

Gateway House, Pilsworth Road, Bury BL9 8RD

ASSESSMENT OF BIODIVERSITY NET GAIN

March 2024

ERAP (Consultant Ecologists) Ltd reference: 2023-026

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Document Control

Survey Type:	Surveyors	Survey Date(s)
UK Habitat Classification Survey (including Condition Assessments of on and off-site habitats)	Victoria Burrows B.Sc. (Hons) M.Sc. CEnv MCIEEM Principal Ecologist	18 th September 2023
Reporting	Personnel	Date
Author	Victoria Burrows B.Sc. (Hons) M.Sc. CEnv MCIEEM	1 st March 2024
Signature(s)		
Checked by	Rachel Brown B.Sc. (Hons)	15 th March 2024
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1.0 INTRODUCTION

1.1 Background and Rationale

- 1.1.1 ERAP (Consultant Ecologists) Ltd has carried out an assessment of Biodiversity Net Gain (BNG) at land at Gateway House, Pilsworth Road, Bury BL9 8RD (hereafter the 'site'). The Ordnance Survey (OS) grid reference at the centre of the site is SD 8196 0860.
- 1.1.2 The assessment was requested to inform a planning application proposing a "*Single storey extension of existing industrial unit (Class B2/B8) including recladding of the existing building roof; Externally will include storage tanks, extension to existing site access points, new service yard, additional cycle and car parking with electrical vehicle charging spaces with associated infrastructure and new external seating area*".
- 1.1.3 This Assessment of BNG has been prepared to provide an assessment of the biodiversity value of the baseline of the site, an assessment of the value of post-development habitats based on the site proposals and landscape strategy, and provides guidance in relation to the requirements to attain a net gain in accordance with accordance with *Biodiversity Net Gain: Good Practice Principles for Development* (CIEEM, 2016).
- 1.1.4 The report advises on the application of the Mitigation Hierarchy in relation to the design of the site and advises on how compliance with Chapter 15, paragraph 180(d) of the *National Planning Policy Framework* (NPPF) (Department for Levelling Up, Housing and Communities, 2023)¹ can be achieved, which states '*opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate*' can be accommodated by the site.

1.2 Scope of Study

- 1.2.1 This report has been prepared to accompany a completed assessment of BNG using *The Biodiversity Metric 4.0 Calculation Tool (JP039)* (Natural England, 2023). The completed Microsoft Excel spreadsheet assessment is presented as a separate document, entitled '*ERAP Ltd 2023-026 Biodiversity Metric 4.0 Calculation Tool Gateway House 01.03.24*', hereafter referred to as the 'BNG Metric'.
- 1.2.2 It is intended that this report provides a transparent assessment to demonstrate the calculation of net gain, based on the reasonable parameters assumed for the proposals (refer to **Section 2.3**). This approach has been applied on a number of other sites ERAP (Consultant Ecologists) Ltd has assisted with and has been accepted by the relevant Local Planning Authorities (LPA) and their ecological advisors to enable a planning application to progress.

1.3 Site Description

- 1.3.1 An aerial image of the site and the off-site area is appended at **Figure 1**.
- 1.3.2 The total site area is **1.53 hectares²**.
- 1.3.3 A parcel of land within the same land ownership and located to the east of the site has been proposed as off-site area for habitat creation and enhancement. The total area of the off-site area is **0.79 hectares**. The OS grid references at the centre of the off-site area is SD 82072 08635.
- 1.3.4 The habitats present within the site are described and assessed in *2023-026 Gateway House, Pilsworth Road, Bury BL9 8RD, Ecological Survey and Assessment* (ERAP (Consultant Ecologists) Ltd, 2023), hereafter referred to as the 'ecology report'.

¹Hereafter the NPPF

² As measured by ERAP (Consultant Ecologists) Ltd; detail on the methods used to measure the area of the site and off site area are presented at **Section 2.0**.

1.4 Proposed Development Description and Application of the Mitigation Hierarchy

- 1.4.1 It is proposed to extend the existing Gateway House building to the south.
- 1.4.2 To accommodate the proposals, which include the construction of building extension of a size that meets the operational needs of the occupier and to achieve the relevant site levels, the need to remove all the grassland, scrub, scattered trees and Bramble scrub within the site boundary is unavoidable. The opportunity for the creation of a buffer and margin suitable for landscape planting / compensatory planting has been achieved by the installation of a retaining wall at the southern margin. The extent of tree removal and tree protection is shown on the *Tree Protection and Retention Plan* (TPM Landscape, 2023).
- 1.4.3 Ecological guidance has been provided to the design team to inform the preparation of the *Landscape Layout* (TPM Landscape, 2023) and the *Planting Plan* (TPM Landscape, 2023). In accordance with the mitigation hierarchy, as removal of vegetation is unavoidable, the landscape proposals aim to maintain habitat connectivity around the margins of the site and to compensate for the loss of scrub habitats by the planting of native scrub with scattered trees. Compensation for the loss of the grassland habitats can be secured by enhancement of off-site grasslands, as described in **Section 4.0** and **Figure 5**.

2.0 METHOD OF SURVEY

2.1 Habitat Assessment and Mapping

Baseline Habitats

- 2.1.1 A Phase 1 Habitat Survey including an assessment in accordance with the UKHab and condition assessments of the habitats present within the site and within the off-site area was carried out by Victoria Burrows B.Sc. (Hons) M.Sc. CEnv MCIEEM on 18th September 2023. The weather was overcast with a light air (Beaufort scale 1) and an air temperature of 16°C.
- 2.1.2 On site habitat mapping was assisted via use of GPS technology, using a topographical survey plan (Survey and Engineering Projects, 2022) and ESRI World Imagery as base plans. This plan has been provided to ERAP (Consultant Ecologists) Ltd without spatial referencing; the plan has been inputted into QGIS and an affine transformation completed to ensure they are accurate in accordance with ESRI.
- 2.1.3 Each of the habitats within the site and the off-site compensation area has been assessed in accordance with the UKHab to determine each habitat type present. This has allowed a reliable classification of habitats in accordance with those used by the BNG Metric.
- 2.1.4 The UKHab has been designed to function at two scales: fine scale (25m² or 5 metres length) and large scale (400m² or 20m² length). It has been considered for the purposes of this survey (where the UKHab has been used to inform the BNG calculation of a relatively small area) that a finer scale of 5m² is appropriate for the classification of habitats.
- 2.1.5 A plan showing the baseline habitats present within the site in accordance with UKHab symbology is appended at **Figure 2**. The off-site baseline habitats are shown at **Figure 4**.
- 2.1.6 Condition Assessments for each of the habitats present within the site and off-site areas have been completed in accordance with *The Biodiversity Metric 4.0 – Technical Annex 1: Condition Assessment Sheets and Methodology* (Natural England, March 2023) (refer to **Section 7.2**).

