

HABITAT MANAGEMENT AND MONITORING PLAN

MAY 2024

Jurby Avenue,
Blackley,
Manchester,
M9 6NQ

U R B A N
G R E E N

QUALITY MANAGEMENT

Project Title:		Habitat Management and Monitoring Plan				
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Rev	Date	Comment			Prepared	Checked

Project Details

Project Type:	Residential Development
Project:	Jurby Avenue
Location:	Jurby Avenue, Blackley, Manchester, M9 6NQ
Author Organisation:	Urban Green
Landowner:	Irwell Valley Homes
Land Manager:	
Responsible Person:	
Planning Authority:	Manchester City Council
Planning Reference (if applicable)	139261/FO/2024
BNG Register Reference (if applicable)	
Metric Revision/Title	Statutory Biodiversity Metric (Version 1)
Are any Irreplaceable Habitats presents onsite	Yes: ☐ No: ☒
Phasing Strategy	No Phasing

Roles and responsibilities

Ecologist or Other Professional Responsible for HMMP			
Name or Initials			
Organisation			
Responsibility	Start Date:		End Date:
Summarise the relevant responsibilities of the Ecologist or other professional responsible for the HMMP, both in terms of the production and implementation of this HMMP			
Statement of Competency			
A competent person is someone who can demonstrate they have acquired through training, qualifications or experience, or a combination of these, the knowledge and skills enabling that person to perform specified tasks.			

Landowner or Land Manager				
Name or Initials				
Organisation				
Responsibility	Start Date:		End Date:	
Summarise the relevant responsibilities of the landowner (or land manager if appropriate) in the production and, or, implementation of this HMMP				
Statement of Competency				
Demonstrate management and monitoring competency and, or, relevant site knowledge and skills through relevant training, qualifications or experience, or a combination of these.				
Management Organisation(s) Responsible for Implementing the HMMP				
Name or Initials		Add N/A if works being completed by the landowner or land manager		
Organisation				
Responsibility	Start Date:		End Date:	
Summarise the relevant responsibilities of the Management Organisation(s) in the production and, or, implementation of this HMMP.				
Statement of Competency				
Demonstrate the knowledge, skills and, or, experience to manage the habitats to achieve the BNG requirements, through relevant training, qualifications, experience, or combination of these.				
LPA or Responsible Body for Reviewing HMMP				
Name or Initials				
Organisation				
Responsibility	Start Date:		End Date:	
Summarise the agreed relevant responsibilities of the LPA or Responsible Body in the review, auditing and, or, long-term involvement in the implementation of this HMMP (if applicable)				

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1 Introduction

1.1 Scope

- 1.1.1.1 Urban Green has been instructed by Irwell Valley Homes to complete a Habitat Management and Monitoring Plan (HMMP) for the land at Jurby Avenue in Blackley (hereafter referred to as ‘the site’).
- 1.1.1.2 The site is currently comprised of unused green space, comprising predominantly grassland.
- 1.1.1.3 The proposals include the construction of an apartment complex with 16 residential units with associated maintenance and utility infrastructure, and hard and soft landscaping.
- 1.1.1.4 There is no phasing strategy proposed for this development.

1.2 Site Context

The site is located at National Grid Reference SD 85541 03537 and comprises a total area of approximately 0.3ha (see Figure 1).

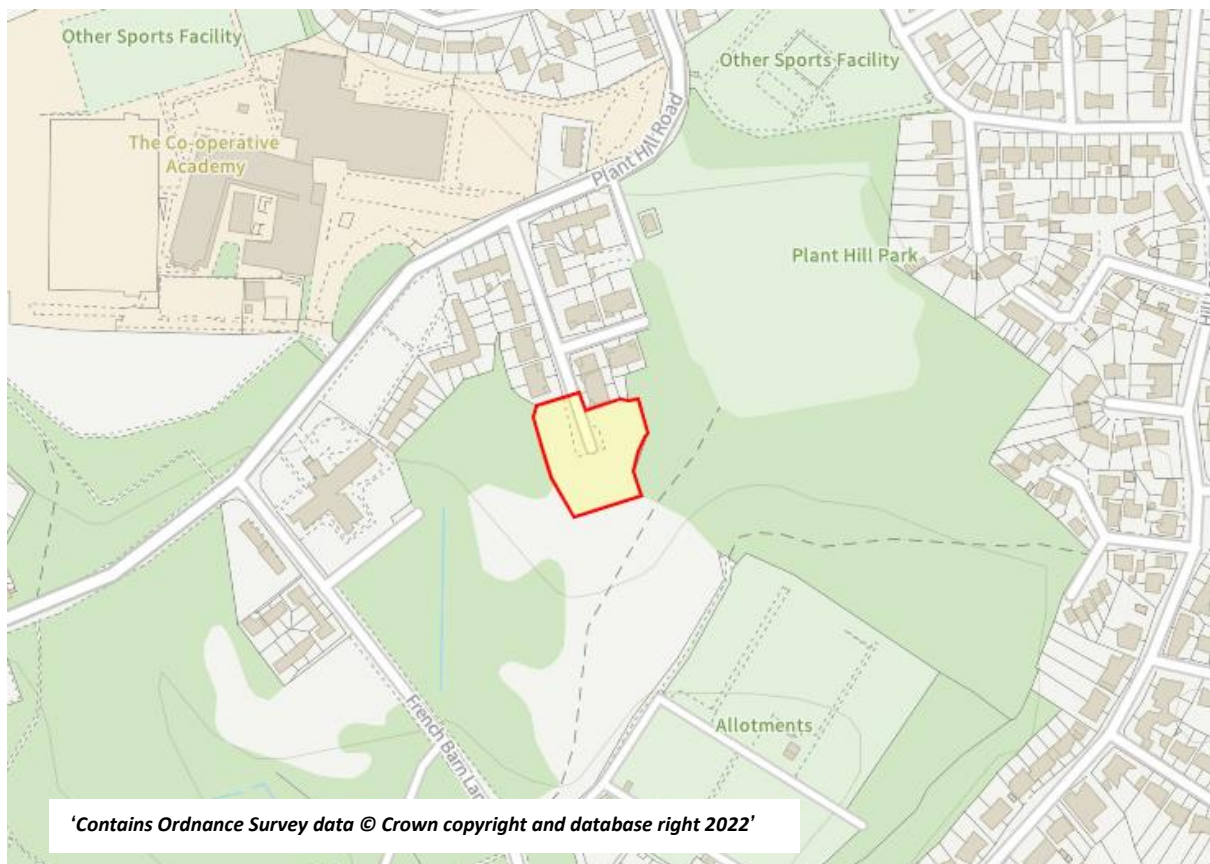


Figure 1 – Site Extent

- 1.2.1.1 The site is located along a suburban/greenspace fringe within the predominantly urban area of Blackley, approximately 5.5km north of the centre of Manchester. The north of the site is bound by residential developments, with the south and east bordering public open greenspace, including Plant Hill Park to the east. Adjacent to the west of the site is a parcel of

woodland. The site features a relatively low level of disturbance due to its location at the end of a small suburban cul-de-sac, however main roads are present nearby in the wider environment.

