



Biodiversity Net Gain Assessment

The Unicorn Inn, 405 Cronton Road, Widnes, Knowsley, WA8 5QF

Graham Powell

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Industry Guidelines and Standards

This report has been written with due consideration to:

- British Standard 42020 (2013). Biodiversity – Code of Practice for Planning and Development.
- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal. 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2020). Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management, Construction Industry Research and Information Association & Institute of Environmental Management and Assessment (2019). Biodiversity Net Gain – Good Practice Principles for Development.

Proportionality

The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.

The desk studies and field surveys undertaken to provide a Preliminary Ecological Appraisal (PEA) might in some cases be all that is necessary.

(BS 42020, 2013)

Executive Summary

Arbtech Consulting Limited was instructed by Graham Powell to undertake a Biodiversity Net Gain (BNG) Assessment at The Unicorn Inn, 405 Cronton Road, Widnes, Knowsley, WA8 5QF (hereafter referred to as “the site”). The assessment was required to inform a planning application for the erection of single storey side extension with partial demolition and internal alterations (hereafter referred to as “the proposed development”).

The proposed development achieves a measurable Biodiversity Net Gain (BNG), in compliance with the Environment Act 2021 and the National Planning Policy Framework (2023). The baseline area-based habitat value of the site was assessed at 0.62 units, consisting primarily of modified grassland (0.11 units), bramble scrub (0.01 units), and scattered trees (0.5 units). Following development, this value increases to 0.69 units, attributed to the creation of 0.07 units of individual trees alongside the retention of existing habitats. This results in a net gain of 11.04% in area-based habitat units. Similarly, the site’s linear-based habitat value improves from 0.14 to 0.16 units, with a 0.12-unit increase from newly created native hedgerow, while 0.04 units of ornamental hedgerow are retained, achieving a net gain of 17.75%.

With all trading conditions met, these enhancements confirm the project's alignment with biodiversity policies, surpassing the minimum 10% BNG requirement for both area-based and linear-based habitat units. To sustain these gains, a Biodiversity Net Gain Management Plan will be required, ensuring the effective implementation, management, and monitoring of habitats for a minimum of 30 years.

Further detail is provided within the relevant sections of this report.

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1.0 Introduction and Context

Arbtech Consulting Limited was instructed by Graham Powell to undertake a Biodiversity Net Gain (BNG) Assessment at The Unicorn Inn, 405 Cronton Road, Widnes, Knowsley, WA8 5QF (hereafter referred to as “the site”). The assessment was required to inform a planning application for the erection of single storey side extension with partial demolition and internal alterations (hereafter referred to as “the proposed development”). A plan showing the proposed development is provided in Appendix 1.

This report should be read in conjunction with the following documents:

- ❖ Statutory DEFRA Biodiversity Metric.
- ❖ Preliminary Ecological Appraisal (PEA): The Unicorn Inn, 405 Cronton Road, Widnes, Knowsley, WA8 5QF (Arbtech Consulting Ltd., 2025).

1.1 Site Location, Geology and Landscape Context

The survey site is centred on UK national grid reference SJ 49302 88255 and has an area of approximately 0.25ha. The site is comprised of a two-storey commercial building with associated auxiliary buildings, area of grassland and hardstanding with scattered trees, and partial hedgerow boundary. The site is located within a suburban context, ~3.6km northeast of Widnes town centre. As a result, the site is immediately surrounded by dense residential dwelling with associated gardens to the north, east and west with areas of grassland to the south. Beyond its immediate surroundings there are habitats of elevated ecological value including areas deciduous woodland, grassland, standing bodies of water and watercourses. A site location plan is provided in appendix 2.

1.2 BNG Informative

BNG is a specific, measurable outcome of project activities that deliver demonstrable and quantifiable benefits to biodiversity compared to the baseline situation. In order to achieve BNG, a project must be able to demonstrate that it has followed all 10 of the Principles of Biodiversity Net Gain (as outlined in the *British Standard 8683:2021 Process for Designing and Implementing Biodiversity Net Gain*).

