

BIODIVERSITY NET GAIN DESIGN STAGE ASSESSMENT

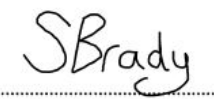
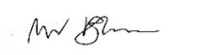
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JD Campus,
Hollins Brook Way,
Bury,
BL9 8RR

**U R B A N
G R E E N**



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Checked By:	Mark Blacker	Signature:		Qualifications: Senior Ecologist, MSc, ACIEEM
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NON-TECHNICAL EXECUTIVE SUMMARY

This Biodiversity Net Gain Assessment has been prepared by Urban Green on behalf of JD Group to support a planning application. The proposals include the development of the site in two phases. Phase 1 plans to develop a creche, private garden and car park. The second phase would provide one multi-purpose all weather pitch, a new Hub facility containing spaces for the wider office campus, including eating spaces, meeting and presentation areas, and offices with associated hard and soft landscaping.

Urban Green have been appointed to complete a Biodiversity Net Gain Design Stage Assessment in order to assess the change in value to the environment provided by the proposed development.

The Assessment was conducted using the Biodiversity Metric 3.1 to calculate the pre-and post-development biodiversity habitat units of the site for the proposed development. The results of this calculation are summarised in the following table:

	Habitat Unit Change					Net change in Biodiversity		
	On-site baseline	Retained	Lost	Enhanced	Created	On-site post development	Habitat units	%
Habitat (Area) Units	1.24	0.00	1.24	0.00	3.45	3.45	2.21	+178.18
Hedgerow (Linear Habitat) Units	1.22	0.52	0.70	0.00	0.94	1.46	0.24	+19.45

Overall, this assessment reaches a net gain in biodiversity and offsite mitigation will not be necessary. However, the trading rules of the Biodiversity Metric 3.1 are not currently satisfied by the proposed landscape design. This is because the area of existing mixed scrub has not been sufficiently compensated for by incorporating the same area of same broad habitat or higher distinctiveness habitat. In this case, the habitat contained non-native invasive species and it was the legal obligation of the landowner to remove the habitat, so it was not possible to retain. It is believed that the creation of many other habitats on site and the high habitat heterogeneity produced offsets the need for this area of mixed scrub to be replaced, especially as it is currently of poor condition. If efforts were made to satisfy the trading rules, additional areas of a heathland and scrub category habitat, or a higher distinctiveness habitat, would need to be created to equal the area being removed.

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1 Introduction

1.1 Background to the Scheme

This Biodiversity Net Gain Assessment has been prepared by Urban Green on behalf of JD Group to support a planning application. The proposals include the development of the site in two phases. Phase 1 plans to develop a creche, private garden and car park. The second phase would provide one multi-purpose all weather pitch, a new Hub facility containing spaces for the wider office campus, including eating spaces, meeting and presentation areas, and offices with associated hard and soft landscaping.

Urban Green have been appointed to complete a Biodiversity Net Gain Design Stage Assessment in order to assess the change in value to the environment provided by the proposed development.

The author of the report is Biodiversity Net Gain Consultant, Shannon Brady. Shannon has experience providing Biodiversity Net Gain assessments and advice for a range of development schemes across the UK, including residential and commercial schemes.

1.2 Site Context

The site is located at National Grid Reference SD 81523 08675 and comprises a total area of approximately 1.9ha (see Figure 1).

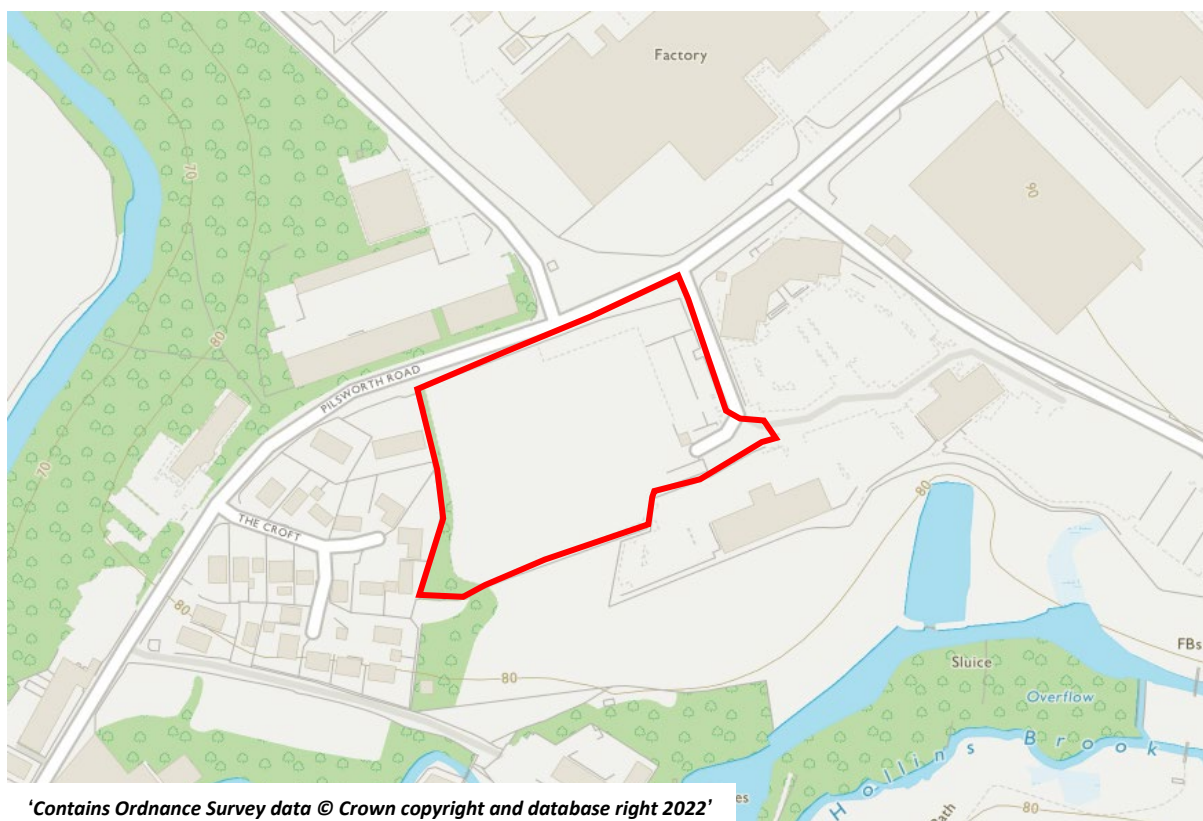


Figure 1 – Site Extent

The site is located on the rural-urban fringe of Bury, which is located approximately 2.5km north-west of the site. Pilsworth Industrial Estate is present immediately to the north-east and east of the site, comprising office blocks and commercial retail outlets. Hollins Vale Local Nature Reserve immediately

borders the south of the site. Hollins Brook and the River Roch are present close to the site, located approximately 100m south and 200m west of the site, respectively.

