

The Old Quadrangle,
University of Manchester

Ecological Appraisal

2023



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Client University of Manchester

Project Title The Old Quadrangle, Manchester

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Executive Summary

Development Details

The University of Manchester is proposing to re-landscape the site of the Old Quadrangle, part of the campus grounds of the University of Manchester. This report describes the ecological features of the site and its surroundings and assesses the potential impacts of the development on the ecological interest. Recommendations are provided so that the development is compliant with biodiversity policy and legislation.

Ecological Interest

The site has a negligible level of ecological interest. Several mature trees occur on the site, amenity grassland is present adjacent to the buildings and planted beds of introduced shrubs are the only features of ecological interest.

Outcomes

The proposals include the removal of hardstanding and habitats of low ecological value only. No further protected species surveys are considered necessary, with the exception of a nesting bird check prior to the removal of vegetation (if being removed during the bird nesting season, generally March-August).



1. Introduction

1.1 Project Brief

- 1.1.1 Rachel Hacking Ecology Limited was commissioned in 2023 by the University of Manchester via Recom Solutions Ltd to carry out an Extended Phase 1 Habitat Survey of The Old Quadrangle, University of Manchester, Oxford Road, Manchester (O.S. grid reference: SJ 84557 96555 – see Figure 1).

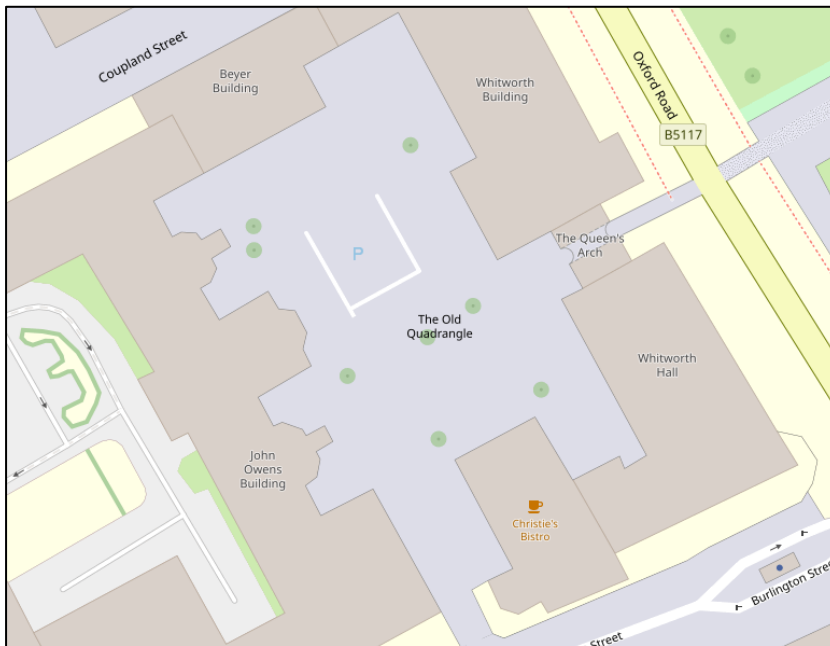


Figure 1. Map showing the location of the site courtesy of © OpenStreetMap Contributors

- 1.1.2 The proposed development site is an open public space, comprising hardstanding, amenity grassland, mature trees, introduced shrubs and planted containers. No buildings occur within the development footprint.

Description of Development

- 1.1.3 The site will be the subject of a planning application for improved landscaping, including the installation of new hardstanding pathways, planted borders and amenity seating areas.

1.2 Scope of Work

- 1.2.1 The Client commissioned Rachel Hacking Ecology to carry out the following works: (omit as required)
- Record the extent, type, and condition of habitats within and next to the site.
 - Calculate the baseline and post-development biodiversity units.
 - Search for signs of protected species and assessment of the potential of habitats and features to support protected and notable species.

1.3 Site Visit Information

Surveyor Details

- 1.3.1 Dr Rachel Hacking (Principal Ecologist) and Joel Hacking (Senior Ecologist) visited the site on 25th July 2023. Both Rachel and Joel are experienced ecologists and fully trained in ecological assessments.

Weather

- 1.3.2 The weather during the survey was mild and overcast with occasional showers.