1.3 Local Policy

- 1.3.1.1 In England, a minimum of 10% Biodiversity Net Gain is mandatory under Schedule 7A of the Town and Country Planning Act 1990.
- 1.3.1.2 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:
- 1.3.1.3 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.
- 1.3.1.4 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):
- 1.3.1.5 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).

2 Environmental Data

2.1 Methodology

2.1.1.1 Sources of information used in the following section are presented in Table 1.

Table 1 – Desk Study Sources of Information

Environmental Information	Data Source	Information Sought
Statutory / Non-statutory Designated Sites and Landscape Character	MAGiC Maps (https://magic.defra.gov.uk/magicmap.aspx)	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. Local Landscape designations present on site that protect locally important landscapes
Protected and Notable Species	Preliminary Ecological Appraisal (Urban Green, 2022a)	Notable species, habitats and designations identified on site and within a 1km radius. Locations of European Protected Species Licences (EPSL) and Class Licences within 1km.
Invasive Non-Native Species (INNS)	Preliminary Ecological Appraisal (Urban Green, 2022a)	Schedule 9 of the Wildlife and Countryside Act 1981 lists the species within the UK which are considered invasive and are damaging to biodiversity.
Biological Records Plan - Sites and Species	Preliminary Ecological Appraisal (Urban Green, 2022a)	Published local plans and objectives to identify local priorities for targeting biodiversity and nature improvement, such Nature Recovery Areas/Strategies, local biodiversity plans, National Character Area 14 objectives and green infrastructure strategies. Species and habitats which are given special conservation status at the local level.
Biodiversity Action Plans (BAP)	South Ribble and Lancashire Biodiversity Action Plans	Species and habitats which are given special conservation status at the local level. If any of the habitats mentioned in the BAP are present pre- or post-development will be allocated high strategic significance .
National Character Area	National Character Area Profiles – Natural England	Information on National Character area such as geology, landscape types, topology, etc.
Agricultural Land Status	Natural England (https://publications.naturalengland.org.uk/category/5954148537204736)	Classification of land based on physical or chemical characteristics which impose long term limitations on the agricultural use of a site for food production.
Soils and Substrates	Soilscapes Viewer, LandIS (https://www.landis.org.uk/soilscapes/)	Soils and substrates samples from habitats present and potentially impact to the site and future habitat management methods.

Environmental Information	Data Source	Information Sought
Flood Risk Information	Flood Map for Planning (https://flood-map-for-planning.service.gov.uk/)	The flood risk zone that the site falls within.

2.2 Designated Sites

2.2.1.1 A desk-based study using MAGIC was performed to identify any statutory or non-statutory sites in the area using a 1km radius. The results are summarised in Table 2.

Table 2 – Designated Sites within the Search Areas

Designated Site	Approx. Distance from Site	Details
Statutory designated sites		
Blackley Forest Local Nature Reserve (LNR)	930m west	The forest makes up most of the reserve along with grassland. The River Irk flows through the park and is a main feature. There are a variety of plants and animals to see. Habitats include broadleaved and plantation woodland, grassland, lake, marsh and a river.
Boggart Hole Clough LNR	820m south	The site is the largest woodland clough in Manchester and part is ancient woodland.
Non-statutory designated sites		
Bailey's Wood Site of Biological Interest (SBI)	500m south	No information provided.
Boggart Hole Clough (SBI)	820m south	No information provided.

2.2.1.2 The site also falls within the Impact Risk Zone of the Rochdale Canal SAC and Site of Special Scientific Interest (SSSI), based on consultation with MAGIC.

2.3 Protected and Notable Species

2.3.1.1 A preliminary ecological appraisal (PEA) was conducted on the site in December 2022 by Urban Green. This constituted a desk-based study and a field survey.

2.3.1.2 Key information obtained is summarised in Table 3; full details can be found within the PEA (Urban Green, 2022a).

Table 3 – Summary of the PEA (Urban Green, 2022a)

Current Site Use and Adjacent Site Use	The site is currently maintained as an actively managed and mown parcel of grassland, with the cul-de-sac Jurby Avenue present to the north, a parcel of woodland to the west, and large expanses of public open greenspace present to the south and east.
Potential Impacts on Designated Sites	No potential impacts on designated sites nearby to the site are anticipated to occur due to the proposed development. The site is located at a sufficient distance from nearby designated sites, and the proposed development activities have been considered.

Habitats	The site comprised predominantly modified grassland, with some bramble scrub and other developed land.
Ecological Constraints	The following potential ecological constraints were identified during the assessment: Suitable habitat for common amphibians, birds, bats, hedgehog, and badger.
Recommended Ecological Mitigation	The following mitigation measures are recommended to minimise potential impacts due to the proposed development: - Precautionary Working Methods during the construction phase for common amphibians, nesting birds, bats, hedgehog, and badger. - If any vegetation require removal, it should be completed outside of the breeding bird season (March to September, inclusive). If this is not feasible, a Nesting Bird Check is to be completed by a qualified ecologist within 48 hours before removal is completed.
Recommended Further Surveys and Reports	No further surveys are required to facilitate development.
Recommended Ecological Enhancements	The National Planning Policy Framework (NPPF) (2021) highlights the requirement for planning policies and decisions to conserve and enhance the natural environment. The proposed development provides the opportunity to enhance the site and ecological enhancements have been recommended.