The site consists predominantly of hardstanding, with two buildings on site. Ephemeral/short perennial vegetation, introduced shrub, scattered scrub, a hedgerow, a line of trees, and modified grassland were also present on site.

1.3 Purpose of this Report

This report has been produced to document the methods, results, and conclusions of a BNG Assessment that was undertaken on site. The advice herein is based on both desk and field-based studies and intends to fulfil the following purposes:

- Ensure the core principles of Biodiversity Net Gain including the mitigation hierarchy are applied;
- Identify the baseline habitats present on site (pre-development), assess the condition and provide an indication of the ecological value of those habitats;

Identify the post development habitats present on site, assess the possible target condition and provide an indication of the likely importance of those habitats;
- Calculate the overall change in biodiversity score from pre- to post-development habitats (measured as habitat units);

1.4 Planning Context

BNG means leaving biodiversity in a better state than it was before. As part of the Government's 25 Year Environment Plan, this requirement is being introduced and mandated for all developments. National planning policy and several Local Plans already require developments to deliver BNG.

Currently the National Planning Policy Framework (NPPF, 2021) details:

Paragraph 174 of the NPPF states:

Planning policies and decisions should contribute to and enhance the natural and local environment by:

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

There is currently no formal guidance from Bury Council regarding Biodiversity Net Gain, however, Greater Manchester Combined Authority have released a guidance document relating to Biodiversity Net Gain in Greater Manchester (GMCA, 2021) and recognise the 10% net gain requirement. This document includes Bury which is part of Greater Manchester.

'For developments in Greater Manchester, the minimum level of Biodiversity Net Gain is considered to be achieved when the biodiversity units for the habitats (for example, area based habitats, rivers and/or hedges) impacted by the development are 10% or more after the development.'

2 Methods

2.1 Biodiversity Net Gain

Biodiversity Net Gain is defined as “development that leaves biodiversity in a better state than before”. This assessment was conducted using the Biodiversity Metric 3.1 from Natural England.

The Biodiversity Metric 3.1 uses habitat features as a proxy measure for capturing the value and importance of nature. The metric considers the size, ecological condition, distinctiveness, and location of habitats assessing ‘Area’, ‘Hedgerow’ and ‘River’ habitats units independently. The metric enables assessments to be made of the baseline and targeted post development biodiversity value of a site.

2.2 Good Practice Principles

To ensure holistic development that makes a lasting positive change to the site’s biodiversity the Good Practice Principles as detailed in Biodiversity Net Gain: Good Practice Principles for Development (Baker, et al., 2019). Key principles include:

- Following the ‘Mitigation Hierarchy’:
 - Avoid impacts on biodiversity
 - Minimise impacts on biodiversity
 - Compensate for biodiversity losses on site
 - Compensate for biodiversity loss off site
- Avoid irreplaceable habitats and losing biodiversity that cannot be offset elsewhere;
- Address risks including difficulty and time of habitat creation and enhancement;
- Make a measurable net gain contribution calculated with a suitable metric with limitation and assumptions clearly identified;
- Achieve the best outcome for biodiversity creating lasting long-term benefits that exceed current expectations;

2.3 Desk Study

A desk study was undertaken to provide information of habitat types, condition and strategic significance both on site and within the wider area. Due to the size and low impact of the proposed development and being located on the rural urban fringe of Bury a 1km Local Data Search was conducted as it was deemed an appropriate distance for the Zone of Influence. Sources of information for the desk study are displayed in Table 1.

Table 1 – Desk Study Sources of Information

Source	Date Consulted	Information Sought
Multi-Agency Geographic Information for the Countryside (MAGIC) online database	29/03/2022	Identify statutory nature conservation designation.

Source	Date Consulted	Information Sought
Greater Manchester Ecology Unit	29/03/2022	Locally designated wildlife sites within 1km of site boundary.
Natural England Priority Habitat Inventory (England)	29/03/2022	Information regarding priority habitats within the zone of influence

2.4 Site Mapping

2.4.1 Sources of Information

Table 2 – Site Mapping Sources of Information

Source	Date Consulted	Information Sought
Preliminary Ecological Appraisal Urban Green 2022 UG_1466_ECO_PEA_03	29/03/2022	Phase 1 Habitat Survey map and description of existing habitat condition.
Tree Data Schedule Urban Green 2022 UG_1466_ARB_TC+TSP_REV00	29/03/2022	Tree Root Protection Areas (RPA) for existing trees on site and details of trees scheduled for removal/retention as part of the development on site.
Landscape Proposals CW Studio Landscape Architects	30/05/2022	Habitat areas and conditions as to be included within the planning layout (post-development) for site.
Natural England: The Biodiversity Metric 3.1	30/05/2022	The Biodiversity Metric 3.1, including the tool itself, user guides and reference documentation associated with the tool.

2.4.2 Existing Habitat (Pre-Development)

The site was subject to a field survey on the 8th of February 2022 by Assistant Ecologist Jake Healy and Senior Biodiversity Consultant Maisie McKenzie. The weather conditions were 11°C, overcast (8/8 oktas), with a wind speed of 3 on the Beaufort scale, and was dry.

The methods were based on the standard 'Phase 1' habitat survey technique (JNCC, 2010) which was extended to include any relevant information on evidence or suitability for use by protected or notable species. Site habitats, extent, quality, and botanical species abundance was recorded for all habitats present on site. Additionally, a tree survey was conducted on site by Urban Green in March 2022, which obtained information on site trees including root protection areas (RPAs).

These habitats were subsequently mapped using ESRI ArcGIS Pro software, and habitat areas and lengths were calculated.

Habitat types were converted to UKHab classifications (The UK Habitat Classification Working Group, May 2018) using the UK Habitat Classification V1 guidance tool based on the assessor's judgment of how JNCC habitat descriptions best meet the criteria of the UKHab classification.

2.4.3 Planning Layout (Post-Development)

The proposed landscape plans as provided by CW Studio (see Appendix 2) were provided in DWG. format and the habitat areas and lengths were calculated from this using BricsCAD. The plans include an indicative site plan and a future development outline plan.

2.5 The Biodiversity Metric 3.1

The BNG calculation was undertaken utilising The Biodiversity Metric 3.1 from Natural England. The Biodiversity Metric 3.1 uses habitat features as a proxy measure for capturing the value and importance of nature. The metric takes into account the type, size, ecological condition and location of habitats. The metric enables assessments to be made of the present and forecast future biodiversity value of a site.

The calculation was performed by a technically competent and experienced person as detailed in British Standard BS8683 - Suitably qualified person –definition in BS8683:2020.

2.6 Habitat Scoring

The Biodiversity Metric 3.1 supplies reference documents and user guides in which to accurately evaluate and assess the different habitats on site as to their condition, distinctiveness, and strategic significance. A summary of the methodology for each assessment undertaken is demonstrated in the following sections.

2.6.1 Condition

The Biodiversity Metric 3.1 uses the term habitat 'condition' as one of its measures of the quality of a habitat.

