an abundance of small cavities[13].	or an abundance of small cavities[13].	or an abundance of small cavities[13].
M	**Woodland disturbance**	No nutrient enrichment or damaged ground evident[14].	Less than 1 hectare in total of nutrient enrichment across woodland area and or less than 20% of woodland area has damaged ground[14].	More than 1 hectare of nutrient enrichment and or more than 20% of woodland area has damaged ground[14].

Condition assessment result	Condition Assessment Score
Total score >32 (33 to 39)	Good (3)
Total score 26 to 32	Moderate (2)
Total score <26 (13 to 25)	Poor (1)

Notes

Footnotes below refer to the EWBG woodland condition assessment methodology: EWBG (No date). Assessing your Woodland's Condition [online]. Available from:

Woodland Wildlife Toolkit (sylva.org.uk)

When applying this condition sheet, good practice would be to use the methodology associated with the EWBG toolkit.

Footnote 1 – See EWBG method INDICATOR 1 for more information. If tree species is not a birch *Betula* sp., cherry *Prunus* sp. or *Sorbus* sp.: 0–20 years (Young); 21–150 years (Intermediate); and >150 years (Old). For birch, cherry or Sorbus species; 0–20 years = Young; 21–60 years =Intermediate; >60 years = Old. A recognisable age-class should be a consistent recognisable layer across the woodland or stand being assessed. Presence of a few saplings would not indicate that the woodland has an 'age-class' of young trees.

Footnote 2 – See EWBG method INDICATOR 2 for more information. Browsing pressure is considered to be significant where >20% of vegetation visible within each survey plot shows damage from any type of browsing pressure listed.

Footnote 3 – See EWBG method INDICATOR 3 for more information. Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly.

Check for the presence of all plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), particularly the following invasive non-native species: American skunk cabbage *Lysichiton americanus*; Himalayan balsam *Impatiens glandulifera*; Japanese knotweed *Reynoutria japonica*; cherry laurel *Prunus laurocerasus*; shallon *Gaultheria shallon*; snowberry *Symphoricarpos albus*; variegated yellow archangel *Lamiastrum galeobdolon* subsp. *argentatum*; rhododendron *Rhododendron ponticum*; and tree-of-heaven *Ailanthus altissima*.

Footnote 4 – See EWBG method INDICATOR 4 and Table 2 for more information. The number of different native tree or shrub species including young trees and shrubs. A list of commonly found native tree and shrub species is provided in Table 2. Not all species listed are native to all parts of the UK. Note a list of commonly found non-native tree species are also included and should be recorded if present.

Footnote 5 – See EWBG method INDICATOR 5 and for more information. The abundance of native tree species in upper (>5 m) and understorey (up to 5 m) layers including young trees and shrubs.

"**Footnote 6** - See EWBG method INDICATOR 6 for more information. Open space within woodland in this context is temporary open space in which trees can be expected to regenerate (for example, glades, rides, footpaths, areas of clear-fell). This differs from permanent open space where tree regeneration is not possible or desirable (for example, tarmac, buildings, rivers). Area is at least 10 m wide with less than 20% covered by shrubs or trees.

Footnote 7 – Given the increased ratio of edge habitat to woodland where the woodland is <10 ha.

Footnote 8 – See EWBG method INDICATOR 8 for more information. This indicator measures regeneration potential of the woodland by considering three classes: seedlings; saplings; and young trees of 4–7 cm DBH. All three classes would fall in the 'young' category of the 'age distribution of trees' indicator, but the regeneration indicator gathers additional information by considering regeneration potential - if seedlings, saplings and young trees are all present that means natural regeneration processes are happening.

Footnote 9 – See EWBG method INDICATOR 9 for more information and Table 3 for a list of diseases and pests and their risk level.

Footnote 10 – See EWBG method INDICATOR 10 directing to NVC key for more information. The 'UKHab to NVC translation table' in the UK Habitat Classification resources may also be useful to assess this."

Footnote 11 – This criterion looks at structural diversity and is useful to understand in conjunction with the age of trees in a woodland. Vertical structure is defined as the number of canopy storeys present. Possible storey values are: 1) Upper; 2) Complex: recorded when the stand is composed of multiple tree heights that cannot easily be stratified into broad height bands (such as upper, middle or lower); 3) Middle; 4) Lower; and 5) Shrub layer. There might be no storeys where the woodland has been felled. See EWBG INDICATOR 11 for more information.

