

Biodiversity Metric Assessment

466 and 470, Moss Lane East, Manchester

A Report To: CS Moss Lane East Ltd
Report Number: RT-MME-158021-03
Date: October 2022

Quality Assurance

Date	Version	Author	Checked and Approved by
12.10.22	Final	Ellie Rickman MCIEEM (Principal Ecological Consultant)	Tim Hextell MCIEEM (Principal Ecological Consultant)

Declaration of Compliance

This study has been undertaken in accordance with British Standard 42020:2013 “Biodiversity, Code of Practice for Planning and Development”. The information which we have prepared is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management’s Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

Disclaimer

The contents of this report are the responsibility of Middlemarch Environmental Ltd. It should be noted that, whilst every effort is made to meet the client’s brief, no site investigation can ensure complete assessment or prediction of the natural environment.

Middlemarch Environmental Ltd accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

Contents

1. Introduction.....	4
1.1 Project Background	4
1.2 Site Description and Context.....	4
1.3 Project Scope	4
1.4 Summary of Proposals	5
2. Methods.....	6
2.1 Biodiversity Metric	6
2.2 Data Sources	6
2.3 Constraints and Assumptions.....	7
3. Biodiversity Metric Calculation	9
3.1 Existing Habitats.....	9
3.2 Future Baseline and Impacts.....	10
3.3 Habitat Creation / Enhancement	10
3.4 Headline Results	12
4. Discussion and Recommendations.....	13
4.1 Conclusions	13
4.2 Recommendations.....	13
5. Drawings.....	14
Appendix 1	17
Biodiversity Metric 3.1. Calculation, Moss Lane	17

1. Introduction

1.1 Project Background

CS Moss Lane East commissioned Middlemarch to undertake a Biodiversity Metric Assessment associated with a proposed development at 466 and 470, Moss Lane East in Manchester.

The assessment is informed by ecological works carried out at the site in June 2022 by Middlemarch. These are:

- RT-MME-158021-01 Preliminary Ecological Appraisal
- RT-MME-158021-02 Preliminary Bat Roost Assessment; and
- RT-MME-158448 Bat Emergence and Return to Roost Survey Report.

1.2 Site Description and Context

Table 1.1 provides a brief summary of the site and its surroundings.

Attribute	Description
Location	Two Victorian era buildings with a hardstanding car park behind, located on the south side of Moss Lane East in Manchester, opposite Whitworth Park.
National Grid Reference	SJ 848 957
Site Area (ha)	0.2 ha
Topography	Flat
Land Cover (on site)	Most of the site is dominated by two large townhouses with a hardstanding car parking area to the south plus areas of amenity grassland and small ornamental trees to the north and south. The site is bounded by a stone wall with railings on the top to the north and brick walls to the east and west. A building adjoins the southern boundary.
Land Cover (site surrounds)	Tarmac roads are present to the north and west (Moss Lane East and Heald Place respectively). Whitworth Park, a large area of grassland and scattered trees is present immediately north of Moss Lane East. The landscape to the south, west and east is dominated by residential areas with small gardens and commercial/municipal buildings and roads.

Table 1.1: Summary of Site and Surroundings

1.3 Project Scope

The purpose of the Biodiversity Metric Assessment (BMA) is to identify the change in biodiversity value that may result from a change in land use (e.g. development) or management (e.g. biodiversity enhancement) at the site and to establish if a net gain for biodiversity can be achieved. The BMA utilises a biodiversity metric to provide a proxy measure of biodiversity based on habitat attributes, which can then be used to determine the relative change in biodiversity value resulting from any land use or management measures proposed.

It should be noted that the metric is only a proxy for biodiversity using habitat values, and that any proposed enhancements should be designed using appropriate ecological expertise. Existing

levels of protection afforded to protected species and to habitats are not changed by use of the metric and statutory obligations will still need to be satisfied. In addition, the metric cannot account for impacts on, or enhancements to, irreplaceable habitats or protected sites, which will need to be assessed separately.