'Condition Sheets' are provided for each area habitat type. These list positive indicators for each habitat and indicate how many of these indicators need to be present to meet certain thresholds of condition. These condition sheets can be found in "The Biodiversity Metric 3.1: habitat condition assessment sheets". Completed condition sheets for this assessment can be found in section 3.

Table 3 details the condition sheets used within this assessment.

Table 3 – Conditions sheets used for habitat assessment

Condition Sheet	Habitats Assessed
Area Habitats	
Grassland (low)	Modified grassland
Scrub	Heathland and shrub - Mixed scrub

Condition Sheet	Habitats Assessed
Urban – Non-Priority Habitat	Sparsely vegetated land - Ruderal/ephemeral
Hedgerow Habitats	
Hedgerows	Native hedgerow
Line of Trees	Line of trees

2.6.2 Distinctiveness

The distinctiveness of each habitat is automatically assigned by the tool, based upon national records of the occurrence and rarity of each habitat. Table 4 provides the basis of the distinctiveness assessment.

Table 4 – Distinctiveness Assessment for Habitats

Distinctiveness Categories		
Category	Scores	Multiplier
Very High	8	Priority habitats as defined in Section 41 of the Natural Environment and Rural Communities (NERC) Act that are highly threatened, internationally scarce and require conservation action e.g. blanket bog.
High	6	Priority habitats as defined in Section 41 of the NERC Act requiring conservation action e.g. lowland fens.
Medium	4	Semi-natural habitats not classed as a Priority Habitat.
Low	2	Habitat of low biodiversity value. Temporary grass and clover ley; intensive orchard; rhododendron scrub.
Very Low	0	Little or no biodiversity value e.g. hard standing or sealed surface.

2.6.3 Strategic Significance

The idea of strategic significance works at a landscape scale. It gives additional unit value to habitats that are in preferred locations for biodiversity and other environmental objectives. Ideally these aspirations will have been summarised in a local strategic planning document which articulates where biodiversity is of high priority and the places where it is less so. Strategic significance utilises published local plans and objectives to identify local priorities for targeting biodiversity and nature improvement, such as Nature Recovery Areas, local biodiversity plans, National Character Area 14 objectives and green infrastructure strategies.

Table 5 – Strategic Significance Assessment for Habitats

Strategic Significance Categories	
Category	Score
High strategic significance High potential & within area formally identified in local policy	1.15
Medium strategic significance Good potential but not in area defined in local policy	1.1
Low Strategic Significance Low potential and not in area defined in local policy	1

2.6.4 Temporal Multiplier

For post development habitat creation or enhancement, a risk multiplier will be automatically applied by the tool to account for the period of diminished ecological value while the habitat reaches the targeted post development condition. This time and therefore risk multiplier differs between habitat types if the habitat is being created or enhanced and how the habitat is to be managed. The predetermined multiplier is based on the average time to meet targeted condition assuming good practice principles and appropriate management strategies are applied.

2.6.5 Difficulty Multipliers

For post-development habitat creation or enhancement, a risk multiplier will be automatically applied by the tool to account the 'difficulty' of habitat-specific enhancement or creation. There are two separate difficulty multipliers assigned to each habitat, one for creation and one for enhancement/restoration, recognising that the technical challenges will not necessarily be the same for both.

2.7 Constraints to the Survey

Whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment.

The conclusions and recommendations detailed in this report are based upon the site redline boundary and the development proposals as outlined by the client at the time of writing. Should there be any changes to the site redline boundary or development proposals at a later stage, this assessment should be reviewed to determine whether any amendments or additional survey work is required.

Best possible effort was made during the mapping process to ensure that the habitat map accurately represents the area of habitats present on site. Some margin of error is possible due to the continuous and difficult to define nature of habitat boundaries, however this margin of error has been minimised using professional opinion of two experienced ecologists and up to date aerial imagery. As such this is not expected to be a significant constraint and affect the overall Biodiversity Net Gain Calculation provided within this report. February is a suboptimal time for carrying out a Phase 1 Habitat Surveys due to being outside of the optimal plant growing season. Therefore, it is likely that some plants are present on the site but were not evident at the time of the survey and were not recorded. This is not considered to be a significant constraint with regards to the general Phase 1 Habitat Survey results due to the size and location of the site and limited extent of the habitats, it is considered very unlikely that any rare or priority plant species were missed. It should not, however, be taken as providing a full and definitive survey of any protected species group.

3 Pre-Development Habitat Assessment

Pre-development baseline habitat condition was assessed following the methodology outlined in Section 2.6. Habitat descriptions and the results of this assessment are provided below. The habitats have been given reference numbers for clarity regarding in-text and the metric calculation (UG_1466_BNG_CALC_01) which illustrates the numerical data. Full habitat descriptions can be found in the PEA (Urban Green, 2022).

3.1 Area Habitats

3.1.1 1) Buildings - Developed land; sealed surface

Two buildings were present on site. These are classified as developed land; sealed surface which has a predetermined condition score of **N/A** within the metric.

3.1.2 2) Hardstanding – Developed land; sealed surface

Hardstanding was present across the site comprising car parks and pathways associated with the two buildings on site. These are classified as developed land; sealed surface which has a predetermined condition score of **N/A** within the metric.

3.1.3 3) Ephemeral/Short Perennial – Ruderal/Ephemeral

Areas of ephemeral/short perennial vegetation are present on site, located in the north-west and centre of the site. It was also noted that these areas were extremely wet and showed characteristics of marshy grassland with areas of standing water (TN3), however, this is not anticipated to be a permanent feature.

Table 6 – Condition Assessment for Urban

Phase 1 Habitat Classification		Ephemeral/Short Perennial
UK Hab Classification		Ruderal/Ephemeral
Condition Sheet		Urban
Condition Criteria 1.	Vegetation structure is varied, providing opportunities for insects, birds and bats to live and breed. A single ecotone (i.e. scrub, grassland, herbs) should not account for more than 80% of the total habitat area.	Fail
Condition Criteria 2.	“There is a diverse range of flowering plant species, providing nectar sources for insects. These species may be either native, or non-native but beneficial to wildlife. NB - To achieve GOOD condition, criterion 2 must be satisfied by native species only (rather than non-natives beneficial to wildlife).”	Fail
Condition Criteria 3.	“Invasive non-native species (Schedule 9 of WCA) cover less than 5% of total vegetated area. NB - To achieve GOOD condition, criterion 3 must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).”	Pass
Condition	Poor	Passes 1 of 3 criteria

Distinctiveness	Medium	
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3.1.4 4) Ornamental Shrub – Introduced Shrub

An area of introduced shrub was present at the west of the site comprising non-native invasive species. Introduced shrub is given a predetermined score of N/A within the metric.

3.1.5 5) Scattered Scrub – Mixed Scrub

Scattered scrub was present within the site but was mainly constrained to the boundaries of the site and appeared unmanaged. Non-native invasive species were found in this habitat.

