

Biodiversity Net Gain Assessment

Survey site:

314A Station Road, Bagworth, Leicestershire, LE67 1BL

Client:

Nicholas Williams

Assessment date:

3rd July 2024

Project:

This report is prepared to inform a planning application with the Hinckley and Bosworth Borough Council.

The proposal is described as “residential development of the site”.

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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 Nicholas Williams to undertake a Biodiversity Net Gain (BNG) Assessment at 314A Station Road, Bagworth, Leicestershire, LE67 1BL (hereafter referred to as “the site”).

The assessment was required to inform a planning application for residential development of the site (hereafter referred to as “the proposed development”).

The planning application was submitted before the implementation of statutory BNG and therefore the target net gain is 1%.

The baseline habitat value of the site is 0.47 area-based habitat units and 0.25 hedgerow units with the proposed development resulting in a 2.85% area-based net gain and a 66.25% net gain for hedgerows.

The proposed development is therefore anticipated to surpass the minimum target of 1% biodiversity net gain and thus is compliant with legislation (Environment Act 2021).

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.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Nicholas Williams to undertake a Biodiversity Net Gain (BNG) Assessment at 314A Station Road, Bagworth, Leicestershire, LE67 1BL (hereafter referred to as “the site”). The assessment was required to inform a planning application for residential development of the site (hereafter referred to as “the proposed development”). A plan showing the proposed development is provided in Appendix 1.

The planning application was submitted before the implementation of statutory BNG and therefore the target net gain is 1%.

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

- Defra Statutory Biodiversity Metric
- Preliminary Ecological Appraisal Report (PEA), Bag1121_PEA, produced by Dr S. Bodnar

1.2 Site Location, Geology and Landscape Context

The site is located at National Grid Reference SK 44272 09220 and has an area of approximately 0.2ha comprising of buildings, hardstanding and grassland. The site is located at the eastern edge of Bagworth, with residential areas to the south and west and a railway line and Bagworth Wood – a coniferous plantation, directly adjacent to the east. The wider landscape comprises primarily of arable land. A site location plan is provided in Appendix 2.

1.3 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, 2021). The DEFRA Statutory Biodiversity Metric is the widely accepted 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 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 the Preliminary Ecological Report (Dr S. Bodnar, 2024). A baseline habitat plan is provided in Appendix 3.

Habitat Classification

The PEA classified the habitats on site according to the methodology set out in Phase 1 Habitat Survey Methodology (JNCC, 2010). For purposes of this BNG Calculation, identified habitats were translated to their equivalents in the UK Habitat Classification. This was achieved using a combination of The UK Habitat Classification Habitat Definitions Version 2.0 (The UK Habitat Classification Working Group, July 2023) and the Phase 1 Translation Tool included in the Statutory Biodiversity Metric spreadsheet.

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 8-1 of the Statutory Biodiversity Metric User Guide (Natural England, 2023).

Habitat Condition

Habitat condition was assessed using the relevant condition assessment sheets found in the Statutory Biodiversity Metric User Guide (Natural England, 2023).

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 Hinckley and Bosworth Borough Council Local Plan 2006 to 2026

2.2 Post Development Biodiversity Value

The post development BNG Calculation was informed by the landscape plan 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, July 2023) and the information provided within the landscape plan.

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 8-1 of the Statutory Biodiversity Metric User Guide (Natural England, 2023).

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, 2023). 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 Local Plan 2006 to 2026

2.3 Limitations

The Preliminary Ecological Report (Dr S. Bodnar, 2024) provided only limited information on the condition of the various habitats identified on site, including the scattered trees. As a result, the condition of the existing habitats was assumed to be 'good', so as not to undervalue these habitats. Tree size information was provided by the client and has not been confirmed by any arboricultural report; as the Local Planning Authority did not request an arboricultural report to accompany the application, no such report is available.

