



Biodiversity Net Gain Assessment

Land at Coverdale Crescent, Ardwick, Manchester M12

Eden Planning

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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 Eden Planning to undertake a Biodiversity Net Gain (BNG) Assessment at Land at Coverdale Crescent, Ardwick, Manchester M12 (hereafter referred to as “the site”). The assessment was required to inform a planning application for the delivery of circa 24 units with associated parking (hereafter referred to as “the proposed development”).

The baseline habitat value of the site is 0.79 units, comprising 0.65 units of other broadleaved woodland (of poor condition) and 0.14 units of modified grassland (of poor condition).

The post development habitat value of the site is 1.39 units, comprising the creation of buildings and hardstanding (no value), modified grassland (0.1 units), mixed scrub (0.03 units), other neutral grassland (0.14 units) and urban trees (1.11 units).

This results in a net change in biodiversity of 76.72% (i.e. a net gain).

Although the project achieves a net gain in the metric, it fails the trading rules component of BNG due to the loss of woodland of medium distinctiveness which must be replaced with the “same broad habitat or higher distinctiveness”. As no new woodland planting has been incorporated into the proposals this criterion has not been achieved.

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.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Eden Planning to undertake a Biodiversity Net Gain (BNG) Assessment at Land at Coverdale Crescent, Ardwick, Manchester M12 (hereafter referred to as “the site”). The assessment was required to inform a planning application for the delivery of circa 24 units with associated parking (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 Metric 4.0.
- Preliminary Ecological Appraisal carried out by Arbtech in August 2023 (Arbtech 2023)

1.2 Site Location, Geology and Landscape Context

The site is located at National Grid Reference SJ 85755 96760 and has an area of approximately 0.2ha comprising woodland and grassland. It is surrounded by Coverdale Crescent to the north and Devonshire Street to the west, approximately 1.4km south-east of central Manchester. A small patch of woodland and grassland can be found to the immediate north of the site; however the immediate and wider landscape entirely comprises urbanised development and associated infrastructure. 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, 2021). The DEFRA Biodiversity Metric 4.0 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 Metric 4.0 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 carried out by Arbtech in August 2023 (Arbtech 2023). 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, 2018).

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 Metric 4.0. Class sizes for urban trees are set out in Table 8-1 of the Biodiversity Metric 4.0 User Guide (Natural England, 2023).

Habitat Condition

Habitat condition was assessed using the relevant condition assessment sheets found in the Biodiversity Metric 4.0 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 Manchester Local Plan

2.2 Post Development Biodiversity Value

The post development BNG Calculation was informed by the proposed site 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 1.0 (The UK Habitat Classification Working Group, May 2018) and the information provided within the proposed site 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 Biodiversity Metric 4.0. Class sizes for urban trees are set out in Table 8-1 of the Biodiversity Metric 4.0 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 Metric 4.0 spreadsheet as well as the relevant condition assessment sheets found in the Biodiversity Metric 4.0 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 Manchester Local Plan

2.3 Limitations

There were no specific limitations to the assessment.

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
Other Broadleaved Woodland	0.1409ha	In the eastern and western sections of the site are areas of immature, self-seeded other broadleaved woodland. The canopy of the woodland is approximately 6m tall and dominated by Ash <i>Fraxinus excelsior</i> , Hawthorn <i>Crataegus laevigata</i> and Silver Birch <i>Betula pendula</i> , with occasional Pendunculate Oak <i>Quercus robur</i> , Alder <i>Alnus glutinosa</i> , and Wild Cherry <i>Prunus avium</i> . The ground flora of this habitat comprises a species poor ruderal mix, with Bramble <i>Rubus fruticosus</i> dominating and Curled Dock <i>Rumex crispus</i> and Dandelion <i>Taraxacum spp.</i> present occasionally.	Poor (see Appendix 5 for full condition assessment details)	High
Modified Grassland	0.07ha	A small area of modified grassland is present in the centre of the site which is subject to intensive trampling by a community of rough sleepers. This has resulted in a sward of approximately 5cm in length. Species composition is poor, comprising predominantly Perennial Ryegrass <i>Lolium perenne</i> and Meadow Grass species <i>Poa sp</i> with occasional broad-leaved herbs such as Curled Dock and dandelion. Given the open nature of the site, an abundance of litter is also present at the site.	Poor	Low

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 all existing habitats on site (modified grassland and other broadleaved woodland).