2.4 National Character Area

- 2.4.1.1 The site is within the Manchester City Council Local Planning Authority, and National Character Area 55 - Manchester Conurbation (NE463).
- 2.4.1.2 The area is characterised by dense urban and industrial development, commercial, financial, retail and administrative centres, commuter suburbs and housing, interspersed with a network of green infrastructure.
- 2.4.1.3 The conurbation is centred on low hills, crossed by several river valleys that thread through the urban fabric. The geology is dominated by sandstones, overlain by deposits of glacial till.

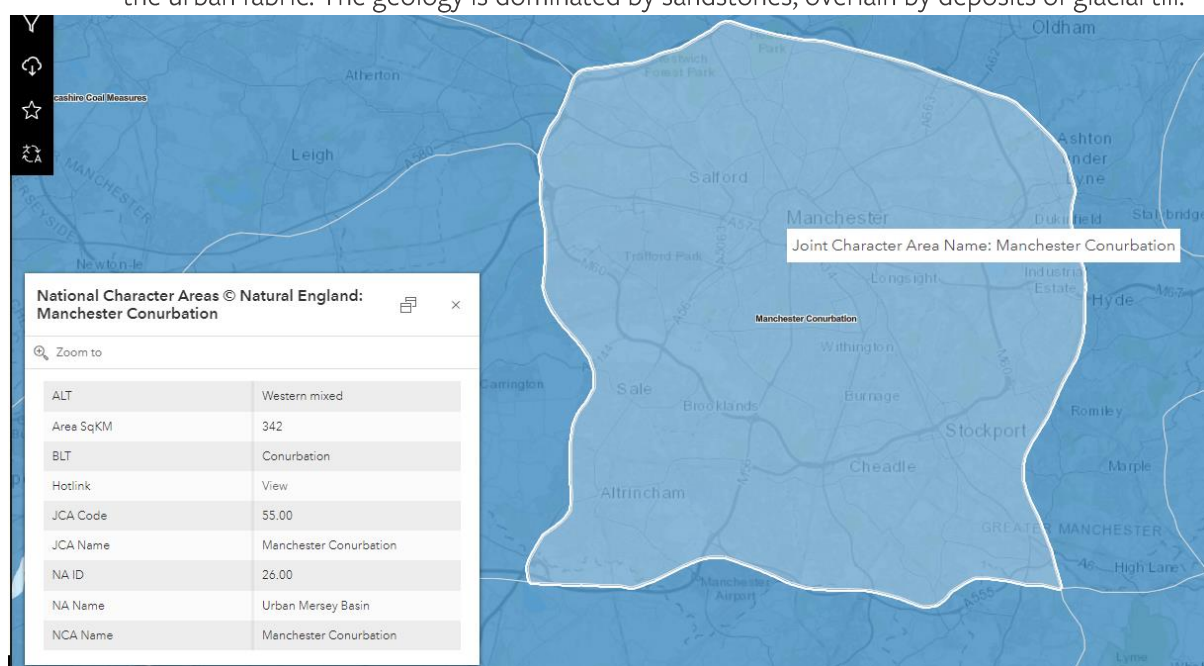


Figure 3 – Natural England Landscape Character Assessment

2.5 Agricultural Land Use

- 2.5.1.1 According to Natural England's Agricultural Land Classification map for the north-west region, the site is currently classified as being predominantly in urban use.

2.6 Soils and Substrates

- 2.6.1.1 Using the Soilscape Viewer from LandIS, the site has been identified as having soil which is slowly permeable seasonally wet acid loamy and clayey soils.
- 2.6.1.2 The soil in this area is generally loamy and clayey in texture and has a low fertility.
- 2.6.1.3 Due to the size and function of the site, and the low complexity of the habitats proposed, a full soil analysis of the site was not deemed necessary.

2.7 Flood Risk Zone

- 2.7.1.1 According to the Flood map for planning service, from the gov.com website, the site lies within Flood Zone 1.
- 2.7.1.2 Most developments that are less than 1 hectare (ha) in flood zone 1 do not need a flood risk assessment (FRA) as part of the planning application. However, there is a risk of flooding from surface water at this site.

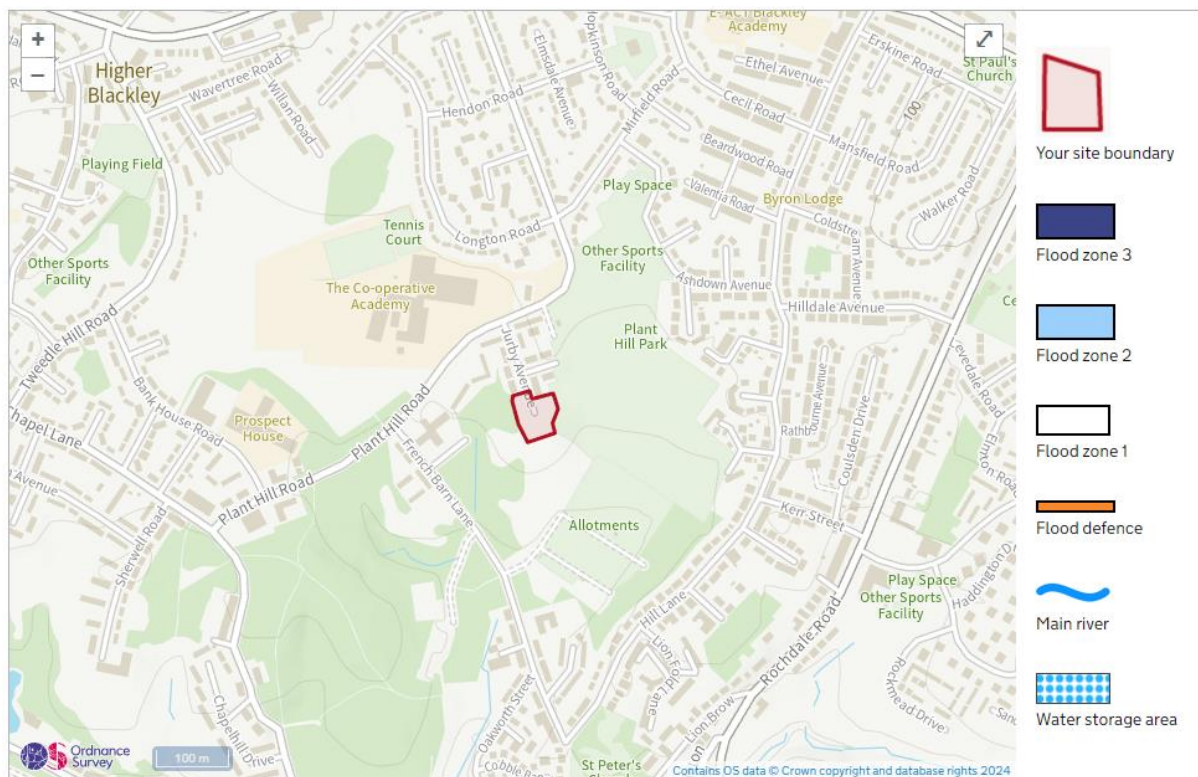


Figure 3 – Flood map showing the flood risk to the site and surrounding area.