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

Habitat	Area / Length	Description	Condition Assessment	Strategic Significance
Developed land; sealed surface (u1b)	0.132 ha	Includes buildings on site (bungalow, garage and kennels) and areas of hardstanding.	n/a	Area/compensation not in local strategy/ no local strategy.
Vegetated garden (u1)	0.091 ha	Area of grassland dominated by rough meadow grass, perennial ryegrass and common couch grass, with creeping thistle and stinging nettle present.	n/a	Area/compensation not in local strategy/ no local strategy.
Urban trees	0.024 ha	6 small, scattered trees were included in the baseline calculation. Some of the trees shown on the baseline habitat map in Appendix 4 were too small to count as small trees (DBH <75mm).	Good	Area/compensation not in local strategy/ no local strategy.
Non-native and ornamental hedgerow (h2b)	0.021 km	There are two short stretches of non-native Leyland cypress hedgerow along the northern and western site boundaries.	Poor	Area/compensation not in local strategy/ no local strategy.
Native hedgerow with trees (h2 – 11)	0.017 km	The southern site boundary is a native Beech <i>Fagus sylvestris</i> hedgerow, with some outgrown hedge trees.	Good	Location ecologically desirable but not in local strategy.

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 the loss of 2 small urban trees and some area of vegetated garden.

Table 2: Post Development Biodiversity Value

Habitat	Area / Length	Description	Target Condition	Strategic Significance
Developed land; sealed surface (u1b)	0.142 ha	Includes retained building and newly constructed buildings and hardstanding.	n/a	Area/compensation not in local strategy/ no local strategy.
Vegetated garden (u1)	0.058 ha	Includes areas created vegetated garden associated with newly built residential buildings.	n/a	Area/compensation not in local strategy/ no local strategy.
Urban trees	0.053 ha	Includes 4 retained good condition trees on western boundary and 9 small moderate condition planted trees	Moderate	Area/compensation not in local strategy/ no local strategy.
Other neutral grassland (g3)	0.010 ha	New species-rich grassland.	Moderate	Area/compensation not in local strategy/ no local strategy.
Non-native and ornamental hedgerow (h2b)	0.013 km	Includes retained section of Leyland cypress hedgerow on northern boundary.	Poor	Area/compensation not in local strategy/ no local strategy
Native hedgerow with trees (h2 – 11)	0.017 km	Retained habitat.	Good	Location ecologically desirable but not in local strategy
Native hedgerow (h2)	0.0473 km	New native species hedging with areas of wild seed grasses below planted along western boundary.	Good	Location ecologically desirable but not in local strategy

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.

The planning application was submitted before the implementation of statutory BNG and therefore the target net gain is 1%.

Areas of Habitat

The baseline habitat value of the site is 0.47 units, comprising 0.18 units of vegetated garden, and 0.29 units of urban trees.

The post development habitat value of the site is 0.49 units, comprising the retention of urban trees (0.20 units), the creation of buildings and hardstanding (no value), vegetated garden (0.11 units), other neutral grassland (0.07 units), and urban trees (0.11 units).

This results in a net gain in biodiversity of 2.85%.

Hedgerows

The baseline hedgerow value of the site is 0.25 units, comprising 0.23 units of native hedgerow with trees and 0.02 units of non-native ornamental hedgerow.

The post development habitat value of the site is 0.42 units, comprising the retention of non-native ornamental hedgerow (0.01 units) and native hedgerow with trees (0.23 units) and the creation of new native hedgerow (0.17 units)

This results in a net gain in biodiversity of 66.25%.

4.0 Recommendations to Deliver BNG

4.1 Discussion

The current proposed plan results in a 2.85% net gain in habitat units and a 66.25% net gain in hedgerow units. This is more than the 1% target of biodiversity net gain (as the planning application was submitted before the implementation of statutory BNG).

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 to ensure that biodiversity net gain is delivered.

4.2 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.

