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Technical Manager (Ecology)

[redacted]

Habitat Management and Monitoring Plan

Site:

Corner of 119 Raby Street and 20-28 Barnhill Street, Manchester M14 4SY

Client:

Caddick Construction

Report date:

31st August 2026

Project:

This report is prepared to discharge conditions associated with a planning consent from Manchester City Council. The development is described as:

Erection of six residential blocks, following demolition of existing buildings and structures, to provide a total of 212 dwellings (Use Class C3) comprising: one 10-storey building accommodating 86 apartments; four buildings of 5 to 6 storeys (including attic storeys) accommodating a total of 119 apartments; and 7 three-storey townhouses; together with ancillary communal facilities, associated access, car and cycle parking, refuse storage, landscaping, amenity space, signage, and other associated works

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Guidelines

A Habitat Management and Monitoring Plan (HMMP) is a key document in the long-term stewardship of habitats created, enhanced, or restored as part of a development. It is essential in the context of Biodiversity Net Gain (BNG), a legal requirement under the Environment Act 2021, which mandates that developments must deliver a minimum 10% net gain in biodiversity and ensure its maintenance for at least 30 years. The HMMP outlines how newly created or enhanced habitats will be managed, monitored, and maintained to achieve their intended ecological value over time, ensuring compliance with BNG commitments.

The HMMP is designed to align with UK regulatory frameworks, including Natural England's guidance on habitat management, local planning authority policies, and the National Planning Policy Framework (NPPF) such as the 'British Standard 42020 (2022) 'Biodiversity – Code of Practice for Planning and Development'.

Proportionality

> The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.
>
> This approach is enshrined in Government planning guidance, for example, section 15 of the National Planning Policy Framework for England.
>
> The desk studies and field surveys undertaken to provide a preliminary ecological appraisal (PEA) might in some cases be all that is necessary.
>
> (BS 42020:2022)

In consequence of the scale and intensity of the proposed development, this plan-led report is considered adequate and proportionate. It communicates all relevant information necessary to determine a planning application or support the recommendations for further surveys.

Version control			
Status	**Issue**	**Name**	**Date**
Draft	0.1	Leo Plevin BSc (Hons), MSc, MCIEEM Technical Manager (Ecology)	07/04/2026
Final	1.0	Leo Plevin BSc (Hons), MSc, MCIEEM Technical Manager (Ecology)	31/08/2026

Contents

1.0 Introduction and Context 5
1.1 Background 5
1.2 Planning Conditions 5
1.3 Project Description 6
1.4 Site Context 6
1.5 Scope of This Report 6
2.0 Ecological Baseline Conditions Relevant to This Report 7
2.2 BNG and Proposed Habitat Creation 7
2.3 Significant on-site Enhancements 8
2.4 Scope for Management 8
3.0 HMMP 9
3.1 Site Monitoring 9
3.2 Habitat Creation and Management 13
4.0 Bibliography 21
Appendix 1: Post Development Landscape Masterplan and Planting Plan 22

1.0 Introduction and Context

1.1 Background

Arbtech Consulting Ltd were commissioned by Caddick Construction to produce a Habitat Management and Monitoring Plan (HMMP) for a proposed development at Corner of 119 Raby Street and 20-28 Barnhill Street, Manchester M14 4SY (hereafter referred to as the site).

The site has been subject to previous ecological assessments of relevance to this report, comprising:

- Preliminary Ecological Appraisal (PEA) and Bat Roost Assessment (Urban Green, 2023).
- Preliminary Ecological Appraisal (PEA) and Bat Roost Assessment (Urban Green, 2025).
- Biodiversity Net Gain (BNG) Design Stage Assessment (Urban Green, 2025).
- Statutory Biodiversity Metric (File Name: UG_3086_BNG_CALC_02_BNG Calculator_S0 - Planning Drawings_-) (Urban Green, 2025).

1.2 Planning Conditions

Following the submission of planning application 143777/FO/2025, planning permission was conditionally granted. The decision notice includes conditions that relate to ecology; of relevance to this report, condition 29 states:

"Prior to the commencement of development, a 30-year Habitat Management and Monitoring Plan for the on-site biodiversity enhancements shall be submitted to and agreed in writing by the City Council as Local Planning Authority. The development shall be implemented and maintained in accordance with the agreed details and shall be retained thereafter.