Table 7 – Condition Assessment for Mixed Scrub

Phase 1 Habitat Classification	Scattered scrub				
UK Hab Classification	Mixed Scrub				
Condition Sheet	Scrub				
Condition Criteria 1.	Habitat is representative of UKHab description. There are at least three woody species, with no one species comprising more than 75% of the cover.	Pass	Condition Criteria 4.	Well-developed edge with tall grassland/herbs present between scrub and adjacent habitats	Fail
Condition Criteria 2.	Diverse age range with seedlings, young shrubs, and mature shrubs.	Fail	Condition Criteria 5.	Clearings, glades and rides present within the scrub, providing sheltered edges.	Fail
Condition Criteria 3.	Absence of invasive non-native species and undesirable species make up 5% of ground cover	Fail			
Condition	Poor	Passes 1 of 5 criteria			
Distinctiveness	Medium				

3.1.6 6) Amenity Grassland - Modified Grassland

The south-western section of the site comprised an area of modified grassland that appeared damaged by previous anthropogenic disturbance.

Table 8 – Condition Assessment for Modified Grassland

Phase 1 Habitat Classification	Modified Grassland				
UK Hab Classification	Modified Grassland				
Condition Sheet	Grassland (Low)				
Condition Criteria 1.	6-8 species per m ²	Fail	Condition Criteria 5.	Cover of bare ground between 1 – 5%	Fail

Condition Criteria 2.	Sward height is varied	Fail	Condition Criteria 6.	Cover of Bracken <5% of ground cover	Pass
Condition Criteria 3.	Cover of scrub less than 20%	Pass	Condition Criteria 7.	Absence of invasive non-native species. Combined cover of damage and undesirable species less than 5% of total area.	Fail
Condition Criteria 4.	Physical damage evident in less than 5% of total grassland area	Fail			
Condition	Poor	Passes 2 of 7 criteria			
Distinctiveness	Low				

3.2 Linear Hedgerow Habitats

3.2.1 1) Species Poor Hedgerow – Native Hedgerow with trees

A single hedgerow that had been recently cut to the stumps was present along the western border of the site.

Table 9 – Condition Assessment for Native Hedgerow

Phase 1 Habitat Classification		Hedgerow			
UK Hab Classification		Native Hedgerow			
Condition Sheet		Hedgerow			
A1. Height	>1.5 m average along length	Fail	C1. Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length	Fail
A2. Width	>1.5 m average along length	Fail	C2. Undesirable perennial vegetation	Undesirable species <20% cover of the area of undisturbed ground	Fail
B1. Gap – Hedge Base	Gap between ground and base of canopy <0.5 m for >90% of length	Fail	D1. Invasive Non-native species	>90% of the hedgerow and undisturbed ground is free of invasive non-native species	Pass
B2. Gap – hedge canopy continuity	Gaps make up <10% of total length. No canopy gaps >5m	Fail	D2. Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities	Fail
Condition	Poor	Passes 1 of 8 attributes			
Distinctiveness	Medium				

3.2.2 2) Scattered Trees – Line of Trees

Multiple lines of trees were present along the northern, western, and southern boundaries of the site.

Table 10 – Condition Assessment for Line of trees

Phase 1 Habitat Classification	Line of Trees
UK Hab Classification	Line of Trees

Condition Sheet		Line of Trees			
Condition Criteria 1.	More than 70% of trees are native species.	Pass	Condition Criteria 4.	There is an undisturbed naturally vegetated strip of at least 6m on both sides to protect the line of trees from anthropogenic activities	Fail
Condition Criteria 2.	Tree canopy is predominantly continuous with gaps in canopy cover making up <10% of total area and no individual gap being >5m wide	Pass	Condition Criteria 5.	At least 95% of the trees are in a healthy condition (excluding veteran features). There is little or no evidence of an adverse impact on tree health by damage of livestock	Pass
Condition Criteria 3.	Include one or more mature or veteran tree	Pass			
Condition	Moderate	Passes 4 of 5 attributes			
Distinctiveness		Medium			

4 Retained Habitats

Using the Biodiversity Metric 3.1, the habitat units of the pre-development habitats to be retained were calculated.

4.1 Area Habitats

Under the proposed landscape design, none of the area habitats present on site will be retained. Details of the type and extent of each habitat lost are detailed in Section 5.1.

4.2 Linear Hedgerow Habitats

Table 11 shows the linear hedgerow habitats and their corresponding length (km) and units to be retained on site.

Table 11 – Linear hedgerow habitats to be retained on site

Habitat Parcel Reference	Total Length (km)	Total Units	Length Retained (km)	Units Retained
2) Line of trees	0.28	1.12	0.13	0.52
Total	0.28	1.12	0.13	0.52

5 Lost Habitats

Using the Biodiversity Metric 3.1, the habitat units of the pre-development habitats to be lost were calculated.

5.1 Area Habitats

Table 12 shows a summary of the area habitats and their corresponding area (ha) and unit score to be lost on site along with planned mitigation.

Table 12 – Area habitats to be lost on site

Habitat Parcel Reference	Total Area (ha)	Total Units	Area lost (ha)	Units lost	Planned Mitigation
1) Developed land; Sealed surface	0.04	0.00	0.04	0.00	Areas of hardstanding provide no ecological services therefore no compensation is necessary.
2) Developed land; Sealed surface	1.15	0.00	1.15	0.00	Areas of hardstanding provide no ecological services therefore no compensation is necessary.
3) Ruderal/Ephemeral	0.27	0.54	0.27	0.54	This area is currently very wet, in poor condition and providing low habitat value. This habitat will be compensated for by creating areas of more species rich habitat, suitable for wet and dry conditions.
4) Introduced Shrub	0.01	0.02	0.01	0.02	This habitat was poor quality and contained invasive non-native species. More valuable habitats, such as wildflower meadows, will offset the loss of this habitat.
5) Mixed Scrub	0.14	0.56	0.14	0.56	The mixed scrub habitats were unmanaged and contained invasive, non-native species. Larger areas of better condition habitat, planted with ferns and perennial bulbs, will compensate for the loss of this habitat.
6) Modified Grassland	0.06	0.12	0.06	0.12	This highly disturbed and poor condition habitat will be compensated for by new areas of species rich grassland.
Total	1.67	1.24	1.67	1.24	

5.2 Linear Hedgerow Habitats

Table 13 shows the linear hedgerow habitats and their corresponding length (km) and units to be lost on site along with planned mitigation.

Table 13 – Linear hedgerow habitats to be lost on site

Habitat Parcel Reference	Total Length (km)	Total Units	Length lost (km)	Units lost	Planned Mitigation
1) Native Hedgerow	0.05	0.1	0.05	0.1	This feature was providing no habitat services and its loss is to be compensated for by the creation of other new hedgerows on site.
1) Line of Trees	0.28	1.12	0.15	0.6	The loss of this habitat is to be compensated for by the creation of other linear features, such as new lines of trees or hedgerows.