Post-development Habitats

- 2.1.7 The post development habitats have been calculated using the *Landscape Layout* (TPM Landscape, 2023). This plan was provided to ERAP (Consultant Ecologists) Ltd as a spatially referenced .dwg file; the file has been converted to .dxf format and inputted into QGIS.

- 2.1.8 Plans showing the proposed habitats (both on and off-site areas) in accordance with UKHab symbology is appended at **Figures 3 and 5** and target condition assessments for each of the proposed habitats are appended at **Section 7.3**.

2.2 Survey Limitations

- 2.2.1 No survey limitations were experienced. All areas of the site were fully accessible.

2.3 Evaluation Methods and Rules Applied

Habitats and Assessment

- 2.3.1 Habitats have been assessed to determine whether they meet those described in *UK Biodiversity Action Plan: Priority Habitat Descriptions* (Maddock, A (ed), 2008); these lists are used to help draw up the statutory lists of Priority Habitats, as required under Section 41 of the *Natural Environment and Rural Communities (NERC) Act 2006*. Where suitable, the ecological value of the habitats present have been assessed using the terms outlined in *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine* (CIEEM, 2018).
- 2.3.2 QGIS has been used to calculate the total area / length of each baseline habitat present within the site and the area / length of the proposed habitats at the site.
- 2.3.3 Each habitat and individual trees have been assessed to determine whether they are 'irreplaceable habitat', defined in *National Planning Policy Framework* (Department for Levelling Up, Housing and Communities, 2023)³ as '*Habitats which would be technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed, taking into account their age, uniqueness, species diversity or rarity. They include ancient woodland, ancient and veteran trees, blanket bog, limestone pavement, sand dunes, salt marsh and lowland fen*'. The further detail presented in *The Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024* (GOV.UK, 2023) draft document has also been referred to.
- 2.3.4 Existing and retained individual trees have been measured using their root protection areas. Proposed urban trees have been measured using their specification on the *Landscape Layout* and the Tree Helper provided within the BNG Metric.

Assumptions

- 2.3.5 Reasonable assumptions have been made in relation to the condition assessments for the proposed habitats at the site; the proposed condition assessment for each habitat is appended at **Section 7.3**. Long-term management of the proposed habitats is required to secure the proposed condition.

3.0 SURVEY RESULTS

3.1 Site Description

On Site Habitats

- 3.1.1 Refer to **Figure 2**. The site is described in the ecology report as follows:

'Gateway House is located at the south-eastern margin of Pilsworth Industrial Estate on the western side of the M66 motorway. The approximately 0.77 hectare footprint of the proposed building extension is characterised by a mosaic of hard-standing, neutral grassland, marshy grassland, Bramble scrub and mixed scrub with scattered trees.'

³Hereafter the NPPF

- 3.1.2 The site has no statutory or non-statutory designation for nature conservation. The strategic significance applied for all habitats in the BNG Metric is 'Area/compensation not in local strategy/ no local strategy' which equates to a 'low' strategic significance.

Off-site Areas Proposed as Compensation

- 3.1.3 Refer to **Figure 4**. The off-site area currently comprises areas of neutral grassland, Bramble scrub, mixed scrub and tall-herb vegetation.
- 3.1.4 Photographs of the off-site areas proposed for compensation are appended at **Section 7.1**.

3.2 Assessment of Baseline Habitats

On Site Habitats

- 3.2.1 **Table 3.1** provides a summary of the habitats present, their condition assessment result and their area within the site. Condition assessments for each habitat are appended at **Section 7.2**.

Table 3.1: Summary of Baseline Area Based Habitats within Site

Habitat Reference	UK Habitat Classification Type	BNG Habitat Equivalent	Condition Assessment Result	Area (ha)
Habitat 1 Neutral grassland	g3c other neutral grassland with the secondary code 64 mown	Grassland – other neutral grassland	Moderate	0.1419
Habitat 2 Marshy grassland	g3c8 Holcus-Juncus neutral grassland with the secondary code 77 neglected and 16 tall-herb.	Grassland – other neutral grassland	Moderate	0.0641
Habitat 3 Mixed scrub	h3h mixed scrub with the secondary codes 48 non-native (due to the high cover of Indian Balsam), 11 scattered trees and 77 neglected (unmanaged for 3 to 10 years).	Heathland and scrub – mixed scrub	Poor	0.4454
Habitat 4 Bramble scrub	h3d Bramble scrub with the secondary code 77 neglected (unmanaged for 3 to 10 years).	Heathland and scrub - Bramble scrub	Condition assessment N/A	0.0283
Habitat 5 Hard-standing	u1b developed land; sealed surface	Urban – developed land; sealed surface	N/A other	0.0599
Habitat 6 Building	u15b buildings.	Urban – developed land; sealed surface	N/A other	0.7909
Total:				1.53

- 3.2.2 The baseline BNG score for the site is provided at **Section 5.0**, below.

Off-site Areas

- 3.2.3 **Table 3.2** provides a summary of the habitats present, their condition assessment result and their total area. Note that no hedgerow or river habitats are present at the off-site areas.