3 Biodiversity Net Gain Assessment

- 3.1.1.1 The Biodiversity Net Gain Assessment and Report follows the user guidance produced by Department for Environment, Food & Rural Affairs (2024) and the good practice methodology as detailed within the *Biodiversity Net Gain: Good Practice Principles for Development* (Baker, et al., 2019).

3.2 Methodology

3.2.1 The Statutory Biodiversity Metric

- 3.2.1.1 The BNG calculation was undertaken utilising The Statutory Biodiversity Metric from Department for Environment, Food & Rural Affairs, using data obtained from the field surveys.
- 3.2.1.2 The calculation was performed by a technically competent and experienced person as detailed in British Standard BS8683 - Suitably qualified person – definition in BS8683:2020.

3.2.2 Habitat Scoring

3.2.2.1 Baseline Habitats

- 3.2.2.2 Habitat types were identified and recorded using the Coreo habitat mapping application (version V1.0) 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.

- 3.2.2.3 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. A summary of primary and secondary codes can be found in Appendix 2.

3.2.2.4 Post-Development

- 3.2.2.5 Post-development habitats are subject to the same condition assessments as baseline habitats, based on information provided by the proposed landscape layout (Appendix 3).

3.2.2.6 Strategic Significance

- 3.2.2.7 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	1.15

Strategic Significance Categories	
Category	Score
Identified in Local Nature Recovery Strategy (LNRS) and delivers specified priorities, or identified local plans as ecologically important	
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

Local Nature Recovery Strategy

- 3.2.2.8 The site has been identified within the Local Nature Recovery Strategy as having opportunity for tree planting. Any trees that are planted onsite as part of the development will be allocated a high strategic significance.

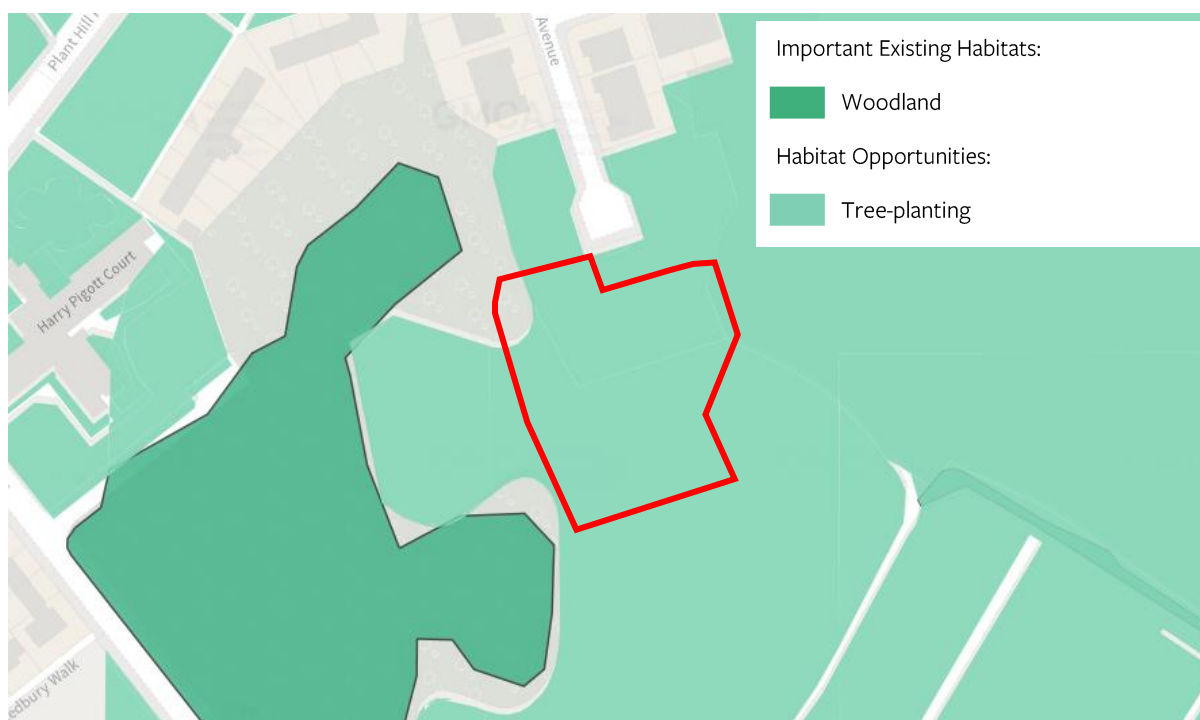


Figure 2 – Greater Manchester Local Nature Recovery Strategy highlighting the areas with opportunities for habitat creation (red line boundary for illustrative purposes).

3.2.3 Constraints to the Survey

- 3.2.3.1 November 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.

3.3 Baseline Habitat Assessment

- 3.3.1.1 Baseline habitat condition was assessed following the methodology outlined in Section 3.2. 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, 2024c) which illustrates the numerical data.

