



Biodiversity Net Gain Assessment Part 1

11 Old Bath Road, Sonning, Reading, Berkshire, RG4 6SZ

Paul Odell

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Arbtech Consultant's Contact Details:

Beth Ellison-Perrett BSc (Hons) MSc MRSB
Consultant

Tel: 07874871277 Email: bethep@arbtech.co.uk

Arbtech Consulting Ltd

<https://arbtech.co.uk>

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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 Paul Odell to undertake a Biodiversity Net Gain (BNG) Assessment at 11 Old Bath Road, Sonning, Reading, Berkshire, RG4 6SZ (hereafter referred to as “the site”). The assessment was required to inform a planning application for the construction of side and front extension with the roof being raised on the existing building (hereafter referred to as “the proposed development”).

Areas of Habitat

The baseline habitat value of the site is 2.87 units, comprising developed land; sealed surface and buildings (no value), 0.27 units of vegetated garden, 0.02 units of introduced shrub, and 2.58 units of individual urban trees.

The post development habitat value of the site is 2.14 units, comprising the extension and creation of buildings and hardstanding (no value), retention of vegetated garden (0.26 units), introduced shrub (0.02 units), urban trees (2.58 units) as well as the creation of introduced shrub (0.01 units), green roof (0.02 units) and façade- bound green wall (0.05 units).

This results in a net change in biodiversity of 2.45% (i.e. a net gain).

Hedgerows

The baseline hedgerow value of the site is 0.49 units, comprising 0.14 units of other native hedgerow and 0.35 units of line of trees.

The post development habitat value of the site is 0.54 units, comprising the enhancement of existing native hedgerow (0.2 units) and the retention of the majority of the line of trees (0.33 units) and the creation of a non-native ornamental hedgerow (0.01 units).

This results in a net change in biodiversity of 10.89% (i.e. a net gain).

Recommendations

According to the Defra Biodiversity Statutory Metric there is a unit deficit of 0.22 habitat units, and this will need to be provided to offset the loss in biodiversity and achieve a 10% biodiversity net gain.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Paul Odell to undertake a Biodiversity Net Gain (BNG) Assessment at 11 Old Bath Road, Sonning, Reading, Berkshire, RG4 6SZ (hereafter referred to as “the site”). The assessment was required to inform a planning application for the construction of side and front extension with the roof being raised on the existing building (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:

- Defra Biodiversity Statutory Metric.
- PEA/Survey Report for the site.

1.2 Site Location, Geology and Landscape Context

The rectangular survey site is centred on National Grid Reference SU 75820 74511 and has an area of approximately 0.193ha comprising a large residential property, a driveway, and a garden. It is surrounded by residential properties, with the river Thames to the north, and a trainline to the south. The wider landscape comprises the Town of Reading. 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 Environment Act (2021) is still in a transitional phase and is not expected to become mandatory until November 2023. However, the requirement for biodiversity net gain is also enshrined within the National Planning Policy Framework (NPPF, 2023).

The DEFRA Biodiversity Statutory 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 10% biodiversity net gain within a site and therefore the Biodiversity Statutory 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 Preliminary Ecological Appraisal and Roost Assessment (Arbtech, 2024). A baseline habitat plan is provided in Appendix 3.

Habitat Classification

The Preliminary Ecological Appraisal and Roost Assessment (Arbtech, 2024) classified the habitats on site according to The UK Habitat Classification Habitat Definitions Version 2.0 (The UK Habitat Classification Working Group, July 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 Biodiversity Statutory Metric. Class sizes for urban trees are set out in Table 8-1 of the Biodiversity Statutory Metric User Guide (Natural England, 2023).

Habitat Condition

Habitat condition was assessed using the relevant condition assessment sheets found in the Biodiversity Statutory 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 Wokingham Core Strategy Plan Document (2010).

2.2 Post Development Biodiversity Value

The post development BNG Calculation was informed by Plan: POBR - PL - 104 - Proposed Landscaping A 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 Plan: POBR - PL - 104 - Proposed Landscaping A.