Table 3.2: Summary of Baseline Area Based Habitats within the Off-site Area

Habitat Reference	UK Habitat Classification Type	BNG Habitat Equivalent	Condition Assessment Result	Area (ha)
Habitat Off 1 Tall-herb vegetation	g3c other neutral grassland with the secondary code 16 tall-herb	Grassland – Other neutral grassland	Poor	0.0183
Habitat Off 2 Marshy grassland	g3c8 Holcus-Juncus neutral grassland with the secondary code 77 neglected and 16 tall-herb.	Grassland – other neutral grassland	Moderate	0.0207
Habitat Off 3 Bramble scrub	h3d Bramble scrub with the secondary code 77 neglected (unmanaged for 3 to 10 years).	Heathland and scrub - Bramble scrub	Condition assessment N/A	0.0656
Habitat Off 4 Mixed scrub	h3h mixed scrub with the secondary codes 48 non-native (due to the high cover of Indian Balsam), 11 scattered trees and 77 neglected (unmanaged for 3 to 10 years).	Heathland and scrub – mixed scrub	Poor	0.4433
Habitat Off 5 Mixed scrub	h3h mixed scrub with the secondary code 77 neglected (unmanaged for 3 to 10 years).	Heathland and scrub – mixed scrub	Poor	0.1031
Habitat Off 6 Other neutral grassland	g3c other neutral grassland with the secondary code 77 neglected (unmanaged for 3 to 10 years).	Grassland – other neutral grassland	Moderate	0.1171
Habitat Off 7 Gorse scrub	h3e Gorse scrub	Heathland and scrub – Gorse scrub	Poor	0.0053
Habitat Off 8 Other neutral grassland	g3c other neutral grassland with the secondary code 77 neglected (unmanaged for 3 to 10 years).	Grassland – other neutral grassland	Moderate	0.0118
Total:				0.79

3.2.4 The baseline BNG score for the off-site areas of compensation is provided at **Section 5.0**, below.

4.0 POST DEVELOPMENT HABITATS

4.1 Consideration of Target Condition Assessments

- 4.1.1 Target condition assessments for each of the proposed habitats on-site as specified on the *Landscape Layout* are presented at **Section 7.3**.
- 4.1.2 Target condition assessments for each of the enhanced and proposed off-site habitats, as annotated on **Figure 5**, are presented at **Section 7.3**.
- 4.1.3 A long-term habitat management plan with an appropriate monitoring regime is required to secure the condition of these habitats in the long-term.

4.2 Consideration of Proposed On-site Habitats

- 4.2.1 The *Landscape Layout* shows that 0.1405 ha of the 1.53ha site (i.e. 9%) will be landscape planted to the following habitats :
 - a. Habitat A: Proposed Flowering Meadow Mix (Germinal GB WFG2 (or similar));
 - b. Habitat B: Mixed native scrub composed of Hawthorn (*Crataegus monogyna*), Hazel (*Corylus avellana*), Blackthorn (*Prunus spinosa*), Elder (*Sambucus nigra*) and Guelder Rose (*Viburnum opulus*) with Silver Birch (*Betula pendula*) trees;
 - c. Habitat C: Introduced shrubs (refer to the *Planting Plan* (TPM Landscape, 2023); and

- d. Habitat E: 12 trees over grassland characterised by Magnolia, Amelanchier, Rowan and Silver Birch.

Table 4.1: Summary of Area-based Habitats to be and Created at the Site

Habitat Type	BNG Equivalent Habitat	Target Condition	Area (ha)
Proposed Habitats			
Habitat A WFG2 wildflower grassland	Grassland – Other neutral grassland	Moderate	0.0198
Habitat B Native scrub	Heathland and scrub – Mixed scrub	Moderate	0.1123
Habitat C Introduced shrub	Urban – Introduced shrub	N/a	0.0084
Habitat D Building and hard-standing	Urban – Developed land; sealed surface	N/a	1.3901
Total			1.53

Table 4.2: Summary of Individual Trees to be Created at the Site

Habitat Reference	BNG Habitat Equivalent	Target Condition	Area (ha) ⁴
Proposed Habitats			
Urban trees (12, small size)	Urban – urban trees	Moderate	0.0489
Total			0.0489

4.3 Consideration of Off-site Area

- 4.3.1 As annotated on **Figure 5** and shown in **Table 4.3** the following actions are proposed to secure a net gain for biodiversity at the site (and to satisfy the trading rules). Please note: Long-term management of the proposed habitats is required to secure the target habitats and condition:

- Habitat Off 1: Tall-herb vegetation to be enhanced by stripping and overseeding with the WFG2 Wildflower grassland to achieve other neutral grassland in 'good' condition;
- Habitat Off 2: Marshy grassland in 'moderate' condition to be brought into active management to secure 'good' condition;
- Habitat Off 3: Bramble scrub to be removed and the area will be seeded with the WFG2 wildflower grassland to achieve other neutral grassland in 'good' condition (Habitat Off B);
- Habitat Off 4: Mixed scrub in 'poor' condition. 0.3858ha of which to be enhanced to 'moderate' condition by management involving the creation of glades and rides and the control of Indian Balsam and 0.0575ha to be removed and seeded with the WFG2 wildflower grassland to achieve other neutral grassland in 'good' condition; (Habitat Off A);
- Habitat Off 5: Mixed scrub in 'poor' condition to be enhanced to 'moderate' condition by management involving the creation of glades and rides and the control of Indian Balsam
- Habitat Off 6: Other neutral grassland in 'moderate' condition to be enhance to 'good' condition;
- Habitat Off 7: Gorse scrub to be retained
- Habitat Off 8: Other neutral grassland in 'moderate' condition to be enhance to 'good' condition.

⁴ Small urban trees have a diameter at breast height (DBH) of up to 30cm, medium urban trees have a DBH of 30 to 90cm, and large urban trees have a DBH of more than 90cm. Due to the way individual trees are calculated by the metric they do not contribute to the total habitat area calculation, but are additional to it.

Table 4.3: Summary of Area-based Habitats to be Retained, Enhanced and Created at the Off-Site Area

Habitat Type	BNG Equivalent Habitat	Target Condition	Area (ha)
Retained Habitats			
Habitat Off 7 Gorse scrub	Heathland and scrub – Gorse scrub	Poor	0.0053
Enhanced Habitats			
Habitat Off 1 Tall-herb vegetation	Grassland – Other neutral grassland	Poor to Good	0.0183
Habitat Off 2 Marshy grassland	Grassland – Other neutral grassland	Moderate to Good	0.0207
Habitat Off 4 Mixed scrub	Heathland and scrub – Mixed scrub	Poor to Moderate	0.3858
Habitat Off 5 Mixed scrub	Heathland and scrub – Mixed scrub	Poor to Moderate	0.1031
Habitat Off 6 Other neutral grassland	Grassland – Other neutral grassland	Moderate to Good	0.1171
Habitat Off 8 Other neutral grassland	Grassland – Other neutral grassland	Moderate to Good	0.0118
Proposed Habitats			
Habitat Off A WFG2 Wildflower grassland	Grassland – Other neutral grassland	Good	0.0575
Habitat Off B WFG2 Wildflower grassland	Grassland – Other neutral grassland	Good	0.0656
Total			0.79