1.4 Summary of Proposals

The proposed development will comprise the demolition of 470 Moss Lane East in order to make way for new student accommodation which will cover the footprint of the building and most of the rear car park area. 464/466 Moss Lane East will remain but will undergo redevelopment in order to repurpose the building for student amenities on site. The trees to the north of the buildings will be retained within the landscaping although some impacts to the existing amenity grassland are likely during the construction phase as new landscaping is proposed along the frontage. A sedum roof is proposed for the new accommodation block split over 3 roof sections of differing heights. This assessment is based on the documentation detailed in the following documentation listed in Table 1.2.

Document / Drawing Number	Author
Landscape Design	Carson Small
GF Planting Plan	Carson Small
Roof Page	Carson Small
Topographical Survey AC202380-01-466-470 Moss Lane East	ACAD Design Services

Table 1.2: Documentation Provided by Client

2. Methods

2.1 Biodiversity Metric

The biodiversity calculations used within this assessment were undertaken by Ellie Rickman MSc, MCIEEM (Principal Ecological Consultant) using 'The Biodiversity Metric 3.1' and associated User Guide¹ and Technical Supplement². Sections 2.2 and 2.3 describe the data used for the assessment and the assumptions applied.

2.2. Data Sources

Existing Baseline

The baseline habitat data and condition assessment for the site is taken from the Preliminary Ecological Appraisal Report RT-MME-158021-01 carried out by Middlemarch in June 2022. A Phase 1 Habitat Plan showing the extent and location of each habitat recorded on site is included in Section 6 (Drawing RT-MME-158021-01).

The Biodiversity Metric 3.1 calculator tool utilises the UK Habitat Classification System (UKHab) as the standard data input for habitats. The Phase 1 Habitat Survey data for the site was subsequently converted for the purposes of the metric calculation using the Phase 1 habitats to UKHab translation feature, included in the Biodiversity Metric 3.1 calculator tool, or using professional opinion.

Each habitat or linear feature recorded within the site is assigned a score for 'Distinctiveness', 'Condition' and 'Strategic Significance'. Table 2.1 below describes how each habitat attribute has been determined for the existing baseline habitats in the metric assessment.

Attribute	Description
Distinctiveness	An automated score based on the type of habitat present and its value to wildlife. Highly diverse habitats such as those listed as Habitats of Principal Importance under the NERC Act (2006) or Annex 1 habitats in the Habitats Directive (1992) score highly in this category, whilst highly modified and low diversity habitats such as arable crops will have low distinctiveness scores.
Condition	A score based on the quality of the habitat parcel against published condition criteria. Condition Assessments are given in Appendix 2.
Strategic significance	A score based on information set out in local plans or policies. In this instance, a strategic location was defined by Manchester City Council's Green Infrastructure Strategy ³ and/or habitats identified as a priority within the Greater Manchester Biodiversity Action Plan. ⁴

Table 2.1: Habitat Attributes for Existing Baseline Habitats

¹ Panks, S., White, N., Newsome, A., Nash, M., Potter, J., Heyton, M., Mayhew, E., Alvarez, M., Russell, T., Cashon, C., Goddard, F., Scott, S.J., Heaver, M., Scott, S.H., Treweek, J., Butcher, B. and Stone, D. (2022) *The Biodiversity Metric 3.1 – Auditing and accounting for biodiversity: User Guide*. Natural England.

² Panks, S., White, N., Newsome, A., Nash, M., Potter, J., Heyton, M., Mayhew, E., Alvarez, M., Russell, T., Cashon, C., Goddard, F., Scott, S.J., Heaver, M., Scott, S.H., Treweek, J., Butcher, B. and Stone, D. (2022) *The Biodiversity Metric 3.1 – Auditing and accounting for biodiversity: Technical Supplement*. Natural England.

³ Manchester City Council (2015), *Manchester's Great Outdoors- a Green and Blue Infrastructure Strategy for Manchester*. MCC.

⁴ Greater Manchester Records Centre, (2009) Greater Manchester Biodiversity Action Plan. Available: https://gmrlrc.org/projects/gm_bap/

The value of each habitat parcel (or linear feature) is presented in terms of habitat (or hedgerow/river) 'biodiversity units' (BU).

Future Baseline

The future baseline conditions of the site are based on the proposed landscaping for the site as detailed in Landscape Design, GL Planting Page and Roof Level Page by Carson Small. Table 2.2 below describes how each habitat attribute has been determined for the future baseline habitats in the metric assessment.

