

University of Manchester,
(Land Adjacent to the Arthur Lewis
Building)

Biodiversity Net Gain Assessment

2024



RACHEL
HACKING
ECOLOGY

Client RECOM

Project Title University of Manchester (Land adjacent to the Arthur Lewis Building)

Project Reference RHE.4051.02

Project Leader Samuel Adshead

Contact Details sam@rachelhackingecology.co.uk

	Name	Position	Date
Author	Sam Adshead	Ecologist	08/10/2024
Reviewer	Joel Hacking	Senior Ecologist	22/10/2024
Revision			



RACHEL
HACKING
ECOLOGY

The Stables
Paradise Wharf
Ducie Street
Manchester
M1 2JN

0161 465 8971

www.rachelhackingecology.co.uk

mail@rachelhackingecology.co.uk



RACHEL
HACKING
ECOLOGY

Report Contents

Executive Summary	3
1. Introduction	4
2. Methods	5
3. Baseline Habitats	6
4. Proposed Habitats	7
5. Assessment	8
Appendix 1: Planning Policy & Legislation	9
Appendix 2: Phase 1 Habitat Map	13
Appendix 3: Proposed Site Layout	14
Appendix 4: Statutory Biodiversity Metric Headline Results.	15



Executive Summary

Development Details

The client is proposing a mixed development on Land at The University of Manchester, adjacent the Arthur Lewis building. This location will also be classified as the 'site'. This report assesses the predicted changes in biodiversity units resulting from the proposed development.

Biodiversity Impact Assessment

Baseline habitats score 0.22 habitat units. Post development habitats score 0.08 habitat units (-63.01%) The proposed development is predicted to result in a net loss of biodiversity.

Outcomes

For the proposed development to achieve the mandatory 10% biodiversity net gain on habitat units, mitigation is required. Recommendations to achieve the target are provided in this report.



1. Introduction

1.1 Project Brief

- 1.1.1 Rachel Hacking Ecology Limited (RHE) was commissioned in 2024 by RECOM (the client) to undertake a Biodiversity Impact Assessment of a proposed development on land adjacent The Arthur Lewis building (University of Manchester) hereafter known as the 'site'. The site is located at O.S. grid reference: SJ 8447 9672 (see Figure 1).

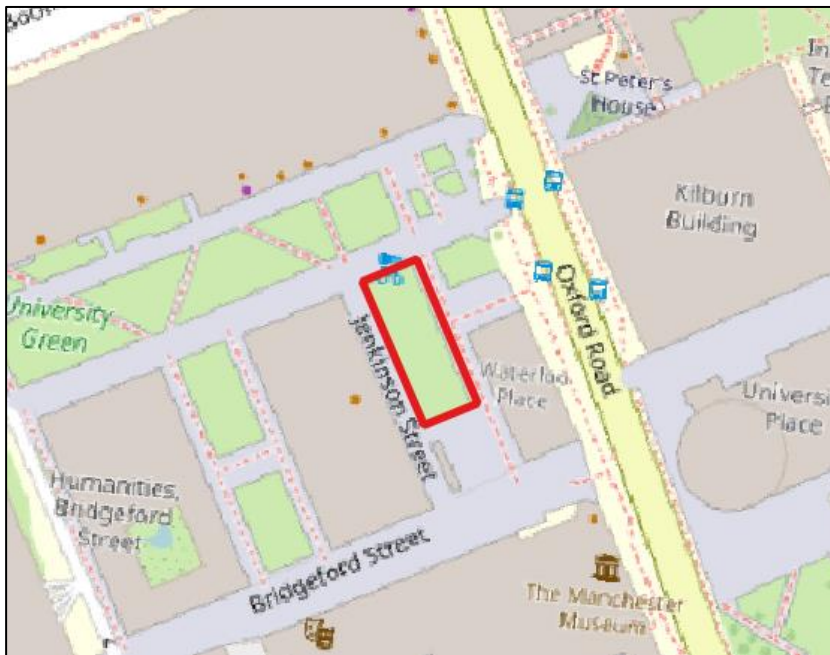


Figure 1. Map showing the location of the site. Base map source: Bing maps.

Description of Development

- 1.1.2 The site will be the subject of a planning application for the temporary erection of a modular unit and associated landscaping. Temporary constructions will remain for 5 years before the landscaping is returned to its previous composition.

1.2 Scope of Work

- 1.2.1 The client instructed RHE to undertake a Biodiversity Net Gain Assessment to quantify the predicted changes in habitats resulting from the proposed development, and to provide advice regarding design changes to achieve biodiversity net gain where necessary.

