

BIODIVERSITY NET GAIN DESIGN STAGE ASSESSMENT

January 2024

Forshaw, Cornbrook
Cornbrook Road
Manchester
M15 4WB

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



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1 Executive Summary

- 1.1.1.1 FG Ordsall Lane Ltd are proposing to develop land at Cornbrook Road in Manchester (hereafter referred to as 'the site'). The proposals include the erection of a 24-storey mixed use building incorporating 224 residential apartments (Use Class C3), 87 apart-hotel studios (Use Class C1), amenity space, flexible commercial space (Use Class E), and café (Use Class E(b)), together with infrastructure, landscaping, and other associated works.
- 1.1.1.2 Urban Green has been appointed to carry out a Biodiversity Net Gain Design Stage Assessment to support a full planning application for the development of the site.
- 1.1.1.3 This assessment was conducted using the Statutory Biodiversity Metric to calculate the pre- and post-development biodiversity habitat units of the site for the proposed development.
- 1.1.1.4 The proposed development produces a net loss of 0.54 area habitat units (76.86%), and a net gain of 0.07 linear hedgerow units. As there were no existing hedgerow habitats on site and the baseline was zero, a final net gain percentage cannot be calculated.
- 1.1.1.5 The trading rules have not been satisfied as two low distinctiveness habitats, sparsely vegetated land – Ruderal/ephemeral, and vacant or derelict, have not been sufficiently compensated for.
- 1.1.1.6 Due to the net loss in area habitats and failure to meet the trading rules, the development does not comply with local and national planning policy and off-site mitigation will be necessary.
- 1.1.1.7 An additional 0.61 units (of area habitat) will need to be created through offsite mitigation to achieve a 10% net gain.
- 1.1.1.8 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 30-year management plan should be implemented post-development.

2 Introduction

2.1 Scope

- 2.1.1.1 Urban Green has been instructed by FG Ordsall Lane Ltd to carry out a Biodiversity Net Gain Assessment at Cornbrook Road in Manchester (hereafter referred to as 'the site') and produce our findings in a report.
- 2.1.1.2 The proposals include the erection of a 24-storey mixed use building incorporating 224 residential apartments (Use Class C3), 87 apart-hotel studios (Use Class C1), amenity space, flexible commercial space (Use Class E), and café (Use Class E(b)), together with infrastructure, landscaping, and other associated works.

2.2 Site Context

- 2.2.1.1 The site is located at National Grid Reference SJ 82404 97043 and comprises a total area of approximately 0.1ha (see Figure 1).

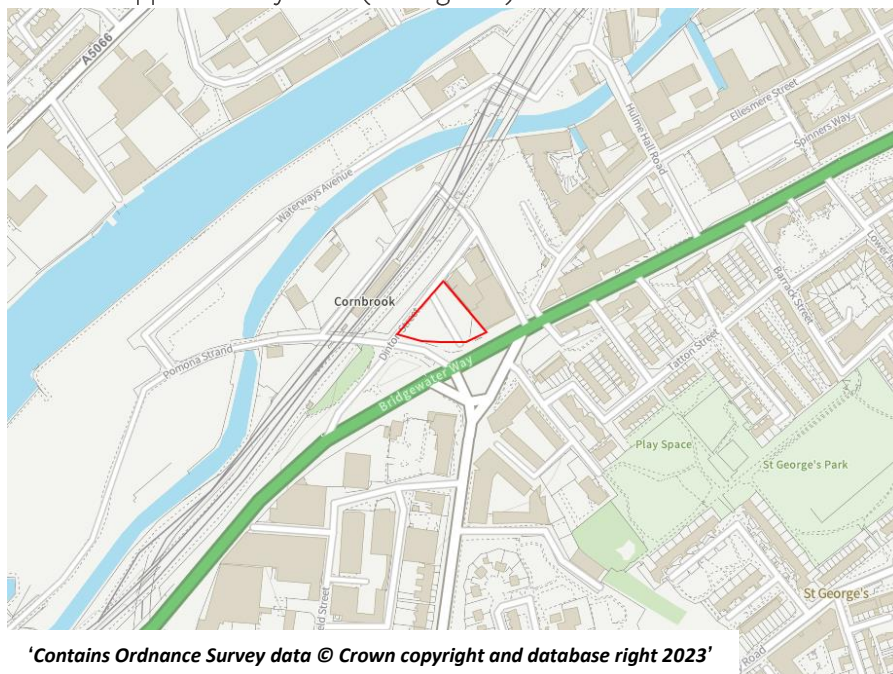


Figure 1 – Site Location Plan.