5.0 HEADLINE RESULTS, EVALUATION AND CONCLUSION

5.1 The headline results of the BNG Calculator are presented at **Table 5.1** below.

Table 5.1: Results of Biodiversity Metric 4.0 Calculation Tool

On-site Baseline	Habitat units	3.54	
	Hedgerow units	0.00	
	Watercourse units	0.00	
On-site Post Intervention	Habitat units	1.05	
	Hedgerow units	0.00	
	Watercourse units	0.00	
On-site net change (units % percentage)	Habitat units	-2.49	-70.36%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%
Off-site Baseline	Habitat units	3.74	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site Post Intervention	Habitat units	6.42	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site net change (units % percentage)	Habitat units	2.68	71.65%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%
Combined Net Unit Change	Habitat units	0.19	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Spatial Risk Multiplier (SRM) Reductions	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Total Net Unit Change	Habitat units	0.19	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Total Net % Change	Habitat units	5.26%	
	Hedgerow units	0.00%	
	Watercourse units	0.00%	

5.2 A net gain for biodiversity can be demonstrated in consideration of the combination of the landscape planting / habitat creation proposals at the site and with the proposed enhancement and long-term management of the off-site area. It is confirmed that the trading rules are satisfied.

5.3 It is recommended that a Long-term Ecological and Habitat Management Plan is prepared as part of the planning conditions / obligations at the site.

6.0 REFERENCES

- CIEEM, 2016. *Biodiversity Net Gain: Good Practice Principles for Development*, Winchester: CIEEM.
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7.0 APPENDIX: PHOTOGRAPHS, CONDITION ASSESSMENTS AND FIGURES

Refer to the ecology report for photographs of the on-site baseline habitats

7.1 Photographs of the Off-site Baseline Habitats

	
Photo 1: Tall-herb area (Habitat Off 1) to be enhanced to other neutral grassland / wildflower grassland	Photo 2: Grassland at Habitat Off 2 to be enhanced to other neutral grassland in 'good' condition by appropriate management
	
Photo 3: Neutral grassland at Habitat Off 6 to be managed to be enhanced to 'good' condition	Photo 4: Neutral grassland at Habitat Off 6 to be managed to be enhanced to 'good' condition, Gorse scrub (Habitat Off 7) to be retained and mixed scrub (Habitat Off 4) to be enhanced to 'moderate' condition

7.2 Condition Assessments of Baseline Habitats

On-site Habitats

Table 7.1: Condition Assessments for Other Neutral Grassland / Marshy Grassland On-site

Condition Assessment Criteria	Habitat 1: Other Neutral Grassland	Habitat 2: Marshy Grassland
A. 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. <i>Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.</i>	✓	✓
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.	x	x
C. Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens¹.	✓	✓
D. Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%.	✓	✓
E. Combined cover of species indicative of sub-optimal condition² 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 species³ (as listed on Schedule 9 of WCA) are present, this criterion is automatically failed.	✓	✓
Additional Group – non-acid grassland types only		
F. There are 10 or more vascular plant species per m2 present, including forbs that are characteristic of the habitat type (species referenced in Footnote 2 and 4 cannot contribute towards this count). <i>Note - this criterion is essential for achieving Good condition for non-acid grassland types only.</i>	✓ (12.2 species)	x (9 species)
Acid Grassland Types		
Good: passes 5 of 5 criteria	N/a	N/a
Moderate: passes 3 or 4 of 5 criteria	N/a	N/a
Poor: passes 0, 1 or 2 of 5 criteria	N/a	N/a
Non-acid Grassland Types		
Good: passes 5 or 6 criteria, including essential criteria A and additional criterion F	x	x
Moderate: passes 3, 4 or 5 criteria, including essential criterion A	✓	✓
Poor: passes 0, 1 or 2 of 6 criteria; OR passes 3 or 4 criteria excluding criterion A and F	x	x
Additional Information: 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 1 - Species indicative of sub-optimal condition for this habitat type include: Creeping Thistle (<i>Cirsium arvense</i>), Spear Thistle (<i>Cirsium vulgare</i>), Curled Dock (<i>Rumex crispus</i>), Broad-leaved Dock (<i>Rumex obtusifolius</i>), Common Nettle (<i>Urtica dioica</i>), Creeping Buttercup (<i>Ranunculus repens</i>), Greater Plantain (<i>Plantago major</i>), White Clover (<i>Trifolium repens</i>), Cow Parsley (<i>Anthriscus sylvestris</i>). 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, by applying professional judgement.		

Table 7.2: Condition Assessments for Mixed Scrub On-site

Condition Assessment Criteria	Habitat 3: Mixed Scrub
A. 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 species¹, with 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.	✓
B. Seedlings, saplings, young shrubs and mature (or ancient or veteran ²) shrubs are all present.	x
C. There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA) and species indicative of sub-optimal condition ⁵ make up less than 5% of ground cover.	x
D. The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	✓
E. There are clearings, glades or rides present within the scrub, providing sheltered edges.	x
Good: passes 5 of 5 criteria	x
Moderate: passes 3 or 4 of 5 criteria	x
Poor: passes 0, 1 or 2 of 5 criteria	✓
Additional Information: 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 <i>Keepers of time: ancient and native woodland and trees policy in England</i> (publishing.service.gov.uk) and <i>Ancient woodland, ancient trees and veteran trees: advice for making planning decisions</i> (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 5 - Species indicative of sub-optimal condition for this habitat type may include: non-native conifers, Tree-of-heaven (<i>Ailanthus altissima</i>), Holm Oak (<i>Quercus ilex</i>), European Turkey Oak (<i>Quercus cerris</i>), Cherry Laurel (<i>Prunus laurocerasus</i>), Snowberry (<i>Symphoricarpos</i> spp.), Shallon (<i>Gaultheria shallon</i>), American Skunk Cabbage (<i>Lysichiton americanus</i>), Buddleia (<i>Buddleja</i> spp.), Cotoneaster (<i>Cotoneaster</i> spp.), Spanish Bluebell (<i>Hyacinthoides hispanica</i>) and Hybrid Bluebells (<i>Hyacinthoides x massartiana</i>). There may be additional relevant species local to the region and or site.	