3.3.2 Area Habitats

Table 5 – Baseline Area Habitats

Habitat Parcel Reference	Total Area (ha)	Condition	Total Units	Units Lost
1) Modified Grassland	0.27	Poor	0.54	0.54
2) Urban Tree	0.004	Moderate	0.03	0.03
3) Bramble Scrub	0.013	N/A	0.05	0.05
4) Developed land; Sealed Surface	0.039	N/A	0.00	0.00
Total	0.33	-	0.62	0.62

3.4 Post-Development Habitat Summary

Table 6 – 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	0.62	-	0.62	-	1.03	1.03	+0.41	+64.86
Linear Hedgerow Units	-	-	-	-	0.18	0.18	+0.18	N/A

- 3.4.1.1 The current landscape proposals for the development of the site are expected to produce a net gain of 0.41 units (64.86%) for area habitats and a net gain of 0.18 units for linear hedgerow habitats. As the baseline value for hedgerow habitats is zero a percentage change cannot be calculated.
- 3.4.1.2 The current proposals also satisfy all trading rules laid out by the metric. Consequently, the development meets all national and local planning policies and off-site mitigation will not be necessary.

4 Purpose of Report

- 4.1.1.1 The purpose of this management plan is to provide a schedule for the management of habitats on site for a 30-year period, ensure that existing and proposed habitats are suitably maintained and ensure good establishment and continued improvement of habitat condition.

4.2 Habitats Covered

- 4.2.1.1 This management plan covers all proposed habitats which provide significant onsite enhancements, as assessed within the Statutory Biodiversity Metric. These include:
- habitats of medium or higher distinctiveness in the biodiversity metric;
 - habitats of low distinctiveness which create a large number of biodiversity units relative to the biodiversity value of the site before development;
 - habitat creation or enhancement where distinctiveness or condition is increased relative to that of the habitat before development; and
 - areas of habitat creation or enhancement which are significant in area relative to the size of the development.
- 4.2.1.2 Habitats that do not provide significant on-site enhancements do not require detailed management regimes. However, many of these habitats still perform important functions and should receive some ecologically driven management.
- 4.2.1.3 Habitats that have not provided significant onsite enhancements, and basic management measures are summarised in Table 7.

Table 7 – Habitats that do not provide significant onsite enhancements

Habitat Type	Justification	Management Measures
Introduced Shrub	Introduced shrub is a low distinctiveness habitat, and only contributes 0.06 units (6%) of the overall post-development unit value.	• Pruning and cutting may be necessary, but should aim to maintain shape and vigour, promote flowering/fruitletting, and create variation and diversity in height and structure. • Avoid cutting all specimens across the plot in a single period, particularly where this is likely to removes all flower/fruit interest for wildlife. • Avoid herbicide use, instead prioritise organic mulches.
Modified Grassland	Modified grassland is a low distinctiveness habitat, and only contributes 0.03 units (3%) of the overall post-development unit value.	• Implement a rotational mowing regime to maintain diversity. • Hand removal of any scrub or invasive, non-native species that establish. • Replant any bare or damaged ground with Rowland Medallion Turf.
Developed Land; Sealed Surface	Developed Land; Sealed Surface is a very low distinctiveness habitat and contributes no units to the overall post-development unit value of the site.	• Regularly monitor tarmacked areas and resurface/fill holes where necessary. • Replace any lose paving stones. • Clean to prevent moss and lichen establishment.

Ornamental, Non-native Hedgerow	While this habitat contributes the entirety of the hedgerow units (o.18), these hedgerows provide limited ecological value and only simple management measures are deemed necessary.	• Avoid planting in freezing or waterlogged conditions, and apply mulch and tree-guards/bamboo canes once planted. • Avoid use of herbicides, instead remove any weeds by hand. • Replace any failed whips immediately with the same species, as described in planting plans (Appendix 3).
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4.3 Management Responsibilities

- 4.3.1.1 Any transference of responsibility of this plan should be undertaken with the appropriate appointment of a competent organisation capable of delivering the management detailed within the document.
- 4.3.1.2 The organisation implementing this plan will be a management company with the necessary certificates of competence to implement landscape management operation on site.
- 4.3.1.3 The managing organisation will ensure that all site management complies with good practice standards and all relevant health and safety procedures.
- 4.3.1.4 The managing organisation will also ensure that measures outlined to avoid pollution incidents, comply with protected species and habitats legislation, and ensure overall environmental protection are enforced.
- 4.3.1.5 A maintenance specification is provided in Section 6. This sets out the detailed maintenance requirements for the habitats onsite, which must be followed at all times. Any deviations from the management plan must be highlighted to the site owners or management company.

4.4 Health and Safety

- 4.4.1.1 The site will be managed to comply with all relevant health and safety legislation, Approved Codes of Practice (ACOP) and Health and Safety Executive (HSE) guidance.
- 4.4.1.2 As the managing organisation will be the main company involved in on site works, the managing organisation will fulfil the landowner's role and the work manager's role.
- 4.4.1.3 This places an obligation on the managing company to ensure that any contractor understands and fulfils their health and safety role and any work undertaken on the site will follow the guidelines of the HSE.

5 Habitat Management

5.1.1.1 This section sets out the specific measures that will ensure that all proposed habitats that provide significant onsite enhancements are successfully created and can achieve their target condition within the targeted time period.

5.1.1.2 Habitats to be created are summarised in Table 8.

Table 8 – Proposed Habitat Creation

Habitat Type	Proposed Condition	Time to Target Condition (years)
Urban Trees	Moderate	27
Mixed Scrub	Poor	1
Other Neutral Grassland	Moderate	5

5.2 General Measures

5.2.1.1 Habitat creation on site will follow details set out in the Detailed Planting Plan (Urban Green, 2024b). The following general measures shall be met to ensure successful habitat creation and succession on site.

- All planting is to follow guidance set out in the relevant British Standard or Horticultural Trades Association documents and carried out by a competent person.
- Planting is to remain undamaged, with healthy and vigorous growth, and is to be planted upright and well balanced. Trees and shrubs are to be of good shape and without elongated shoots, grown in a suitable environment and hardened off before being delivered to the site.
- All planting is to be true to name and free from pests, diseases, discoloration, weeds, fungus, and physiological disorders upon planting.
- If plants/trees are unobtainable alternatives are to be agreed with the Ecologist/Landscape Architect in writing prior to ordering.
- After planting ensure that the full depth of topsoil is wetted. Apply water evenly and without damaging or displacing plants or soil. Continue to water as necessary to ensure the successful establishment and continued thriving of planting.
- No tree/shrub/hedgerow works shall be completed during nesting bird season (March to September inclusive). If works are required within the nesting bird season, a check must be undertaken of all affected trees by a suitably qualified ecologist.