- 2.2.1.2 The site is located in a densely urban area of Manchester, approximately 1.5km from the centre of Manchester and approximately 2.2km from the centre of Salford. Cornbrook tram lines run past the site approximately 25m north. Bridgewater canal runs north of the tram lines to the north, approximately 115m from site, with the River Irwell adjacent approximately 57m from the canal and approximately 191m from site. The site is surrounded predominantly by urban buildings comprising of residential and commercial structures.

2.3 Purpose of Report

- 2.3.1.1 The report has been produced to document the methods, results and conclusions of a Biodiversity Net Gain Design Stage 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).

2.4 Planning Context

2.4.1 National Policy

- 2.4.1.1 Biodiversity Net Gain 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 via the Environment Act, 2021. National planning policy and several Local Plans already require developments to deliver BNG.
- 2.4.1.2 Currently the National Planning Policy Framework (NPPF), Paragraph 180 of the NPPF states:
- 2.4.1.3 Planning policies and decisions should contribute to and enhance the natural and local environment by inter alia:
- 2.4.1.4 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.

2.4.2 Local Policy

- 2.4.2.1 Paragraph 170 of the NPPF states:
- 2.4.2.2 Planning policies and decisions should contribute to and enhance the natural and local environment by inter alia:
- 2.4.2.3 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;
- 2.4.2.4 Manchester City Council adopted a local plan in 2012, which will remain in place until 2027. While this document does not directly reference Biodiversity Net Gain, Policy EN 15 (Biodiversity and Geological Conservation) states:

- 2.4.2.5 Developers will be expected to identify and implement reasonable opportunities to enhance, restore or create new biodiversity, either on-site or adjacent to the site, contributing to linkages between valuable or potentially valuable habitat areas where appropriate.
- 2.4.2.6 The Biodiversity Strategy (2022-2030) for the City of Manchester necessitates the 'protection and enhancement of biodiversity and nature-based solutions through the planning and development process' which includes the 'integration of Biodiversity Net Gain'.
- 2.4.2.7 Additionally, Greater Manchester Combined Authority (GMCA) have produced guidance relating to Biodiversity Net Gain within the 10 GM boroughs and set out a 10% target (GMCA, 2021):
- 2.4.2.8 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 is increased by 10% or more after the development. If the calculations indicate that a net gain will not be delivered at this stage, either the design should be updated or additional areas for habitat compensation identified (either onsite or outside the development boundary).

3 Methods

- 3.1.1.1 The Biodiversity Net Gain Assessment and Report follows the user guidance produced by Natural England (2023) and the good practice methodology as detailed within the *Biodiversity Net Gain: Good Practice Principles for Development* (Baker, et al., 2019).

3.2 Desk Study

- 3.2.1.1 Sources of information used in the desk study are presented in Table 1.

Table 1 – Desk Study Sources of Information

Source	Date Consulted	Information Sought
MAGiC website (www.magic.gov.uk)	10/01/2024	Locations of statutory designated sites within 1km of the site boundary. Locations of Natura 2000 sites (Ramsar, Special Area of Conservation (SAC) and Special Protection Area (SPA)) within 5km of the site boundary. Locations of European Protected Species Licences (EPSL) and Class Licences within 1km.
The Statutory Biodiversity Metric	11/01/2024	The Statutory Biodiversity Metric, including the tool itself, user guides and reference documentation associated with the tool.
Greater Manchester Local Nature Recovery Strategy	10/01/2024	Locally designated wildlife sites within 1km of site boundary. Records of protected and notable species within 1km of the site boundary. Priority habitats and opportunity areas within Greater Manchester
Greater Manchester Biodiversity Action Plan	10/01/2024	Species and habitats which are given special conservation status at the local level.
Preliminary Ecological Appraisal (Urban Green, 2024a)	10/01/2024	Notable species, habitats and designations identified on site and within a 1km radius.
Soft Landscape Plan (Wright Landscapes, 2024)	11/01/2024	Habitat areas and conditions as to be included within the planning layout (post-development) for site.