Table 2: Post Development Biodiversity Value

Habitat	Area / Length	Description	Target Condition	Strategic Significance
Developed Land; Sealed Surface (including buildings)	0.0466ha (hard standing) 0.0833ha (buildings) 0.1299ha (total)	New apartment building and hard pathways and parking areas	N/A	Low
Modified Grassland	0.0544ha	New modified grassland forming amenity areas	Due to the amenity nature of the areas it is anticipated that the habitat will only reach poor condition	Low
Mixed Scrub	0.0085ha	New areas of native scrub along site boundaries	It is anticipated that the habitat can reach moderate condition within	Low
Other Neutral Grassland	0.0182ha	An area of wildflower planting across the southern side of the site, to managed specifically for wildlife	It is anticipated that with the appropriate management the grassland can achieve moderate condition within 5 years	High
Urban Trees	0.1629ha (40 x small trees) 0.1832ha (5 x medium trees) 0.3461ha (total)	40 x new small trees to be planted across the developed site, 2 x semi-mature field maple trees and 3 x semi-mature silver birch to be planted expected to reach a medium size within 30 years (see below).	The trees are anticipated to reach a poor due to the amenity use of the area. It is anticipated that the two field maple trees and three silver birch can reach medium size based on a minimum 18mm girth at planting and appropriate management	High

3.3 Change in Biodiversity Value of the Site

Full details are provided in the Defra Biodiversity Metric 4.0. The headline results are presented in Appendix 6.

Areas of Habitat

The baseline habitat value of the site is 0.79 units, comprising 0.65 units of other broadleaved woodland (of poor condition) and 0.14 units of modified grassland (of poor condition).

The post development habitat value of the site is 1.39 units, comprising the creation of buildings and hardstanding (no value), modified grassland (0.1 units), mixed scrub (0.03 units), other neutral grassland (0.14 units) and urban trees (1.11 units).

This results in a net change in biodiversity of 76.72% (i.e. a net gain).

Although the project achieves a net gain in the metric, it fails the trading rules component of BNG due to the loss of woodland of medium distinctiveness which must be replaced with the “same broad habitat or higher distinctiveness”. As no new woodland planting has been incorporated into the proposals this criterion has not been achieved.

Hedgerows

There are no hedgerows on site.

Watercourses

There are no watercourses on site.

4.0 Recommendations to Deliver BNG

4.1 Discussion

The current proposed plan results in a 39.08% net gain in habitat units. This is more than the 10% target of biodiversity net gain.

Although the project achieves a net gain in the metric, it fails the trading rules component of BNG due to the loss of woodland of medium distinctiveness which must be replaced with the “same broad habitat or higher distinctiveness”. As no new woodland planting has been incorporated into the proposals this criterion has not been achieved.

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 Enhancement Recommendations

Native trees (small size)

The 40 new small trees to be planted across the site should be native species from the following list to encourage invertebrates, birds and other wildlife:

Alder <i>Alnus glutinosa</i>	Bird cherry <i>Prunus padus</i>	Wild cherry <i>Prunus avium</i>
Hazel <i>Corylus avellana</i>	Silver birch <i>Betula pendula</i>	Field rose <i>Rosa arvensis</i>
Holly Ilex <i>aquifolium</i>	Honeysuckle <i>Lonicera periclymenum</i>	Dog rose Wild pear <i>Pyrus pyraeaster</i>
Juniper <i>Juniperus communis</i>	<i>Rosa canina</i>	Guelder rose <i>Viburnum opulus</i>
Aspen <i>Populus tremula</i>	Wayfare tree <i>Viburnum lantana</i>	Yew <i>Taxus baccata</i>
Bay willow <i>Salix pentandra</i>	Field maple <i>Acer campestre</i>	Hawthorn <i>Crataegus monogyna</i>
Pedunculate oak <i>Quercus robur</i>	Rowan <i>Sorbus aucuparia</i>	

These should be purchased as ‘whips’, young bare root saplings a year old. They should be kept in their protective bags during transportation and planted within 4 days, after being kept in a frost-free environment and watered regularly. Planting should be completed between November and March. The soil preparation should include the removal any weeds or stones in the hedge path and to rotovate the soil and incorporate organic matter. The ground should not be frozen or waterlogged. In heavy clay or other difficult soils, a trench may need to be dug for planting. After planting, water the trees and add a layer of mulch to reduce weed competition to the growing saplings.