6 Pre-Development Unit Summary

Using the Biodiversity Metric 3.1, the habitat units of the existing site habitats were calculated; the habitat units to be retained within site development were calculated; and the habitat units that are anticipated to be lost in site development were calculated.

The results of these calculations are presented in the Table 14.

Table 14: Pre-Development Unit Summary

	On-site baseline	Retained	Lost
Area Units	1.24	0.00	1.24
Linear Hedgerow Units	1.22	0.52	0.7

7 Habitat Creation

7.1 Area Habitats

7.1.1 Urban - Developed Land, Sealed Surface

A large area of the post-development site will be taken up by developed land in the form of buildings, paving, parking areas and recreational areas. This habitat classification is automatically allocated a condition score of N/A by the metric and therefore contributes no habitat units to the final score.

7.1.2 Urban – Urban Trees

A total of 87 urban trees are due to be planted across the site. These trees will be categorised as boundary, car park, rain garden and ornamental and it is expected that species mixes will vary accordingly. At present, the final species mix is unconfirmed, therefore it has been assumed that the trees planted will be a mix containing >70% native species. Tree sizes have been gathered from the landscape proposals. An effort should be made to incorporate as many native species as possible and to carry out a limited maintenance regime which benefits local wildlife.

Table 15 – Condition Assessment for Urban Trees

Classification within Landscape Designs		Car park tree / boundary tree / rain garden tree / ornamental tree				
UK Hab Classification		Urban Trees				
Condition Sheet		Urban Trees				
Condition Criteria 1.		The tree is a native species(or more than 70% within the block are native species).	Pass	Condition Criteria 4.	There is little or no evidence of an adverse impact on tree health by anthropogenic activities such as vandalism or herbicide use. There is no current regular pruning regime so the trees retain >75% of expected canopy for their age range and height.	Pass
Condition Criteria 2.		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).	Pass	Condition Criteria 5.	Micro-habitats for birds, mammals and insects are present e.g. presence of deadwood, cavities, ivy or loose bark	Fail
Condition Criteria 3.		The tree is mature or veteran (or more than 50% within the block are mature or veteran).	Fail	Condition Criteria 6.	More than 20% of the tree canopy area is oversailing vegetation beneath.	Fail
Condition	Moderate	Passes 3 of 7 criteria				
Distinctiveness		Medium				
Time to Target Condition		27 years				

Difficulty of Creation	Low
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7.1.3 Urban – Rain Garden – Rain Garden

The rain garden will contain plants suitable for dry and wet conditions, including ornamental grasses and flowering perennials. The specific planting mix is to be confirmed, and, upon confirmation of the exact species being incorporated into these areas, the habitat type and/or condition score and resulting units may change.

Table 16 – Condition Assessment for Rain Garden

Classification within Landscape Designs		Rain Garden				
UK Hab Classification		Rain Garden				
Condition Sheet		Urban				
Condition Criteria 1.		Vegetation structure is varied, providing opportunities for insects, birds and bats to live and breed. A single ecotone (i.e. scrub, grassland, herbs) should not account for more than 80% of the total habitat area.	Pass	Condition Criteria 3.	Invasive non-native species (Schedule 9 of WCA) cover less than 5% of total vegetated area.	Pass
Condition Criteria 2.		There is a diverse range of flowering plant species, providing nectar sources for insects. These species may be either native, or non-native but beneficial to wildlife.	Pass			
Condition	Good	Passes 3 of 3 criteria.				
Distinctiveness		Low				
Time to Target Condition		5 years				
Difficulty of Creation		Low				

7.1.4 Heathland and Shrub – Mixed Scrub – Car Park and Campus Planting

These areas are primarily around the periphery of the site and adjacent to areas of hardstanding. They will be characterised by block planting of flowering, evergreen shrubs and perennials. The definitive species mix is to be confirmed and the final assessment may be impacted by the species selected.

Table 17 – Condition Assessment for Mixed Scrub

Classification within Landscape Designs	Car Park and Campus Planting				
UK Hab Classification	Heathland and Shrub				
Condition Sheet	Scrub				
Condition Criteria 1.	Habitat is representative of UKHab description (where in its natural range). There are at least	Fail	Condition Criteria 4.	The scrub has a well-developed edge with scattered scrub and tall grassland and/or herbs	Fail

	three woody species, with no one species comprising more than 75% of the cover (except common juniper, sea buckthorn or box, which can be up to 100% cover).			present between the scrub and adjacent habitat(s).	
Condition Criteria 2.	There is a good age range – all of the following are present: seedlings, young shrubs and mature shrubs.	Fail	Condition Criteria 5.	There are clearings, glades or rides present within the scrub, providing sheltered edges.	Fail
Condition Criteria 3.	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and species indicative of sub-optimal condition make up less than 5% of ground cover.	Pass			
Condition	Poor	Passes 1 of 5 criteria.			
Distinctiveness	Medium				
Time to Target Condition	1 year				
Difficulty of Creation	Low				

7.1.5 Grassland – Modified Grassland – Entrance Planting

The various parcels of this type of planting are located around public spaces which will experience high footfall. These areas will feature perennial and ornamental grass planting with seasonal bulbs, although the exact species composition is to be decided.

Table 18 – Condition Assessment for Modified Grassland

Classification within Landscape Designs	Entrance Planting				
UK Hab Classification	Grassland				
Condition Sheet	Grassland (Low)				
Condition Criteria 1 (essential for moderate).	There must be 6-8 species per m2. If a grassland has 9 or more species per m2 it should be classified as a medium distinctiveness grassland habitat type.	Fail	Condition Criteria 5.	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	Pass
Condition Criteria 2.	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.	Pass	Condition Criteria 6.	Cover of bracken less than 20%.	Pass
Condition Criteria 3.	Some scattered scrub (including bramble) may be	Pass	Condition Criteria 7.	There is an absence of invasive non-native	Pass

	present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.			species (as listed on Schedule 9 of WCA, 1981).	
Condition Criteria 4.	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.	Pass			
Condition	Poor	Passes 6 of 7 criteria but fails essential criteria 1.			
Distinctiveness	Low				
Time to Target Condition	4 years.				
Difficulty of Creation	Low				

7.1.6 Grassland – Modified Grassland – Woodland Planting

The majority of the woodland planting will be undertaken around the boundary of the site, adjacent to the public footpath and recreational areas. These areas will be planted with ferns, flowering perennials and seasonal bulbs, however, the exact species mix is to be confirmed and this could influence the final score.