3.3 Site Mapping

3.3.1 Existing Habitats

- 3.3.1.1 The site was subject to a field survey on 19/12/2023, by Assistant Ecologists Toby Mills and Olivia Jones of Urban Green. The weather conditions were 9°C, passing clouds (2/8 oktas), and wind speed 5 Beaufort scale.
- 3.3.1.2 Plant species were identified and recorded, flora species listed as protected in the Wildlife and Countryside Act 1981 (as amended) and species which are indicators of important and/or uncommon habitats, were searched for during the survey. Any invasive species, including those listed on the revised (April 2010) Schedule 9 of the Wildlife and Countryside Act 1981 were also searched for during the field survey.
- 3.3.1.3 Habitat types were identified and recorded using the Coreo habitat mapping application (V2.0) which utilises UKHab classifications (Butcher et al., 2020). Habitat types were based on the UKHab guidance provided and the assessor's best judgment while using these guidelines. Habitats were identified using primary codes and additional secondary codes have been used to record further information regarding various aspects of the site. A summary of primary and secondary codes can be found in Appendix 2.
- 3.3.1.4 These habitats were subsequently mapped using ESRI ArcGIS Pro software, and habitat areas and lengths were calculated to demonstrate habitats within the proposed development and the surrounding area. The baseline habitat map is displayed in Appendix 1.

3.3.2 Post-Development Habitats

- 3.3.2.1 The planning layout as provided by Wright Landscapes, 2023 (see Appendix 3) was provided in PDF and DWG format, detailing planting mixes and the areas of the proposed habitats. These were used to categorise the proposed habitats to inform the assessment. Calculations for areas relating to each habitat were also provided.

3.4 The Statutory Biodiversity Metric

- 3.4.1.1 The BNG calculation was undertaken utilising The Statutory Biodiversity Metric from Natural England using data obtained from the field surveys.
- 3.4.1.2 The calculation was performed by a technically competent and experienced person as detailed in British Standard BS8683 - Suitably qualified person – definition in BS8683:2020.
- 3.4.1.3 The Statutory Biodiversity Metric uses habitat features as a proxy measure for capturing the value and importance of nature. The metric considers the size, ecological condition, location and proximity to nearby 'connecting' features. The metric enables assessments to be made of the present and forecast future biodiversity value of a site.

3.5 Habitat Scoring

3.5.1.1 The Statutory Biodiversity Metric supplies reference documents and user guides to accurately evaluate and assess the different habitats on site. The methodology for the baseline and post development calculations are demonstrated in the following sections.

3.5.2 Minimum Mapping Units (MMU)

3.5.2.1 The UKHab classification system can be applied at various levels – fine scale, suitable for smaller sites, and large scale, used for broader landscapes. The fine scale level, which acknowledges areas of minimum 25m² and lengths of 5m, is considered appropriate for this site.

3.5.3 Baseline Units

3.5.3.1 To assess the quality of a habitat, and therefore calculate the units scored, the Statutory Biodiversity Metric utilises three scoring factors detailed as follows:

3.5.3.2 Condition

3.5.3.3 The condition of a habitat is assessed utilising the Condition Sheets provided for each habitat type (Natural England, 2023b). These list positive indicators for each habitat and indicate how many of these indicators need to be present to meet certain thresholds of condition.

3.5.3.4 Condition sheets used within this assessment for pre- and post-development habitats are Urban and Individual Trees (Table 2).

Table 2 – Conditions sheets used for habitat assessment

Condition Sheet	Habitats Assessed
Area Habitats	
Urban	Vacant or derelict land Sparsely Vegetated Land – Ruderal/Ephemeral Rain Garden
Individual Trees	Urban Tree

3.5.3.5 Distinctiveness

3.5.3.6 The distinctiveness of each habitat is automatically assigned by the tool, based upon national records of the occurrence and rarity of each habitat. Table 3 provides the basis of the distinctiveness assessment for area habitats.