Native trees (medium size)

The current Biodiversity Net Gain guidance advises that “*most newly planted street trees should be categorised as ‘small’*” and that “*evidence is required to justify the input of larger size classes*”. As such the majority of proposed new trees on site have been estimated to only reach a small size within 30 years (outlined above). However, it is proposed that 5 new trees will be planted as semi-mature trees (i.e. 18cm+ girth). Based on the model produced by the Bristol Tree Forum (see Figures 1 & 2 below) which uses the industry standard tree growth rate of 2.54cm girth per year, a semi-mature tree can reach a diameter of 31.1cm within 30 years, meaning it will be classified as a medium tree.

British Standard BS 3936-1, Nursery Stock Specification for Trees and Shrubs					
Specification	Tree Girth	Lower (cm)	Upper (cm)	Median DBH (cm)	Estimated Age (yrs)
Light Standard (LS)	6-8cm	6	8	2.23	6
Standard (S)	8-10cm	8	10	2.86	7
Select Standard (SS)	10-12cm	10	12	3.50	8
Heavy Standard (HS)	12-14cm	12	14	4.14	9
Extra Heavy Standard (EHS)	14-16cm	14	16	4.77	10
Advanced Heavy Standard (AHS)	16-18cm	16	18	5.41	11
Semi mature	18 cm +	18	25	6.84	12

1 st Annual Tree Growth (cm)	Girth (cm)	DBH (cm)	Project Timeframe (yrs)	DBH by Timeframe
2.54	0.8083	30	24.26	

Urban Tree Habitat size 30 years after planting							
Tree Size (BS 3961-1)	Planting DBH (cm)	Eventual DBH (cm)	RPA r (m)	RPA (sq m)	RPA (ha)	BNG 2.1 Size	BNG 4.0 Habitat (ha)
Light Standard	2.23	26.5	3.2	31.7	0.0032	Small	0.0041
Standard	2.86	27.1	3.3	33.3	0.0033	Small	0.0041
Select Standard	3.5	27.8	3.3	34.8	0.0033	Small	0.0041
Heavy Standard	4.14	28.4	3.4	36.3	0.0036	Small	0.0041
Extra Heavy Standard	4.77	29.0	3.5	38.1	0.0038	Small	0.0041
Advanced Heavy Standard	5.41	29.7	3.6	39.8	0.0040	Small	0.0041
Semi-mature	6.84	31.1	3.7	42.7	0.0044	Medium	0.0366

Figures 1 & 2: Model produced by the Bristol Tree Forum for predicting tree growth of nursery stock trees (<https://bristoltreeforum.org/2023/04/01/biodiversity-metric-4-0-whats-it-all-about/>)

This is highly variable, and a number of factors will influence the growth rate of trees. As such the following recommendations are made to increase the likelihood of the new trees reaching the required size:

- Fast growing species will be planted to ensure the maximum growth rate will be achieved (e.g. silver birch and field maple).
- Prior to planting and when trees are first establishing, the roots of grass and other weeds would be at a similar level of that of the newly planted and establishing trees and are far more efficient at taking up water and thus depriving the trees of water.
- It is vital that prior to planting and for 3 years after planting the trees have a 1m wide circle completely free from grass and weeds. Eliminating grass and weeds from within the 1m circle can be carried out via a glyphosate weedkiller. This is best undertaken a minimum of 1 week ahead of planting (manufactures instructions are to be adhered to). For maintenance of grass and weeds post planting glyphosate is best applied when the tree is dormant.
- If trees are not correctly secured they will rock within their planting pits; roots not firmly in contact with the soil are unable to take up moisture and nutrients, resulting in die back or death of the tree. Tree stakes (total of 2. one on either side of the rootball) are to be installed prior to back filling of the planting pit and situated so to make sure that they avoid the rootball; the purpose of a stakes is to anchor the tree and its root system. The stakes are to be a round stake and are to

be driven into the base of the planting pit, these should have a diameter of c.75mm and be long enough to secure firmly into the base of the planting pit and extend to a minimum of 50mm above the top of the tree ties. The trees are to be secured to the stakes by the means of rubber tree ties and spacer blocks. The stakes and tree ties are to be inspected every 6 months to see if any adjustment is required, particular after heavy winds or rain and are to be removed completely at the beginning of the 3rd growing season (2 years) after planting.