Reason - In the interests of biodiversity net gain being achieved on site pursuant to policy EN15 of the Manchester Core Strategy, policies JP-G8 of Places for Everyone, National Planning Policy Framework (NPPF) and Schedule 7A of the Town and Country Planning Act 1990 (as amended)."

1.3 Project Description

The planning application pertaining to the site (Manchester City Council reference: 143777/FO/2025) describes the development as: Erection of six residential blocks, following demolition of existing buildings and structures, to provide a total of 212 dwellings (Use Class C3) comprising: one 10-storey building accommodating 86 apartments; four buildings of 5 to 6 storeys (including attic storeys) accommodating a total of 119 apartments; and 7 three-storey townhouses; together with ancillary communal facilities, associated access, car and cycle parking, refuse storage, landscaping, amenity space, signage, and other associated works (hereafter referred to as the proposed development). A plan showing the proposed development is provided in **Appendix 1**.

1.4 Site Context

The site is located at National Grid Reference SJ 83866 95773 and comprises a total area of approximately 0.63ha. The site is located to the east of Princess Road and south of Moss Lane East, Moss Side, Manchester, M14 4SY and comprises an open, regularly maintained grassed area to the north; an unmaintained grassland area to the southwest; and a row of mostly derelict terraced houses to the southeast. The site is bounded by a blend of residential and commercial properties to all four orientations; with the Heineken UK Brewery to the north, Moss Side Park to the south/southeast; and Princess Road/A5103 to the west.

1.5 Scope of This Report

This Habitat Management and Monitoring Plan (HMMP) has been prepared to support the delivery of Biodiversity Net Gain (BNG) in accordance with the Environment Act 2021 and the approved Biodiversity Gain Plan for the development. BNG has been calculated using the Statutory Biodiversity Metric, and all habitat creation, enhancement, and retention detailed within this HMMP is intended to achieve and maintain the target habitat types and condition assessments specified within the approved metric. The habitats managed under this HMMP are required to be maintained for a minimum period of 30 years from the completion of establishment works. Target habitat condition scores set out in the Statutory Biodiversity Metric define the required standard of success for each habitat parcel. Monitoring outcomes will be assessed against these target condition criteria. Where monitoring identifies that habitats are not progressing towards, or are failing to achieve, their target condition, remedial management actions will be implemented in accordance with the adaptive management framework set out in this HMMP. This ensures that the required biodiversity gains are secured and maintained for the full management period.

Any biodiversity gains delivered off-site, where required to meet statutory BNG obligations, are secured through separate legal mechanisms and do not rely on the successful delivery of this HMMP.

2.0 Ecological Baseline Conditions Relevant to This Report

The baseline ecological conditions of relevance to this report were determined as a result of the PEA and BNG Assessment.

2.1 Habitat Degradation

The site has not been subject to any degradation since 30th January 2020, and as such, the baseline biodiversity value of the site is derived from the site as observed during the PEA (Urban Green, 2023,2025).

2.2 BNG and Proposed Habitat Creation

The development, as currently proposed, is anticipated to result in a -49.34% net loss for area-based habitat units, no linear-based habitat are present within the site. The post-development habitat coverage and their target conditions in accordance with the BNG Assessment are detailed in **Table 1** below.

***Table 1**. Proposed post-development habitats.*

Broad Habitat		Proposed Habitat Type	Area (ha)	Condition
Retained	N/A			
Created	Urban	Developed land; sealed surface	0.245	Condition N/A
	Urban	Developed land; sealed surface	0.298	Condition N/A
	Urban	Vegetated Garden	0.027	Condition N/A
	Urban	Introduced Shrub	0.026	Condition N/A
	Urban	Rain Garden	0.002	Moderate
	Urban	Other Green Roof	0.016	Condition N/A
	Grassland	Modified Grassland	0.012	Poor
	Individual Trees	Urban tree	0.175	Moderate
	Individual Trees	Urban tree	0.045	Poor
Enhanced	N/A			

2.3 Significant on-site Enhancements

Significant on-site enhancements are defined as habitat creation or habitat enhancement measures that make a material contribution to the biodiversity net gain (BNG) delivered by the development, relative to the pre-development baseline biodiversity unit value as calculated using the Statutory Biodiversity Metric. The retention of existing habitats, where no improvement in condition or distinctiveness is achieved, does not constitute a significant on-site enhancement for the purposes of BNG.