Attribute	Description
Distinctiveness	An automated score based on professional opinion about the projected habitat type proposed, taking into account the landscaping proposals detail in Add development drawing.
Condition	A target condition score of the proposed habitat parcel based on professional opinion about the outline enhancement and future management proposals.
Strategic significance	A score based on information set out in local plans or policies. In this instance, the strategic location was defined by areas highlighted within Manchester City Council's Green Infrastructure Strategy or habitats identified as priorities within the Greater Manchester Biodiversity Action Plan.
Time to Target Condition	Time to target condition is automatically assigned in accordance with the Biodiversity Metric Tool 3.1. This multiplier can be adapted manually to reflect situations where a habitat is created in advance or where there is a delay in the project timescales for new habitat creation (e.g. project phasing).
Difficulty of Recreation	An automated value based on the difficulty of creating the target habitat. This value is unchanged from the values generated in Metric 3.1.

Table 2.2: Habitat Attributes for Existing Baseline Habitats

Following the calculation of the existing and future biodiversity value of the site, a calculation of the net biodiversity change is carried out to determine the 'Post-intervention habitat (or hedgerow/river) units', along with a figure for the percentage of net biodiversity impact loss (or gain).

2.3 Constraints and Assumptions

The following constraints and assumptions are applied to this report:

- For the purposes of this report, the term 'Habitat Loss' is applied to proposals that result in a change of habitat type or habitat 'distinctiveness'. This is defined in the Biodiversity Metric even where the new habitat type is created without any physical loss of the previous habitat type (e.g. creation of scrub over grassland). 'Habitat Enhancement' is applied where the habitat type and 'distinctiveness' remains the same, but the 'condition' of the habitat is improved.
- The BMA necessitates an estimation of future baseline values, based on professional opinion, to determine the change in biodiversity value that could occur as a result of the proposals at the site. The assumptions about target habitat types or condition in this report are based on professional opinion about the likely achievable outcomes at the site, based on the proposed planting plans and presumed management resources. All target habitats presume the implementation of a long-term Management Plan to achieve these ends and a recommendation to this effect is given in Section 5.

- The area of any new Urban Trees proposed is calculated using the Street Tree Helper (as described above). For the purposes of this assessment, all new trees proposed are assumed to be small (below 1/3 of their life expectancy).

3. Biodiversity Metric Calculation

3.1 Existing Habitats

The habitats identified during the Preliminary Ecological Appraisal are described in Table 3.1 and their value in biodiversity units (BU) is provided. The current extent of the habitats present is shown in Drawing RT-MME-158021-01 in Section 6. The baseline metric calculations are provided in Appendix 1.

Phase 1 Habitat	UKHab Habitat Equivalent	Area (ha) / Length (km)	Description (distinctiveness, condition, connectivity and strategic significance)	Value (BU)
Area Based Habitats				
Amenity Grassland	Modified Grassland	0.048	Habitat is automatically classed as being of 'Low' distinctiveness and assessed as being in 'Poor' condition. Amenity Grassland has been given 'Medium' Strategic Significance due to its proximity to Whitworth Park and the inclusion of this habitat in the Greater Manchester Biodiversity Action Plan under 'Managed Green Space'.	0.11
Buildings and Hardstanding	Developed Land/Sealed Surface	0.129	Habitat is automatically classed as being of 'Very Low' distinctiveness and does not require a condition assessment. This habitat is of 'Low' Strategic Significance.	0.00
Scattered Trees	Urban Trees	0.028	Habitat is automatically classed as being of 'Medium' distinctiveness and assessed as being in 'Poor' condition. Urban trees have been given 'Medium' Strategic Significance due to their proximity to Whitworth Park and the inclusion of this habitat in the Greater Manchester Biodiversity Action Plan under 'Managed Green Space'.	0.12
Bare Ground	Vacant land/ Bare ground	0.002	Habitat is automatically classed as being of 'Low' distinctiveness and does not require a condition assessment. This habitat is of 'Low' Strategic Significance.	0.00
Total Area (ha)		0.21	Total Habitat Baseline (BU)	0.23
Hedgerows				
Ornamental Hedge	Hedgerow-Ornamental Non-native	0.018	Laurel and Leylandii Hedgerows to the north and south west of the site. These are automatically classed as being of 'Very Low' distinctiveness and 'Poor' condition. This habitat is of 'Low' Strategic Significance.	0.02
Total Length (km)		0.018	Total Hedgerow Baseline (BU)	0.02

Table 3.1: Summary of Existing Habitats and Linear Features

3.2 Future Baseline and Impacts

Description of the Future Baseline

The future baseline for the purposes of this assessment is set out in the Landscape Design Document for the site compiled by Carson Small. An adapted version of this map is included in Section 6 showing how each landscaping area has been translated to a habitat type for the purpose of the Biodiversity Metric Assessment.

Impacts

Table 3.2 outlines the potential biodiversity impacts of the proposed development (including area proposed for retention, retained for enhancement, or habitats that are lost).

Phase 1 Habitat	UKHab Habitat	Habitats Retained		Habitat Retained for Enhancement		Habitat Loss	
		Area/ Length (Ha/km)	Value (BU)	Area/ Length (Ha/km)	Value (BU)	Area/ Length (Ha/km)	Value (BU)
Area based habitats							
Amenity Grassland	Modified Grassland	0.048 ha	0.11	0.00 ha	0.00	-0.048 ha	-0.11
Buildings and Hardstanding	Developed Land/Sealed Surface	0.129 ha	0.00	N/A	N/A	N/A	0.00
Scattered Trees	Urban Trees	0.028 ha	0.12	0.02 ha	0.08	-0.08 ha	0.04
Total Impact (Area habitats)		0.21 ha	0.23	0.02 ha	0.08	-0.056 ha	-0.05
Hedgerows							
Ornamental Hedge	Hedgerow- Ornamental Non-native	0.018 km	0.02	0.00 km	0.00	0.018 km	-0.02
Total Impact (Hedgerows)		0.018 km	0.02	0.00 km	0.00	-0.18 km	-0.02

Table 3.2: Summary of Impacts

3.3 Habitat Creation / Enhancement

Table 3.3 below outlines the value of the proposed habitat creation/ enhancements in the development proposals.

Landscape Typology	UKHab Habitat Equivalent	Area (ha) / Length (km)	Description (target distinctiveness, condition, connectivity strategic significance and risk multipliers)	Value (BU)
Habitats				
Hardstanding	Developed land: Sealed surface	0.115	Comprises the new area of built development (buildings and hardstanding). The habitat type is automatically assessed as being 'Very low' distinctiveness and due to the limited attributes for biodiversity is not assigned a condition and is assigned 'Low Strategic Significance'.	0.00
Sedum Roof	Other Green Roof	0.049	Proposed for the roof of new building. This habitat is automatically assessed as being of low distinctiveness and does not require a condition assessment. It is considered to be in an area of 'Medium' Strategic Significance due to the proximity to Whitworth Park.	0.1
Ornamental Planting	Vegetated Garden	0.015	Proposed to the north around retained trees and in a small area in the centre of the site. This habitat is automatically assessed as being of low distinctiveness and does not require a condition assessment. It is in an area of 'Medium' Strategic Significance due to the proximity to Whitworth Park.	0.03
Trees in planters	Urban Trees	0.012	3 Trees in pots proposed to the centre of the site. These are assumed to be small and are automatically assessed as being of medium distinctiveness. They are given a target condition of 'Poor' due to being confined in planters. It is in an area of 'Medium' Strategic Significance due to the proximity to Whitworth Park.	0.04
Total Creation (Area Habitats)		0.19	Total Habitat Baseline (BU)	0.17
Hedgerows				
Proposed Ornamental Hedgerow	Hedgerow-Ornamental Non-native	0.041	New ornamental hedgerows are proposed along the northern boundary. These are automatically classed as being of 'Very Low' distinctiveness and 'Poor' condition. It is considered to be in an area of 'Medium' Strategic Significance due to the proximity to Whitworth Park.	0.04
Total Creation (Length)		0.041	Total Hedgerow Baseline (BU)	0.04

Table 3.3: Summary of Habitat Creation and Enhancement Proposals

3.4 Headline Results

Table 3.4 details the headline results. Full details of the biodiversity metric calculations can be found in Appendix 1.