- Mulch is valuable for your trees health and care as it insulates the soil and provides a buffer from hot and cold temperate' s; it helps to retain moisture; it helps with weed prevention, soil compaction and mower & strimmer damage. The mulch is to be laid around the base of the tree to a minimum of a 1m radius from the trunk of the tree(s) and is to be laid and maintained at a depth of 75mm to 100mm deep. Biodegradable mulches gradually break down and release nutrients into the soil and help improve soil structure. Due to the natural process the mulch reduces over time and should be checked and topped up annually for at least the first 5 years after planting.
- The main reason is trees die during the establishment period is due to lack of water; it is essential that especially during the spring and summer months to give a heavy enough watering to enable the water to penetrate right down to the deepest roots of the. During the spring and summer months (March / April through to September) it is suggested that the trees are to receive c.20L (litres) of water every other week. Depending upon weather conditions (extended periods of rain, frost or heat) during these core periods, the suggested quantities of water and the frequency of watering may need to be adjusted to make allowances so not to cause over watering or drought conditions.

Scrub planting

Areas of scrub will be planted along the eastern and northern site boundaries. The following measures will be used to create this habitat:

- Planting of desirable species only including:
 - Dog Rose (15%)
 - Dogwood (10%)
 - Blackthorn (20%)
 - Hawthorn (20%)
 - Hazel (10%)
 - Holly (10%)
 - Guelder Rose (15%)
- Planting should take place between November and March.
- The planting pattern should include a mix of species planted close together, with some areas left open to create natural openings.
- Wood chip/mulch should be placed around each newly planted scrub to prevent weed competition and improve water retention.
- Upon planting the area will be left for 1 year to allow the new plants to be established before any management is started.

Wildflower planting

The southern side of the site will be planted as a wildflower meadow. The following recommendations are made for any areas of wildflower planting:

- Em2 – Standard General Purpose Meadow Mixture is recommended as this contains a mix of wildflower and grass species which will be beneficial to invertebrates, birds and bats. Included within the seed mix is a species specifically mentioned in the Reading Biodiversity Action Plan, cowslip.
- A rate of 4g/m² should be used. Therefore, to cover the combined 176m² area of planting proposed in this plan, 0.7kg of seed mix is needed
- The following is advised by Emorsgate Seeds:

Sowing: Seed is best sown in the autumn or spring but can be sown at other times of the year if there is sufficient warmth and moisture. The seed must be surface sown and can be applied by machine or broadcast by hand.

Management: Most sown meadow wildflower and grass species are perennial; they will be slow to germinate and grow and will not usually flower in their first growing season. There will often be a flush of annual weeds from the soil in the first growing season which may grow up and obscure the meadow seedlings beneath. This annual weed growth is easily controlled by topping or mowing. Mow newly sown meadows regularly throughout the first year of establishment to a height of 40-60mm, removing cuttings if dense. In the second and subsequent years EM2 sowings can be managed in a number of ways which, in association with soil fertility, will determine the character of the grassland. The best results are usually obtained by traditional meadow management based around a main summer hay cut in combination with autumn and possibly spring mowing or grazing.