Table 3 – 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.

Distinctiveness Categories		
Category	Scores	Multiplier
Low	2	Habitat of low biodiversity value. Temporary grass and clover ley; intensive orchard; rhododendron scrub.
Very Low (hedgerows)	1	Lowest biodiversity value possible e.g. non-native and ornamental hedgerow
Very Low (area and watercourse)	0	Little or no biodiversity value e.g. hard standing or sealed surface.

3.5.3.7 Strategic Significance

3.5.3.8 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. 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 (see Table 4).

Table 4 – Strategic Significance Assessment for Habitats

Strategic Significance Categories	
Category	Score
High strategic significance Identified in Local Nature Recovery Strategy (LNRS) and delivers specified priorities, or identified local plans as ecologically important	1.15
Medium strategic significance Where LNRS is not available, good potential but not in area defined in local policy – using professional judgment	1.1
Low Strategic Significance Definitions for high or medium not met, i.e., does not deliver specific priorities outlined in LNRS/local plans	1

3.5.3.9 There are no statutory or non-statutory designated sites present onsite or within 1km of the site.

3.5.4 **Local Nature Recovery Strategy**

3.5.4.1 The site provides opportunities for tree planting according to the Greater Manchester Local Nature Recovery Strategy (LNRS) (Figure 2). The site has been listed as having medium ‘priority’ value for tree planting. Planting trees within the highlighted areas is identified as an opportunity within the LNRS for reducing particulate exposure, improving urban cooling, and provide ecological stepping stones. If any trees are planted within the relevant areas, they will be allocated a **high strategic significance**.

- 3.5.4.2 The site has also been identified via the Greater Manchester LNRS as having opportunities for grassland creation across the majority of the site (Figure 2). If any grassland habitats were created within the relevant areas, they will be allocated a **high strategic significance**.

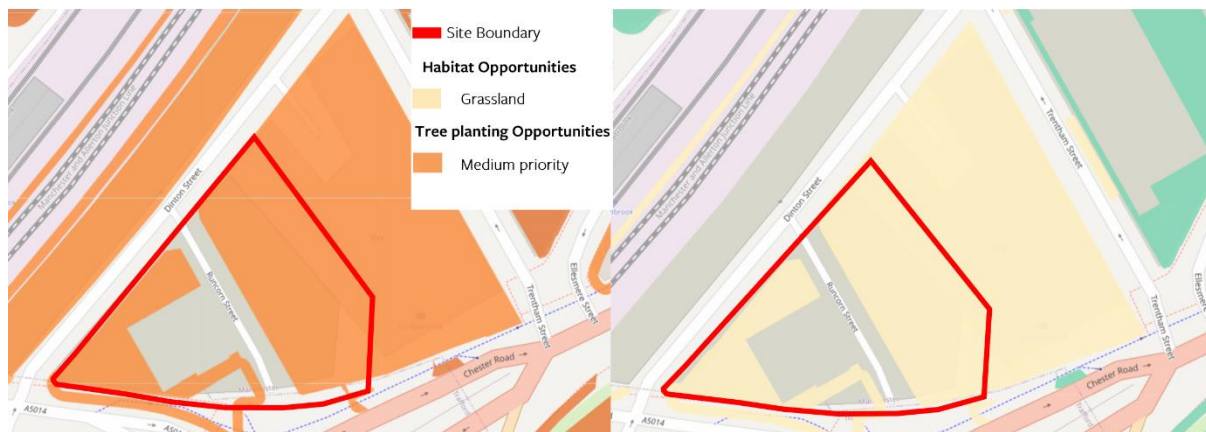


Figure.2 Greater Manchester LNRS highlighting opportunities for habitat creation and tree planting at Forshaw, Cornbrook.