	Habitat Units	Hedgerow Units
On-site baseline	0.23	0.02
On-site post-intervention	0.26	0.04
Total net unit change	0.03	0.02
Total net % change	12.05%	119.81%

Table 3.4: Biodiversity Metric Assessment – Headline Results

The existing value of the habitats on site is **0.23 BU** in area habitats and **0.02 BU** for Hedgerow units.

The proposals (habitat loss, retention, enhancement and creation combined), as based on the landscape design will deliver a total of **0.26 units**, a **12.05%** increase on the baseline habitat value.

The existing value of the hedgerows on site is **0.02 BU**.

The proposals (habitat loss, retention, enhancement and creation), as based on the landscape design, will deliver a total of **0.04 BU**, a 100% increase on the baseline hedgerow value.

4. Discussion and Recommendations

4.1 Conclusions

Biodiversity Change

The BMA identified that the proposed development will result in a net gain of **0.03 BU** (Habitats) and **0.02 BU** (Hedgerows). These gains compensate for all loss of these features and secures a net gain for biodiversity. This net gain exceeds the 10% net gain in biodiversity value advocated by the Environment Act 2021. This ensures that the proposed development is compliant with planning policy for area and linear habitats.

Landscape and Ecological Management Plan

The projected onsite habitat values given in this report are based on the assumption that an appropriate management plan will be implemented to ensure that the retained and created habitats will be established and maintained to fulfil the target condition and intended biodiversity value. Biodiversity Net Gain Principles⁵ necessitates that any biodiversity units claimed must be deliverable over a minimum period of 30 years. As such, the recommended management plan must provide long-term management proposals and provide scope for monitoring and reporting, to demonstrate that the intended values will be achieved over a minimum 30-year period. A recommendation to this effect is included in Section 4.2 below.

4.2 Recommendations

- R1** A Landscape and Ecological Management Plan (LEMP) should be produced for all habitat features proposed within the site. The LEMP should set out the appropriate establishment works and management prescription required to achieve and maintain the intended type and condition of each habitat proposed. The LEMP should cover a minimum period of 30 years and include provisions for monitoring, review, reporting and contingency throughout. The LEMP could be produced as part of a planning condition for the proposed development.

⁵ CIRIA, CIEEM, IEMA (2016) *Biodiversity Net Gain: Good Practice Principles for Development* [Available <https://cieem.net/wp-content/uploads/2019/02/Biodiversity-Net-Gain-Principles.pdf>]

5. Drawings

Drawing C158021-01– Phase 1 Habitat Survey

Drawing C158021-03 - Drawing Adaptation of Landscape Strategy Proposal for Purposes of the BMA