Off-site Area

Table 7.3: Condition Assessments for Other Neutral Grasslands Off-site

Condition Assessment Criteria	Habitat Off 1: Tall-herb	Habitat Off 2: Marshy Grassland	Habitat Off 6: Other Neutral Grassland	Habitat Off 8: Other Neutral Grassland
A. 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. <i>Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.</i>	x	✓	✓	✓
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.	x	x	x	x
C. Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens¹.	✓	✓	✓	✓
D. Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%.	✓	✓	✓	✓
E. Combined cover of species indicative of sub-optimal condition² 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 species³ (as listed on Schedule 9 of WCA) are present, this criterion is automatically failed.	✓	✓	✓	✓
Additional Group – non-acid grassland types only F. There are 10 or more vascular plant species per m² present, including forbs that are characteristic of the habitat type (species referenced in Footnote 2 and 4 cannot contribute towards this count). <i>Note - this criterion is essential for achieving Good condition for non-acid grassland types only.</i>	✓ (6 species)	x (9 species)	✓ (12 species)	✓ (10 species)
Acid Grassland Types				
Good: passes 5 of 5 criteria	N/a	N/a	N/a	N/a
Moderate: passes 3 or 4 of 5 criteria	N/a	N/a	N/a	N/a
Poor: passes 0, 1 or 2 of 5 criteria	N/a	N/a	N/a	N/a
Non-acid Grassland Types				
Good: passes 5 or 6 criteria, including essential criteria A and additional criterion F	x	x	x	x
Moderate: passes 3, 4 or 5 criteria, including essential criterion A	x	✓	✓	✓
Poor: passes 0, 1 or 2 of 6 criteria; OR passes 3 or 4 criteria excluding criterion A and F	✓	x	x	x
Additional Information: 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 1 - Species indicative of sub-optimal condition for this habitat type include: Creeping Thistle (<i>Cirsium arvense</i>), Spear Thistle (<i>Cirsium vulgare</i>), Curled Dock (<i>Rumex crispus</i>), Broad-leaved Dock (<i>Rumex obtusifolius</i>), Common Nettle (<i>Urtica dioica</i>), Creeping Buttercup (<i>Ranunculus repens</i>), Greater Plantain (<i>Plantago major</i>), White Clover (<i>Trifolium repens</i>), Cow Parsley (<i>Anthriscus sylvestris</i>). 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, by applying professional judgement.				

Table 7.4: Condition Assessments for Mixed Scrub Off-site

Condition Assessment Criteria	Habitat Off 4: Mixed Scrub	Habitat Off 5: Mixed Scrub	Habitat Off 7: Gorse Scrub
A. 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 (<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.	✓	✓	X
B. Seedlings, saplings, young shrubs and mature (or ancient or veteran ²) shrubs are all present.	X	X	X
C. There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA) and species indicative of sub-optimal condition ⁵ make up less than 5% of ground cover.	X	X	X
D. The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	✓	✓	✓
E. There are clearings, glades or rides present within the scrub, providing sheltered edges.	X	X	X
Good: passes 5 of 5 criteria	X	X	X
Moderate: passes 3 or 4 of 5 criteria	X	X	X
Poor: passes 0, 1 or 2 of 5 criteria	✓	✓	✓
Additional Information: 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 <i>Keepers of time: ancient and native woodland and trees policy in England</i> (publishing.service.gov.uk) and <i>Ancient woodland, ancient trees and veteran trees: advice for making planning decisions</i> (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 5 - Species indicative of sub-optimal condition for this habitat type may include: non-native conifers, Tree-of-heaven (<i>Ailanthus altissima</i>), Holm Oak (<i>Quercus ilex</i>), European Turkey Oak (<i>Quercus cerris</i>), Cherry Laurel (<i>Prunus laurocerasus</i>), Snowberry (<i>Symphoricarpos</i> spp.), Shallon (<i>Gaultheria shallon</i>), American Skunk Cabbage (<i>Lysichiton americanus</i>), Buddleia (<i>Buddleja</i> spp.), Cotoneaster (<i>Cotoneaster</i> spp.), Spanish Bluebell (<i>Hyacinthoides hispanica</i>) and Hybrid Bluebells (<i>Hyacinthoides x massartiana</i>). There may be additional relevant species local to the region and or site.			

7.3 Target Condition Assessments of Retained, Enhanced and Created Habitats

On-site Habitats

Table 7.5: Condition Assessments for WFG2 Wildflower Grassland On-site

Condition Assessment Criteria	Habitat A: Other Neutral Grassland / Wildflower grassland
A. 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. <i>Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.</i>	✓
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.	x
C. Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens¹.	x
D. Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%.	✓
E. Combined cover of species indicative of sub-optimal condition² 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 species³ (as listed on Schedule 9 of WCA) are present, this criterion is automatically failed.	✓
Additional Group – non-acid grassland types only	
F. There are 10 or more vascular plant species per m2 present, including forbs that are characteristic of the habitat type (species referenced in Footnote 2 and 4 cannot contribute towards this count). <i>Note - this criterion is essential for achieving Good condition for non-acid grassland types only.</i>	✓
Acid Grassland Types	
Good: passes 5 of 5 criteria	N/a
Moderate: passes 3 or 4 of 5 criteria	N/a
Poor: passes 0, 1 or 2 of 5 criteria	N/a
Non-acid Grassland Types	
Good: passes 5 or 6 criteria, including essential criteria A and additional criterion F	x
Moderate: passes 3, 4 or 5 criteria, including essential criterion A	✓
Poor: passes 0, 1 or 2 of 6 criteria; OR passes 3 or 4 criteria excluding criterion A and F	x
Additional Information: 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 1 - Species indicative of sub-optimal condition for this habitat type include: Creeping Thistle (<i>Cirsium arvense</i>), Spear Thistle (<i>Cirsium vulgare</i>), Curled Dock (<i>Rumex crispus</i>), Broad-leaved Dock (<i>Rumex obtusifolius</i>), Common Nettle (<i>Urtica dioica</i>), Creeping Buttercup (<i>Ranunculus repens</i>), Greater Plantain (<i>Plantago major</i>), White Clover (<i>Trifolium repens</i>), Cow Parsley (<i>Anthriscus sylvestris</i>). 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, by applying professional judgement.	