5.3 Habitat Creation

5.3.1 Individual Trees – Urban Trees

- 5.3.1.1 A total of 33 small trees will be planted onsite. The mix incorporates non-native species, including Japanese maple (*Acer palmatum* 'Purpureum'), golden honey locust (*Gleditsia triacanthos* 'Sunburst'), rowan 'Sheerwater Seedling' (*Sorbus aucuparia* 'Sheerwater Seedling'), and small-leaved lime 'Green Spire' (*Tilia cordata* "Green Spire"). See landscape design (Appendix 3) for exact locations of each species.

	Appropriate for habitat creation
	Not appropriate for habitat creation

Table 9 – Habitat Creation Activities for Individual Trees

Habitat Creation Activity	Further Details	Indicative Timing of Operation											
		J	F	M	A	M	J	J	A	S	O	N	D
Ground Preparation (Rootball)	- Dig a square hole the same depth as the tree's rootball but three times as wide. Loosen the soil around the sides and base of the hole. Avoid planting during hot/dry, wet or freezing conditions. - Retain the topsoil and mix with compost.												
Ground Preparation (Containerised)	- Dig a square hole the same depth as the tree's container but three times as wide. Loosen the soil around the sides and base of the hole. Avoid planting during hot/dry, wet or freezing conditions. - Retain the topsoil and mix with compost.												
Planting (Rootball)	- Soak the roots of the tree for 2 hours before planting. - Place tree into centre of hole, spread roots and fill hole with soil mixture, compacting once full to secure tree. - For trees >1.5m in height, add a stake on the side that will be facing the wind and tether the tree to it. - Water the soil generously.												
Planting (Containerised)	- Place tree into centre of hole, spread roots and fill hole with soil mixture, compacting once full to secure tree. - For trees >1.5m in height, add a stake on the side that will be facing the wind and tether the tree to it. - Water the soil generously.												

Establishment	Water daily for the first two weeks, then weekly for the first year while the tree has its leaves. Tear off any suckers that appear and readjust the tether to the stake to avoid damage to the trunk. Stakes can be removed after 3 years.											
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5.3.2 Heathland and Shrub - Mixed Scrub

5.3.2.1 Areas of mixed scrub will be created in the public areas, predominantly along the western and southern site boundaries. Species within this habitat will include guelder rose (*Viburnum opulus*), common dogwood (*Cornus sanguinea*), and common hazel (*Corylus avellana*).

Table 10 – Habitat Creation Activities for Mixed Scrub

Habitat Creation Activity	Further Details	Indicative Timing of Operation											
		J	F	M	A	M	J	J	A	S	O	N	D
Ground Preparation	Remove weeds by hand, or use herbicides where necessary (e.g. glyphosphate).												
	Fork soil to break up any compacted areas and create pits in clumps, with unplanted gaps between. Complete just prior to planting to avoid soil becoming waterlogged or dried out.												
Planting	- Plant whips into pits and backfill with topsoil (ideally collected from site) which will be combined with a general-purpose slow-release fertiliser and Tree Planting and Mulching Compost. - Avoid freezing or waterlogged conditions. - Secure trees with stakes and protect with tree guards.												

5.3.3 Grassland - Other Neutral Grassland

- 5.3.3.1 Wildflower meadow will be created to the east of the site, with some smaller areas around the building entrance, using the EM3 Special General Purpose Meadow Mixture from Emorsgate Seeds.

Table 11– Habitat Creation Activities for Other Neutral Grassland

Habitat Creation Activity	Further Details	Indicative Timing of Operation											
		J	F	M	A	M	J	J	A	S	O	N	D
Ground Preparation	Soil testing to ensure soil is of low fertility (<25 mg/l of phosphorus, <120 mg/l of potassium and approx. 0.2% nitrogen), with pH 5-7.												
	If necessary, reduce fertility through stripping topsoil, inversion ploughing or spreading with nutrient-poor soil.												
	Remove weeds by hand, through repeated cultivation, or use herbicides where necessary (e.g. glyphosphate).												
	Plough or dig to bury the surface vegetation, harrow or rake to produce a medium tilth, and roll or tread, to produce a firm surface.												
Sowing	Seed with EM3 Special General Purpose Meadow Mixture at a rate of 4g/m² by hand or using appropriate lightweight machinery, and roll or tread once all seeds are sown. For best results, sow in autumn or spring, though they can be sown at other times of year if there is sufficient warmth and moisture.												
Establishment	If there is little/no rain, water with a light spray to avoid dislodging seeds.												
	Cut in the first summer after sowing, ideally late August, to reduce competition for wildflowers.												

Appropriate for management
 Not appropriate for management

5.4 Management Prescriptions

5.4.1.1 This section includes detailed management techniques and annual schedule of works for each habitat that will be present within the proposed development, including retained, enhanced and created habitats. These management prescriptions should be followed for the next 30 years to ensure all habitats achieve their existing/proposed condition.

5.4.2 Individual Trees – Urban Trees

Table 12 – Management Objectives for Individual Trees

Condition Criteria	Management Action	Timing of Management Action (Year)	Indicative Timing of Operation											
			J	F	M	A	M	J	J	A	S	O	N	D
A. The tree is a native species (or at least 70% within a block)	While this criterion will fail as all proposed trees are non-native, management recommendations below should still be followed.	Bare root/rootball - As required												
	Replacement planting for failed trees using same species (according to planting scheme within landscapes)	Containerised - As required												
B. The tree canopy is predominantly continuous	Undertake regular arboricultural inspections to identify any structural risks, pests, diseases or other health issues	Annually Years 1 – 3, and then every 3 years from Years 4 - 30												
C. The tree is mature or veteran	- Pruning of damaged or diseased trees to ensure tree canopy is balanced and consistent with the natural structure for the species. All pruning works must be carried out by a qualified professional. - Limit the use of damaging management practices e.g., herbicide use and unnecessary pruning.	As required												
D. There is little or no evidence of an adverse impact on tree health by anthropogenic activities and no current regular pruning regime so the trees retain >75% of expected canopy														

[illegible]