3.5.5 Post-Development

- 3.5.5.1 Post-development habitats are subject to the same condition assessments as baseline habitats, based on information provided by the proposed landscape layout (Appendix 3). Two additional factors are considered within post-development landscapes which are detailed below.
- 3.5.5.2 Temporal Multiplier
- 3.5.5.3 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.
- 3.5.5.4 Difficulty Multipliers
- 3.5.5.5 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.

3.6 Constraints to the Survey

- 3.6.1.1 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.

- 3.6.1.2 December is a suboptimal month for carrying out UKHab 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 UKHab survey results as, 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.
- 3.6.1.3 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 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.
- 3.6.1.4 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.

4 Pre-Development Habitat Assessment

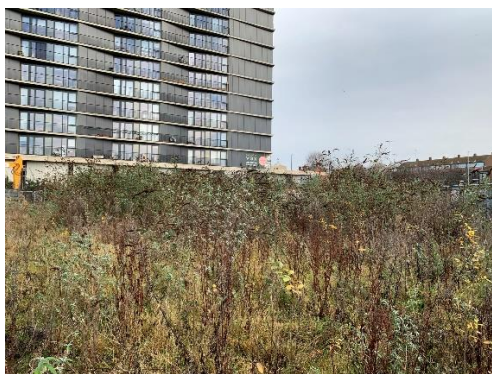
4.1.1.1 Baseline habitat condition was assessed following the methodology outlined in Section 3.5. Habitat descriptions and the results of this assessment are provided below. The habitats have been given reference numbers for clarity regarding in-text and the metric calculation (Urban Green, 2024b) which illustrates the numerical data.

4.2 Area Habitats

4.2.1 1) Urban – Vacant or derelict land (u 16 81 82 519 524)

4.2.1.1 The western area of the site has been identified as vacant or derelict land. According to the Google Earth, buildings were present until 3 years ago. Since then, it appears to be abandoned and unmanaged, allowing self-seeded habitats to form. To the south-east there was a small area of hardstanding with construction waste materials.

4.2.1.2 The habitat was comprised of approximately 14 different species, with the most abundant being buddleia (*Buddleja davidii*), white clover (*Trifolium repens*), and broadleaved dock (*Rumex obtusifolius*). Various scrub species were present such as, bramble (*Rubus fruticosus* agg.) and white willow (*Salix alba*). Other species that were frequently present included tutsan (*Hypericum androsaemum*), common vetch (*Vicia sativa*), broom (*Cytisus scoparius*), and dandelions (*Taraxacum spp.*).



Photograph 1 – Vacant or derelict land with a coverage of vegetation mainly consisting of buddleia.

Table 5 – Condition Assessment for Vacant or Derelict Land

UK Hab Classification	Vacant or Derelict Land				
Condition Sheet	Urban				
Condition Criteria 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.	Pass	Condition Criteria C.	Invasive non-native plant species (listed on Schedule 9 of WCA) and others which are to the detriment of native wildlife (using professional judgement) cover less than 5% of the total vegetated area. Note - to achieve Good condition, this criterion must be satisfied by a complete absence of invasive non-native species	Fail

				(rather than <5% cover).	
Condition Criteria 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.	Pass			
Condition	Moderate	Passes 2 of 3 criteria.			
Distinctiveness	Low				

4.2.2 2) Sparsely Vegetated Land – Ruderal/Ephemeral (s 10 519)

- 4.2.2.1 The north-eastern area of the site is mainly hardstanding, and is evidently unmanaged/abandoned, allowing ruderal/ephemeral vegetation to begin colonising the land through rubble and cracks in paving.
- 4.2.2.2 Buddleia was dominant, with abundant mare's-tail (*Hippuris vulgaris*), frequent bramble scrub, dandelions, and colt's-foot (*Tussilago farfara*). Occasional species present included tall fleabane (*Erigeron annuus*), ribwort plantain (*Plantago lanceolata*), white melilot (*Melilotus albus*), common nettles (*Urtica dioica*), red fescue (*Festuca rubra*), broadleaved dock, ground ivy (*Glechoma hederacea*), weld (*Reseda luteola*), common sowthistle (*Sonchus oleraceus*), Oxford ragwort (*Senecio squalidus*) and woody fleabane (*Dittrichia viscosa*). There were rare occurrences of herb-robert (*Geranium robertianum*), mugwort (*Artemisia vulgaris*), scentless mayweed (*Tripleurospermum inodorum*), soft rush (*Juncus effusus*) and spear thistle (*Cirsium vulgare*).