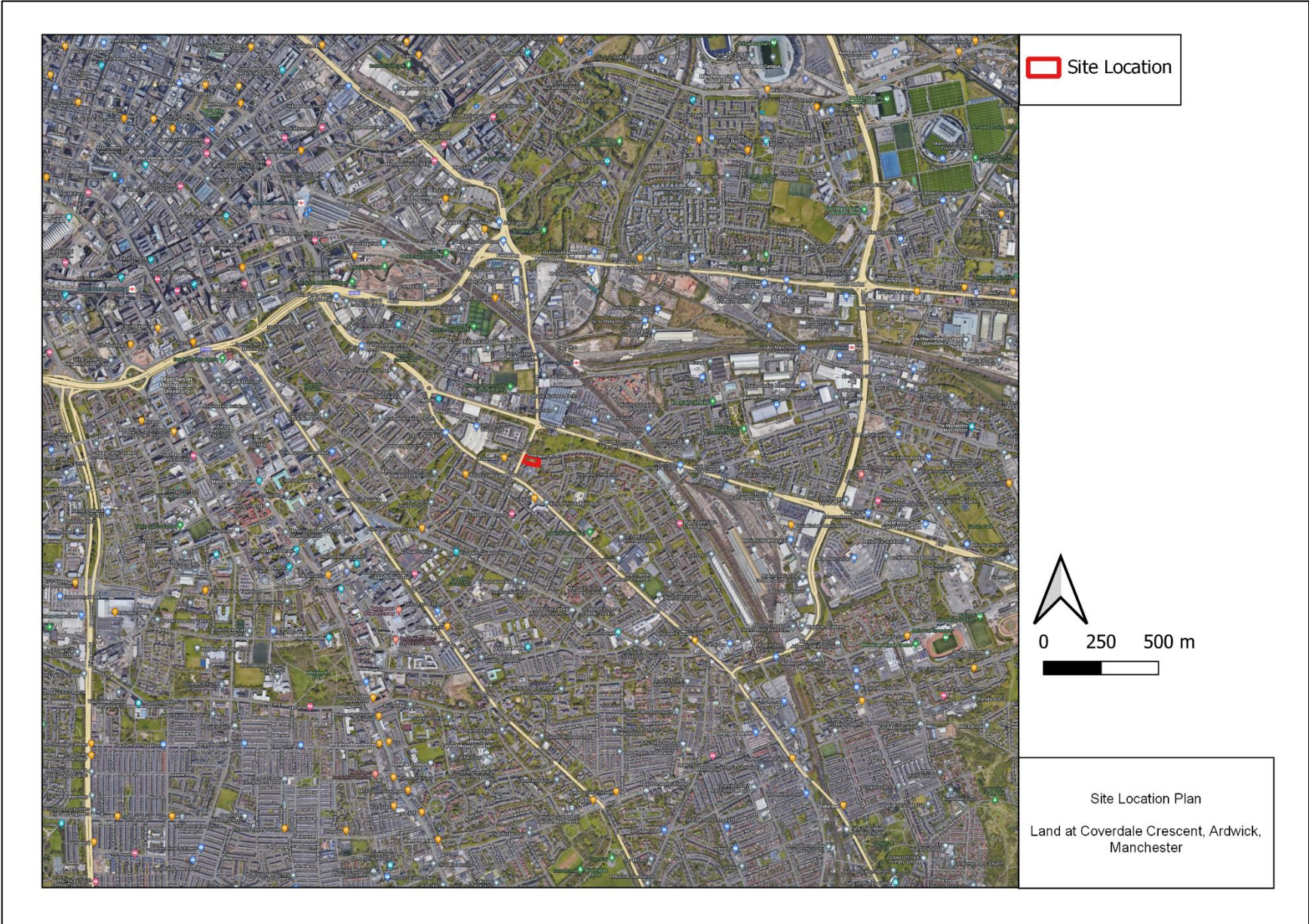
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Appendix 1: Proposed Development Plan