- 1.2.2 This report should be read in conjunction with the Extended Phase 1 Habitat Survey Report (RHE, 2024¹).

2. Methods

2.1 Biodiversity Net Gain

- 2.1.1 The Statutory Biodiversity Metric Calculation Tool was used to achieve the predicted changes in habitat units resulting from the proposed development.
- The baseline habitats recorded during the Habitat Survey¹ were measured using QGIS software (see Appendix 2 for the Phase 1 Habitat Survey Map).
 - The baseline habitats were translated into the UK habitat classification².
 - Habitat conditions were assessed using the Statutory Biodiversity Metric Habitat Condition Assessment sheets³.
 - The strategic significance of baseline habitats was assessed on whether they were formally identified in a local strategy or policy, or whether they were in an ecologically desirable location.
 - The proposed habitats were assessed based on information provided by the client and the landscape proposed masterplan (see Appendix 3).
- 2.1.2 The predicted change in biodiversity units was determined by calculating the difference between the baseline units and the post-development units.
- 2.1.3 Sam Adshead (Ecologist) carried out the calculations and assessment in October 2024. Sam is fully trained in Biodiversity Impact Assessments.

¹ Rachel Hacking Ecology (2024). Extended Phase 1 Habitat Survey. University of Manchester, Oxford Road

² Butcher, B., Carey, P., et al. (2020). UK Habitat Classification – Habitat Definitions V1.1. at <http://UKhab.org>

³ The_Statutory_Biodiversity_Metric_-_User_Guide_.pdf (publishing.service.gov.uk)



3. Baseline Habitats

- 3.1.1 The Phase 1 Habitat map is contained in Appendix 2. Photographs can be seen within the previously conducted ecological appraisal report¹. Proposed plans are contained in Appendix 3. Headline BNG results are displayed in Appendix 4. Habitat condition assessment information will be provided as a separate document.

3.2 Area Habitats

- 3.2.1 The baseline is calculated to be 0.22 habitat units.

Amenity Grassland (Modified grassland)

- 3.2.2 The site is dominant habitat is amenity grassland, extending to 0.1095ha. This habitat is classified as Grassland - Modified grassland within the Statutory Biodiversity Metric and it is of low distinctiveness and low strategic significance. The habitat is in poor condition and provides 0.22 habitat units.

Hardstanding (Developed land; sealed surface)

- 3.2.3 A thin strip of hardstanding extends around the existing grassland area, which equates to 0.0047ha. This habitat is of very low distinctiveness and low strategic importance. A condition assessment is not applicable for this habitat. Hardstanding provides zero habitat units.

4. Proposed Habitats

4.1.1 The following habitats and measurements are provided by the client.

4.2 Retained Habitats

4.2.1 0.0405ha of modified grassland is to be retained as a part of the development. This will provide 0.08 habitat units.

4.3 Created Area Habitats

Buildings and Hardstanding

4.3.1 Newly created modular units and sealed surfaces will account for a total of 0.0737ha. This habitat will provide zero habitat units.



5. Assessment

5.1 On-site Baseline

5.1.1 The on-site baseline scores 0.22 habitat units.

5.2 On-site post-intervention

5.2.1 Post-intervention, the site scores 0.08 habitat units.

5.3 Predicted Change

5.3.1 The Statutory Biodiversity Metric shows a net loss of 0.14 (-63.01%) habitat units.

5.3.2 The site proposals do not satisfy the trading rules with a deficit on low distinctiveness habitat units, related to the amenity grassland.

5.4 Recommendations

5.4.1 For the proposed development to achieve the required 10% biodiversity net gain on habitat units these options are considered:

- **Option A:** On-site mitigation which would require an adjustment of the current landscape masterplan. Retained, enhanced and created habitats need to be managed for 30 years. Achieving 10% net gain on-site is possible. However, the temporary nature of the proposed modular units and their eventual removal may make on-site mitigation unfeasible.
- **Option B:** The developer is unable to compensate all impacts on-site but is able to secure local compensatory habitat creation. This scenario is not modelled explicitly and would require making assumptions for what an individual development might look like.
- **Option C:** The developer is unable to compensate on site and is unable to find local compensatory habitat in which to invest. Instead, they have to pay for their units through a biodiversity unit offsetting market. This will entail payment for the 0.14 habitat units. This could be through the Environment Bank, the LPA, or another local third-party provider. Decisions made here would need to be agreed with the LPA.