Footnote 12 – See EWBG method INDICATOR 12 for more information. See gov.uk standing advice on ancient and veteran trees. Available from:

Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk) and: Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk)

Footnote 13 – See EWBG method INDICATOR 13 for more information. This includes logs, large dead branches on the forest floor and stumps (<1 m tall) >20 cm diameter at narrowest point and >50 cm long. Also includes standing dead trees (>1 m tall) and also deadwood on standing live trees. Diameter is measured at the narrowest point on the stem. Minimum diameter of 20 cm.

Footnote 14 – See EWBG method INDICATOR 15 for more information. Examples of disturbance are: significant nutrient enrichment; soil compaction from trampling, machinery, animal poaching or litter.

Individual trees: Rural trees

Condition Sheet: INDIVIDUAL TREES Habitat Type	
Condition Assessment Criteria	
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).
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.
Condition Assessment Result	**Condition Assessment Score**
Passes 5 or 6 criteria.	Good (3)
Passes 3–5 criteria.	Moderate (2)
Passes 2 or fewer criteria.	Poor (1)
Note that 'Fairly Good' and 'Fairly Poor' condition categories are not available for this habitat type.	
Footnote 1 – See gov.uk standing advice on ancient and veteran trees. Available from: Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk) And: Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk)	
Footnote 2 – Enhancement of this habitat type is only possible by improving the habitat so that it meets all Criteria B, D and F. It is not possible or appropriate to enhance individual tree/s through meeting just one or two of those Criteria, nor by meeting Criteria A, C or E.	

Hedgerows

Condition Sheet: HEDGEROW Habitat Types		
Condition Assessment Criteria		
Attributes and functional groupings (A, B, C, D and E)	**Criteria – the minimum requirements for 'favourable condition'**	**Description**
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).
A1	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 *Prunus spinosa* 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).
B2	Gap – hedger 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).
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).
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.

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 *Urtica* spp., cleavers *Galium aparine* and docks *Rumex* spp. Their presence, either singly or together, does not exceed the 20% cover threshold.
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 WCA3) 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].
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)
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 20–50 m 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.
E2	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.

Condition category requirements for hedgerows without trees	Condition Assessment Score
No more than 2 failures in total; AND No more than 1 failure in any functional group.	Good (3)
No more than 4 failures in total; AND Does not fail both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 and C2 = Moderate condition).	Moderate (2)
Fails a total of more than 4 attributes; OR Fails both attributes in more than one functional group (e.g., fails attributes A1, A2, B1 and B2 = Poor condition)	Poor (1)
Condition category requirements for hedgerows with trees	**Condition Assessment Score**
No more than 2 failures in total; AND No more than 1 failure in any functional group	Good (3)
No more than 5 failures in total; AND	Moderate (2)

Does not fail both attributes in more than one functional group (e.g., fails attributes A1, A2, B1, C2 and E1 = Moderate condition).	
Fails a total of more than 5 attributes; OR Fails both attributes in more than one functional group (e.g., fails attributes A1, A2, B1 and B2 = Poor condition).	Poor (1)

Notes
Footnote 1 – DEFRA (2007) Hedgerow Survey Handbook. A standard procedure for local surveys in the UK. [online] Available on: layout (hedgelink.org.uk)
Footnote 2 – STALEY, J.T. ET AL. (2020) Definition of Favourable Conservation Status for Hedgerows. [online] Available on: Definition of Favourable Conservation Status for Hedgerows - RP2943 (naturalengland.org.uk)
Footnote 3 – Wildlife and Countryside Act 1981 (as amended).
Footnote 4 – CHEFFINGS, C. M. et al. (2005) The Vascular Plant Red Data List for Great Britain. Species Status 7: 1-116. [online] Available on: The Vascular Plant Red Data List for Great Britain (Species Status No. 7) | JNCC Resource Hub
Footnote 5 – BOTANICAL SOCIETY OF BRITAIN AND IRELAND (BSBI). Definitions: wild, native or alien? [online] Available on: Definitions: wild, native or alien? – Botanical Society of Britain & Ireland (bsbi.org)
Footnote 6 – BSBI and Biological Records Centre (BRC) (2022) Online Atlas of the British and Irish Flora. [online] Available on: Acknowledgements | Online Atlas of the British and Irish Flora (brc.ac.uk)
Footnote 7 – GB NON-NATIVE SPECIES SECRETARIAT (GBNNSS) (2022) Available on: Home » NNSS (nonnativespecies.org)
Footnote 8 – See gov.uk standing advice on ancient and veteran trees. Available from: Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk) and Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk)