

Habitat Management and Monitoring Plan

Version 1
10.01.2024

Prepared for: City Works

Site:
Land at Welcomb Street, Manchester 139997/FO/2024

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1. Introduction

1.1 Background to the project

Amenity Tree was commissioned by City Works to undertake a Habitat Monitoring and Management Plan for the Welcomb Street, Openshaw, Manchester site to discharge planning condition 29 requiring the submission of a Habitat Management and Monitoring Plan (HMMP) as detailed in the decision notice below.

“29) Prior to any works on the proposed development commencing (excluding demolition), a written 30-year Habitat Management and Maintenance Plan (HMMP) for the site shall be submitted to and approved in writing by the City Council as local planning authority. The approved HMMP shall relate to all 'significant' biodiversity gains on site and shall be strictly adhered to and implemented in full for its duration and shall contain:

- A) Aims, objectives and targets for management, including habitat target conditions matching the associated Biodiversity Metric submitted with the application.*
- B) Descriptions of the management operations necessary to achieving aims and objectives.*
- C) Preparation of a works schedule, including timescales for habitat clearance and habitat creation and/or enhancement*
- D) Details of monitoring needed to measure the effectiveness of management.*
- E) Details of the persons responsible for the implementation and monitoring.*
- F) Mechanisms of adaptive management and remedial measures to account for changes in the work schedule to achieve required targets.*
- G) Reporting on years 1, 2, 5, 10, 20 and 30'.*

The initial Biodiversity Net Gain assessment (BNG) was carried out by Amenity Tree which detailed the site has a unit baseline score of 0.97 and an onsite post intervention unit score of 1.12 meaning a 0.15 unit increase or a 15.31% increase in biodiversity as demonstrated by the metric and therefore no off-site mitigation is needed.

1.2 Report purpose

The purpose of the report is to outline the methods and means by which the proposed landscape shall be implemented and achieved on the site and to set out the overall management objectives for the site, and to describe the long-term maintenance required to allow the planting to flourish and reach its design potential.

1.3 Management objectives

- The site shall be managed as a high-quality care area maintaining an attractive, tidy and safe finish to all landscape elements.
- The proposed planting shall enhance the biodiversity and nature conservation interest.
- The Management Company shall ensure establishment and the long-term health of all landscape elements to the benefit of residents and staff as well as the visual amenity of the area.
- Best Health & Safety practices shall be always used.
- To maintain standards and make amendments where required, it is expected that the Management Company will review the management work (with reference to this document) at least quarterly with the maintenance team for the first year and annually thereafter.

2.0 Protection of existing landscape

2.1 Retention and protection of existing trees

The implementation of retained tree protection measures shall mean the retention of the arboriculture assets covering located on the site as shown on the Tree Protection Plan in Appendix 1 (Middlemarch AIA October 2022). The retention of these trees shall be managed by the following means:

- A site visit shall be carried out by the arboricultural clerk of works to delineate the actual RPA in accordance with BS5837:2012.
- The position of the RPA shall become the Construction Exclusion Zone and be fenced off with hears fencing securely staked to the ground.
- The clerk shall receive digital images to demonstrate the CEZ is fit for purpose prior to any other work commencing on site.
- All works shall conform to the approved Arboricultural Impact Assessment and Method Statement

3.0 Proposed habitat creation methods

3.1 Native hedge planting

A native hedge mix is to be planted as below, a total of 55m.

Objectives:

- To ensure early establishment and healthy development.
- To create well established hedgerows with connectivity to other important bio diversity elements.
- To enhance biodiversity.
- To enhance appearance and visual interest.

Maintenance Operations:

- In the first two years of planting, new hedgerow plants are to be monitored at each maintenance visit to ensure they are upright, firm, and stable and good health.
- Checks shall be made to ensure all stakes / grow tubes of hedgerow plants are properly adjusted. Removal of grow tubes is dependent on plant development but generally, occurs years 3-5.
- Hedgerows should be maintained and watered to field capacity throughout the first and second years of planting. They should be watered by hose or irrigation drip lines.
- Careful monitoring during watering shall be necessary to minimise risk of failures, leaks or damage to property.
- Any damaged or dying plants are to be replaced in the following dormant season.
- Hedgerows should be maintained in a grass free strip 75cm wide for the first 3 year or until established.
- Hedgerows should be pruned to a height of 1250mm high by 750mm wide, pruning to take place Autumn and Spring, outside of the nesting season.

3.2 Introduced shrub

An area of 0.07Ha shall be created.

Objectives:

- To ensure early establishment and healthy growth.
- To maintain a dense canopy cover.
- To maintain year round appearance and visual interest.

Maintenance operations:

- All shrub beds shall be maintained substantially free of weeds. Work shall be done either manually or with appropriate selective weed killer in accordance with the manufacturer's recommendations. If weed killer is used the dead weeds shall be removed at the next maintenance visit. Care must be taken to avoid damage to adjacent planting and grass and replaced immediately if affected by weed killer.
- Once established shrubs shall be selectively thinned or reduced in height as appropriate by removal or pruning to allow room for growth and avoid overcrowding / overshading and create a natural form rather than a cube or cloud shape. Care shall be taken to avoid over pruning and so creating obvious gaps in the shrub beds.
- Ground cover plants shall be clipped or pruned if necessary to give a neat and tidy finish and contained within the shrub bed. Work to remove dead vegetation shall be carried out during the winter months.
- For most herbaceous species a single cut can be carried out in early spring after the risk of frost has passed (generally March onwards). Leaving dried flowers over winter periods visual interest and provides a food source for seed eating birds and insects. Shelter is also found for wildlife in dead foliage over winter.

Pruning of herbaceous planting:

- In spring cut stems close to the crown or dormant top of the plant, avoiding the removal of new shoots.
- Tidy up the base of the plant, removing dead foliage and debris.
- Remove all material from site.
- Apply a 50mm layer of fine horticultural mulch. This will help moisture retention in the soil and contribute to weed suppression and allow delicate stems to grow.
- Leave dried flower heads over winter for relevant species ie Ornamental grasses.

Fertilising:

- One application, just before or at the time of spring growth.
- A balanced fertiliser is required, one high in Phosphorous. Fertilisers high in nitrogen should not be used. NPK 10-20-10 balance would be suitable.

Litter Collection:

- Collect litter and dispose off site on each visit.

3.3 Urban tree plating

Twenty five individual trees are to be planted covering 0.1018Ha to a poor condition.

Objectives:

- To ensure early establishment and healthy growth.
- To create a well shaped framework for future balanced growth.
- To enhance appearance and visual interest.

Maintenance Operations:

- In the first two years following planting, new trees are to be closely monitored at each maintenance visit to ensure that they are upright, firm stable and in good health.
- Checks shall be made to ensure all stakes and ties of planted trees are properly adjusted at each maintenance visit. Between 5-7 years tree stakes shall be removed once the trees are established and root firm.
- Trees shall be maintained and watered to field capacity throughout the first and second years of planting, taking into account prevailing weather conditions and hot dry periods. They should be watered with the use of a hose being left to run slowly down the irrigation tube until the pit reaches full capacity.
- Any damaged or dying branches shall be removed using the standard methods appropriate for the work. Any dead, dying or defective trees shall be replaced in the following dormant planting season, refer to Section 10 Plant Replacement.
- Trees planted in grass areas shall have a 100cm diameter circle around the trunk which should be maintained free of weeds and be mulched until the tree is no longer vulnerable to damage from mowing equipment.
- All trees on site, in publicly accessible areas should be inspected by an Arboricultural Consultant every 2 years and any risks addressed immediately.

3.4 Habitat creation methods – Neutral grassland

Other neutral grassland contains Biodiverse lawn EL1 (unmown and mown) and flowering meadow EM4 over 0.1Ha..

Recommended Seed Mixes:

- Emorsgate Seeds EM4
- Emorsgate Seeds EL1

Considerations:

- If soil is being imported into the site, then nutrient poor soil should be used to create wildflower areas in order to support the establishment of the meadow.
- Don't add fertiliser as this will increase fertility of the soil and negatively impact the wildflower meadow.
- Reducing soil fertility: Due to the baseline conditions of the site intensive nutrient stripping techniques are not considered necessary and therefore nutrients should be removed from the grassland through silage cuts

Creation Methodology:

- Create a fine tilth for a seedbed by digging or rotovating the soil then firming and raking.
- Sow seed mixture evenly by hand at 5g per square meter during, late summer/early autumn.

Additional Methodology:

- Designate some areas of grassland for creation of a calcareous species sward with thin poor soils and good drainage. These areas should be managed in line with 'other neutral grassland' once established.
- Remove topsoil and spread limestone chippings.

- Translocation of soils from habitats within the site to be removed by development should be carried out by an experienced contractor alongside Suitably Qualified Ecologist (SQE) who can identify appropriate soils.

4.0 GENERAL

- All materials and workmanship are to be the highest possible standards and shall be in accordance with relevant British Standards, good horticultural practices and Landscape specifications.
- The Management Company shall employ suitably qualified staff for all work and when using sprays and mechanical equipment. All equipment shall be kept in a sound condition, fit for use and purpose.
- Appointed contractors shall comply with all relevant Health & Safety regulations and good working practices.
- The Management Company shall take care when working beside any structure or paved area and will, at their own cost be responsible for making good any damaged caused.
- All work shall be carried out whilst soil and weather conditions are suitable for the proposed operations.
- Weeds, pruning's, leaves, rubbish and other arisings shall be removed from the site composting where possible at the end of each visit. No materials shall be left on site and the area shall be let in a neat and tidy condition after each visit.
- Under no circumstances shall arisings, wood, rubbish etc be burnt on site or disposed of through refuse bins provided for occupants.
- Entomological or disease infestation shall be dealt with as required and shall be checked at each visit. Control shall either be by spraying with approved chemicals, pruning all dead wood by cutting back to an outward pointing bud or by the removal of defective plants.
- Watering during the first two years after planting maybe necessary during times of drought in summer months and, when watering is required, it shall be

carried out on a regular basis to suit climatic conditions. If conditions are severe or soils are particularly free draining, careful monitoring and more frequent watering maybe necessary to maintain good plant health and avoid plant failure.

- All shrubs / hedges shall be pruned to remove deadwood, overhanging / tangles and damaged branches.
- Winter flowering shrubs shall be pruned in the spring. Shrubs flowering in March to July shall be pruned immediately after flowering and shrubs flowering in July to October shall be cut back to old wood in the winter. Shrubs that require spring pruning to provide seasonal colour shall be pruned in March and shrubs require seasonal pruning to promote continual flowering shall be pruned appropriately. Plants shall be refirmed when necessary to ensure the plants are securely planted
- Bark mulch levels shall be maintained, being topped up when necessary to a minimum depth of 50mm. Any spillages shall be swept back onto the bed from surrounding areas, ensuring no plants are smothered.
- Edge valleys in beds shall be maintained to reduce spillage and grass edges shall be cut at each maintenance visit.

4.1 Maintenance visits

- 4.1 There shall be a minimum of 20 maintenance visits per year. Visits shall be weekly March to October and twice monthly November to February. Additional visits maybe needed to manage with extreme weather conditions or specific horticultural requirements.

5. Monitoring details

5.1. Monitoring/review regime over the 30 year period

Monitoring reports to be submitted to the LPA in years 1, 2, 5, 10, 15, 20, 25 and 30 alongside results of monitoring utilising habitat condition criteria outlined below.

The new tree planting shall be monitored to a poor condition by use of the criteria below

Condition Assessment Criteria		Condition Achieved (Y/N)
1	The tree is a native species (or more than 70% within the block are native species).	
2	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	
3	The tree is mature ² or veteran ³ (or more than 50% within the block are mature ² or veteran ³).	
4	There is little or no evidence of an adverse impact on tree health by anthropogenic activities such as vandalism or herbicide use. There is no current regular pruning regime so the trees retain >75% of expected canopy for their age range and height.	
5	Micro-habitats for birds, mammals and insects are present e.g. presence of deadwood, cavities, ivy or loose bark	
6	More than 20% of the tree canopy area is oversailing vegetation beneath.	
Number of criteria passed		
Condition Assessment Result	Condition Assessment Score	Score Achieved ✕/□
Passes 5 or 6 of 6 criteria	Good (3)	
Passes 3 or 4 of 6 criteria	Moderate (2)	
Passes 0, 1 or 2 of 6 criteria	Poor (1)	

The new native hedgerow shall reach a moderate condition by use of the criteria below.

Condition Assessment Criteria				
A series of ten attributes, representing key physical characteristics, are used for this assessment. The attributes, and the minimum criteria for achieving a favourable condition in each, are defined. The attributes use similar favourable condition criteria to the Hedgerow Survey Handbook and the handbook is the recommended source of reference for assessing individual hedgerow attributes.				
Hedgerow favourable condition attributes				
Attributes and functional groupings (A, B, C, D & E)	Criteria (the minimum requirements for 'favourable condition')	Description	Condition Achieved (Y/N)	Notes/Justification
Core groups - applicable to all hedgerow types				
A1. Height	>1.5 m average along length	The average height of woody growth estimated from base of stem to the top of shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees. Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). A newly planted hedgerow does not pass this criterion (unless it is > 1.5 m height).		
A2. Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (e.g. blackthorn suckers) are only included in the width estimate when they >0.5 m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice*).		
B1. Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')	This is the vertical gappiness of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).		
B2. Gap - hedge canopy continuity	Gaps make up <10% of total length and No canopy gaps >5 m	This is the horizontal gappiness of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small). Access points and gates contribute to the overall gappiness, but are not subject to the >5 m criterion (as this is the typical size of a gate).		
C1. Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: - measured from outer edge of hedgerow, and - is present on one side of the hedge (at least)	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedge. Undisturbed ground should be present for at least 90% of the hedgerow length, greater than 1m in width and must be present along at least one side of the hedge. This criterion recognises the value of the hedge base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches.		
C2. Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	The indicator species used are nettles (<i>Urtica</i> spp.), cleavers (<i>Galium aparine</i>) and docks (<i>Rumex</i> spp.). Their presence, either singly or together, should not exceed the 20% cover threshold.		
D1. Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	Neophytes are plants that have naturalised in the UK since AD 1500. For information on neophytes see the JNCC website and for information on invasive non-native species see the GB Non-Native Secretariat website.		
D2. Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (e.g. excessive hedge cutting).		
Additional group - applicable to hedgerows with trees only				
E1. Tree age	At least one mature tree per 30m stretch of hedgerow. A mature tree is one that is at least 2/3 expected fully mature height for the species.	This criterion addresses if there are sufficient mature trees (within the scope of planning timescales) which are of higher value to biodiversity.		
E2. Tree health	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). 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.	This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens.		
Each attribute is assigned to one of five functional groups (A – E), as indicated in Table TS1-2 and the condition of a hedgerow is assessed according to the number of attributes from these functional groups which pass or fail the 'favourable condition' criteria according to the approach set out in Table TS1-3.				
The hedgerow condition assessment generates a weighting (score) ranging from 1-3, which is used within the biodiversity metric 3.1. The scores for each are set out in tables TS1-3 and TS1-4 below.				
TABLE TS1-3: Hedgerow condition assessment and weighting				
Condition categories for hedgerows without trees				
Category	Maximum number of attributes that can fail to meet 'favourable condition' criteria in Table TS1-2	Weighting (score)		
Good	No more than 2 failures in total; AND No more than 1 in any functional group.	3		
Moderate	No more than 4 failures in total; AND Does not fail both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & C2 = Moderate condition).	2		
Poor	Fails a total of more than 4 attributes; OR Fails both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & B2 = Poor condition).	1		
Score achieved:				

The neutral grassland shall reach a fairly poor condition by use of the criteria below.

The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type (and relative to Footnote 3 suboptimal species which may be listed in the UKHab description).¹

Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.

Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.

Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens².

Cover of bracken *Pteridium aquilinum* is less than 20% and cover of scrub (including bramble *Rubus fruticosus* agg.) is less than 5%.

Combined cover of species indicative of suboptimal condition³ and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area.

If any invasive non-native plant species⁴ (as listed on Schedule 9 of WCA⁵) are present, this criterion is automatically failed.

5.2. Potential contingencies

Should a proposed habitat and/or target condition be concluded to be unachievable during the monitoring period the following shall occur.

- A detailed report shall be compiled to determine the reasons for the lack of achievability by the ecologist. It shall address the root causes of the issue and provide recommendations as to how the root causes could be altered.
- The root causes shall be addressed by all parties and a further attempt shall be made to achieve condition within the term period of 30 years.
- This activity shall be fully reported upon by the appointed ecologist annually until target condition can be reversed.
- Alternative areas for habitat creation will be examined and considered for feasibility.
- If after these factors have been exhausted the LPA will be informed and if considered necessary by all parties off site mitigation will be required to the satisfaction of the LPA.

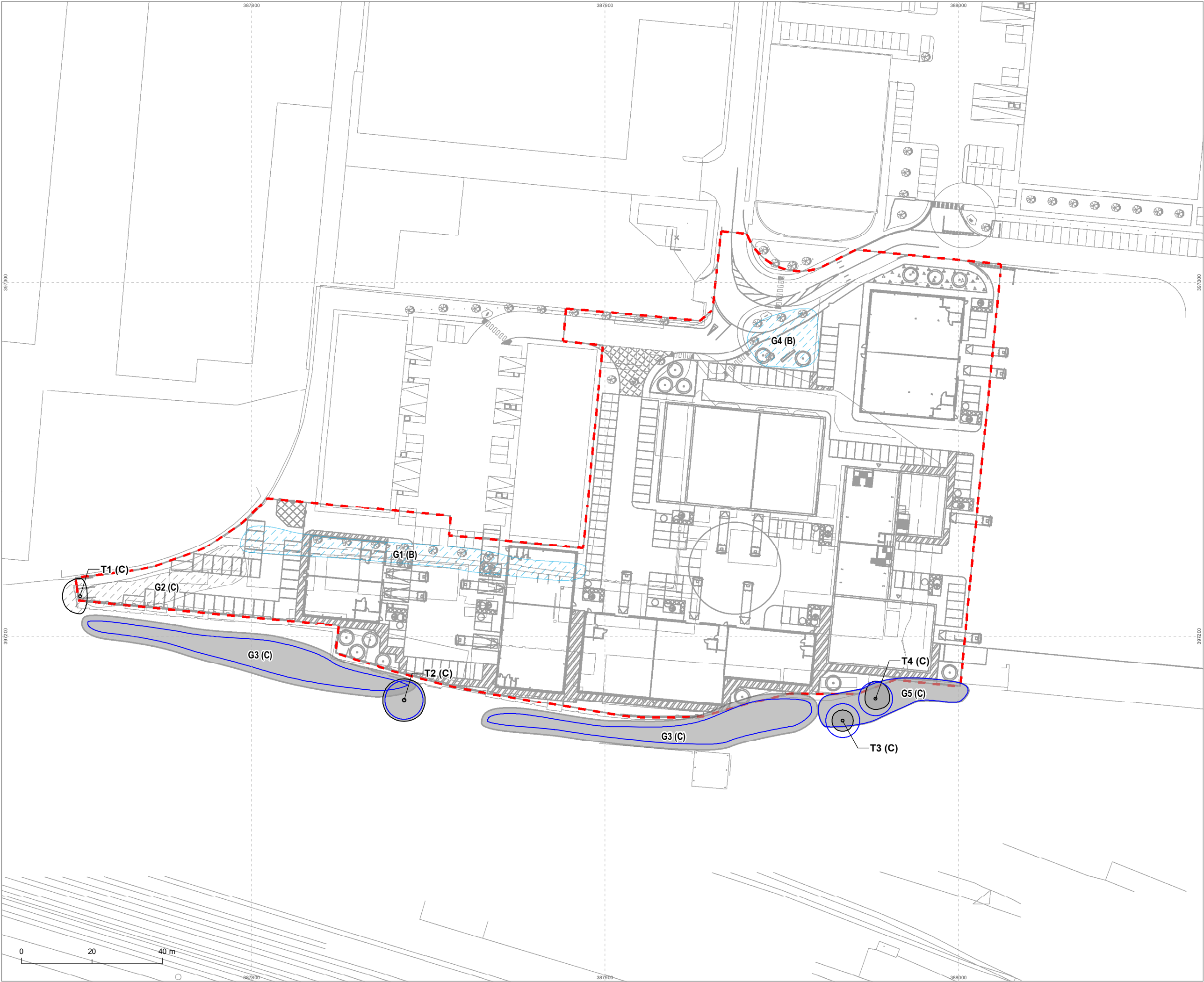
5.3 Organisations responsible for implementing, managing and monitoring