Photograph 2 – Sparsely vegetated land, buddleia dominant

Table 6 – Condition Assessment for Ruderal/Ephemeral

UK Hab Classification		Sparsely Vegetated Land - Ruderal/Ephemeral			
Condition Sheet		Urban			
Condition Criteria 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.	Pass	Condition Criteria C.	Invasive non-native plant species (listed on Schedule 9 of WCA) and others which are to the detriment of native wildlife (using professional judgement) cover less than 5% of the total vegetated area. Note - to achieve Good condition, this criterion must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).	Fail
Condition Criteria 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.	Fail			
Condition	Poor	Passes 1 of 3 criteria.			
Distinctiveness		Low			

4.2.3 3) Individual Trees – Urban Tree

- 4.2.3.1 A single juvenile wild cherry (*Prunus avium*) tree was located to the south of the site. Tree support stakes imply that the tree was planted.



Photograph 3 – Wild Cherry tree to the south of site.

Table 7 – Condition Assessment for Urban Tree

UK Hab Classification		Urban Tree			
Condition Sheet		Individual Trees			
Condition Criteria A.		The tree is a native species (or more than 70% within the block are native species).	Pass	Condition Criteria 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.
Condition Criteria 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 (individual trees automatically pass this criterion).	Pass	Condition Criteria E.	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.
Condition Criteria C.		The tree is mature (or more than 50% within the block are mature).	Fail	Condition Criteria F.	More than 20% of the tree canopy area is oversailing vegetation beneath.
Condition	Moderate	Passes 3 of 6 criteria			
Distinctiveness		Medium			

4.2.4 4) Urban – Developed Land; Sealed Surface (u1b 528)

- 4.2.4.1 The north-western and southern boundaries of site are encompassed by pavements, which runs along Dinton Street, Cornbrook Road and Chester Road.
- 4.2.4.2 Developed land; sealed surface is automatically allocated a condition score of N/A in the metric.

5 Lost Habitats

5.1.1.1 The proposed landscape layout and the Statutory Biodiversity Metric were used to calculate the units associated with the habitats which are to be lost on site.

5.2 Area Habitats

5.2.1.1 All existing habitats will be lost.

5.2.1.2 Table 8 shows a summary of the area habitats and their corresponding area (ha) and unit score to be lost on site.

Table 8 – Area habitats to be lost on site.

Habitat Parcel Reference	Total Area (ha)	Total Units	Area Lost (ha)	Units Lost	Proposed Mitigation
1) Vacant or Derelict Land	0.112	0.45	0.112	0.45	While these habitats have low ecological value, their loss will not be sufficiently compensated for by other low or higher distinctiveness habitats
2) Ruderal/Ephemeral	0.111	0.22	0.111	0.22	
3) Urban Tree	0.004	0.03	0.004	0.03	The only existing tree on the site will be lost to accommodate for the development; however, 12 new trees will be planted in area habitat. 4 new trees will be planted in the hedgerow habitat.
4) Developed Land; Sealed Surface	0.07	0	0.07	0	Developed land provides no ecological benefit, therefore no mitigation is necessary.
Total	0.29	0.70	0.29	0.70	

6 Pre-Development Habitat Summary

6.1.1.1 Using the Statutory Biodiversity Metric, 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.

6.1.1.2 The results of these calculations are presented in the Table 9.

Table 9 - Pre-Development Unit Summary

	On-site baseline	Retained	Lost	Enhanced
Area Habitat Units	0.70	0	0.70	-

7 Post-Development Habitat Assessment

7.1 Area Habitats

7.1.1 1) Individual Trees – Urban Trees

- 7.1.1.1 A total of 12 individual trees will be planted across the site, however, 4 will be planted as a linear feature and have been assessed as a line of trees (see Section 7.2.2). All trees planted will be sweetgum (*Liquidambar styraciflua*) and are classified as small as per guidance from Natural England.
- 7.1.1.2 All the trees are being planted in areas that have been identified by Greater Manchester LNRS as having a medium priority for tree planting, therefore they have been allocated a high strategic significance (see Section 3.5.4, Figure 2).