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 Biodiversity Statutory Metric. Class sizes for urban trees are set out in Table 8-1 of the Biodiversity Statutory 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 Biodiversity Statutory Metric spreadsheet as well as the relevant condition assessment sheets found in the Biodiversity Statutory 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 Wokingham Core Strategy Plan Document (2010).

2.3 Limitations

There were no specific limitations to the survey.

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 (building)	0.011988783ha	There is one main building onsite (B1) and a shed (B2) within the garden. B1 is a two-storey brick-built building with a cross-pitched and gabled roof clad in clay tiles. B2 is a single-storey wooden shed with a pitched roof clad in bitumen.	N/A	Low strategic significance
Developed land; sealed surface (hard standing)	0.041334267ha	Surrounding B1 and extending to the north-west and south-east of the site are areas of developed land; sealed surface. The hard standing is comprised of shingles and concrete slabs which are of negligible habitat value for protected species.	N/A	Low strategic significance
Vegetated garden	0.135376374ha	To the south-east of the site, and a small area to the north-west, are areas of vegetated garden. The area to the north-west and the majority of the area to the south-east are subject to mowing, resulting in a sward of approximately 2cm in length. Species composition is comprised of perennial ryegrass (D), clover (F), creeping buttercup (F), dandelion (O), daisy (O), common chickweed (O), forget-me-not (R) and cow parsley (R). However, the area to the far south-east has been left unmanaged resulting in a sward of approximately 5cm in length and the colonisation of ruderals. Species composition for this area is comprised of all the same species as above, as well as, green alkanet (D), hogweed (A), nettles (A), square-stalked willowherb (F), dock (F), cow parsley (O), herb Robert (O), large leaf avens (O), hybrid bluebells (R), bramble (R) and ivy (R).	N/A	Low strategic significance
Introduced shrubs	0.00817382ha	Along the boundaries of the vegetated garden are areas of introduced shrubs. These are comprised of rose, mallow, cotoneaster, primrose, evergreen spindle, cherry laurel, snowberry, lilac, Japanese mahonia and laburnum.	N/A	Low strategic significance

Individual urban trees	0.195432196ha	Present onsite are scattered trees located throughout the site, which are comprised of beech, maple, oak, hawthorn, holly, yew, ash, eared willow and rowan. The trees are predominately semi-mature to mature in age with a few saplings along the eastern boundary and represent a fair to good structural condition. 17 are classed as small sized and 12 are classed as medium trees. Due to the residential garden, the small trees are discounted, as per the guidance.	Good	Medium strategic significance
Other native hedgerow	0.031225944km	Along the north-west boundary of the site, is a section of native hedge which approximately 12m long, 2m wide and is comprised of elm and ivy. Additionally, there is a hedge which splits the rear garden in half and is comprised of yew. This hedge is approximately 16m long and 2m wide.	Moderate	Medium strategic significance
Line of trees	0.07990814km	Along the south-western and eastern boundary are lines of trees. The line of trees is comprised of oak, beech, holly, yew, lilac, maple, common laburnum, silver birch, hazel and hawthorn. The trees are approximately 6- 10m tall. The trees are predominately semi-mature to mature in age and represent a fair to good structural condition.	Moderate	Medium strategic significance

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 a section of vegetated garden, line of trees and hard standing.

Table 2: Post Development Biodiversity Value

Habitat	Area / Length	Description	Target Condition	Strategic Significance
Developed land; sealed surface (building)	0.019697053ha	Retention/ extension of the main dwelling and the erection of a garden room.	N/A	Low strategic significance
Developed land; sealed surface (hard standing)	0.035700203ha	The retention of the hard standing onsite.	N/A	Low strategic significance
Vegetated garden	0.128221401ha	The retention of vegetated garden within the site.	N/A	Low strategic significance