Table 19 – Condition Assessment for Modified Grassland

Classification within Landscape Designs	Woodland Planting				
UK Hab Classification	Grassland				
Condition Sheet	Grassland (Low)				
Condition Criteria 1 (essential for moderate).	There must be 6-8 species per m2. If a grassland has 9 or more species per m2 it should be classified as a medium distinctiveness grassland habitat type.	Fail	Condition Criteria 5.	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	Pass
Condition Criteria 2.	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.	Pass	Condition Criteria 6.	Cover of bracken less than 20%.	Pass

Condition Criteria 3.	Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Pass	Condition Criteria 7.	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981).	Pass
Condition Criteria 4.	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.	Pass			
Condition	Poor	Passes 6 of 7 criteria but fails essential criteria 1.			
Distinctiveness	Low				
Time to Target Condition	1 year.				
Difficulty of Creation	Low				

7.1.7 Grassland – Other Neutral Grassland – Groundcover Planting

The areas of groundcover planting are primarily around the periphery of the site and will consist of wildflower species which are shade tolerant. Species expected to be included are bird's-foot trefoil (*Lotus corniculatus*), common knapweed (*Centaurea nigra*), common vetch (*Vicia sativa*) and autumn hawkbit (*Scorzoneroides autumnalis*). This species mix is subject to change and could therefore impact the net change in biodiversity.

Table 20 – Condition Assessment for Other Neutral Grassland

Classification within Landscape Designs	Groundcover Planting				
UK Hab Classification	Grassland				
Condition Sheet	Grassland (Medium, High & Very High)				
Condition Criteria 1 (essential for moderate).	The appearance and composition of the vegetation closely matches characteristics of the specific grassland habitat type (see UKHab definition). Wildflowers, sedges and indicator species for the specific grassland habitat type are very clearly and easily visible throughout the sward.	Fail	Condition Criteria 4.	Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%.	Pass
Condition Criteria 2.	Sward height is varied (at least 20% of the sward is less than 7	Pass	Condition Criteria 5.	There is an absence of invasive non-native	Pass

	cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.			species (as listed on Schedule 9 of WCA, 1981). Combined cover of species indicative of sub-optimal condition ¹ 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.	
Condition Criteria 3.	Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	Pass	Condition Criteria 6 (essential for good).	There are greater than 9 species per metre squared.	Fail
Condition	Poor	Passes 4 of 6 criteria but fails essential criteria 1 and 6.			
Distinctiveness	Medium				
Time to Target Condition	2 years.				
Difficulty of Creation	Low				

7.1.8 Grassland – Modified Grassland – Grass

There are small compartments of grass in the south-west corner of the site and towards the centre of the site adjacent to recreational space. This is expected to be amenity grassland and will be created by laying turf.

Table 21 – Condition Assessment for Modified Grassland

Classification within Landscape Designs	Grass				
UK Hab Classification	Grassland				
Condition Sheet	Grassland (Low)				
Condition Criteria 1 (essential for moderate).	There must be 6-8 species per m2. If a grassland has 9 or more species per m2 it should be classified as a medium distinctiveness grassland habitat type.	Fail	Condition Criteria 5.	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	Pass
Condition Criteria 2.	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.	Fail	Condition Criteria 6.	Cover of bracken less than 20%.	Pass

Condition Criteria 3.	Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Pass	Condition Criteria 7.	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981).	Pass
Condition Criteria 4.	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.	Pass			
Condition	Poor	Passes 5 of 7 criteria but fails essential criteria 1.			
Distinctiveness	Low				
Time to Target Condition	1 year.				
Difficulty of Creation	Low				

7.1.9 Grassland – Other Neutral Grassland – Pictorial Meadow Planting

The areas of pictorial meadow planting border the sports pitch and recreational areas, as well as the public path. This will be laid as wildflower meadow turf which features a wide range of wildflowers. The exact species mix is yet to be confirmed but the species mix and density is likely to influence the final net gain result.

Table 22 – Condition Assessment for Other Neutral Grassland

Classification within Landscape Designs	Pictorial Meadow Planting				
UK Hab Classification	Grassland				
Condition Sheet	Grassland (Medium, High & Very High)				
Condition Criteria 1 (essential for moderate).	The appearance and composition of the vegetation closely matches characteristics of the specific grassland habitat type (see UKHab definition). Wildflowers, sedges and indicator species for the specific grassland habitat type are very clearly and easily visible throughout the sward.	Pass	Condition Criteria 4.	Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%.	Pass

Condition Criteria 2.	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Pass	Condition Criteria 5.	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981). Combined cover of species indicative of sub-optimal condition 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.	Pass
Condition Criteria 3.	Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	Pass	Condition Criteria 6 (essential for good).	There are greater than 9 species per metre squared.	Fail
Condition	Moderate	Passes 5 of 6 criteria but fails essential criteria 6.			
Distinctiveness	Medium				
Time to Target Condition	5 years.				
Difficulty of Creation	Low				

7.2 Linear Hedgerow Habitats

7.2.1 Hedgerows – Native Species Rich Hedgerow

There are two lengths of native hedgerow being created on site – one parallel to the northern boundary and another along the western boundary. The native species expected to be planted within these hedgerows include alder, hawthorn (*Crataegus monogyna*), holly (*Ilex aquifolium*), blackthorn (*Prunus spinosa*) and dog rose (*Rosa canina*). These hedges meet the criteria to be considered species rich as they contain 5 native woody species. The hedge will be maintained at 0.9m high.

Table 23 – Condition Assessment for Native Species Hedgerow

Classification within Landscape Designs	Hedge Planting				
UK Hab Classification	Hedgerows				
Condition Sheet	Hedgerow				
A1. Height.	>1.5m average along length.	Fail	C1. Undisturbed Ground and Perennial Vegetation.	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: - measured from outer edge of hedgerow, and - is present on one side of the hedge (at least).	Fail

A2. Width.	>1.5m average along length.	Fail	C2. Undesirable Perennial Vegetation.	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	Pass
B1. Gap – Hedge Base.	Gap between ground and base of canopy <0.5 m for >90% of length (unless ‘line of trees’).	Pass	D1. Invasive and Neophyte Species.	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species.	Pass
B2. Gap – Hedge Canopy Continuity.	Gaps make up <10% of total length and No canopy gaps >5 m.	Pass	D2. Current Damage.	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	Pass
Condition	Moderate	Passes 5 of 8 criteria and fails no more than 1 criterion in each group.			
Distinctiveness	Medium				
Time to Target Condition	5 years.				
Difficulty of Creation	Low				

8 Post-Development Summary and Conclusion

Using the Biodiversity Metric 3.1, the habitat units of the planned enhanced and created habitats were calculated; the habitat units to be retained within site development were calculated; and the habitat units that are anticipated to be lost in site development were calculated.

The results of these calculations are presented in the Table 24.

Table 24: Post Development Biodiversity Net Gain Calculation

	Habitat Unit Change					On-site post development	Net change in Biodiversity	
	On-site baseline	Retained	Lost	Enhanced	Created		Habitat units	%
Habitat (Area) Units	1.24	0.00	1.24	0.00	3.45	3.45	2.21	+178.18
Hedgerow (Linear Habitat) Units	1.22	0.52	0.70	0.00	0.94	1.46	0.24	+19.45

As illustrated in Table 24 the total Biodiversity Net Gain for the site, based on the current landscape design, is +178.18% for area habitats and a 19.45% for linear habitats. Overall, it demonstrates that the post development habitats on site will provide more ecological benefit to local wildlife species than the habitats currently found on site and is in line with the relevant National Planning Policy Framework and Local Planning Policies.