The legalised Environment Act (2021) requires developments in England to demonstrate a measurable net gain in biodiversity and sets a target of a minimum of +10% BNG for all developments. It also stipulates that a management plan with a minimum 30-year term, should be adopted to ensure biodiversity net gain can be delivered. The requirement for biodiversity net gain is also enshrined within the National Planning Policy Framework (NPPF, 2024). As of 12th February 2024, BNG has become mandatory. The DEFRA Statutory Biodiversity Metric is the latest and final version of the metric tool used to calculate BNG. It enables the calculation of habitat value pre- and post-development in order to determine the overall change in biodiversity value as a result of the proposed development. The Biodiversity Metric has separate BNG assessments for areas of habitat, hedgerows and watercourses.

The biodiversity value of a site should be maximised. However, it may not always be possible to achieve a +10% biodiversity net gain within a site and therefore the Statutory Biodiversity Metric can also account for offsite habitat creation, where land is available. Alternatively, developers can seek to provide an agreed financial contribution to an appropriate third party (such as the Local Authority, the UK Government or another landowner) to deliver the required biodiversity net gain elsewhere on their behalf.

2.0 Methodology

2.1 Baseline Biodiversity Value

The baseline BNG Calculation was informed by a PEA (Arbtech Consulting Ltd., 2025). A baseline habitat plan is provided in Appendix 3.

Habitat Classification

The PEA classified the habitats on site according to UK Habitat Classification User Manual (UK Habitat Classification Working Group, 2023).

Habitat Area/Length

The area or length of each habitat was calculated using qGIS software. In calculating the area or length of each habitat, habitats which occur as two or more isolated parcels across the site were combined, where they were deemed to be of a similar composition and condition. Distinctions were made between habitats to be retained (i.e. left as found in baseline), enhanced (i.e. improved condition) or lost (i.e. destroyed by proposed development). Areas of scattered trees were calculated using the Tree Helper tool within the Statutory Biodiversity Metric. Class sizes for urban trees are set out in Table 14 of the Statutory Biodiversity Metric User Guide (Natural England, 2024).

Habitat Condition

Habitat condition was assessed using the relevant condition assessment sheets found in the Statutory Biodiversity Metric Condition Assessment Supplement (Natural England, 2024).

Strategic Significance

Strategic significance was assigned for each habitat based upon a review of the following:

- ❖ Ecological value
- ❖ Function within the landscape
- ❖ Any site or habitat allocations under the Knowsley Council Local Plan Core Strategy (January 2016)

2.2 Post Development Biodiversity Value

The post development BNG Calculation was informed by development plans which is included in Appendix 1. A post development habitat plan is provided in Appendix 4.

Habitat Classification

Proposed habitats were translated to their equivalents in the UK Habitat Classification using The UK Habitat Classification Habitat Definitions Version 2.0 (The UK Habitat Classification Working Group, 2023) and the information provided within the development plans.

Habitat Area/Length

The area or length of each proposed habitat was calculated using qGIS software. In calculating the area or length of each habitat, habitats which occur as two or more isolated parcels across the site were combined, where they were deemed to be of similar composition and condition. Distinctions were made between habitats to be retained (i.e. left as found in baseline), enhanced (i.e. improved condition) or newly created. Areas of scattered trees were calculated using the Tree Helper tool within the Statutory Biodiversity Metric. Class sizes for urban trees are set out in Table 14 of the Statutory Biodiversity Metric User Guide (Natural England, 2024).

Habitat Condition

Target habitat condition for each proposed habitat was determined assessed using the Temporal Multipliers Tool and the Enhancement Temporal Multipliers Tool included in the Statutory Biodiversity Metric spreadsheet as well as the relevant condition assessment sheets found in the Statutory Biodiversity Metric User Guide (Natural England, 2024). This is based on the assumption that a 30-year management plan will be adopted for the site.