For this development, the following measures are considered to represent significant on-site enhancements:

- Creation of habitats of medium distinctiveness.
- Creation of habitats of low distinctiveness meeting moderate or above condition
- Creation of habitats of low distinctiveness which are significant in area relative to the size of the development

2.4 Scope for Management

Urban habitat types that generate negligible post-development biodiversity units do not require specific management or monitoring and are not considered further within this HMMP. Habitats of low distinctiveness that do not require targeted enhancement to meet BNG objectives; however, their retention is necessary to maintain compliance with the approved BNG assessment. These habitats will therefore be subject to periodic monitoring over the 30-year management period. Created habitats of medium distinctiveness or above constitute significant on-site enhancements as well as low distinctiveness habitats which require management to reach target condition or make up a significant area in relation to the size of the development will be subject to specific management and monitoring to ensure they achieve their target condition within the 30-year term.

Considering the above, the following management and monitoring is required for post-development habitats:

- Management and Monitoring

  Newly created individual trees, modified grassland and rain gardens to ensure successful habitat creation and target condition.

3.0 HMMP

3.1 Site Monitoring

Site monitoring detail is provided in **Table 2** below.

Table 2. *Site monitoring*

<table>
<tr><th>Mitigation</th><th>Specification</th></tr>
<tr><td>Persons Responsible and Lines of Communication</td><td>The details of the responsible persons and organisation(s) for delivering this management plan are outlined below.

Table 2.1. Organisation responsible for providing HMMP
<table>
<tr><th colspan="5">Project Ecologist or Other Professional Responsible for HMMP</th></tr>
<tr><td colspan="2">Name or Initials</td><td colspan="3">Leo Plevin BSc (Hons), MSc, MCIEEM – Technical Manager (Ecology)</td></tr>
<tr><td colspan="2">Organisation</td><td colspan="3">Arbtech Consulting Ltd</td></tr>
<tr><td>Responsibility</td><td>Start Date:</td><td>Commencement of works</td><td>End Date:</td><td>30 years following completion of the last establishment works</td></tr>
<tr><td colspan="5">Arbtech Consulting Ltd is responsible for producing this HMMP and providing ecological advice for the creation, management, and monitoring of the habitats on site, as well as other constraints to achieving the site's aims, e.g., any protected species presence. Any other competent persons required are to be appointed by the landowner. This will ensure that the HMMP is implemented in full and that all created habitats are in a fit state to meet objectives.</td></tr>
<tr><th colspan="5">Statement of Competency</th></tr>
<tr><td colspan="5">Arbtech Consulting has provided ecological consultancy services since 2006 and has expertise with Biodiversity Net Gain, including the statutory metric, BNG plans and management plans. The author of the HMMP is an ecologist of 9 years’ experience and is a full member of CIEEM.</td></tr>
</table>
Table 2.2. Organisation Responsible for Implementing the HMMP
<table>
<tr><th>Organisation Responsible for Implementing the HMMP</th></tr>
</table></td></tr>
</table>

Name or Initials		N/A		
Organisation		Caddick Construction Ltd		
Responsibility	**Start Date:**	Commencement of works	**End Date:**	30 years following completion of the last establishment works
Caddick Construction Ltd has been selected as the Development Biodiversity Champion for the habitat creation phase of the development. Caddick Construction Ltd will be responsible for ensuring all actions outlined in this document are implemented. Any queries with regards to the mitigation and enhancement prescriptions will be addressed to the project ecologist, and communication will be retained between the Caddick Construction Ltd and the project ecologist throughout the project. Caddick Construction Ltd will be responsible for understanding when an Ecological Clerk of Works is required on site to supervise works, requirements of which are detailed within each mitigation section where necessary. Once the development is complete, Caddick Construction Ltd will act as the Post-Development Biodiversity Champion and will be responsible for implementing the proposed long-term management. Caddick Construction Ltd will be responsible for ensuring all recommended management is undertaken and any associated remedial measures are completed where necessary.				

Table 2.3. *Organisation responsible for reviewing HMMP*

LPA or Responsible body Reviewing HMMP				
Name or Initials		N/A		
Organisation		Manchester City Council		
Responsibility	**Start Date:**	Commencement of works	**End Date:**	30 years following completion of the last establishment works
To ensure that the HMMP and legal agreement are followed, the objectives of the HMMP are delivered, and to take enforcement action should a breach occur.				