During the initial build period it will be the responsibility of the main contractor to appoint an Ecological Clerk of Works to oversee the habitat enhancements and creations during the build period.

The main contractor shall implement and appoint approved landscape contractors for the works implementations who shall be overseen by the appointed EcOW/landscape architect.

Management of the landscape after the build shall be by separate management committee.

Appendix 1 – AMS/Tree Protection plan



C157730-02-01

Legend

Tree location and stem diameter

Category B tree

Category B tree to be removed

Category C

Category C tree to be removed

Root Protection Area

Current canopy - tree to be retained

Proposed site plan

Planning boundary

NOTES

All dimensions to be verified on site. Do not scale this drawing, use figured dimensions only. All discrepancies to be clarified with Project Arboriculturalist. Drawing to be read in conjunction with Preliminary Arboricultural Assessment and Tree Schedule. Drawing has been produced in colour and is based on digital information in .dwg format, aerial images and/or GPS location where appropriate. The original of this drawing was produced in colour - a monochrome copy should not be relied upon. The exact position of individual trees or species included as part of a tree group, woodland or hedgerow should be checked and verified on site prior to any decisions for foundation design, tree operations or construction activity being undertaken. Further survey work would be required for calculating foundation depths.

Trees are living organisms that change over time, the condition of all trees illustrated herein, are to be checked by the Project Arboriculturalist should works commence 12 months after the date of this survey. SOME TREES MAY BE SUBJECT TO STATUTORY CONSTRAINTS. IT IS THEREFORE ADVISED THAT NO WORKS SHOULD BE UNDERTAKEN TO ANY TREES ILLUSTRATED HEREIN WITHOUT FIRST OBTAINING THE RELEVANT AUTHORISATION TO DO SO UNLESS AGREED AS PER THE APPROVED PLANS THROUGH PLANNING CONSENT.

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Project

Welcomb Street, Openshaw, Manchester

Drawing

Tree Retention Plan

Client

RPS Consulting UK & Ireland

Drawing Number

C157730-02-01

Revision

00

Scale @ A3

1:1,000

Date

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