Strategic Significance

Strategic significance was assigned for each proposed habitat based upon a review of the following:

- ❖ Likely ecological value
- ❖ Function within the landscape
- ❖ Any site or habitat allocations under the Knowsley Council Local Plan Core Strategy (January 2016)

2.3 Limitations

As reported with the PEA for the same site (Arbtech, 2025) evidence of recent site degradation was present. To ensure the accuracy of the baseline calculations and to account for the ecological value of the site prior to degradation, the baseline calculations will be partially carried out retrospectively. In the absence of specific data on these areas a precautionary approach was adopted: all habitats and areas within the recently cleared section were identified using aerial imagery (Google Maps, 2024) and were assumed to be of good condition, consistent with the BNG user guidelines. This assumption was made to provide a balanced estimation of their contribution to habitat value, aligning with recognised ecological survey standards when direct measurements are unavailable.

3.0 Results

3.1 Baseline Habitats

Table 1 details the baseline habitats present within the site along with their area/length, condition and strategic significance. A full condition assessment for each habitat (where relevant) is provided in Appendix 5a.

Table 1: Baseline Biodiversity Value

Type	Habitat	Area (ha) / Length (km)	Description	Condition Assessment	Strategic Significance
Area-Based	u1b5 Building	0.03285ha	As described within the PEA report for the same site (Arbtech, 2025)	Habitat condition pre-determined as ' N/A ' as detailed within the Statutory Biodiversity Condition Assessment Supplement.	Low Strategic Significance Area/compensation not in local strategy/no local strategy and no evidence to suggest the habitat is of medium strategic significance (not part of a habitat corridor or steppingstone).
	u1b Developed land/sealed surface	0.16403ha	As described within the PEA report for the same site (Arbtech, 2025)	Habitat condition pre-determined as ' N/A ' as detailed within the Statutory Biodiversity Condition Assessment Supplement.	Low Strategic Significance Area/compensation not in local strategy/no local strategy and no evidence to suggest the habitat is of medium strategic significance (not part of a habitat corridor or steppingstone).

Type	Habitat	Area (ha) / Length (km)	Description	Condition Assessment	Strategic Significance
	g4 Modified grassland	0.05729ha	As described within the PEA report for the same site (Arbtech, 2025)	<i>Poor: passes 5 of 7 criteria but fails essential criterion A.</i> Assessed using the 'grassland low distinctiveness' habitat type assessment sheet.	Low Strategic Significance Area/compensation not in local strategy/no local strategy and no evidence to suggest the habitat is of medium strategic significance (not part of a habitat corridor or steppingstone).
	h3d Bramble scrub	0.00129ha	As described within the PEA report for the same site (Arbtech, 2025)	Habitat condition pre-determined as ' N/A ' as detailed within the Statutory Biodiversity Condition Assessment Supplement.	Low Strategic Significance Area/compensation not in local strategy/no local strategy and no evidence to suggest the habitat is of medium strategic significance (not part of a habitat corridor or steppingstone).
	g 32 Scattered tree	0.0407ha	As described within the PEA report for the same site (Arbtech, 2025)	T1 and T2: Good Condition T3 and T4: Moderate Condition Assessed using the 'individual tree' habitat type assessment sheet.	Medium Strategic Significance Although individual trees are not explicitly listed as a habitat of strategic significance, Knowsley Council does emphasise the need for greater tree planting.

Type	Habitat	Area (ha) / Length (km)	Description	Condition Assessment	Strategic Significance
Linear-Based	h2b Non-Native, Ornamental Hedgerow	0.047km	As described within the PEA report for the same site (Arbtech, 2025)	Habitat condition pre-determined as ' Poor ' as detailed within the Statutory Biodiversity Metric Condition Assessment Supplement.	Low Strategic Significance Area/compensation not in local strategy/no local strategy and no evidence to suggest the habitat is of medium strategic significance (not part of a habitat corridor or steppingstone).
	h2b Non-Native Ornamental Hedgerow (Included retrospective)	0.093km	As described within the PEA report for the same site (Arbtech, 2025)	Habitat condition pre-determined as ' Poor ' as detailed within the Statutory Biodiversity Metric Condition Assessment Supplement.	Low Strategic Significance Area/compensation not in local strategy/no local strategy and no evidence to suggest the habitat is of medium strategic significance (not part of a habitat corridor or steppingstone).

3.2 Post Development Habitats

Table 2 details the post development habitats present within the site along with their area/length, condition and strategic significance. An assessment of the anticipated condition for each habitat (where relevant) is provided in Appendix 5b, which is based on the assumption that a 30-year management plan will be implemented for the site. The proposed development will result in a **+11.04%** gain in area-based and **-17.75%** gain of linear-based habitats.