However, the trading rules of the Biodiversity Metric 3.1 are not currently satisfied by the proposed landscape design. This is because the area of existing mixed scrub has not been sufficiently compensated for by incorporating the same area of same broad habitat or higher distinctiveness habitat. In this case, the habitat contained non-native invasive species and it was the legal obligation of the landowner to remove the habitat, so it was not possible to retain. It is believed that the creation of many other habitats on site and the high habitat heterogeneity produced offsets the need for this area of mixed scrub to be replaced, especially as it is currently of poor condition. If efforts were made to satisfy the trading rules, additional areas of a heathland and scrub category habitat, or a higher distinctiveness habitat, would need to be created to equal the area being removed.

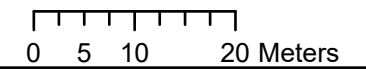
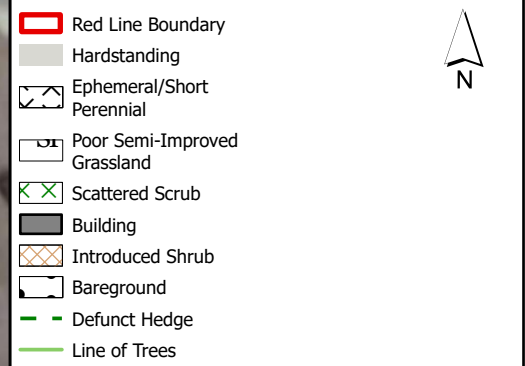
To ensure that the habitats proposed as part of the post development design of this site reach the condition detailed within this report and the full gain in value to the environment is achieved by this site, a long-term management plan (usually 30 years) is required. This length of management plan is required due to the complex nature of the habitats to be enhanced/created on site and the high value they will provide to the environment.

9 References

- CIEEM (2019). Advice Note on the Lifespan of Ecological Reports and Surveys. CIEEM.
- CW Studio (2022). Landscape Proposal: Indicative Site Plan
- CW Studio (2022). Landscape Proposal: Future Development Outline Plan
- Greater Manchester Combined Authority (2021). GMCA Biodiversity Net Gain Guidance for Greater Manchester
- Natural England (2021). The Biodiversity Metric 3.1 - Calculation Tool: User Guide - Beta Test.
- Natural England (2021). The Biodiversity Metric 3.1 - Technical Supplement - Beta Test.
- Natural England (2021). The Biodiversity Metric 3.1 - User Guide - Beta Test.
- eCountability Ltd. (2018). UK Habitat Classification (Professional Edition).
- JNCC (2010). Handbook for Phase One Habitat Survey – 2010 Edition. England Field Unit, Nature Conservancy Council. Reprinted JNCC.
- Stace, C. (2010). New Flora of the British Isles. 3rd ed. Cambridge: Cambridge University Press.
- Urban Green (2022). UG_1466_BNG_CALC_o1
- Urban Green (2022). UG_1466_ECO_PEA_o3

Appendix 1 – Pre- Development Habitat Map

U R B A N
G R E E N



A: Ground Floor, The Tower,
Deva City Office Park, Trinity Way,
Manchester M3 7BF