Table 7.6: Condition Assessments for Mixed Scrub On-site

Condition Assessment Criteria	Habitat B: Mixed Scrub
A. 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 (<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.	✓
B. Seedlings, saplings, young shrubs and mature (or ancient or veteran ²) shrubs are all present.	x
C. There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA) and species indicative of sub-optimal condition ⁵ make up less than 5% of ground cover.	✓
D. The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	✓
E. There are clearings, glades or rides present within the scrub, providing sheltered edges.	x
Good: passes 5 of 5 criteria	x
Moderate: passes 3 or 4 of 5 criteria	✓
Poor: passes 0, 1 or 2 of 5 criteria	x
Additional Information: 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 <i>Keepers of time: ancient and native woodland and trees policy in England</i> (publishing.service.gov.uk) and <i>Ancient woodland, ancient trees and veteran trees: advice for making planning decisions</i> (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 5 - Species indicative of sub-optimal condition for this habitat type may include: non-native conifers, Tree-of-heaven (<i>Ailanthus altissima</i>), Holm Oak (<i>Quercus ilex</i>), European Turkey Oak (<i>Quercus cerris</i>), Cherry Laurel (<i>Prunus laurocerasus</i>), Snowberry (<i>Symphoricarpos</i> spp.), Shalton (<i>Gaultheria shallon</i>), American Skunk Cabbage (<i>Lysichiton americanus</i>), Buddleia (<i>Buddleja</i> spp.), Cotoneaster (<i>Cotoneaster</i> spp.), Spanish Bluebell (<i>Hyacinthoides hispanica</i>) and Hybrid Bluebells (<i>Hyacinthoides x massartiana</i>). There may be additional relevant species local to the region and or site.	

Table 7.7: Condition Assessments for Individual Trees On-site

Condition Assessment Criteria	Habitat E: Individual Tree (non-native)	Habitat E: Individual Tree (native)
A. The tree is a native species (or more than 70% within the block are native species)	x	✓
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. Individual trees automatically pass this criterion.	✓	✓
C. The tree is mature (or more than 50% within the block are mature).	x	x
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.	x	x
F. More than 20% of the tree canopy area is oversailing vegetation beneath	✓	✓
Good: Passes 5 or 6 of 6 criteria	x	x
Moderate: Passes 3 or 4 of 6 criteria	✓	✓
Poor: Passes 0, 1 or 2 of 6 criteria	x	x
Additional information / definitions: Footnote 1 - See gov.uk standing advice on ancient and veteran trees. Available from: <i>Keepers of time: ancient and native woodland and trees policy in England</i> (publishing.service.gov.uk) and <i>Ancient woodland, ancient trees and veteran trees: advice for making planning decisions</i> (www.gov.uk)		

Off-site Area

Table 7.8: Condition Assessments for Other Neutral Grassland Off-site

Condition Assessment Criteria	Habitat Off 1: Wildflower grassland	Habitat Off 2: Marshy Grassland	Habitat Off 6: Other Neutral Grassland	Habitat Off 8: Other Neutral Grassland	Habitat Off A: Wildflower grassland	Habitat Off B: Wildflower grassland
A. 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. <i>Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.</i>	✓	✓	✓	✓	✓	✓
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.	✓	✓	✓	✓	✓	✓
C. Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens ¹ .	✓	✓	✓	✓	✓	✓
D. Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%.	✓	✓	✓	✓	✓	✓
E. Combined cover of species indicative of sub-optimal condition 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 ³ (as listed on Schedule 9 of WCA) are present, this criterion is automatically failed.	✓	✓	✓	✓	✓	✓
Additional Group – non-acid grassland types only						
F. There are 10 or more vascular plant species per m2 present, including forbs that are characteristic of the habitat type (species referenced in Footnote 2 and 4 cannot contribute towards this count). <i>Note - this criterion is essential for achieving Good condition for non-acid grassland types only.</i>	✓	✓	✓	✓	✓	✓
Acid Grassland Types						
Good: passes 5 of 5 criteria	N/a	N/a	N/a	N/a	N/a	N/a
Moderate: passes 3 or 4 of 5 criteria	N/a	N/a	N/a	N/a	N/a	N/a
Poor: passes 0, 1 or 2 of 5 criteria	N/a	N/a	N/a	N/a	N/a	N/a
Non-acid Grassland Types						
Good: passes 5 or 6 criteria, including essential criteria A and additional criterion F	✓	✓	✓	✓	✓	✓
Moderate: passes 3, 4 or 5 criteria, including essential criterion A	x	x	x	x	x	x
Poor: passes 0, 1 or 2 of 6 criteria; OR passes 3 or 4 criteria excluding criterion A and F	x	x	x	x	x	x
Additional Information:						
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 1 - Species indicative of sub-optimal condition for this habitat type include: Creeping Thistle (<i>Cirsium arvense</i>), Spear Thistle (<i>Cirsium vulgare</i>), Curled Dock (<i>Rumex crispus</i>), Broad-leaved Dock (<i>Rumex obtusifolius</i>), Common Nettle (<i>Urtica dioica</i>), Creeping Buttercup (<i>Ranunculus repens</i>), Greater Plantain (<i>Plantago major</i>), White Clover (<i>Trifolium repens</i>), Cow Parsley (<i>Anthriscus sylvestris</i>).						
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, by applying professional judgement.						

Table 7.9: Condition Assessments for Mixed Scrub Off-site

Condition Assessment Criteria	Habitat Off 4: Mixed Scrub	Habitat Off 5: Mixed Scrub	Habitat Off 7: Gorse Scrub
A. 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 species¹, with 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.	✓	✓	x
B. Seedlings, saplings, young shrubs and mature (or ancient or veteran²) shrubs are all present.	x	x	x
C. There is an absence of invasive non-native plant species³ (as listed on Schedule 9 of WCA) and species indicative of sub-optimal condition⁵ make up less than 5% of ground cover.	✓	✓	x
D. The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	✓	✓	✓
E. There are clearings, glades or rides present within the scrub, providing sheltered edges.	✓	✓	x
Good: passes 5 of 5 criteria	x	x	x
Moderate: passes 3 or 4 of 5 criteria	✓	✓	x
Poor: passes 0, 1 or 2 of 5 criteria	x	x	✓
Additional Information: 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 <i>Keepers of time: ancient and native woodland and trees policy in England</i> (publishing.service.gov.uk) and <i>Ancient woodland, ancient trees and veteran trees: advice for making planning decisions</i> (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 5 - Species indicative of sub-optimal condition for this habitat type may include: non-native conifers, Tree-of-heaven (<i>Alnus altissima</i>), Holm Oak (<i>Quercus ilex</i>), European Turkey Oak (<i>Quercus cerris</i>), Cherry Laurel (<i>Prunus laurocerasus</i>), Snowberry (<i>Symphoricarpos</i> spp.), Shalton (<i>Gaultheria shallon</i>), American Skunk Cabbage (<i>Lysichiton americanus</i>), Buddleia (<i>Buddleia</i> spp.), Cotoneaster (<i>Cotoneaster</i> spp.), Spanish Bluebell (<i>Hyacinthoides hispanica</i>) and Hybrid Bluebells (<i>Hyacinthoides x massartiana</i>). There may be additional relevant species local to the region and or site.			