Table 2: Post Development Biodiversity Value

Habitat			Area (ha) / Length (km)	Description	Target Condition	Strategic Significance
Created	Area-Based	u1b5 Building	0.01975ha	A single storey side extension along the northern and western elevation with partial demolition and internal alterations.	Habitat condition pre-determined as ' N/A ' as detailed within the Statutory Biodiversity Condition Assessment Supplement.	Low Strategic Significance Area/compensation not in local strategy/no local strategy and no evidence to suggest the habitat is of medium strategic significance (not part of a habitat corridor or steppingstone).
		g 200 Individual trees	0.0204ha	Five native trees will be planted within the area of grassland as part of the proposed plans.	Anticipated to achieve a Moderate Condition score.	Medium Strategic Significance Although individual trees are not explicitly listed as a habitat of strategic significance, Knowsley Council does emphasise the need for greater tree planting.
	Linear-Based	h2a Native hedgerow	0.037km	Newly planted native hedgerow (species unknown) will be planted along the border of the modified grassland as part of the proposed development.	Anticipated to achieve a Moderate Condition score.	Low Strategic Significance Area/compensation not in local strategy/no local strategy and no evidence to suggest the habitat is of medium strategic significance (not part of a habitat corridor or steppingstone).

Habitat			Area (ha) / Length (km)	Description	Target Condition	Strategic Significance
Retained	Area Based	u1b Developed land/sealed surface	0.14428ha	Area of hardstanding will be lost in the construction of the side extensions. The remaining areas of hardstanding will remain the same.	Habitat condition pre-determined as ' N/A ' as detailed within the Statutory Biodiversity Condition Assessment Supplement.	Low Strategic Significance Area/compensation not in local strategy/no local strategy and no evidence to suggest the habitat is of medium strategic significance (not part of a habitat corridor or steppingstone).
		g4 Modified grassland	0.05729ha	The modified grassland is unaffected by the proposed development.	<i>Poor: passes 5 of 7 criteria but fails essential criterion A.</i> Assessed using the 'grassland low distinctiveness' habitat type assessment sheet.	Low Strategic Significance Area/compensation not in local strategy/no local strategy and no evidence to suggest the habitat is of medium strategic significance (not part of a habitat corridor or steppingstone).
		g 32 Scattered tree	0.0407ha	The four trees present on site are to be retained as part of the proposed development.	T1 and T2: Good Condition T3 and T4: Moderate Condition Assessed using the 'individual tree' habitat type assessment sheet.	Medium Strategic Significance Although individual trees are not explicitly listed as a habitat of strategic significance, Knowsley Council does emphasise the need for greater tree planting.

Habitat			Area (ha) / Length (km)	Description	Target Condition	Strategic Significance
		h3d Bramble scrub	0.00129ha	The bramble scrub on site is to be retained as part of the proposed development.	Habitat condition pre-determined as ' N/A ' as detailed within the Statutory Biodiversity Condition Assessment Supplement.	Low Strategic Significance Area/compensation not in local strategy/no local strategy and no evidence to suggest the habitat is of medium strategic significance (not part of a habitat corridor or steppingstone).
	Linear Based	h2b Non-Native, Ornamental Hedgerow	0.041km	The areas of hedgerow which were on site at the time of the preliminary survey are to be retained as part of the proposed development apart from the Cherry Laurel hedge within the modified grassland.	Habitat condition pre-determined as ' Poor ' as detailed within the Statutory Biodiversity Metric Condition Assessment Supplement.	Low Strategic Significance Area/compensation not in local strategy/no local strategy and no evidence to suggest the habitat is of medium strategic significance (not part of a habitat corridor or steppingstone).

3.3 Change in Biodiversity Value of the Site

Full details are provided in the DEFRA Statutory Biodiversity Metric. The headline results are presented in Appendix 6.

Area-Based Habitat Units

The baseline area-based habitat value of the site is **0.62 units**, comprising 0.11 units of modified grassland, 0.01 units of bramble scrub, 0.5 units of scattered trees and 0.00 units for buildings and developed land sealed surface.