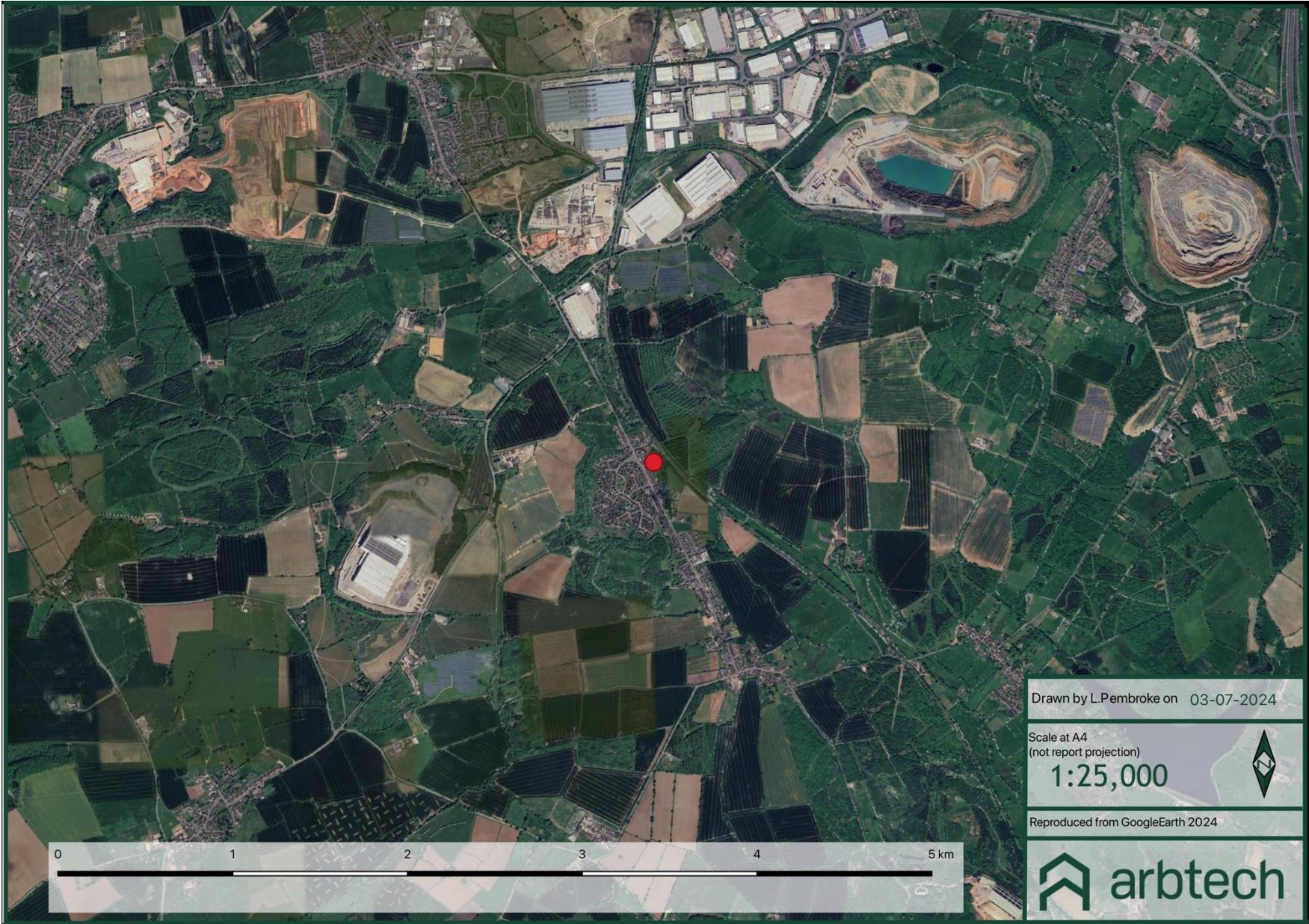
5.0 Bibliography

- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.
- CIEEM-CIRIA-IEMA (2019) Biodiversity Net Gain – Good Practice Principles for Development.
- Joint Nature Conservation Committee (2010). Handbook for Phase 1 habitat survey a technique for environmental audit.
http://jncc.defra.gov.uk/PDF/pub10_handbookforphase1habitatsurvey.pdf
- Natural England (2023). The Statutory Biodiversity Metric (JP039).
- Natural England (2023). The Statutory Biodiversity Metric User Guide (JP039).
- Natural England (2023). The Statutory Biodiversity Metric Technical Annex 1 - Condition Assessment Sheets and Methodology (JP039).
- Natural England (2023). The Statutory Biodiversity Metric Technical Annex 2 – Technical Information (JP039).
- The UK Habitat Classification Habitat Definitions Version 2.0 (The UK Habitat Classification Working Group, July 2023)