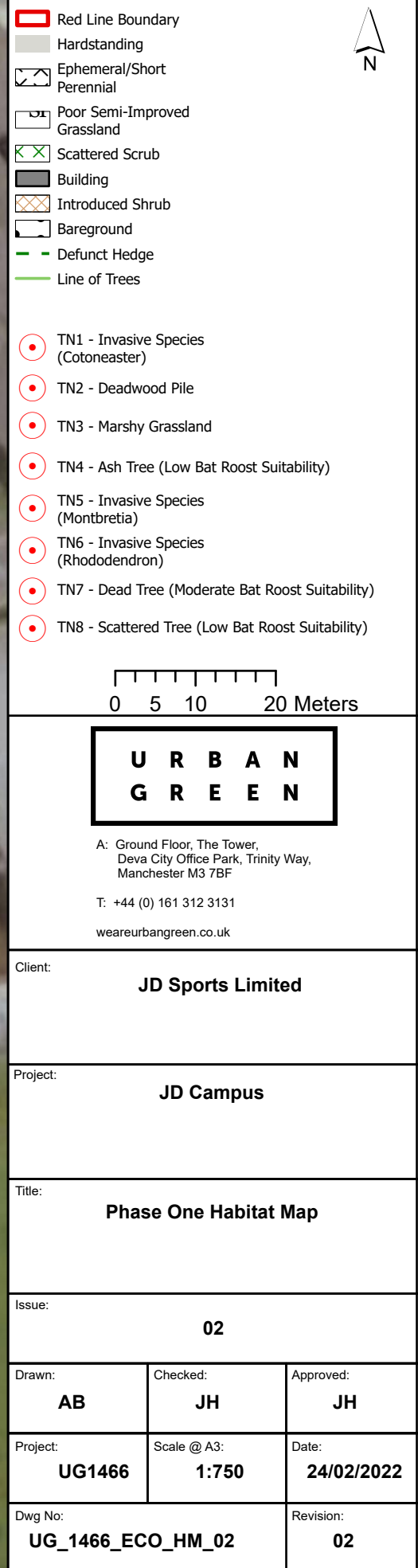
weareurbangreen.co.uk

Title: **Phase One Habitat Map**

Drawn: AB	Checked: JH	Approved: JH
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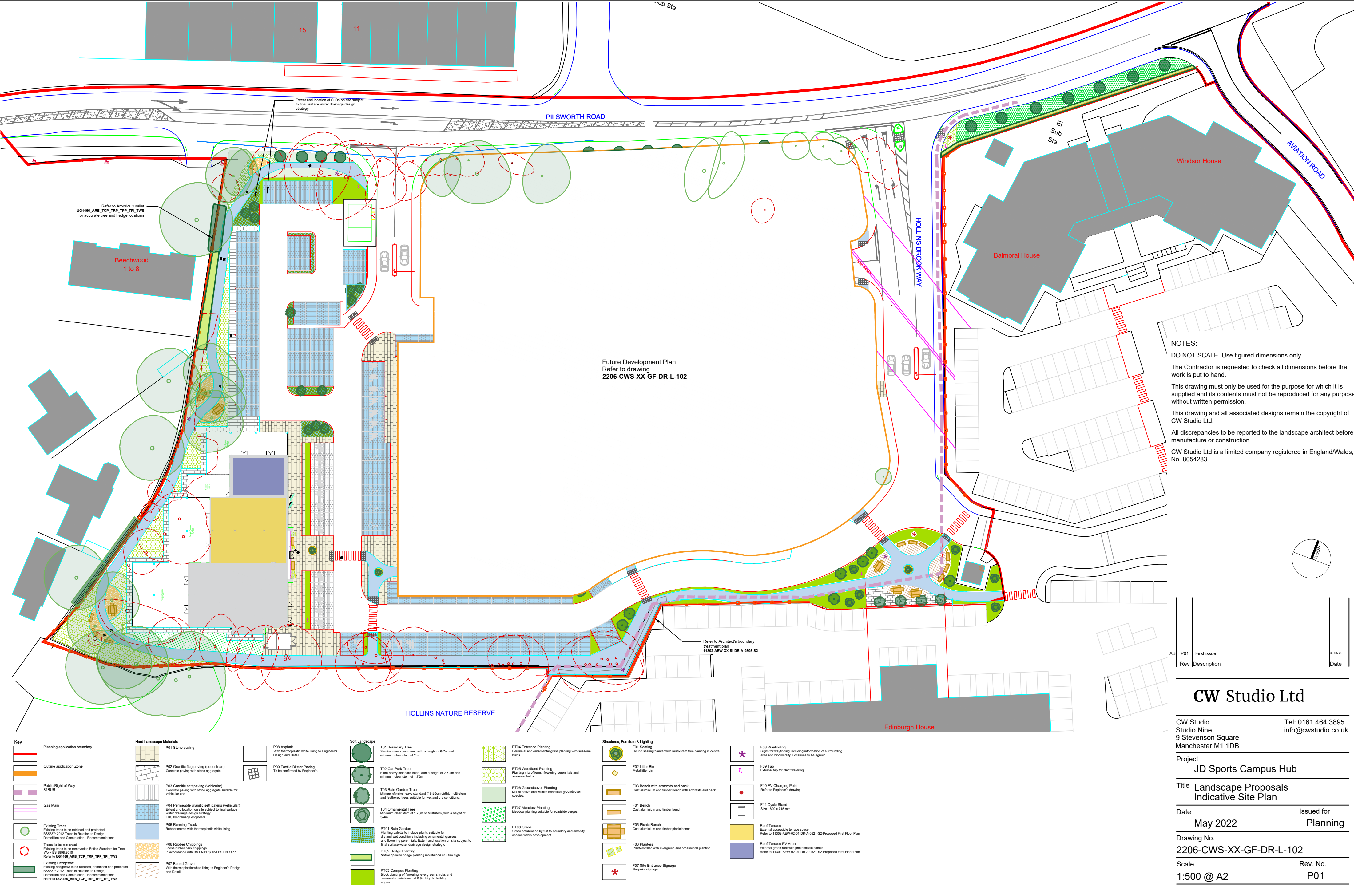
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Dwg No:	Revision:
UG_1466_ECO_HM_02	02



Appendix 2 - Proposed Landscape Plan

U R B A N
G R E E N



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AB	P01	First issue	30.05.22
Rev	Description	Date	

CW Studio Ltd

CW Studio
Studio Nine
9 Stevenson Square
Manchester M1 1DB

Tel: 0161 464 3895
info@cwstudio.co.uk

Project
JD Sports Campus Hub

Title
**Landscape Proposals
Indicative Site Plan**

Date
May 2022

Issued for
Planning

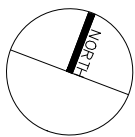
Drawing No.
2206-CWS-XX-GF-DR-L-102

Scale
1:500 @ A2

Rev. No.
P01



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CW Studio Ltd

CW Studio
Studio Nine
9 Stevenson Square
Manchester M1 1DB

Tel: 0161 464 3895
info@cwstudio.co.uk

Project
JD Sports Campus Hub

Title
**Landscape Proposals
Future Development Outline Plan**

Date
May 2022

Issued for
Planning

Drawing No.
2206-CWS-XX-GF-DR-L-102

Scale
1:500 @ A2

Rev. No.
P01

Key	Planning application boundary.
	Outline application Zone
	Public Right of Way 81BUR
	Gas Main
	Existing Trees Existing trees to be retained and protected BS5837:2012 Trees in Relation to Design Demolition and Construction - Recommendations. Refer to U01466_ARB_TCP_TRP_TPP_TPL_TWS
	Trees to be removed Existing trees to be removed to British Standard for Tree Work BS3698:2010 Refer to U01466_ARB_TCP_TRP_TPP_TPL_TWS
	Existing Hedgerow Existing hedgerow to be retained, enhanced and protected. BS5837:2012 Trees in Relation to Design Demolition and Construction - Recommendations. Refer to U01466_ARB_TCP_TRP_TPP_TPL_TWS
Hard Landscape Materials	P01 Stone paving
	P02 Granitic flag paving (pedestrian) Concrete paving with stone aggregate
	P03 Granitic sett paving (vehicular) Concrete paving with stone aggregate suitable for vehicular use
	P04 Permeable granitic sett paving (vehicular) Extent and location on site subject to final surface water drainage design strategy TBC by drainage engineers.
	P05 Running Track Rubber crumb with thermoplastic white lining
	P06 Bound Gravel With thermoplastic white lining to Engineer's Design and Detail
	P07 Asphalt With thermoplastic white lining to Engineer's Design and Detail
	P08 Tactile Blister Paving To be confirmed by Engineer's
Soft Landscape	T01 Boundary Tree Semi-mature specimens, with a height of 6-7m and minimum clear stem of 2m
	T02 Car Park Tree Extra heavy standard trees, with a height of 2.5-4m and minimum clear stem of 1.75m
	T03 Rain Garden Tree Mixture of extra heavy standard (18-20cm girth), multi-stem and feathered trees suitable for wet and dry conditions.
	T04 Ornamental Tree Minimum clear stem of 1.75m or Multistem, with a height of 3-4m.
	PT01 Rain Garden Planting palette to include plants suitable for dry and wet conditions including ornamental grasses and flowering perennials. Extent and location on site subject to final surface water drainage design strategy.
	PT02 Hedge Planting Native species hedge planting maintained at 0.9m high.
	PT03 Campus Planting Block planting of flowering, evergreen shrubs and perennials maintained at 0.9m high to building edges.
	PT04 Entrance Planting Perennial and ornamental grass planting with seasonal butterflies
	PT05 Groundcover Planting Mix of native and wildlife beneficial groundcover species.
	PT06 Pictorial Meadow Planting Meadow turf
	PT07 Grass Grass established by turf to boundary and amenity spaces within development

Structures, Furniture & Lighting	F01 Seating Round seating planter with multi-stem tree planting in centre
	F02 Litter Bin Metal litter bin
	F03 Bench with armrests and back Cast aluminium and timber bench with armrests and back
	F04 Bench Cast aluminium and timber bench
	F05 Picnic Bench Cast aluminium and timber picnic bench
	F06 Bleachers Tiered spectator seating
	F07 Site Entrance Signage Bespoke signage

F08 Wayfinding Signs for wayfinding including information of surrounding area and biodiversity. Locations to be agreed.
F09 Tap External tap for plant watering
F10 EV Charging Point Refer to Engineer's drawing
F11 Cycle Stand Size - 800 x 715 mm Hemigate Stainless Steel cycle stand by Broxap or equal approved.