Creation Period	Habitat creation works will be scheduled to take place following the completion of major development works to ensure newly created habitats are not damaged during construction activities. On-site biodiversity gain works will be implemented within 6 months of the completion of construction, and the 30-year management period will commence from the date of completion of all biodiversity enhancement works. The proposed timeline is as follows: 1. Pre-Development (Prior to Construction) • Identify and protect any existing ecological features that must be retained • Implement measures and avoid to areas designated for habitat creation to prevent soil compaction or contamination. 2. Post-Development (After Major Construction Works) • **Soil Preparation** Remove any construction debris and de-compact soil as necessary. Introduce appropriate soil treatments to optimise conditions for target grassland species. Undertake any excavation or reprofiling works for pond enhancement, including removal of nutrient-rich sediments where necessary. • **Initial Establishment and Maintenance (First 1–2 Years)** Implement a sensitive cutting regime as to not destroy the habitats. Control competitive species such as dominant grasses to encourage plant diversity. Avoid the use of herbicides and artificial fertilisers to maintain habitat integrity. • **Long-Term Management** Continue appropriate management strategies outlined in Table 3. Adjust management practices if required, having discussed this with the SQE. This phased approach ensures that the habitat establishment aligns with best practices and maximises biodiversity benefits while avoiding damage from construction activities.
Post-Development Monitoring	Post-development site visits will be undertaken by a Suitably Qualified Ecologist (SQE) over the 30-year management period to confirm the successful installation, establishment and ongoing management of habitats and species-specific enhancements. Monitoring visits will be completed in years 1, 2, 5, 10, 15, 20, 25 and 30 following occupation of the development. The success of habitat creation and enhancement will be assessed with reference to the target habitat condition criteria defined within the Statutory Biodiversity Metric. Monitoring will focus on habitat structure, species composition and evidence of appropriate management, rather than absolute species richness targets, and will be informed by professional judgement of the SQE. Success indicators may include, but are not limited to: • Establishment of characteristic species appropriate to the target habitat type;

	• Habitat structure consistent with the intended condition category (e.g. sward height variability, age and structural diversity of trees and shrubs); • Absence, or effective control, of invasive non-native species or dominant undesirable species; and • Evidence that management prescriptions are being implemented at the required frequency and intensity. A monitoring report will be produced following each SQE visit, detailing findings, photographic evidence and any required remedial actions. Remedial management may be triggered where monitoring identifies a failure to meet interim or target habitat condition criteria, where habitat establishment has been compromised by unforeseen factors (such as drought, flooding, soil compaction, vandalism or disease), or where management prescriptions have not been implemented as specified. Where remedial action is required, the SQE will recommend proportionate corrective measures, which may include adjustments to management regimes, re-seeding or re-planting, soil remediation, or enhanced control of undesirable species. The scale of evidence required to confirm implementation of remedial actions will be defined by the SQE and may include additional site visits or photographic evidence provided by the Post-Development Biodiversity Champion.
Adaptive Management	Adaptive management is a structured and systematic approach to natural resource management that involves the ongoing monitoring and evaluation of management actions, followed by informed adjustments to improve outcomes over time. It is an iterative process whereby management actions are implemented, monitored against defined objectives, and reviewed to inform subsequent management decisions. Monitoring results will be used to inform any necessary changes to management practices in order to support the achievement of Biodiversity Net Gain (BNG) targets set out in the statutory biodiversity metric and this Habitat Management and Monitoring Plan (HMMP). Monitoring also enables the early identification of unforeseen external influences that may affect the delivery of objectives, such as the emergence of plant disease, the spread of invasive species influenced by climate change, or changes to site accessibility resulting from flooding. In addition to formal monitoring, observations and records arising from routine site management are a critical component of effective adaptive management. Appropriate mechanisms should be established to ensure that such information is captured, reviewed, and incorporated into revisions of management prescriptions, and subsequently reflected in monitoring reports. Regular, robust monitoring and reporting to the responsible authority will enable potential issues to be identified at an early stage, allowing timely and proportionate management responses to be implemented. Where external factors significantly affect the achievement of BNG objectives, any proposed amendments to management prescriptions or targets should be agreed with the responsible authority. Following such reviews, all changes will be clearly documented within this management plan and the associated management and monitoring schedule.