Appendix 1: Proposed Development Plan



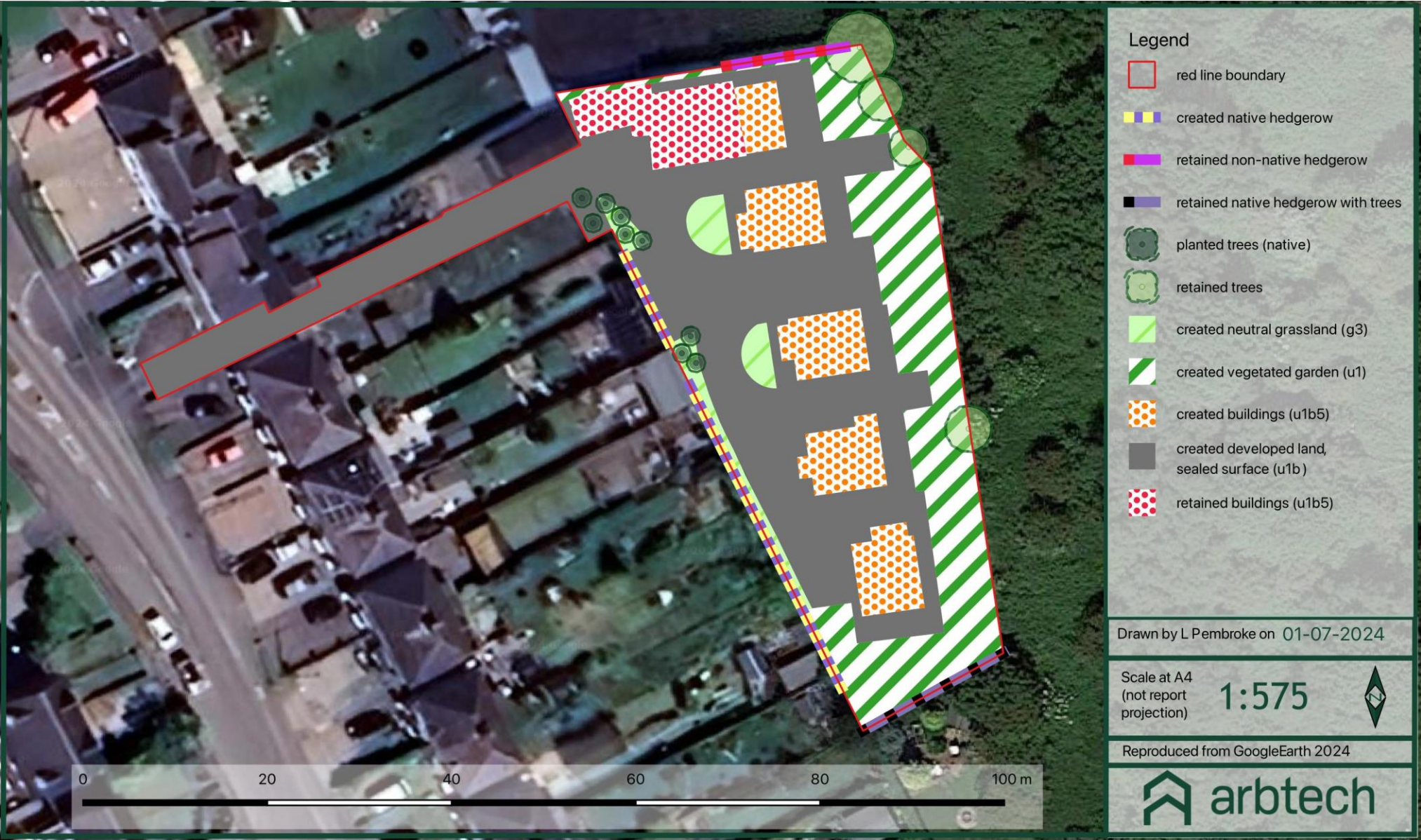
Appendix 2: Site Location Plan



Appendix 3: Baseline Habitat Plan



Appendix 4: Post Development Habitat Plan



Appendix 5a: Habitat Condition Assessment Sheets - Baseline

Condition Sheet: INDIVIDUAL TREES Habitat Type			
Habitat Types			
Individual trees – Urban trees			
Individual trees – Rural trees			
Complete a condition sheet for each tree or block of trees.			
Please see separate Line of trees condition sheet for a line of Rural trees.			
Habitat Description			
mature horse chestnut Aesculus hippocastanum. Some of these host features of bat and owl roosting habitat value. None are to be directly impacted by the development.			
Individual trees (description applied to the urban or rural environment):			
Young trees over 7.5 cm in diameter at breast height whose canopies are not touching.			
Urban Perimeter / Linear Blocks and Groups (description applied to the urban environment only):			
Groups or stands of trees (size requirement as defined above) within and around the perimeter of urban land. This includes those along urban streets, highways, railways and canals, and also former field boundary trees incorporated into developments. Canopies must overlap continuously. Groups of urban trees that don't match the descriptions for woodland may be assessed within this category.			
On-site or off-site, site name and location	LE67 1BL	Survey date and Surveyor name	
Limitations (if applicable)		Survey reference (if relating to a wider survey)	Baseline
Grid reference		Habitat parcel reference	Urban tree
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	The tree is a native species (or at least 70% within the block are native species).	Yes	All trees are native
B	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	Yes	Majority of trees have continuous canopy
C	The tree is mature (or more than 50% within the block are mature) ¹ .	Yes	< 50% of trees 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.	Yes	No evidence of human damage.
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	Yes	No features identified
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Yes	Predominately above other natural grassland with bare ground below 5%.
Number of criteria passed			
Condition Assessment Result (out of 6 criteria)	Condition Assessment Score	Score Achieved $\neq$ /	
Passes 5 or 6 criteria	Good (3)	GOOD	
Passes 3 or 4 criteria	Moderate (2)		
Passes 2 or fewer criteria	Poor (1)		
Note that 'Fairly Good and Fairly Poor' condition categories are not available for this broad habitat type.			
Suggested enhancement interventions to improve condition score²			

Condition sheet: HEDGEROW Habitat Types					
Habitat Type					
Native hedgerow					
Native hedgerow - associated with bank or ditch					
Native hedgerow with trees					
Native hedgerow with trees - associated with bank or ditch					
Species-rich native hedgerow					
Species-rich native hedgerow - associated with bank or ditch					
Species-rich native hedgerow with trees					
Species-rich native hedgerow with trees - associated with bank or ditch					
Habitat Description					
These will be dominant in hawthorn					
See the Statutory Biodiversity Metric Technical Annex 2 and UK Habitat Classification:			ukhab – UK Habitat Classification		