Appendix 1: Planning Policy & Legislation

National Policy

The National Planning Policy Framework (NPPF 2023) describes the Government's planning policy for England and how it should be applied. Within this framework, the requirements in relation to biodiversity are included within several policies. The two most relevant to individual planning decisions are Paragraphs 180 and 186, shown below:

- 180. Planning policies and decisions should contribute to and enhance the natural and local environment by:
 - a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
 - b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
 - c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
 - d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
 - e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
 - f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.
- 186. When determining planning applications, local planning authorities should apply the following principles:
 - a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
 - b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments),



should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Legislation

The Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000) includes the notification and confirmation of Sites of Special Scientific Interest (SSSIs). SSSIs can be notified for their floral, faunal, geological, or physiographical features. Protection against damaging operations and management of SSSIs is also included within the Act. Impact Risk Zones (IRZs) are zones around an SSSI account for the particular sensitivities of the features for which it is notified and identify development proposal which could have adverse impacts.

The Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000) protects native animals, plants and habitats. Under the Act it is an offence to intentionally kill, injure or take any wild animal listed on Schedule 5 and it is an offence to interfere with places used for shelter or protection, or intentionally disturb animals occupying such places. The Act prohibits picking, uprooting or destroy any wild plant (or any attached seed or spore) listed in Schedule 8.

European Protected Species (EPS) such as bats, Hazel Dormouse, Otter, Natterjack Toad, Smooth Snake, Sand Lizard and Great Crested Newt are protected by the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000) and the Conservation of Habitats and Species Regulations 2017. The Acts make it an offence to:

- a) Deliberately capture, injure or kill an EPS;
- b) Deliberately impair an EPS's ability to survive, breed, reproduce, rear or nurture young; to hibernate or migrate; or significantly affect the local distribution or abundance of the EPS.
- c) Possess or control live or dead EPS or any part of, or anything derived from a EPS;
- d) Damage or destroy a breeding site or resting place of an EPS;



- e) Intentionally or recklessly obstruct access to any place that is used for shelter or protection by an EPS;
- f) Intentionally or recklessly disturb a structure or place that it uses for shelter or protection that is occupied by an EPS.

All common herptiles are protected under the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000). Grass Snake, Slow Worm, Common Lizard, Adder are protected against intentional killing or injury. Common Frog, Common Toad, Smooth Newt and Palmate Newt is protected against sale. In addition, all British reptiles, Common toad and Great Crested Newt are listed as Species of Principal Importance.

All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended). It is an offence to intentionally kill, injure or take any wild bird or take, damage, or destroy its nest whilst in use or being built, or take or destroy its eggs. It is an offence to intentionally or recklessly disturb a species listed on Schedule 1 of the Act while they are nest building or at or near a nest with eggs or young, or to disturb the dependent young.

The Protection of Badgers Act 1992 makes it an offence to wilfully, or to attempt to kill, injure, take, possess or cruelly ill-treat a Badger, or intentionally or recklessly interfere with a sett. Interference of a sett includes disturbing badgers during occupation of a sett, or damaging or destroying a sett, or obstructing access to the sett.

Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006 places a duty on every public authority to have regard to conserving biodiversity. Section 41 of the same Act requires the Secretary of State to publish a list of the living organisms and types of habitats that are of 'Principal Importance' for the purpose of conserving biodiversity. The Secretary of State must take steps, as appear reasonably practicable, to further the conservation of those living organisms and habitats in any list published under this section. The list of species and habitats of principal importance currently includes 943 species and 56 habitats. These are the species and habitats found in England which are regarded as conservation priorities under the UK Post-2010 Biodiversity Framework

The Hedgerows Regulations 1997 protect 'important' hedgerows from destruction or damage. A hedgerow is 'important' if it (a) has existed for 30 years or more; and (b) satisfies at least one of the criteria listed in Part II of Schedule 1 of the Regulations. Under the Regulations, it is against the law to remove or destroy 'important' hedgerows unless permitted by the local planning authority.