Legal Responsibility	It is expected that compliance with this HMMP will be legally enforced through a planning condition or Section (s) 106 agreement. As part of this legal agreement, habitat creation and management detailed within this HMMP will need to be retained and appropriately managed for the entire 30-year term to meet legislative objectives outlined in the Environment Act (2021). Should any future development at the site be proposed that will impact habitats that deliver the required gain as part of the planning conditions/s106 agreement, this will need to be considered and suitably compensated for in accordance with any future plans.

3.2 Habitat Creation and Management

Best practice habitat creation and management over a 30-year term to ensure a BNG consistent with that reported within the BNG Assessment is provided in **Table 3** below.

Table 3. *Habitat Creation and Management Prescriptions*

Ecological receptor	Specification
Habitats with N/A or poor target conditions	It is noted that developed land; sealed surface, vegetated garden, introduced shrubs, and other green roof do not require any specific management to achieve their BNG objective. This is because developed land; sealed surface is of negligible biodiversity value. Vegetated garden, introduced shrub and other green roof habitats are predetermined as condition N/A within the Statutory Biodiversity Metric. As such, management prescriptions for these habitat types are not included in this HMMP.
Individual trees	*Overview:* It is proposed to create 0.175ha of individual trees of moderate condition, as well as 0.045ha of individual trees in poor condition. *Objectives:* • To plant individual trees in moderate condition by passing condition criteria A, B, C, and F (as a minimum) in accordance with the Individual Trees Habitat Type Condition Sheet and BNG Assessment. • To plant trees that will provide pollinating, foraging, and refuge opportunities for protected and/ or notable species groups, including invertebrates, bats, and birds. *Tree planting Creation Method:*

	• **Ground preparation and planting** The locations for tree planting will be cleared and reduced to compacted permeable bare ground in preparation for planting. Planting substrate must comprise site-won material with any deficiencies made up of imported topsoil compliant with BS 3883:2015. Each tree will be pit planted upright within the centre in accordance with BS 4428:1989, within a hole at least 500mm greater than the root system when fully spread and at a depth 250mm greater than the root system. Root balls will be soaked thoroughly in water and loosened to expose restricted roots before planting. The planted trees will then be backfilled, ensuring there are no air pockets around roots or any roots protruding out of the ground. • **Timing** The land will be prepared during the summer, ready for planting between November and March. Planting trees before the new year helps ensure better rooting and subsequent establishment, including faster growth during the first growing season. • **Species** All tree species will be native and sourced from a nearby supplier to ensure local provenance. Suitable species include, but are not limited to, Alder *Alnus glutinosa*, Silver birch *Betula pendula*, Wild cherry *Prunus avium*, Crab apple *Malus sylvestris*, Elder *Sambucus nigra*, Hazel *Corylus avellana*, Rowan *Sorbus aucuparia*, Goat willow *Salix caprea* and English Oak *Quercus robur*. *Risks:* • Tree failure and/or poor establishment - poor stock quality, drought stress, or unsuitable soil conditions may lead to mortality • Damage from pests, diseases, or vandalism - disease and vandalism can reduce survival rates • Inappropriate species selection - trees not suited to local soil, hydrology, climate, or landscape context may fail or cause long-term management issues. • Extreme weather - drought, flooding, high winds, or frost can negatively affect the establishment of young trees • Damage during maintenance – mowing and strimming may damage stems or roots • Inadequate aftercare and monitoring - lack of watering, inspections, or replacement planting may compromise the long-term success of trees. *Management prescriptions covering a 30-year term:* **Table 3.1:** New tree planting management prescriptions.