On-site or off-site, site name and location	LE67 1BL		Survey date and Surveyor name		
Limitations (if applicable)			Survey reference (if relating to a wider survey)		
Grid reference			Habitat parcel reference	Native hedgerow with trees	
Condition Assessment Details					
A series of ten attributes, representing key physical characteristics are used for this assessment. Each attribute is assigned to one of five functional groups (A – E) and the condition of a hedgerow is assessed according to the number of attributes from these functional groups which pass or fail the 'favourable condition' criteria.					
This assessment is based on the Hedgerow Survey Handbook ¹ and Favourable Conservation Status document ² . For further clarification please refer to the Hedgerow Survey Handbook.					
Best practice would be to record the species, age, spacing and other key information about all trees present along a hedgerow within the 'Habitat Description' box, as well as other key features of the hedgerow.					
Hedgerow favourable condition attributes					
Attributes and functional groupings (A, B, C, D and E)	Criteria - the minimum requirements for 'favourable condition'		Criteria description	Criterion passed (Yes or No)	Notes (such as 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 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).	Yes	< 1.5m in height
A2.	Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (such as blackthorn <i>Prunus spinosa</i> suckers) are only included in the width estimate when they are >0.5 m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).	Yes	> 1.5m in length
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).	Yes	Gaps in canopy
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).	Yes	Large gaps present
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.	Yes	No disturbance

C2.	Nutrient-enriched perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	The indicator species used are nettles <i>Urtica</i> spp., cleavers <i>Galium aparine</i> and docks <i>Rumex</i> spp. Their presence, either singly or together, does not exceed the 20% cover threshold.	Yes	No indicator species
D1.	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA ³) and recently introduced species.	Recently introduced species refer to plants that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives. For information on archaeophytes and neophytes see the JNCC website ⁴ , as well as the BSBI website ⁵ where the 'Online Atlas of the British and Irish Flora' ⁶ contains an up-to-date list of the status of species. For information on invasive non-native species see the GB Non-Native Secretariat website ⁷ .	Yes	No invasive species
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 (for example, excessive hedgerow cutting).	Yes	No damage
Additional group - applicable to hedgerows with trees only					
E1.	Tree class	There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient ⁸), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow.	This criterion addresses if there are a range of age-classes or morphologies which allow for replacement of trees and provide opportunities for different species.	Yes	Only young trees present
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.	Yes	All trees healthy