7.4 Figures

Figure 1: Aerial Image of the Site and the Off-site Area

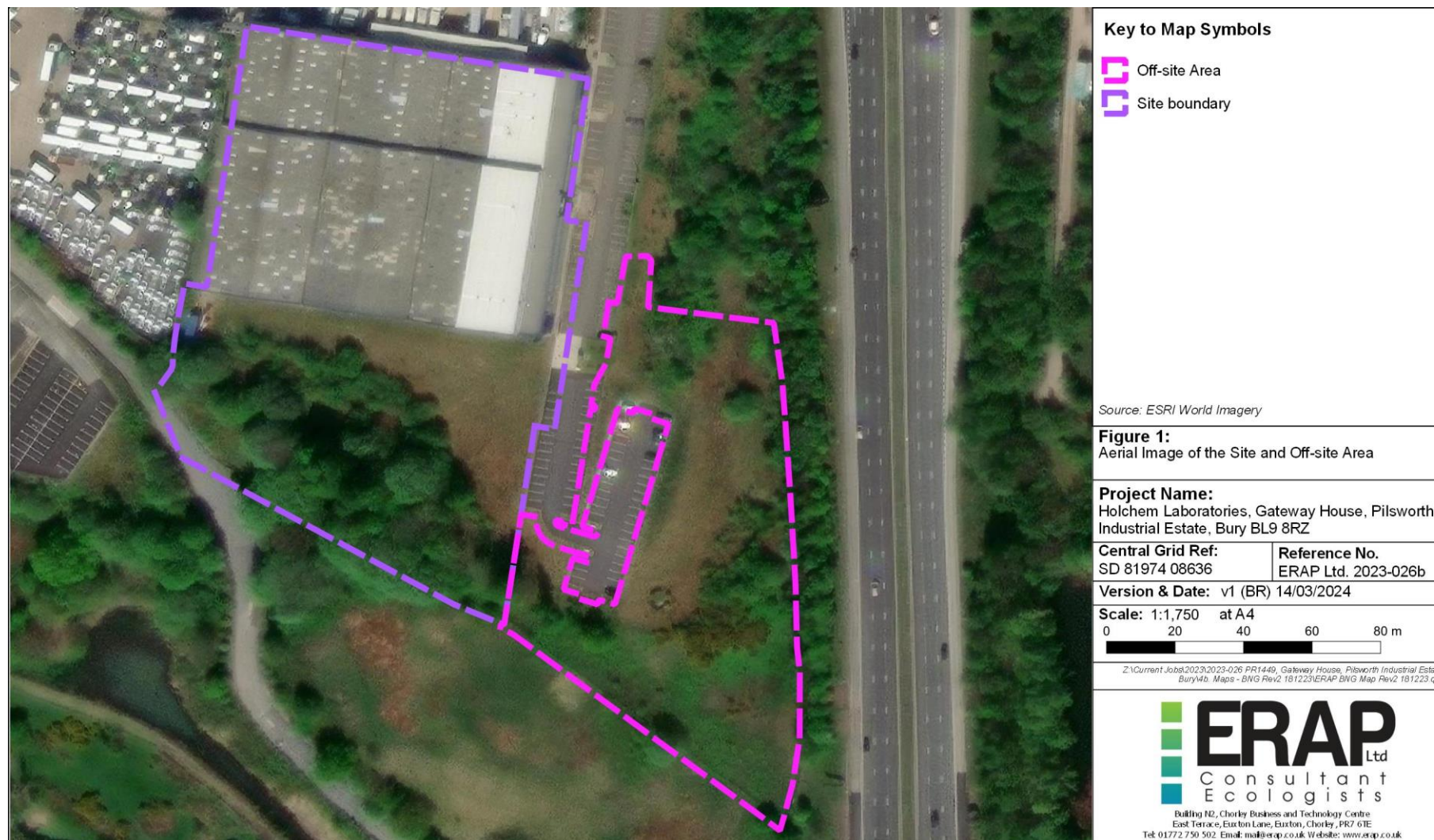


Figure 2: UKHab Plan of the Baseline Habitats within the Site

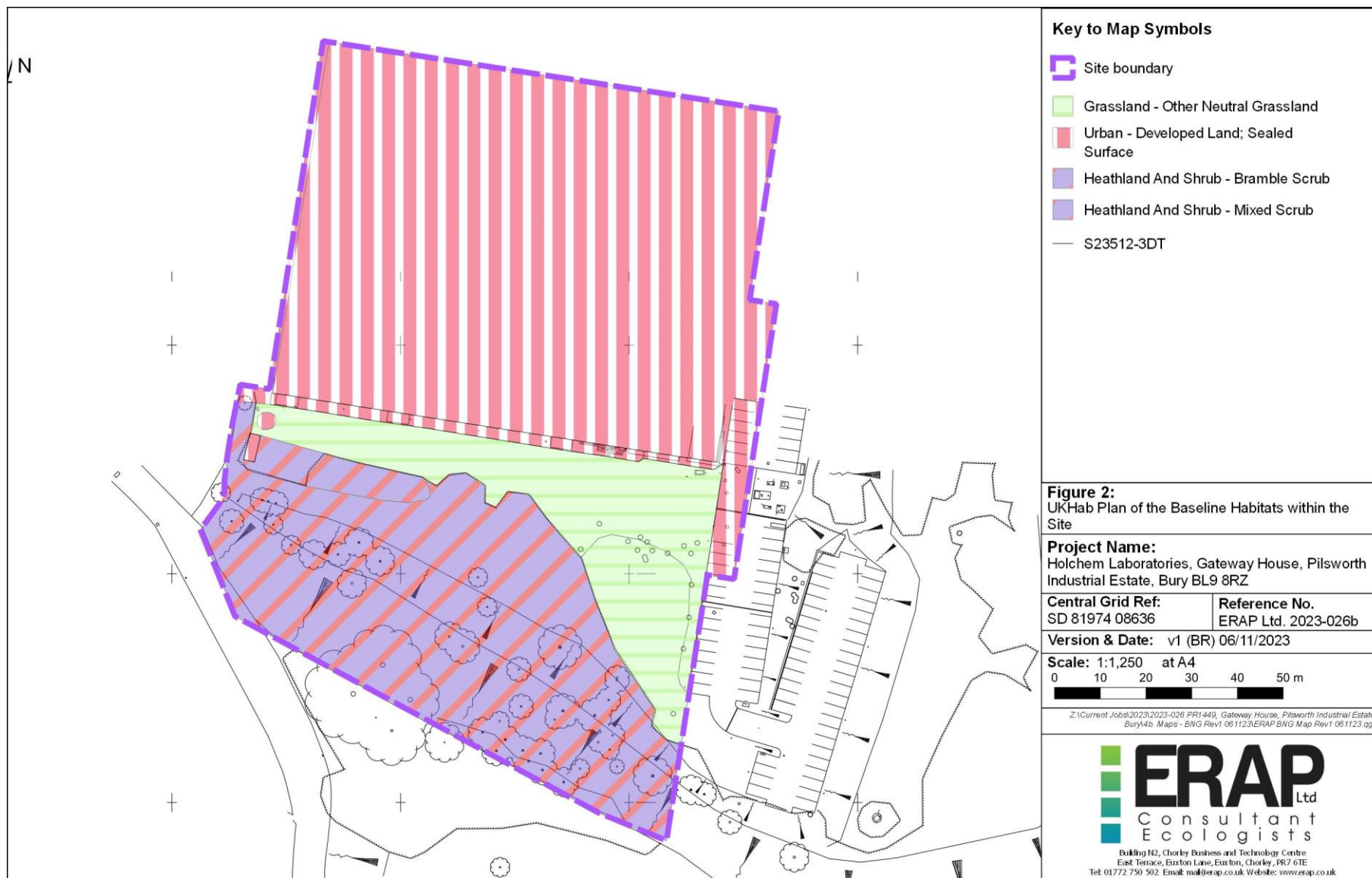