2. Methods

2.1 Field Survey

Extended Phase 1 Habitat Survey

- 2.1.1 In accordance with JNCC guidelines¹ the site was walked over and the habitats and features of ecological interest were mapped and described. Habitats and features of particular interest were target noted.
- 2.1.2 During the walkover habitat and features were assessed for their suitability to support of protected and notable species in accordance with CIEEM guidelines². Field signs of protected, notable, and invasive non-native species, if encountered, were mapped, and described.

2.2 Biodiversity Net Gain

- 2.2.1 During the site walkover the ecological condition of each habitat was assessed in accordance with the Natural England (2023) guidelines³. Habitat types recorded and mapped during the field survey were converted from the JNCC system to the UK Habitat Classification system⁴.
- 2.2.2 Habitat data including type, area (or length), condition and strategic location were uploaded to the Defra Biodiversity Metric Calculator (version 4.0) spreadsheet to determine the baseline value of the site. The extent of any habitats to be retained or enhanced was also entered into baseline worksheets.
- 2.2.3 The post-development masterplan was interrogated to determine areas of hard standing, buildings, and associated infrastructure. New, retained and enhanced habitats were classified and allocated a target condition, based on habitat type, location and management input. This information was uploaded to the metric spreadsheet to obtain a post-development value.
- 2.2.4 The pre- and post-development values were compared to determine whether the yield of biodiversity units achieved a deficit or gain.

¹ JNCC (2010). *Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit*. Joint Nature Conservation Committee, Peterborough

² CIEEM (2017). *Guidelines for Preliminary Ecological Appraisal*. Chartered Institute of Ecology and Environmental Management, Winchester.

³ Panks, S. White, N., Newsome, A. et al. (2023). *Biodiversity metric 4: Auditing and accounting for biodiversity – User Guide*. Natural England.

⁴ Butcher, B., Carey, P., et al. (2020). UK Habitat Classification – Habitat Definitions V1.1. at <http://UKhab.org>

2.3 Mitigation Hierarchy

2.3.1 Mitigation measures should be embedded within the masterplan design and planning application process. Measures during the construction phases should be included in a Construction Environmental Management Plan: Biodiversity (CEMP). This process from proposal to implementation needs to consider the 'mitigation hierarchy' of avoid, reduce, compensate, and enhance:

- Aim to avoid negative effects through the design process.
- Mitigate if negative effects cannot be avoided.
- Use compensation measures to offset residual impacts.
- Identify and implement opportunities to enhance biodiversity



3. Results

3.1 Survey Constraints

- 3.1.1 Field survey results are valid for a limited duration and no investigation can provide a complete description and characterisation of a site. The composition of habitats and species can change depending on environmental variables and the mobility of species, so the results of a study become less reliable over time. In some cases, surveys that are 3 years old may be acceptable for a project assuming that habitats have not significantly changed in the intervening period, but for protected species it is likely that survey data will need to be no more than 18 months old.
- 3.1.2 The site comprised of mostly hardstanding, and each area of the site was accessible. The survey had negligible constraints, and a full assessment of the habitats could be undertaken.

3.2 Habitats

- 3.2.1 The habitats survey plan is contained in Appendix 2. Biodiversity Net Gain measures will be completed following the completion of a fixed development layout and landscaping plan.

Amenity Grassland

- 3.2.2 A swathe of amenity grassland is present towards the north of the site (see Photograph 1).



Photograph 1 showing the amenity grassland on the site.

Introduced Shrubs

- 3.2.3 Introduced shrubs are present on the site. The largest of these, containing mature trees, are situated in the centre (see Photograph 2). Several smaller planting containers are scattered around the site (see Photograph 3).



Photograph 2 showing the introduced shrub beds in the centre of the site.



Photograph 3 showing the planting containers on the site.

Mature Trees

- 3.2.4 Several mature trees occur on the site (see Photograph 4).



Photograph 4 showing the mature trees on the site.



Photograph 5 showing the mature trees on the site.

Bare Ground

- 3.2.5 The dominant habitat on the site is hardstanding, which is mapped as Bare Ground (see Photograph 5).



Photograph 5 showing the bare ground.

Invasive Species

- 3.2.6 Wall Cotoneaster *Cotoneaster horizontalis* is present in the planting area to the north of the site (see Photograph 6), and Hollyberry Cotoneaster *Cotoneaster bullatus* is also present in the planted bed to the south of the site (see Photograph 7). Both plants are listed under Schedule 9 of the Wildlife & Countryside Act 1981 (as amended) as an invasive species.