Management	When	Rationale	BNG condition criteria compliance
Prepare planting area in summer, in preparation for autumn/ winter planting.	Year 1 – June/ July/ August	To ensure the ground is dry and workable.	n/a
Plant native trees only within prepped areas in Autumn, whereby the canopy oversails the vegetation	Year 1 – September/ October/ November	To ensure trees take root and establish prior to the first growing phase, the following spring.	A & F
Standard trees will be staked and tied using a 75mm diameter stake with the bark removed. The stakes will be long enough to allow for 600mm of the stake to be driven into each pit. Stakes will be fitted prior to tree planting to prevent root damage.	Year 1 – Immediately prior to planting.	Protect roots from damage.	B & D
Ensure the stakes and ties are not restricting growth and are not damaged. Replace where necessary.	Year 2 onwards – Checked annually for the first 5 years.	Ensure growth isn't stunted.	B & D
Remove stakes and ties.	Year 5 in Spring – April/ May	Allow trees to grow unperturbed once established.	B & D
Removal of spent flowers is to be done through 'deadheading'	Years 1 – 5 - Twice annually, late spring and in the Autumn.	Allows trees to place more energy into re-growth.	B & D
At the end of each growing season, all plant failures are to be 100% replaced	Year 2 onwards - Checked annually for the 30-year term after each growing season in Autumn.	To ensure the success of planted trees.	B & D

	Remove weeds	Year 2 onwards - Checked annually for the 30-year term after each growing season in Autumn.	Reduce competition for resources.	B & D
	Application of bark mulch at a depth of 50 mm	Year 2 onwards - Checked annually for the 30-year term after each growing season in Autumn.	Reduce competition for resources.	B & D
	Do not apply chemical fertilisers	At all times.	The use of chemical fertilisers will encourage vigorous grasses and weeds to grow	D
	Watering should be undertaken before and after planting out, and as necessary for the continued thriving of all planting.	Annually - for the 30-year term, when required following prolonged periods of drought.	Ensures plants do not dry out and subsequently fail.	B
	Undertake any pruning requirements outside of the nesting bird season, which is between March and September inclusive.	At all times.	Ensure no active bird nests are impacted by maintenance works.	E

Modified grassland

Overview:

It is proposed to create 0.012ha of modified grassland in poor condition.

Objectives:

- To create grassland that will be suitable for amenity purposes whilst also providing pollination, foraging, and commuting opportunities for protected and/ or notable species groups, including badgers, herptiles, hedgehogs, invertebrates, bats, and birds.
- To undertake landscaping works in compliance with BS 4428:1989 – The Code of Practice for General Landscape Operation.

Creation Method:

- **Ground preparation**
  - A soft strip of the current base substrate must be undertaken in the first instance and removed from the area to provide bare soil

	suitable for laying turf. The bare soil will be subject to light rolling or trampling to provide a firm base prior to laying turf. • **Proposed seed mix:** – It is proposed to turf the grassland areas with Wildflower Turf Shade Tolerant (WFT–Shade-41) by Wildflower Co https://wildflowerexperts.com/products/turf-shade-tolerant/ within wildlife areas and Species Rich Lawn Turf (WFT-Species-Rich-26) https://wildflowerexperts.com/products/turf-species-rich-lawn/ within amenity areas. – **Laying Turf** o Turf will be rolled out over prepared areas, pressing it down to ensure good root to soil contact. o Each turf must butt up to the next without overlapping or leaving gaps. This helps prevent weeds growing up from beneath the turf. o Turf will be cut to ensure successful installation around tree planting adhering to creation methods outlined for proposed trees. o Immediately after laying, water thoroughly. Make sure the soil underneath the turf is damp to be sure it has adequate water. o Within a few days, roots under the turf should start to establish and knit into the soil. Detailed specifications including any ground fertility requirements, ground preparation, installation and maintenance of wildflower turf from the supplier should also be adhered to. ***Risks:*** • Poor establishment – unsuitable soil conditions, drought, waterlogging, or inappropriate seed mix may result in poor germination and establishment • Dominance of undesirable or competitive species – aggressive grasses or ruderal species may outcompete target species, reducing botanical diversity • Colonisation by invasive or problem species – invasive non-native or undesirable species may establish following soil disturbance, reducing habitat condition by failing criterion G • Extreme weather – prolonged drought, heavy rainfall, flooding, or unseasonal weather may negatively affect the establishment and ongoing condition of the grassland • Damage from public access or site operations – trampling, vehicle movements, or machinery may cause soil compaction or localised damage to the sward

- Inadequate aftercare and monitoring – lack of appropriate management, monitoring, or remedial action may compromise the long-term success of the grassland.