The hedgerow condition assessment generates a weighting (score) ranging from 1 - 3, which is used within the Statutory Biodiversity Metric. The scores for each are set out in the tables below.					
Condition categories for hedgerows without trees					
Category	Category Requirements	Metric Score			
Good	No more than 2 failures in total; AND No more than 1 failure in any functional group.	3			
Moderate	No more than 4 failures in total; AND <u>Does not fail both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1 and C2 = Moderate condition).	2			
Poor	Fails a total of more than 4 attributes; OR <u>Fails both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	1			
Score achieved: Poor					
Condition categories for hedgerows with trees					
Category	Category Requirements	Metric score			
Good	No more than 2 failures in total; AND No more than 1 failure in any functional group.	3			
Moderate	No more than 5 failures in total; AND <u>Does not fail both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1, C2 and E1 = Moderate condition).	2			
Poor	Fails a total of more than 5 attributes; OR <u>Fails both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	1			
Score achieved: Good					

Appendix 5b: Habitat Condition Assessment Sheets – Proposed

Condition Sheet: INDIVIDUAL TREES Habitat Type			
Habitat Types			
Individual trees – Urban trees			
Individual trees – Rural trees			
Complete a condition sheet for each tree or block of trees.			
Please see separate Line of trees condition sheet for a line of Rural trees.			
Habitat Description			
mature horse chestnut Aesculus hippocastanum. Some of these host features of bat and owl roosting habitat value. None are to be directly impacted by the development.			
Individual trees (description applied to the urban or rural environment): Young trees over 7.5 cm in diameter at breast height whose canopies are not touching.			
Urban Perimeter / Linear Blocks and Groups (description applied to the urban environment only): Groups or stands of trees (size requirement as defined above) within and around the perimeter of urban land. This includes those along urban streets, highways, railways and canals, and also former field boundary trees incorporated into developments. Canopies must overlap continuously. Groups of urban trees that don't match the descriptions for woodland may be assessed within this category.			
On-site or off-site, site name and location	LE67 1BL	Survey date and Surveyor name	
Limitations (if applicable)		Survey reference (if relating to a wider survey)	Baseline
Grid reference		Habitat parcel reference	Urban tree - planted
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	The tree is a native species (or at least 70% within the block are native species).	Yes	All trees are native
B	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	Yes	Majority of trees have continuous canopy
C	The tree is mature (or more than 50% within the block are mature) ¹ .	no	< 50% of trees 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.	Yes	No evidence of human damage.
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	no	No features identified
F	More than 20% of the tree canopy area is overhanging vegetation beneath.	Yes	Predominately above other natural grassland with bare ground below 5%.
Number of criteria passed			
Condition Assessment Result (out of 6 criteria)	Condition Assessment Score	Score Achieved x/✓	
Passes 5 or 6 criteria	Good (3)		
Passes 3 or 4 criteria	Moderate (2)	MODERATE	
Passes 2 or fewer criteria	Poor (1)		
Note that 'Fairly Good and Fairly Poor' condition categories are not available for this broad habitat type.			
Suggested enhancement interventions to improve condition score ²			
Footnotes			
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)			

Condition Sheet: GRASSLAND Habitat Type (medium, high and very high distinctiveness)			
UK Habitat Classification (UKHab) Habitat Types			
Grassland - Lowland calcareous grassland			
Grassland - Lowland dry acid grassland			
Grassland - Lowland meadows			
Grassland - Other lowland acid grassland			
Grassland - Other neutral grassland			
Grassland - Tall herb communities (H6430) [Not to be confused with the Tall forbs secondary code – see UKHab guidance for details.]			
Grassland - Upland acid grassland			
Grassland - Upland calcareous grassland			
Grassland - Upland hay meadows			
Sparsely vegetated land - Calaminarian grassland			
On-site or off-site, site name and location	LE67 1BL	Survey date and Surveyor name	
Limitations (if applicable)		Survey reference (if relating to a wider survey)	Habitat creation
Grid reference		Habitat parcel reference	other neutral grassland
Habitat Description			
other neutral grassland planted within communal areas of development			
ukhab – UK Habitat Classification			
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
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 relative to Footnote 3 suboptimal species which may be listed in the UKHab description). ¹	Yes	Assuming suitable wild seed mix is used when planting new grassland areas
	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.	No	Sward height will be low due to planting and species composition.
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens ² .	Yes	Assuming management will prevent extensive bare ground
D	Cover of bracken <i>Pteridium aquilinum</i> is less than 20% and cover of scrub (including bramble <i>Rubus fruticosus</i> agg.) is less than 5%.	Yes	assuming management of area to prevent bracken from growing and removal if found
E	Combined cover of species indicative of suboptimal 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 ¹) are present, this criterion is automatically failed.	Yes	assuming wild seed mix use is sufficient
Additional Criterion - must be assessed for 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 5 cannot contribute towards this count). Note - this criterion is essential for achieving Good condition for non-acid grassland types only.		Species composition is low
Essential criterion for Good condition achieved (for non-acid grassland) (Yes or No)			
Number of criteria passed		4	MODERATE