C158021-01

Legend

Site boundary

Scattered scrub

Scattered tree

Fence

Wall

Building

Hardstanding

Bare ground

Amenity grassland

Target note

1. Large metal shipping container

2. Tree stump

3. Building that borders the boundary

4. Notable offsite habitat: Whitworth Park

Project

Moss Lane East

Drawing

Phase 1 Habitat Map

Client

Turley Associates

Drawing Number

C158021-01

Revision

00

Scale @ A3

1:250

Date

July 2022

Approved By

AC

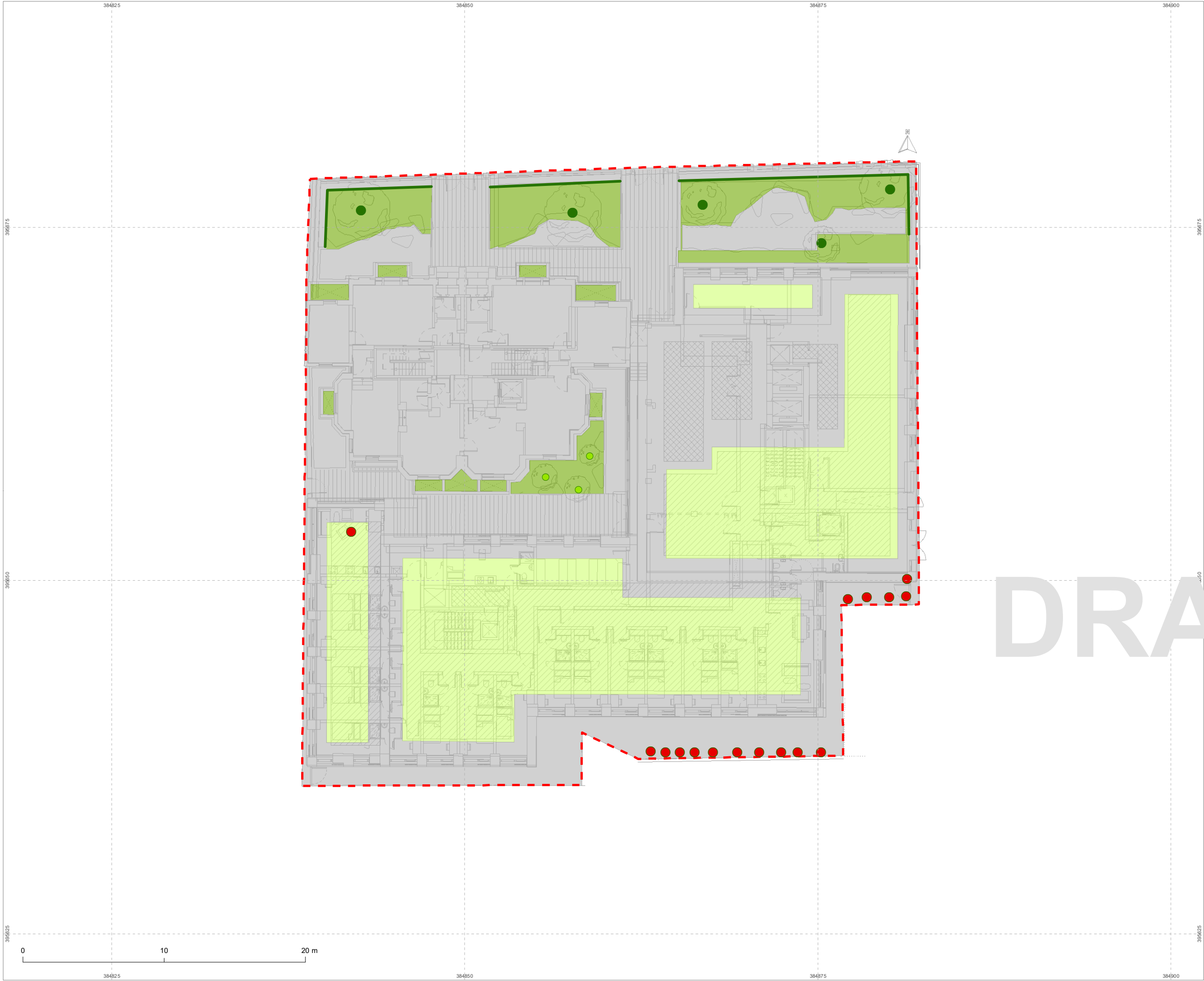
Drawn By

JR

MIDDLEMARCH

Triumph House, Birmingham Road, Allesley, Coventry CV5 9AZ
T:01676 525880
E:admin@middlesmarch-environmental.com

This map is reproduced from the Ordnance Survey material with the permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationary Office. © Crown copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution of civil proceedings.
Licence Number: 100040519



DRAFT

C158021-BNG

Legend

- Application boundary
- Proposed tree
- Tree to be removed
- Tree to be retained
- Proposed hedge
- Proposed hardstanding and building
- Proposed plant areas
- Proposed sedum roof

Project

Moss Lane East

Drawing

Biodiversity Net Gain Proposal

Client

Turley Associates

Drawing Number

C158021-BNG

Revision

00

Scale @ A3

1:250

Date

October 2022

Approved By

ER

Drawn By

BD

 MIDDLEMARCH

Triumph House, Birmingham Road, Allesley, Coventry CV5 9AZ
T:01676 525880
E:admin@middlemarch-environmental.com

This map is reproduced from the Ordnance Survey material with the permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationary Office. © Crown copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution of civil proceedings.
Licence Number: 100040519

Appendix 1

Biodiversity Metric 3.1. Calculation, Moss Lane
(provided separately)