5.4.3 Heathland and Shrub - Mixed Scrub

Table 13 - Management Objectives for Mixed Scrub

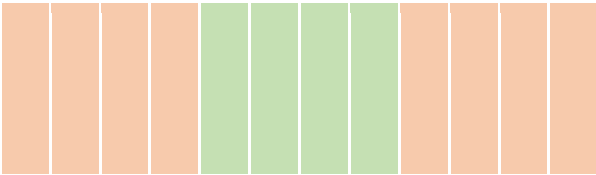
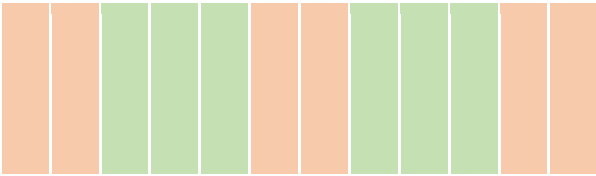
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[illegible]

5.4.4 Grassland - Other Neutral Grassland

[illegible]

B. 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)	Initial cut in summer, ideally mid-August, and remove cuttings.	1	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Green	Orange	Orange	Orange	Orange
	Continue to keep short through mowing until March of Year 2.	1 - 2	Green	Green	Green	Orange	Orange	Orange	Orange	Green	Green	Green	Green	Green
	- Due to the location of this grassland, it is expected to receive regular management and to fail this criterion. However, if possible mowing should be limited to three cuts a year. - Take a hay cut in summer to ~50mm, and leave arisings in situ to dry and shed seed for one week then remove entirely.	2 - 30	Orange	Orange	Orange	Orange	Orange	Orange	Green	Green	Orange	Orange	Orange	Orange
	Cut again in autumn (and spring if needed) and remove arisings.	2 - 30	Orange	Orange	Green	Green	Green	Orange	Orange	Orange	Green	Green	Green	Orange
C. Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	Visual assessment of bare ground cover. If exceeding 5%, carry out management action.	2 - 30	Orange	Orange	Green	Green	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange
	Seed areas of bare ground with EM3 Special General Purpose Meadow Mixture. Seed at a rate of 4g/m² by hand.	As required	Orange	Orange	Green	Green	Green	Orange	Orange	Green	Green	Green	Orange	Orange
D. Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%.	Manual removal of bracken and scrub regeneration upon discovery.	As required	Orange	Orange	Orange	Green	Green	Green	Green	Green	Orange	Orange	Orange	Orange
E. Combined cover of species indicative of sub-optimal condition and physical damage account for less than 5% of total area.	Mowing regime as described under criterion B, with removal of arisings following.	1 - 30	Orange	Orange	Green	Green	Green	Orange	Orange	Green	Green	Green	Orange	Orange
	Immediate removal of invasive non-native species upon discovery using suitable methods (Appendix 4)	As required	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green

F. There are 10 or more vascular plant species per m ² present, including forbs that are characteristic of the habitat type	Random quadrat sampling using 1m² quadrats. Ten quadrat samples should be taken and average species richness per m² calculated	5 - 30	
	Re-seeding of areas with a species richness of <10 species per m² by overseeding with EM3 Special General Purpose Meadow Mixture.	As required	

6 Habitat Monitoring

6.1 Monitoring Schedule

- 6.1.1.1 Following completion of habitat creation and initial enhancement works, habitats should be monitored to ensure that they are on track to achieve their predicted condition.
- 6.1.1.2 Monitoring should be carried out on **Years 1, 2, 3, 4, 5, 10, 15, 20, 25 and 30**.
- 6.1.1.3 All monitoring should be completed within the optimal botanical survey period (May to October) by a suitably qualified ecologist, using appropriate measures to assess the habitat against the Statutory Biodiversity Metric Condition Assessments (DEFRA 2024b) (e.g., photography, quadrat sampling, etc).

6.2 Monitoring Reports

- 6.1.1.1 Following completion of habitat creation and initial enhancement works, a monitoring report should be prepared and submitted to the Local Planning Authority or Responsible Body on the years detailed in Section 7.1.
- 6.1.1.2 Monitoring results inform necessary management changes to promote achieving BNG targets stated in the Statutory Biodiversity Metric and HMMP, allowing an adaptive management system to be followed.

6.2.2 Individual Trees – Urban Trees

- 6.1.1.1 Table 15 details the habitat condition criteria for the elected habitat type and the condition, and the score for each year at which monitoring should take place.

Table 15 – Monitoring Results for Individual Trees

Condition Criteria	Target Condition Score	Year											Comments
		0	1	2	3	4	5	10	15	2	25	30	
A. The tree is a native species (or at least 70% within a block)	Fail												
B. The tree canopy is predominantly continuous	Pass												
C. The tree is mature or veteran	Fail												
D. There is little or no evidence of an adverse impact on tree health by anthropogenic activities	Pass												
E. Natural ecological niches present	Fail												
F. More than 20% of the tree canopy area is oversailing vegetation beneath	Pass												
Condition Score	Moderate												

6.2.3 Heathland and Shrub – Mixed Scrub

6.1.1.1 Table 16 details the habitat condition criteria for the elected habitat type and the condition, and the score for each year at which monitoring should take place.

Table 16 – Monitoring Results for Mixed Scrub

Condition Criteria	Target Condition Score	Year											Comments
		0	1	2	3	4	5	10	15	2	25	30	
A. The parcel represents a good example of its habitat type	Pass												
B. Seedlings, saplings, young shrubs and mature shrubs are all present	Fail												
C. There is an absence of invasive non-native species/ >5% species indicative of sub-optimal condition	Pass												
D. The scrub has a well-developed edge	Fail												
E. There are clearings, glades or rides present	Fail												
Condition Score	Poor												

6.2.4 Grassland – Other Neutral Grassland

6.1.1.1 Table 17 details the habitat condition criteria for the elected habitat type and the condition, and the score for each year at which monitoring should take place.

Table 17 – Monitoring Results for Other Neutral Grassland

Condition Criteria	Target Condition Score	Year											Comments
		0	1	2	3	4	5	10	15	2	25	30	
G. The grassland is a good representation based on its UKHab description.	Pass												
H. Sward height is varied	Fail												
I. Cover of bare ground is between 1% and 5%	Pass												
J. Cover of bracken >20% and cover of scrub >5%	Pass												
K. Species indicative of sub-optimal condition and physical damage accounts for > 5% of total area	Pass												
L. There are 10 or more vascular plant species per m2 including forbs that are characteristic of the habitat type	Fail												
Condition Score	Moderate												

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- Wildlife and Countryside Act (1981).