The post development area-based habitat value of the site is **0.69 units**, comprising the:

- ❖ creation of 0.07 units of individual trees and 0.00 units of building.
- ❖ retention of 0.11 units of modified grassland, 0.01 units of bramble scrub, and 0.5 unit of scattered trees.

This results in a net change in biodiversity of **+11.04% (i.e. net gain)**.

Linear-Based Habitat Units

The baseline linear-based habitat value of the site is **0.14 units**, comprising 0.05 units of ornamental hedgerow and 0.09 units of ornamental hedgerow (retrospectively)

The post development linear-based habitat value of the site is **0.16 units**, comprising the:

- ❖ creation of 0.12 units of native hedgerow.
- ❖ retention of 0.04 units of ornamental hedgerow.

This results in a net change in biodiversity of **+17.75% (i.e. net gain)**.

4.0 Recommendations to Deliver BNG

4.1 Discussion

The current landscaping proposal generates net gain in area-based habitat units (+**11.04%**) and a net gain of linear-based habitat units (**+17.75%**). As such, the proposed development is compliant with current legislation (Environment Act 2021) and planning policies (National: National Planning Policy Framework, 2023) as a minimum biodiversity net gain of +10% was achieved for both area- and linear-based habitat units.

All trading conditions have been satisfied.

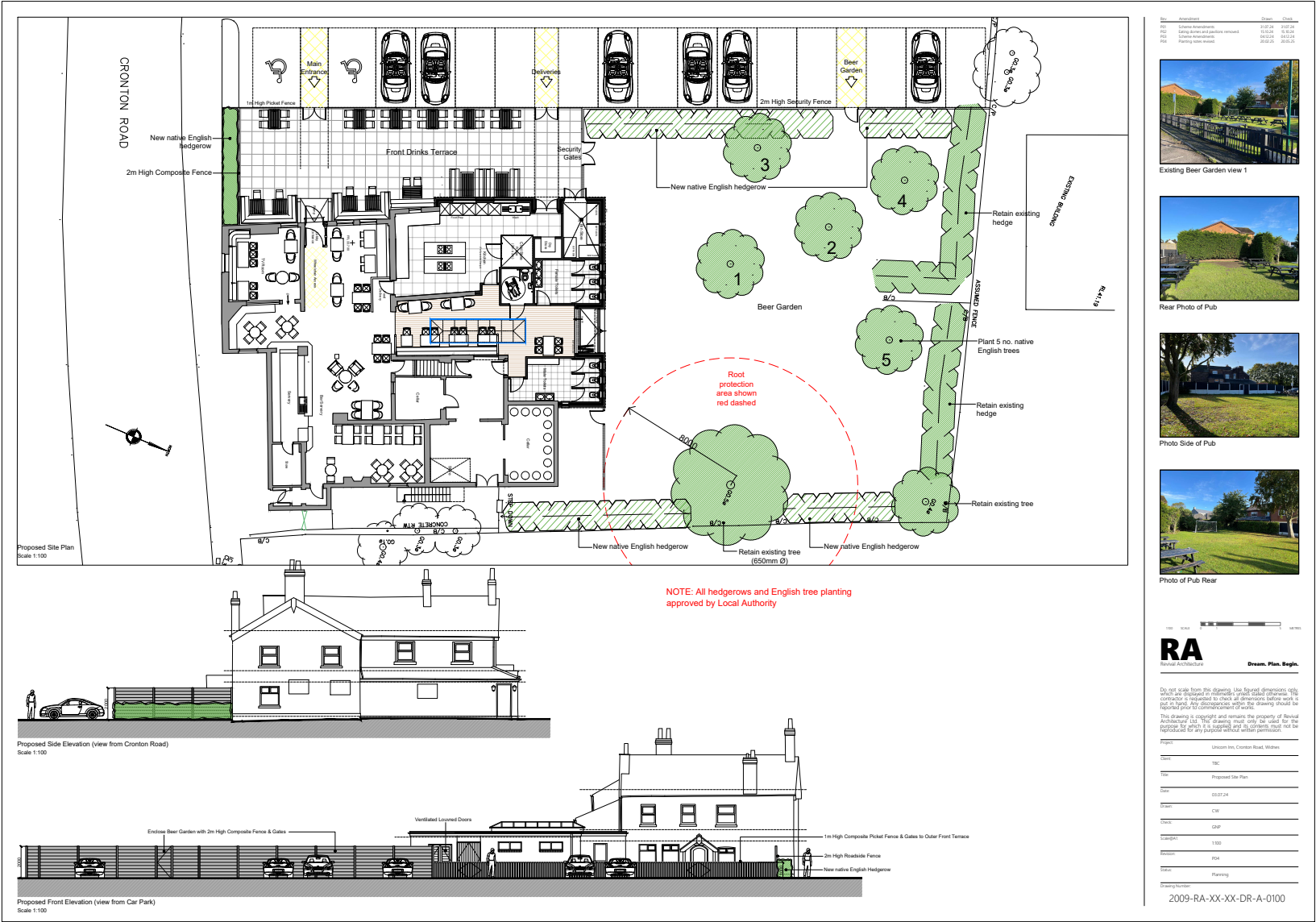
4.3 Post Development

A Biodiversity Net Gain (BNG) Management Plan must be produced for the site. This should include recommendations for the implementation, management and monitoring of the site for at least 30 years.

5.0 Bibliography

- Arbtech Consulting Ltd. (2024). Preliminary Ecological Appraisal (PEA): The Unicorn Inn, 405 Cronton Road, Widnes, Knowsley, WA8 5QF.
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Appendix 1: Proposed Development Plan



Appendix 2: Site Location Plan



Appendix 3: Baseline Habitat Plan



Appendix 4: Post Development Habitat Plan



Appendix 5: Habitat Condition Assessment Sheets - Baseline

Modified Grassland; assessed using 'Grasslands Low Distinctiveness' habitat type condition sheet:

Condition Assessment Criteria:		Condition Achieved (Y/N)	Notes/Justification
A	There must be 6-8 vascular plant species per m ² , including at least 2 forbs. NB - this criterion is essential for achieving moderate condition.	N	Greater than 6 vascular plant species are present but not per square metre.