Introduced shrubs	0.015310509ha	The retention of the introduced shrubs to the north-east of the site, as well as the planting of new introduced shrubs throughout the site. 0.00817382ha (retained) and 0.007136689ha (newly planted)	N/A	Low strategic significance
Individual urban trees	0.195432196ha	All medium sized trees will be retained in-situ post-development. Although, small trees are being removed, due to the residential garden, the small trees are discounted, as per the guidance.	Good	Medium strategic significance
Other native hedgerow	0.031225944km	The enhancement of the native hedgerows onsite.	Good	Medium strategic significance
Line of trees	0.068008188km	The retention of the line of trees.	Moderate	Medium strategic significance
Green roof	0.006410892ha	The creation of green roofs on the garage and garden room.	N/A	Low strategic significance
Façade-bound green wall	0.015842308km	The creation of a green wall on the north-eastern and north-western elevations of the garden building	Good	Low strategic significance
Ornamental hedgerow	0.006485136km	The creation of a non-native ornamental hedgerow along a section of the north-eastern boundary of the site	N/A	Low strategic significance

3.3 Change in Biodiversity Value of the Site

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

Areas of Habitat

The baseline habitat value of the site is 2.87 units, comprising developed land; sealed surface and buildings (no value), 0.27 units of vegetated garden, 0.02 units of introduced shrub, and 2.58 units of individual urban trees.

The post development habitat value of the site is 2.14 units, comprising the extension and creation of buildings and hardstanding (no value), retention of vegetated garden (0.26 units), introduced shrub (0.02 units), urban trees (2.58 units) as well as the creation of introduced shrub (0.01 units), green roof (0.02 units) and façade- bound green wall (0.05 units).

This results in a net change in biodiversity of 2.45% (i.e. a net gain).

Hedgerows

The baseline hedgerow value of the site is 0.49 units, comprising 0.14 units of other native hedgerow and 0.35 units of line of trees.

The post development habitat value of the site is 0.54 units, comprising the enhancement of existing native hedgerow (0.2 units) and the retention of the majority of the line of trees (0.33 units) and the creation of a non-native ornamental hedgerow (0.01 units).

This results in a net change in biodiversity of 10.89% (i.e. a net gain).

4.0 Recommendations to Deliver BNG

4.1 Discussion

The current proposed plan results in a 2.45% net gain in habitat units and a 10.89% net gain in hedgerow units. This is less than the 10% target of biodiversity net gain for habitat units.

In order to achieve the required minimum 10% net gain in biodiversity as a result of the proposed development, the provision of additional or alternative landscaping should be explored and the proposed plans amended accordingly to either achieve a 10% net gain on site or to reduce off-site compensation requirements that may be required to achieve a 10% net gain.

4.2 Biodiversity Offsetting

If the landscaping plans are not altered, the deficit will need to be delivered in a suitable offsite location i.e. biodiversity offsetting.

According to the Defra Biodiversity Statutory Metric there is a unit deficit of 0.22 habitat units, and this will need to be provided to offset the loss in biodiversity and achieve a 10% biodiversity net gain.

The mechanism for securing this off-setting will need to be proposed to, and confirmed by the LPA e.g., purchasing conservation credits through a registered provider, habitat creation directly through the client owned or LPA offered land or a financial contribution towards another provider such as a local nature reserve or park. As well as the creation of new habitats, this should also secure the management of the proposed habitats to help achieve the desired condition for at least 30 years. This would be linked to the application through a planning obligation Section 106 (S106) agreement. The proposed habitat compensation should be of an appropriate distinctiveness to meet the trading rules of BNG. An ecology survey of the baseline habitat of any off-site land will be required to inform the baseline conditions of any land subject to off-site compensation measures.