Appendix 2: Site Location Plan



Appendix 3: Baseline Habitat Plan



Appendix 4: Post Development Habitat Plan



Appendix 5: Habitat Condition Assessment Sheets

Condition Sheet: WOODLAND Habitat Type						
UK Habitat Classification (UKHab) Habitat Type(s)						
Woodland and forest - Other woodland; broadleaved						
Habitat Description						
See Table 1						
Site name and location	Land at Coverdale Cresence	On-site or off-site	On site			
Limitations (if applicable)	N/A	Survey reference (if relating to a wider survey)	N/A			
Grid reference	SJ 85755 96760	Habitat parcel reference	N/A			
Condition Assessment Criteria						
Indicator		Good (3 points)	Moderate (2 points)	Poor (1 point)	Score per indicator	Notes (such as justification)
A	Age distribution of trees	Three age-classes ¹ present.	Two age-classes ¹ present.	One age-class ¹ present.	1	Young trees
B	Wild, domestic and feral herbivore damage	No significant browsing damage evident in woodland ² .	Evidence of significant browsing pressure is present in 40% or less of whole woodland ² .	Evidence of significant browsing pressure is present in 40% or more of whole woodland ² .	3	No browsing pressure
C	Invasive plant species	No invasive species ³ present in woodland.	Rhododendron <i>Rhododendron ponticum</i> or cherry laurel <i>Prunus laurocerasus</i> not present, other invasive species ³ <10% cover.	Rhododendron or cherry laurel present, or other invasive species ³ >10% cover.	3	No invasive non-natives present
D	Number of native tree species	Five or more native tree or shrub species ⁴ found across woodland parcel.	Three to four native tree or shrub species ⁴ found across woodland parcel.	Two or less native tree or shrub species ⁴ across woodland parcel.	1	Two native species per m2
E	Cover of native tree and shrub species	>80% of canopy trees and >80% of understory shrubs are native ⁵ .	50 - 80% of canopy trees and 50 - 80% of understory shrubs are native ⁵ .	<50% of canopy trees and <50% of understory shrubs are native ⁵ .	3	More than 80% of canopy cover is native
F	Open space within woodland	10 - 20% of woodland has areas of temporary open space ⁶ . Unless woodland is <10ha, in which case 0 - 20% temporary open space is permitted ⁷ .	21 - 40% of woodland has areas of temporary open space ⁶ .	<10% or >40% of woodland has areas of temporary open space ⁶ . But if woodland <10ha has <10% temporary open space, please see Good category ⁷ .	1	Less than 10% open space

G	Woodland regeneration	All three classes present in woodland ⁸ ; trees 4 - 7 cm Diameter at Breast Height (DBH), saplings and seedlings or advanced coppice regrowth.	One or two classes only present in woodland ⁸ .	No classes or coppice regrowth present in woodland ⁸ .	1	No coppice with one age class across woodland
H	Tree health	Tree mortality less than 10%, no pests or diseases and no crown dieback ⁹ .	11% to 25% mortality and/or crown dieback or low-risk pest or disease present ⁹ .	Greater than 25% tree mortality and or any high-risk pest or disease present ⁹ .	3	Less than 10% trees with pests/diseases
I	Vegetation and ground flora	Recognisable NVC plant community ¹⁰ at ground layer present, strongly characterised by ancient woodland flora specialists.	Recognisable woodland NVC plant community ¹⁰ at ground layer present.	No recognisable woodland NVC plant community ¹⁰ at ground layer present.	1	Ground layer dominated by bramble, curled dock and dandelion
J	Woodland structure vertical	Three or more storeys across all survey plots or a complex woodland ¹¹ .	Two storeys across all survey plots ¹¹ .	One or less storey across all survey plots ¹¹ .	2	Canopy and ground layer
K	Veteran trees	Two or more veteran trees ¹² per hectare.	One veteran tree ¹² per hectare.	No veteran trees ¹² present in woodland.	1	No veteran trees present
L	Amount of deadwood	50% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, branch stubs and stumps, or an abundance of small cavities ¹³ .	Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities ¹³ .	Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities ¹³ .	1	Less than 25% of woodland with areas of deadwood
M	Woodland disturbance	No nutrient enrichment or damaged ground evident ¹⁴ .	Less than 1 hectare in total of nutrient enrichment across woodland area and or less than 20% of woodland area has damaged ground ¹⁴ .	More than 1 hectare of nutrient enrichment and or more than 20% of woodland area has damaged ground ¹⁴ .	1	Species indicative of nutrient enrichment across whole woodland
Total Score (out of a possible 39)					22	
Condition Assessment Result				Condition Assessment Score		Result Achieved
Total score >32 (33 to 39)				Good (3)		Poor
Total score 26 to 32				Moderate (2)		
Total score <26 (13 to 25)				Poor (1)		