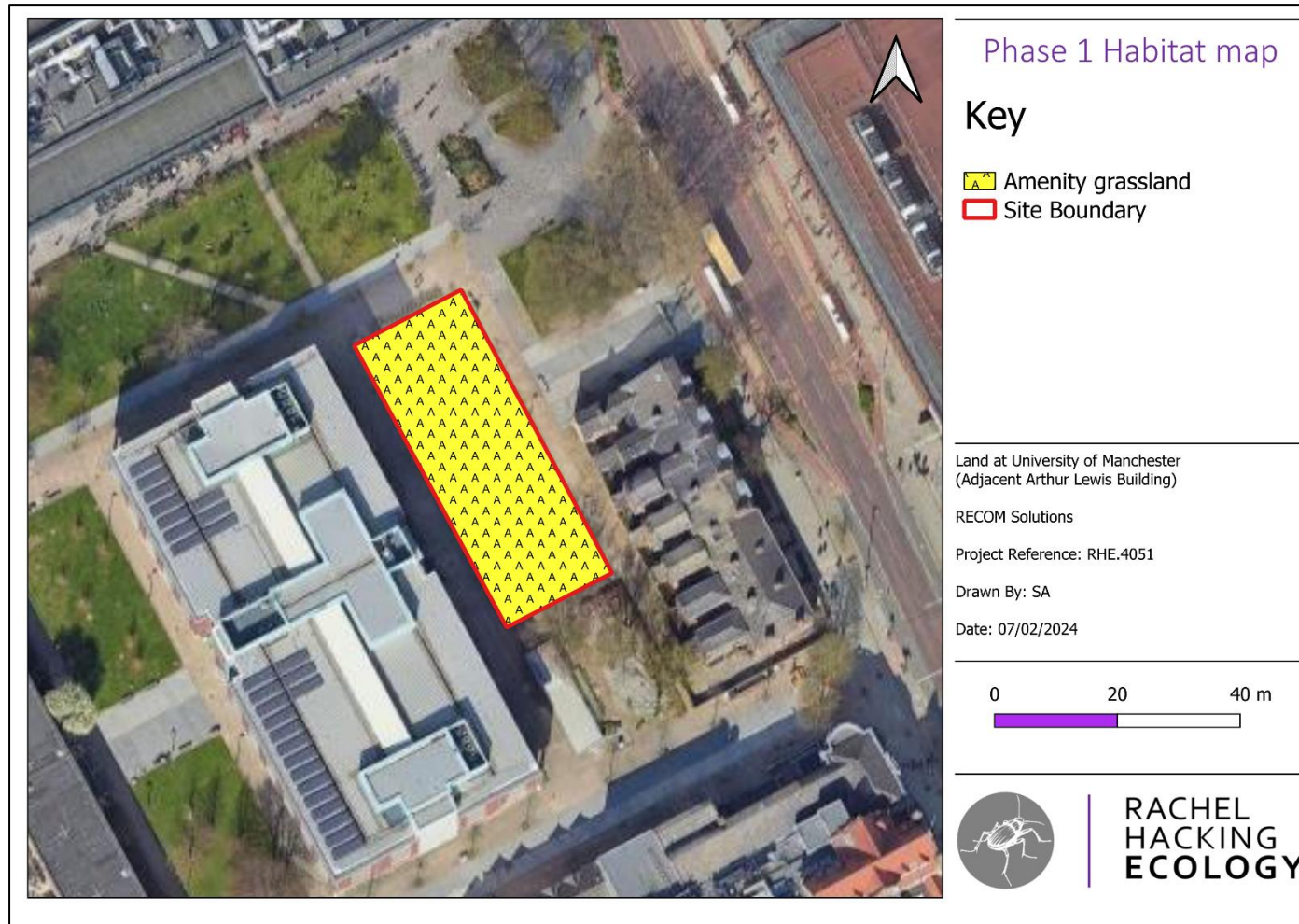


The Environment Bill 2021 makes it mandatory for housing and development, subject to some narrow exemptions, to achieve at least a 10% net gain in value for biodiversity – a requirement that habitats for wildlife must be left in a measurably better state than before the development. Developers must submit a 'biodiversity gain plan' alongside usual planning application documents. The local authority must assess whether the 10% net gain requirement is met in order to approve the biodiversity gain plan.