Table 10 – Condition Assessment for Individual Trees

Classification Within Landscape Proposals		Tree-Planting - Clear-/stem			
UK Hab Classification		Urban Trees			
Condition Sheet		Individual Trees			
Condition Criteria 1.	The tree is a native species (or at least 70% within the block are native species).	Fail	Condition Criteria 4.	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.	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	Pass	Condition Criteria 5.	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark	Fail
Condition Criteria 3.	The tree is mature (or more than 50% within the block are mature)	Fail	Condition Criteria 6.	More than 20% of the tree canopy area is oversailing vegetation beneath	Pass
Condition	Moderate	Passes 3 of 6 criteria			
Distinctiveness		Medium			
Time to Target Condition		27 years			
Difficulty of Creation		Low			

7.1.2 2) Urban – Rain Garden

- 7.1.2.1 Located in the south of the site along Cornbrook road a series of linear rain gardens will be created. The proposed species include fourfold white (*Iris sibirica*), purple moor-grass ‘Transparent’ (*Molinia caerulea subsp.arundinacea*), and valfredda (*Ajuga reptans*), none of which are native to the UK. The varied plant species create opportunities for wildlife, in particular providing nectar sources for invertebrates.

Table 11 – Condition Assessment for Rain Garden

Classification within Landscape Designs		Rain Garden			
UK Hab Classification		Rain Garden			
Condition Sheet		Urban			
Condition Criteria 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.	Pass	Condition Criteria C.	Invasive non-native plant species (listed on Schedule 9 of WCA) and others which are to the detriment of native wildlife (using professional judgement) cover less than 5% of the total vegetated area. Note - to achieve Good condition, this criterion must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).
Condition Criteria 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.	Pass		
Condition	Good	Passes 3 of 3 criteria.			
Distinctiveness		Low			
Time to Target Condition		5 years			
Difficulty of Creation		Low			

7.1.3 3) Urban – Introduced Shrub

- 7.1.3.1 The carpark and surrounding areas will be utilised for introduced shrub planting, providing amenity value. The chosen species are all non-native, including hebe ‘Red Edge’ (*Hebe* ‘Red Edge’), and midwinter fire (*Cornus sanguinea*).
- 7.1.3.2 Introduced shrub is automatically allocated a condition score of **N/A** in the metric.

7.1.4 4) Urban – Developed Land; Sealed Surface

- 7.1.4.1 The developed land will consist of a multi-storey building with a car park as well as various access routes including roads, pedestrian pathways, pavements, and cycle lanes. Developed land; sealed surface is automatically allocated a condition score of **N/A** in the metric.

7.2 Linear Hedgerow Habitats

7.2.1 1) Non-Native and Ornamental Hedgerow

- 7.2.1.1 A new hedgerow will be created along the northeastern side of the carpark, within the area of introduced shrub.
- 7.2.1.2 The hedgerow will be comprised of approximately 25m of Portuguese laurel (*Prunus lusitanica*).
- 7.2.1.3 Non-native and ornamental hedgerow is automatically allocated a condition score of **N/A** in the metric.

7.2.2 2) Line of Trees

- 7.2.2.1 As previously stated in Section 7.1.1, four sweetgum trees will be planted to the north-east of the site forming a line of trees.
- 7.2.2.2 These trees are being planted within an area that has been identified within the Greater Manchester LNRS as having a medium priority for tree planting, therefore this habitat has been allocated a high strategic significance (see Section 3.5.4, Figure 2).