Management prescriptions covering a 30-year term:

Table 3`.2: *Modified Grassland management prescriptions.*

Management	When	Rationale	BNG condition criteria compliance
Cut monthly during the growing season	Between April and October. Cutting frequency may be adjusted following monitoring, where required to achieve the target condition.	Cutting monthly will allow a neat and tidy appearance whilst allowing more species to effectively colonise.	A, C, F, & G.
Turn and dry the cut grass over 3-5 days before removing arisings off-site	Following cuts in May and September.	This allows any seeds present to drop, encouraging species diversity and invertebrates to relocate unharmed.	A.
Do not apply chemical fertilisers	At all times.	The use of chemical fertilisers will encourage vigorous grasses and weeds to grow or cause large areas of bare ground due to inhospitable growing conditions.	D & E.

Rain garden

Overview:
It is proposed to create 0.002ha of rain gardens in moderate condition.

	Objectives: • To enhance biodiversity and provide habitat for invertebrates, amphibians, and birds through planting of native, moisture-tolerant species. • To contribute to on-site Sustainable Drainage Systems (SuDS) through interception, attenuation and infiltration of surface water runoff. *Enhancement Method:* • **Ground preparation and soil construction** Excavated areas will be formed to specified depths and gradients, typically with gently sloping sides and a flat base. Soil profiles will include sandy-loam soil to BS3882. • **Planting** The rain-garden beds will be planted with a mix of moisture-tolerant native and ornamental species suited to free-draining yet periodically damp conditions. Planting will include a combination of grasses, sedges, ferns, and flowering perennials chosen to provide seasonal interest, structure, and biodiversity. *Risks:* • Inadequate drainage or infiltration − unsuitable soils, compaction, or incorrect substrate may result in prolonged waterlogging or failure to attenuate runoff • Poor establishment and/or plant failure − inappropriate species selection, poor-quality planting stock, drought stress, or prolonged inundation may lead to plant mortality • Inappropriate species selection − species not tolerant of fluctuating water levels or local climate conditions may fail to establish or require excessive maintenance • Sediment accumulation and blockage − sediment, litter, or debris may block inlets, outlets, or overflow structures, reducing performance • Poor water quality − polluted runoff, hydrocarbons, or nutrient enrichment may negatively affect vegetation and soil function • Extreme weather events − intense rainfall, drought, or unseasonal weather may exceed design capacity or stress vegetation • Damage from site operations or public use − trampling, vehicle movements, or maintenance activities may compact soils or damage planting • Inadequate aftercare and monitoring − lack of inspections, sediment removal, plant replacement, or adaptive management may compromise long-term function and biodiversity value. **Table 3.3**. Rain garden management prescriptions over a minimum 30-year term.

Management	When	Rationale	BNG condition criteria compliance
Remove weeds manually	Checked twice annually in early spring and in autumn	Reduce competition for resources such as nutrients, water, and light	A, B, C
Application of bark mulch at a depth of 50 mm	Immediately after planting, then topped up annually in autumn or as required	Suppresses weed growth, retains moisture, and regulates soil temperature	A
Watering will be undertaken before and after planting and during dry spells	When required, more frequent watering during drought periods	Ensures plants establish successfully and do not fail due to water stress	A, C
Removal of sediment/debris build-up in rain garden basins	Checked annually; cleared as necessary	Ensures functionality of the rain garden as a SuDS feature and prevents clogging of the soil profile	A, B, C

4.0 Bibliography

- CIEEM. (2017, updated 2023). Guidelines for Preliminary Ecological Appraisal Institute of Ecology and Environmental Management http://www.cieem.net/data/files/Resource_Library/Technical_Guidance_Series/GPEA/GPEA_April_2013.pdf
- CIRIA. (2025). The SuDS Manual (C753) https://www.ciria.org/CIRIA/CIRIA/Item_Detail.aspx?iProductCode=C753
- HMSO: Wildlife and Countryside Act 1981 (as amended) http://jncc.defra.gov.uk/page-1377
- HMSO: Countryside & Rights of Way Act (2000) http://jncc.defra.gov.uk/page-1378
- HMSO: Natural Environmental and Rural Communities Act (2006) http://www.legislation.gov.uk/ukpga/2006/16/contents
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Appendix 1: Post Development Landscape Masterplan and Planting Plan




SOFT LANDSCAPE
dep
DEP LANDSCAPE ARCHITECTURE LTD
1 COMMERCIAL STREET
MANCHESTER, M15 4AQ
MSV
Moss Side, Manchester
Planting Plan - Ground Floor
Stage 4
1:200@A1
MN/EP
5242
07
June 26
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