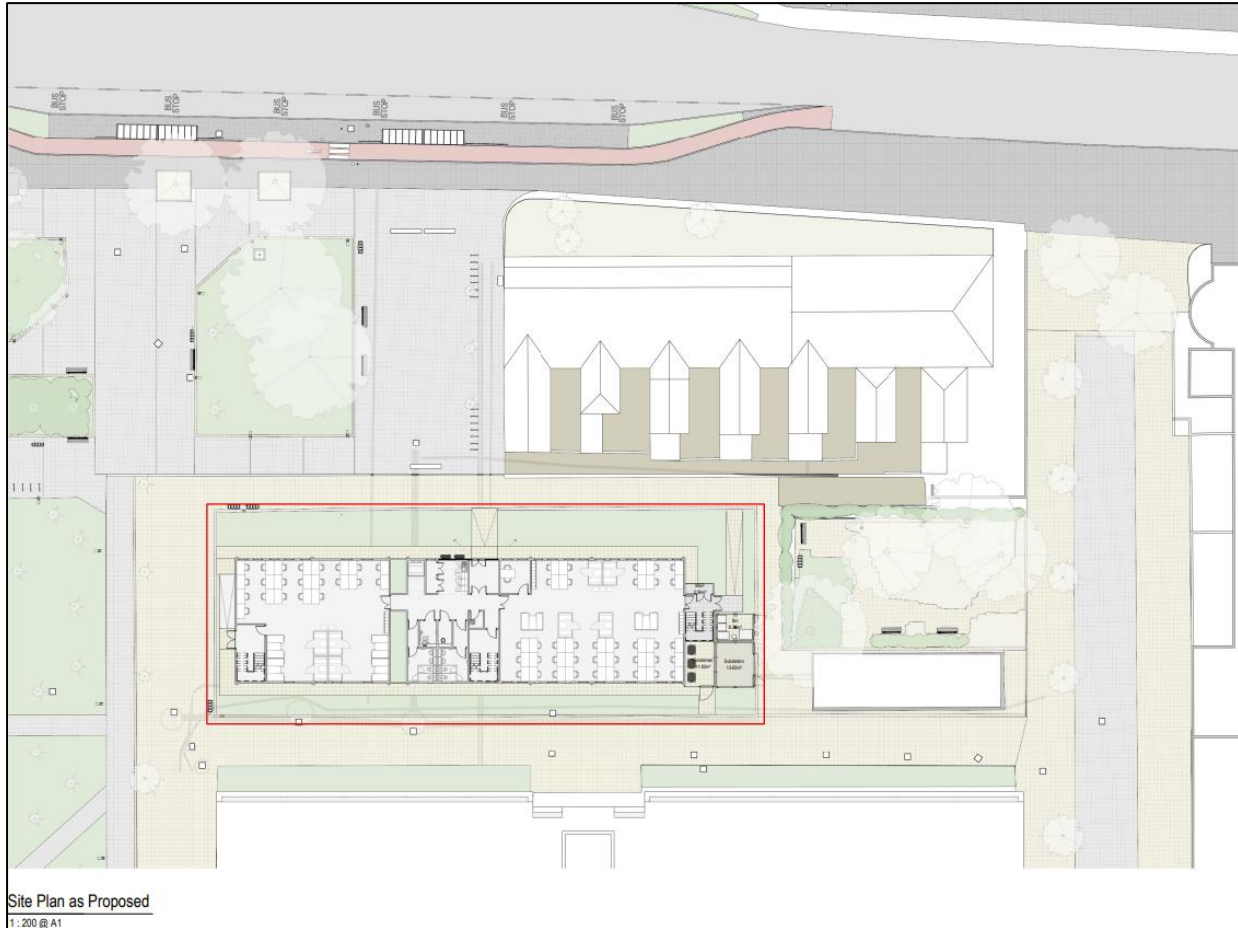
The Environment Bill 2021 strengthens the duty on public authorities (NERC Act, 2006) to have regard to the conservation of biodiversity.

The Environment Bill 2021 amends the Wildlife and Countryside Act 1981 to introduce an additional purpose for granting a protected species licence in relation to development, 'for reasons of overriding public interest', and two additional tests for the granting of such licences: that there is 'no other satisfactory solution' and that granting the licence is 'not detrimental to the survival of any the population of the species concerned'. These changes will reduce the scope for unlicensed activities to provide clear safeguards before licences can be granted, providing legal certainty and clarity to developers about their environmental obligations.

Appendix 2: Phase 1 Habitat Map



Appendix 3: Proposed Site Layout



Plans courtesy of Halliday Meecham Architects



Appendix 4: Statutory Biodiversity Metric

Headline Results.

FINAL RESULTS				
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)		Habitat units	-0.14	
		Hedgerow units	0.00	
		Watercourse units	0.00	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)		Habitat units	-63.01%	
		Hedgerow units	0.00%	
		Watercourse units	0.00%	
Trading rules satisfied?		No - Check Trading Summaries ▲		
Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	0.22	0.24	0.16
Hedgerow units	10.00%	0.00	0.00	0.00
Watercourse units	10.00%	0.00	0.00	0.00