Table 12 – Condition Assessment for Line of Trees

Classification within Landscape Designs	Tree-Planting - Clear-/stem				
UK Hab Classification	Line of Trees				
Condition Sheet	Line of Trees				
Condition Criteria 1.	More than 70% of trees are native species.	Fail	Condition Criteria 4.	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.	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 >5 m wide.	Fail	Condition Criteria 5.	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.	Pass

Condition Criteria 3.		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.	Fail			
Condition	Poor	Passes 1 of 5 criteria.				
Distinctiveness		Low				
Time to Target Condition		5 years				
Difficulty of Creation		Low				

8 Post-Development Habitat Summary

8.1.1.1 Using the Statutory Biodiversity Metric, the habitat units of the proposed 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.

8.1.1.2 The results of these calculations are presented in the Table 13.

Table 13 – Post Development Biodiversity Net Gain Calculation

	Habitat Unit Change					Net change in Biodiversity		
	On-site baseline	Retained	Lost	Enhanced	Created	On-site post development	Habitat units	%
Area Habitat Units	0.70	0	0.70	-	0.16	0.16	-0.54	-76.86
Linear Hedgerow Units	-	-	-	-	0.07	0.07	0.07	N/A

8.1.1.3 As illustrated in Table 13, the current landscape proposals for the development of the site produce a 0.54 unit (-76.86%) net loss in biodiversity for area habitats and a 0.07 unit net gain of linear hedgerow habitats. As there were no existing hedgerow habitats on site and the baseline was zero, a final net gain percentage cannot be calculated.

8.1.1.4 Consequently, the development does not meet all local and national planning policy and off-site mitigation will be necessary.

8.1.1.5 An additional 0.61 units (of area habitat) will need to be created through offsite mitigation to achieve a 10% net gain.

8.1.1.6 In addition, the trading rules have not been satisfied as two low distinctiveness habitats, sparsely vegetated land – ruderal/ephemeral, and vacant or derelict, have not been sufficiently compensated for.

8.1.1.7 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.

8.1.1.8 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

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APPENDIX 1 – BASELINE HABITAT MAP

U R B A N
G R E E N

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Legend

- Red Line Boundary
- Sparsely vegetated land
- Urban
- Developed land sealed surface
- Urban Tree



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Project: **Forshaw Cornbrook**

Title: **UKHAB Habitat Map**

Issue: **01**

Drawn: CL	Checked: TM	Approved: OJ
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Project: UG2342	Scale @ A3: 1:250	Date: 19/12/2023
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Dwg No: UG_2342_ECO_HM_01	Revision: 01
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APPENDIX 2 – PRIMARY AND SECONDARY CODES

Primary Code	Definition
u	Urban
ub1	Developed land; sealed surface
s	Sparsely vegetated land
Secondary code	Definition
10	Scattered scrub
16	Tall forbs
81	Ruderal or ephemeral
82	Vacant or derelict
519	Abandoned
524	Invasive non-native species
528	Walking or cycling route

APPENDIX 3 – PROPOSED LANDSCAPE PLAN

U R B A N
G R E E N



HARDWORKS

P1 - Granite Paving
Material: Granite - Match Existing
Size: 200 x 100 x 50

P2 - Granite Paving
Material: Granite - Match Existing
Size: 450 x RL x 50

P3 - Concrete Paving
Material: Mayfair
Size: 600 x 400 x 50

P4 - Macadam with rolled chipping

LIGHTING

S1 - Bollard Lighting

SOFTWORKS

S1 - Ornamental Planting

S2 - Rain Garden

S3 - Existing Planting

S4 - Hedging

S5 - Tree Planting - Clear/stem

STREET FURNITURE

F1 - Cycle Stands

F2 - Ornamental Pots

F3 - Signage (Cycle Lane)

F4 - Information Board

F5 - Security Bollard

F6 - Decorative Screening

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Area measurements for indicative purposes only.

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S1-P02	20-12-23	Change to red line boundary	NW	CB
S1-P01	18-12-23	Planning	NW	CB

Revision	Date	Description	Drawn	Approved

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PROJECT Cornbrook

DRAWING Landscape Masterplan
TITLE

DATE 06/12/2023	SCALE 1:260
DRAWN NW	SIZE A3
APPROVED CB	WORKSTAGE Stage 1

DRAWING NUMBER 1169-WRI-XX-XX-DR-L-0002	SUITABILITY S1	REVISION P02
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