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	N	Regularly mown, uniform sward height present.
C	Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Y	No scattered scrub present (less than 20% coverage).
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	Y	Physical damage present in less than 5% of total grassland area.
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	Y	Bare ground cover between 1% and 10%.
F	Cover of bracken less than 20%.	Y	No bracken observed (less than 20% coverage).
G	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981).	Y	Absence of invasive species.
Essential criterion 1 achieved (Y/N)			N
Number of criteria passed			5
Condition Assessment Result		Condition Assessment Score	Score Achieved x/✓
Passes 6 or 7 of 7 criteria including passing essential criterion 1		Good (3)	
Passes 4 or 5 of 7 criteria including passing essential criterion 1		Moderate (2)	
Passes 0, 1, 2 or 3 of 7 criteria; OR 4, 5 or 6 of criteria but failing criterion 1		Poor (1)	✓

Scattered Trees; assessed using 'Individual Trees' habitat type condition sheet:

Condition Assessment Criteria		Condition Achieved (Y/N)	Notes/Justification
A	The tree is a native species (or more than 70% within the block are native species).	Y	All tree species are either native or naturalised.
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).	Y	T1 and T2 are individual trees whilst T3 and T4 have a continuous canopy.
C	The tree is mature (or more than 50% within the block are mature).	Y	75% of the trees can be considered mature.
D	There is little or no evidence of an adverse impact on tree health by anthropogenic activities such as vandalism or herbicide use. There is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	Y (T1, T2&T4) N (T3)	T1, T2 and T4 show no signs of anthropogenic damage. T3 has evidence of extensive pruning.
E	Natural Ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	Y (T2) N (T1, T3&T4)	Ivy present on T2. No ecological niches present on T1, T3 & T4.
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Y (T1&T2) N (T3&T4)	T1 and T2 over sail the modified grassland. T3 and T4 over sail areas of hardstanding.
Number of criteria passed			T1(6) T2(5) T3(3) T4(4)
Condition Assessment Result		Condition Assessment Score	
Passes 5 or 6 of 6 criteria		Good (3)	
Passes 3 or 4 of 6 criteria		Moderate (2)	
Passes 0, 1 or 2 of 6 criteria		Poor (1)	
		Score Achieved x/✓	
		T1 and T2	
		T3 and T4	