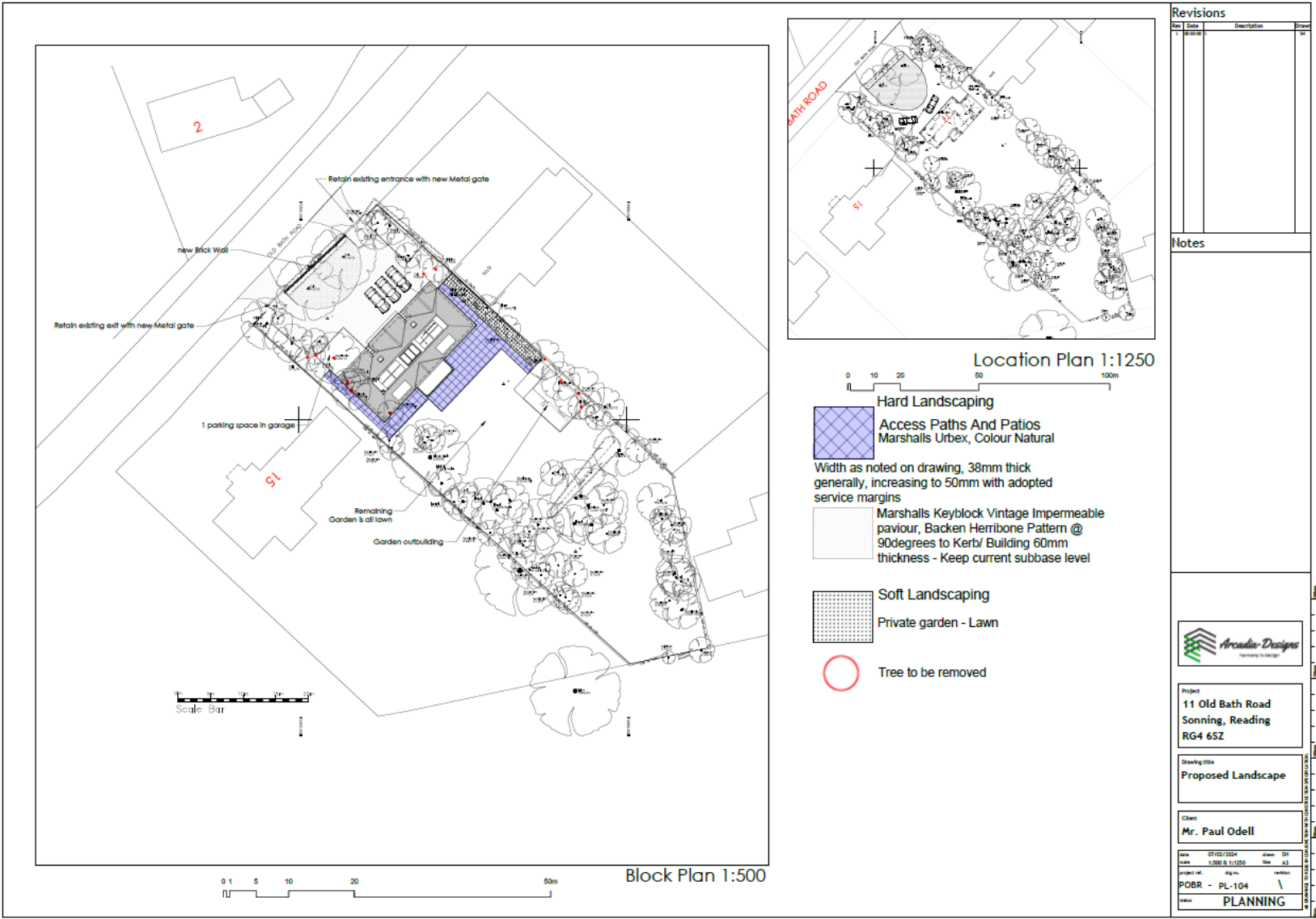
4.3 Post Development

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

- 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.
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- Natural England (2023). The Biodiversity Statutory 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

Individual Urban trees	A	The tree is a native species (or at least 70% within the block are native species).	Y	Present onsite are scattered trees throughout the site, which are comprised of scots pine and oak.
	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	Individual trees automatically pass this criterion
	C	The tree is mature (or more than 50% within the block are mature).	Y	The trees are approximately 12-15m tall with a DBH of approximately 70cm. The trees are semi-mature to mature in age and represent a fair to good structural condition.
	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.	Y	Trees will be in a residential curtilage so are anticipated to be protected from adverse impacts.
	E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	Y	The trees represent a fair to good structural condition.
	F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Y	Located within the vegetated garden.
Number of criteria passed			6	