Condition Sheet: GRASSLAND Habitat Type (low distinctiveness)			
UK Habitat Classification (UKHab) Habitat Type(s)			
Grassland - Modified grassland			
Site name and location	Land at Coverdale Cresence	On-site or off-site	On site
Limitations applicable (if)	N/A	Survey reference (if relating to a wider survey)	N/A
Grid reference	SJ 85755 96760	Habitat parcel reference	N/A
Habitat Description			
See Table 1			
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	<p>There are 6-8 vascular plant species per m² present, including at least 2 forbs (this may include those listed in Footnote 1). Note - this criterion is essential for achieving Moderate or Good condition.</p> <p>Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m² (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.</p>	N	Less than 6 species per m2
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	Uniform sward length of 5cm
C	<p>Some scattered scrub (including bramble <i>Rubus fruticosus</i> agg.) may be present, but scrub accounts for less than 20% of total grassland area.</p> <p>Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.</p>	Y	Scrub is less than 20% of area
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.	N	Urban site with high levels of disturbance and littering
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) ² .	Y	Bare ground less than 10%
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Y	No bracken present

G	There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴).	Y	No invasive non-natives present
Essential criterion achieved (Yes or No)			
Number of criteria passed			
Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved x/✓	
Passes 6 or 7 criteria including passing essential criterion A	Good (3)		
Passes 4 or 5 criteria including passing essential criterion A	Moderate (2)		
Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A)	Poor (1)	Y – passes 4 but fails A	
Suggested enhancement interventions to improve condition score			
Footnotes			
<p>Footnote 1 – Creeping thistle <i>Cirsium arvense</i>, spear thistle <i>Cirsium vulgare</i>, curled dock <i>Rumex crispus</i>, broad-leaved dock <i>Rumex obtusifolius</i>, common nettle <i>Urtica dioica</i>, creeping buttercup <i>Ranunculus repens</i>, greater plantain <i>Plantago major</i>, white clover <i>Trifolium repens</i> and cow parsley <i>Anthriscus sylvestris</i>.</p> <p>Footnote 2 – For example, this could include small, scattered areas of bare ground allowing establishment of new species, or localised patches where not exceeding 10% cover.</p> <p>Footnote 3 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement.</p> <p>Footnote 4 – Wildlife and Countryside Act 1981 (as amended).</p>			

Appendix 6: Headline BNG Results

The Defra Biodiversity Metric 4.0 is provided as a separate excel spreadsheet.

Land at Coverdale Crescent

Headline Results

Scroll down for final results

Return to results menu

On-site baseline

Habitat units0.73

Woodland units0.00

Water units0.00

On-site post-intervention
(including habitat creation, creation & enhancement)

Habitat units1.33

Woodland units0.00

Water units0.00

On-site net change
(units & percentage)

Habitat units0.6076.72%

Woodland units0.000.00%

Water units0.000.00%

Off-site baseline

Habitat units0.00

Woodland units0.00

Water units0.00

Off-site post-intervention
(including habitat creation, creation & enhancement)

Habitat units0.00

Woodland units0.00

Water units0.00

Off-site net change
(units & percentage)

Habitat units0.000.00%

Woodland units0.000.00%

Water units0.000.00%

Combined net unit change
(including all on-site & off-site habitat creation, creation & enhancement)

Habitat units0.60

Woodland units0.00

Water units0.00

Spatial risk multiplier (SRM) deductions

Habitat units0.00

Woodland units0.00

Water units0.00

FINAL RESULTS

Total net unit change
(including all on-site & off-site habitat creation, creation & enhancement)

Habitat units0.60

Woodland units0.00

Water units0.00

Total net % change
(including all on-site & off-site habitat creation, creation & enhancement)

Habitat units76.72%

Woodland units0.00%

Water units0.00%

Trading rules satisfied?

No - Check Trading Summary A

Habitat Type

Target

Baseline Units

Units

Units

Habitat Deficit

Habitat units

10.00%

0.73

0.67

0.00

Woodland units

10.00%

0.00

0.00

0.00

Water units

10.00%

0.00

0.00

0.00

Not engaged/not in agreement

Not engaged/not in agreement

Not engaged/not in agreement