Appendix 5a: Habitat Condition Assessment Sheets - Proposed

Urban Trees; assessed using 'Individual Trees' habitat type condition sheet:

Condition Assessment Criteria		Condition Achieved (Y/N)	Notes/Justification
A	The tree is a native species (or more than 70% within the block are native species).	Y	Newly planted trees will be 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).	Y	Trees will be planted individually and expect to not produce a continuous canopy with mature.
C	The tree is mature (or more than 50% within the block are mature).	N	The trees are not expected to reach maturity within the 30-year time frame.
D	There is little or no evidence of an adverse impact on tree health by anthropogenic activities such as vandalism or herbicide use. There is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	Y	Trees are expected to be free of adverse damage.
E	Natural Ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	N	The trees are no expected to provide ecological niches.
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Y	The trees will oversail areas of managed modified grassland.
Number of criteria passed			4
Condition Assessment Result		Condition Assessment Score	Score Achieved ×/✓
Passes 5 or 6 of 6 criteria		Good (3)	
Passes 3 or 4 of 6 criteria		Moderate (2)	✓
Passes 0, 1 or 2 of 6 criteria		Poor (1)	

Native, Species-Rich Hedgerow with Trees; assessed using 'Hedgerow' habitat type condition sheet:

Hedgerow favourable condition attributes				
Attributes and functional groupings (A, B, C, D & E)	Criteria (the minimum requirements for 'favourable condition')	Description	Condition Achieved (Y/N)	Notes/Justification
Core groups - applicable to all hedgerow types				
A1. Height	>1.5 m average along length	The average height of woody growth estimated from base of stem to the top of 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).	Y	Hedgerow height is expected to be allowed to exceed 1.5 metres.
A2. Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (e.g. blackthorn suckers) are only included in the width estimate when they >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).	Y	Hedgerow width is expected to be allowed to exceed 1.5 metres.
B1. Gap – hedge base	Gap between ground and base of canopy <0.5 m for >90% of length	This is the vertical 'gappiness' of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).	Y	No gaps are expected along the base of the hedgerows.
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).	Y	No gaps are expected along the canopy of the hedgerows.

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 hedge (at least)	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedge. Undisturbed ground should be present for at least 90% of the hedgerow length, greater than 1m in width and must be present along at least one side of the hedge. This criterion recognises the value of the hedge 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.	N	The hedgerows are expected to fail this criteria given the modified grassland.
C2. Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	The indicator species used are nettles (<i>Urtica</i> spp.), cleavers (<i>Galium aparine</i>) and docks (<i>Rumex</i> spp.). Their presence, either singly or together, should not exceed the 20% cover threshold.	N	Given the amount of expected disturbance surrounding the hedgerows, they are anticipated to fail this criteria.
D1. Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native and recently introduced species	Recently introduced species refer to plant that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives.	Y	No invasives anticipated.
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 hedge cutting).	Y	Hedgerows are expected to pass this criteria.
Condition categories for hedgerows with trees				
Category	Maximum number of attributes that can fail to meet 'favourable condition' criteria in Table TS1-2	Weighting (score)		
Good	No more than 2 failures in total; AND No more than 1 failure in any functional group.	3		
Moderate	No more than 5 failures in total; AND	2		

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

Appendix 6: Headline BNG Results

The DEFRA Statutory Biodiversity Metric is provided as a separate excel spreadsheet.

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.07
	Hedgerow units	0.02
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	11.04%
	Hedgerow units	17.75%
	Watercourse units	0.00%
Trading rules satisfied?	Yes ✓	

Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	0.62	0.68	0.00
Hedgerow units	10.00%	0.14	0.15	0.00
Watercourse units	10.00%	0.00	0.00	0.00

No additional area habitat units required to meet target ✓

No additional hedgerow units required to meet target ✓

No additional watercourse units required to meet target ✓