Condition sheet: HEDGEROW Habitat Types				
Habitat Type				
Native hedgerow				
Native hedgerow - associated with bank or ditch				
Native hedgerow with trees				
Native hedgerow with trees - associated with bank or ditch				
Species-rich native hedgerow				
Species-rich native hedgerow - associated with bank or ditch				
Species-rich native hedgerow with trees				
Species-rich native hedgerow with trees - associated with bank or ditch				
Habitat Description				
These will be dominant in hawthorn				
See the Statutory Biodiversity Metric Technical Annex 2 and UK Habitat Classification:		ukhab – UK Habitat Classification		
On-site or off-site, site name and location	LE67 1BL	Survey date and Surveyor name		
Limitations (if applicable)		Survey reference (if relating to a wider survey)		
Grid reference		Habitat parcel reference	Native hedgerow	
Condition Assessment Details				
A series of ten attributes, representing key physical characteristics are used for this assessment. Each attribute is assigned to one of five functional groups (A – E) and the condition of a hedgerow is assessed according to the number of attributes from these functional groups which pass or fail the 'favourable condition' criteria.				
This assessment is based on the Hedgerow Survey Handbook ¹ and Favourable Conservation Status document ² . For further clarification please refer to the Hedgerow Survey Handbook.				
Best practice would be to record the species, age, spacing and other key information about all trees present along a hedgerow within the 'Habitat Description' box, as well as other key features of the hedgerow.				
Hedgerow favourable condition attributes				
Attributes and functional groupings (A, B, C, D and E)	Criteria - the minimum requirements for 'favourable condition'	Criteria description	Criterion passed (Yes or No)	Notes (such as 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 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).	Yes
A2.	Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (such as blackthorn <i>Prunus spinosa</i> suckers) are only included in the width estimate when they are >0.5 m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).	No Assumption hedgerow width will be limited due to space indicated in landscape plan
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).	Yes Gaps in canopy
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).	Yes Large gaps present

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.	Yes	No disturbance
C2.	Nutrient-enriched perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	The indicator species used are nettles <i>Urtica</i> spp., cleavers <i>Galium aparine</i> and docks <i>Rumex</i> spp. Their presence, either singly or together, does not exceed the 20% cover threshold.	No	No indicator species
D1.	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA ³) and recently introduced species.	Recently introduced species refer to plants that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives. For information on archaeophytes and neophytes see the JNCC website ⁴ , as well as the BSBI website ⁵ where the 'Online Atlas of the British and Irish Flora' ⁶ contains an up-to-date list of the status of species. For information on invasive non-native species see the GB Non-Native Secretariat website ⁷ .	Yes	No invasive species
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 (for example, excessive hedgerow cutting).	Yes	assuming hedgerow will be subject to some level of management due to location within residential development
Additional group - applicable to hedgerows with trees only					
E1.	Tree class	There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient ⁸), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow.	This criterion addresses if there are a range of age-classes or morphologies which allow for replacement of trees and provide opportunities for different species.		
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.		

The hedgerow condition assessment generates a weighting (score) ranging from 1 - 3, which is used within the Statutory Biodiversity Metric. The scores for each are set out in the tables below.

Condition categories for hedgerows without trees		
Category	Category Requirements	Metric Score
Good	No more than 2 failures in total; AND No more than 1 failure in any functional group.	3
Moderate	No more than 4 failures in total; AND <u>Does not fail both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1 and C2 = Moderate condition).	2
Poor	Fails a total of more than 4 attributes; OR <u>Fails both attributes</u> in more than one functional group (for example, 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	0.01
	Hedgerow units	0.17
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	2.85%
	Hedgerow units	66.25%
	Watercourse units	0.00%
Trading rules satisfied?	Yes ✓	