Line of trees	A	At least 70% of trees are native species.	Y	The line of trees is comprised of oak, beech, holly, yew, lilac, maple, common laburnum, silver birch, hazel and hawthorn
	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.	Y	Predominately continuous canopy, with no gaps being over 5m wide.
	C	One or more trees has veteran features and or natural ecological niches for vertebrates and invertebrates, such as presence of standing and attached deadwood, cavities, ivy or loose bark.	N	No ecological niches.
	D	There is an undisturbed naturally-vegetated strip of at least 6 m on both sides to protect the line of trees from farming and other human activities (excluding grazing). Where veteran trees are present, root protection areas should follow standing advice ² .	N	approx 2m on the site side, the adjacent site (offsite) is another garden and driveway
	E	At least 95% of the trees are in a healthy condition (deadwood or veteran features valuable for wildlife are excluded from this). 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.	Y	Trees in healthy condition
Number of criteria passed			3	

Other hedgerow	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).	Y	Approximately 2m tall
	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).	Y	Approximately 2m wide
	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.	Y	Under 0.5m gap at base of hedges
	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 in the hedges
	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.	N	Hedges are adjacent to hard standing and mown vegetated garden.

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.	N	
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 .	Y	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 (e.g., excessive hedgerow cutting).	Y	No damage to the hedges through excessive management.
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 (e.g. 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 (e.g. fails attributes A1, A2, B1 and B2 = Poor condition).	1	
	Score achieved:		MODERATE	

Appendix 5b: Habitat Condition Assessment Sheets - Proposed

Façade- bound green wall	Core Criteria - must be assessed for all urban habitat types :					
	A	Vegetation structure is varied, providing opportunities for vertebrates and invertebrates to live, eat and breed. A single structural habitat component or vegetation type does not account for more than 80% of the total habitat area.		y	varied mirco- habitats	
	B	The habitat parcel contains different plant species that are beneficial for wildlife, for example flowering species providing nectar sources for a range of invertebrates at different times of year.		y		
	C	Invasive non-native plant species (listed on Schedule 9 of WCA ¹) and others which are to the detriment of native wildlife (using professional judgement) ² cover less than 5% of the total vegetated area ³ . Note - to achieve Good condition, this criterion must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).		y	no NNIs onsite.	
	Essential criteria relevant for habitat type achieved (Yes or No)				Yes	
	Number of criteria passed				3	
	Condition Result	Assessment	Condition Assessment Score	Score Achieved		
	Results for habitats requiring assessment of 3 core criteria only (all listed urban habitats except Open mosaic habitat on previously developed land, Bioswale, SuDS and Green roofs):					
	Passes all 3 core criteria; AND Meets the requirements for Good condition within criterion C.		Good (3)	3		
	Passes 2 of 3 core criteria; OR Passes 3 of 3 core criteria but does not meet the requirements for Good condition within criterion C.		Moderate (2)			
	Passes 0 or 1 of 3 core criteria.		Poor (1)			

Other hedgerow	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).	Y	Approximately 2m tall
	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).	Y	Approximately 2m wide
	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.	Y	Under 0.5m gap at base of hedges
	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 in the hedges
	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.	N	Hedges are adjacent to hard standing and mown vegetated garden.

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.	Y	Assumed with condition 30+
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 .	Y	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 (e.g., excessive hedgerow cutting).	Y	No damage to the hedges through excessive management.
Condition categories for hedgerows without trees					
Category		Category Requirements			
Good		No more than 2 failures in total; AND No more than 1 failure in any functional group.			
Moderate		No more than 4 failures in total; AND <u>Does not fail both attributes</u> in more than one functional group (e.g. fails attributes A1, A2, B1 and C2 = Moderate condition).			

	Poor	Fails a total of more than 4 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:		Good	

Appendix 6: Headline BNG Results

The Defra Biodiversity Statutory 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	0.05
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	2.45%
	Hedgerow units	10.89%
	Watercourse units	0.00%
Trading rules satisfied?	Yes ✓	

Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	2.87	3.15	0.22
Hedgerow units	10.00%	0.49	0.54	0.00
Watercourse units	10.00%	0.00	0.00	0.00

No additional hedgerow units required to meet target ✓

No additional watercourse units required to meet target ✓