Figure 3: UKHab Plan: Post-development Habitats within the Site

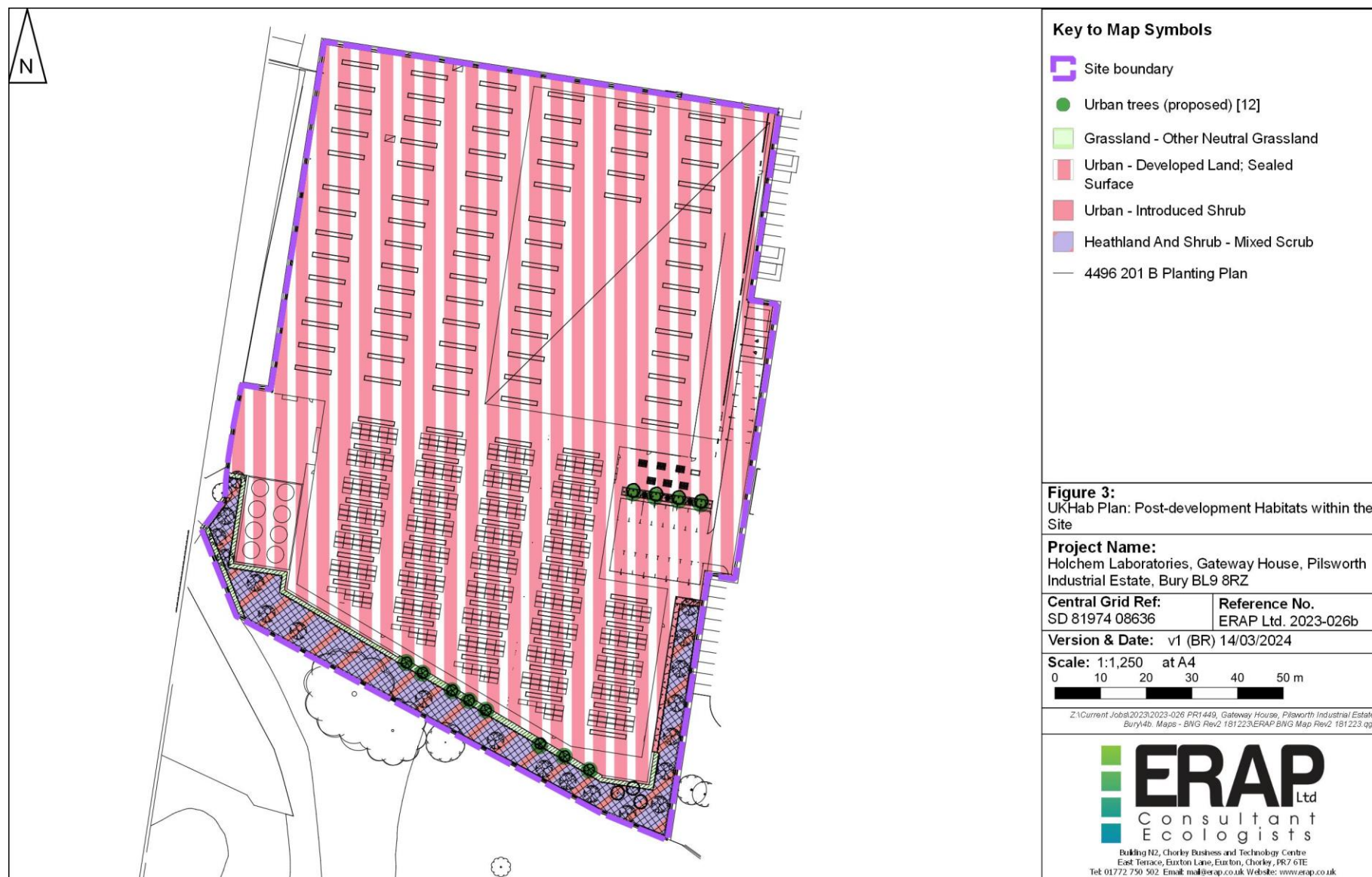


Figure 4: UKHab Plan: Off-site Area Baseline Habitats



Figure 5: UKHab Plan: Off-site Area Post-development Habitats



7.5 Planting Plan