APPENDIX 1 – PRE-DEVELOPMENT HABITAT MAP

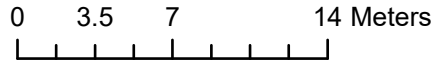
U R B A N
G R E E N

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Legend

- Red Line Boundary
- Buildings
- Modified grassland
- Other developed land
- Bramble scrub
- Urban Tree
- Target Note

TN1 - Shipping Container



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

T: +44 (0) 161 312 3131
weareurbangreen.co.uk

Client:
Irwell Valley

Project:
Jurby Avenue

Title:
UKHAB Habitat Map

Issue:
01

Drawn: CL	Checked: SC	Approved: SB
Project: UG1828	Scale @ A3: NTS	Date: 12/12/2022
Dwg No: UG_1828_ECO_HM_01		Revision: 01

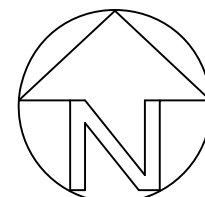
Appendix 2 - Primary and Secondary Codes

Hierarchical code	Code	Definition
Primary Code	g4	Modified Grassland
	u1b	Developed land; sealed surface
	h3d	Bramble scrub
Secondary Code	11	Scattered trees
	75	Active management
	66	Frequently mown

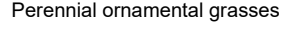
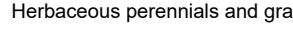
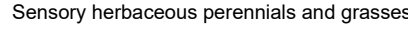
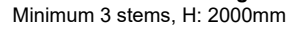
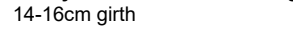
APPENDIX 3 – PROPOSED LANDSCAPE PLAN

U R B A N
G R E E N

Graphical representations of equipment on this drawing have been co-ordinated, but are approximations only. Please refer to the specifications and / or details for actual sizes and / or specific contractor construction information.



E



Individual varieties to be planted in groups of approximately 10.

Individual varieties to be planted in groups of 1, 3 or 5.

Grasses to be planted separately or in small groups of 3-5.
Flowering plants to be spread evenly throughout the proposed area.

Individual varieties to be planted separately or in small groups of 3-5.

- All plants to be completely hardened off

REV.	DATE	DESCRIPTION	DRAWN	CHK'D
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SOFT LANDSCAPE PLAN

PLANNING

Drawn: TH	Checked: SA	Approved: MT
Project: UG1828	Scale @ A1: 1:200	Date: 17/01/22
Dwg No: UG_1828_LAN_SL_DRW_02		Revision: P04

Appendix 4 – Schedule 9 Invasive Species Management

- 7.1.1.1 An invasive, non-native species is a species that is present outside of its native range but has established populations after accidental or intentional introduction to a geographical region. These species have negative ecological impacts on the environments in which they are present by outcompeting native flora and fauna for resources, facilitating the spread of disease, and interrupting natural food webs.
- 7.1.1.2 Schedule 9 of the Wildlife and Countryside Act 1981 lists the species within the UK which are considered invasive and are damaging to biodiversity. It is the legal responsibility of the landowner to control populations of invasive species and prevent their growth and spread.
- 7.1.1.3 While no invasive species were identified onsite; however, it should be noted that some invasive non-native plants are very fast spreading and therefore the potential for these species to be introduced to the site at a later date cannot be ruled out.
- 7.1.1.4 The table below details some of the invasive, non-native species listed on Schedule 9 and the recommended management practices.

Common name (scientific name)	Identification		Management
Himalayan balsam (<i>Impatiens glandulifera</i>)	- Green or red stems - Serrated oval leaves growing in a whorl round the stem - Bright pink flowers		- Spraying of glyphosate-based herbicides - Application to be carried out by a qualified individual - Herbicide to be applied in spring, before the flowering period but after germination of seeds - Approved herbicides only to be used - Balsam bashing – pulling plants up by the root before seeds are set (before July/August)

Giant Hogweed	• Up to 4m in height • Large white flower clusters • Green stem with purple blotches • Large compound leaves with serrated edges, up to 1.5m across		• Spraying of glyphosate-based herbicides • Application to be carried out by a qualified individual with the correct PPE. Extra care must be taken when working around giant hogweed as the sap can cause burns to the skin • Herbicide to be applied in April/May before flowering period • Approved herbicides only to be used • Organic waste must be disposed of at a landfill site licensed to handle invasive plant matter
Japanese knotweed (<i>Fallopia japonica</i>)	• Bamboo like stems with purple flecks • Large, shovel shaped leaved • Cream/white clustered flowers		• Stem injection or spraying with glyphosate in late summer/early autumn (September/October) • Approved herbicides only to be used • Application to be carried out by a qualified individual • Application of herbicide annually (can take 3+ years to effectively combat) • Inform relevant authorities prior to disposal of plant material or use an authorised disposal site/company (GOV.UK, 2022)

Rhododendron (<i>Rhododendron</i> spp.)	• Woody stems • Oval, dark green, glossy leaves • Dense clusters of flowers of various colours		• Cut stems above ground using hand or mechanical tools • Digging out and removal of root system • Chipping of plant material to prevent regrowth
Montbretia (<i>Crocasmia</i> <i>x crocosmiiflora</i>)	• Low growing plant • Long, thin, light green leaves • Bright orange flowers		• Physical removal of plant material and root system by digging out • Disposal off site at an authorised disposal site • Application of herbicide in early spring

Cotoneaster (<i>Cotoneaster</i> spp.)	• Genus of flowering plants • Dense, shrubby growth • Small, shiny, dark green leaves • Small white or pink berries with red berries in autumn		• Physical removal of plant material and root system by digging out • Plant material should be chipped, burned or disposed of at an authorised site to prevent regrowth • Application of herbicide in June-August to small plants and stump treatment of larger plants which have been removed mechanically
Variegated yellow archangel (<i>Lamium galeobdolon</i> subsp. <i>Argentatum</i>)	• Low growth which forms carpets on the ground • Opposite, variegated leaves • Small, round, yellow flowers		• Physical removal of plant material and root system by digging out to a depth of approximately 1m • If necessary, application of herbicide before June (prior to seed setting)