Photograph 6 showing the Cotoneaster on the site.



Photograph 7 showing the Cotoneaster on the southern part of the site.

4. Assessment

4.1 Development Context

- 4.1.1 The following assessment assumes that the habitats on the site will be removed to facilitate the proposed landscaping scheme. This will result in the loss of the existing bare ground, amenity grassland, introduced shrubs and mature trees.

4.2 Impacts on Designated Sites

- 4.2.1 There are no designated sites on or immediately adjacent to the site. The nearest designated sites are Clayton Vale and Highfield Park Local Nature Reserves, both approximately 3km away. No non-statutory sites are present within 1km of the site.

4.3 Impacts on Habitats

This section evaluates and describes potential impacts and assesses ecological effects on habitats that are within the study area. The affected habitats include hardstanding, amenity grassland, scattered trees and introduced shrubs only. The habitats impacted by the proposals are of negligible value.

4.4 Impacts on Species

Protected Species

- 4.4.1 No evidence of protected species was found during the survey. The habitats offer poor cover for mammals and invertebrates. No impact on protected species is anticipated.
- 4.4.2 The trees on the site were subject to a ground-level assessment for bats. None of the trees were found to offer potential roosting features (PRF's), such as knot holes or peeling bark. The trees were assessed as offering negligible suitability for roosting bats.

Nesting Birds

- 4.4.3 The mature trees and introduced shrubs provide suitable habitat for nesting birds. If the vegetation is to be removed during the nesting season (generally March-August), this could result in the disturbance



of a bird nest, which could constitute an offence under the Wildlife & Countryside Act 1981 (as amended).

Invasive Species

- 4.4.4 *Cotoneaster horizontalis* and *Cotoneaster bullatus* are present within the site along the northern and southern edges of the site. Under the Wildlife and Countryside Act (Section 14 and Part II of Schedule 9) 1981 (as amended), it is an offence for these species to be planted in the wild or otherwise cause it to grow in the wild.
- 4.4.5 It is not an offence to have *Cotoneaster* on your land, but it is an offence to allow the species to spread into neighbouring areas or to grow in the wild. Therefore, it will be necessary to ensure appropriate measures are in place to prevent development activities from causing further spread of the species to new areas.



5. Recommendations

5.1 Further Surveys

Protected Species

- 5.1.1 No further surveys on protected species is considered necessary. The trees offer negligible suitability for bats. No evidence of other protected species was found on the site, and therefore no recommendation for further survey effort.

Nesting Birds

- 5.1.2 The trees and shrubs offer suitable nesting habitat for birds. Construction activities that might directly impact upon breeding birds should hence be limited to the September-February period. If vegetation has to be cleared during the bird breeding season (generally March-August), checks immediately before clearance by a suitably qualified ecologist will be required. If nesting activity is detected work in that area will need to stop until the ecologist considers that nesting activity is finished.

5.2 Mitigation Measures

- 5.2.1 Protection of ecological features (habitats and species) during the construction phase will be described in a Construction Environmental Management Plan (CEMP). Mitigation measures to protect, maintain and enhance ecological features during the operational phase of development will be described in a Biodiversity Management Plan (BMP). Management Plans will contain Operational Aims and Objectives, Rationale for management, Prescriptions and schedules detailing the timing and responsibility for delivering the prescriptions. It is anticipated that the CEMP and BMP will be provided as a planning condition in advance of the commencement of the proposed development.

Habitats

- 5.2.2 The landscaping scheme will provide biodiversity enhancement. This will be confirmed following the completion of a fixed layout plan, and the calculation of the Biodiversity Net Gain metric.

Invasive Species

- 5.2.3 The site has two planting areas containing invasive species, with two species of Cotoneaster preset on the site. Both species are listed under Schedule 9 of the Wildlife & Countryside Act 1981 (as amended). The Cotoneaster can be kept and maintained on-site, but if it is to be removed, this needs to be undertaken using an appropriate invasive species removal and disposal methodology.



Appendix 1: Planning Policy & Legislation

National Policy

The National Planning Policy Framework (NPPF 2021) 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 174 and 180, shown below:

- 174. 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; etc...
- 180. 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.

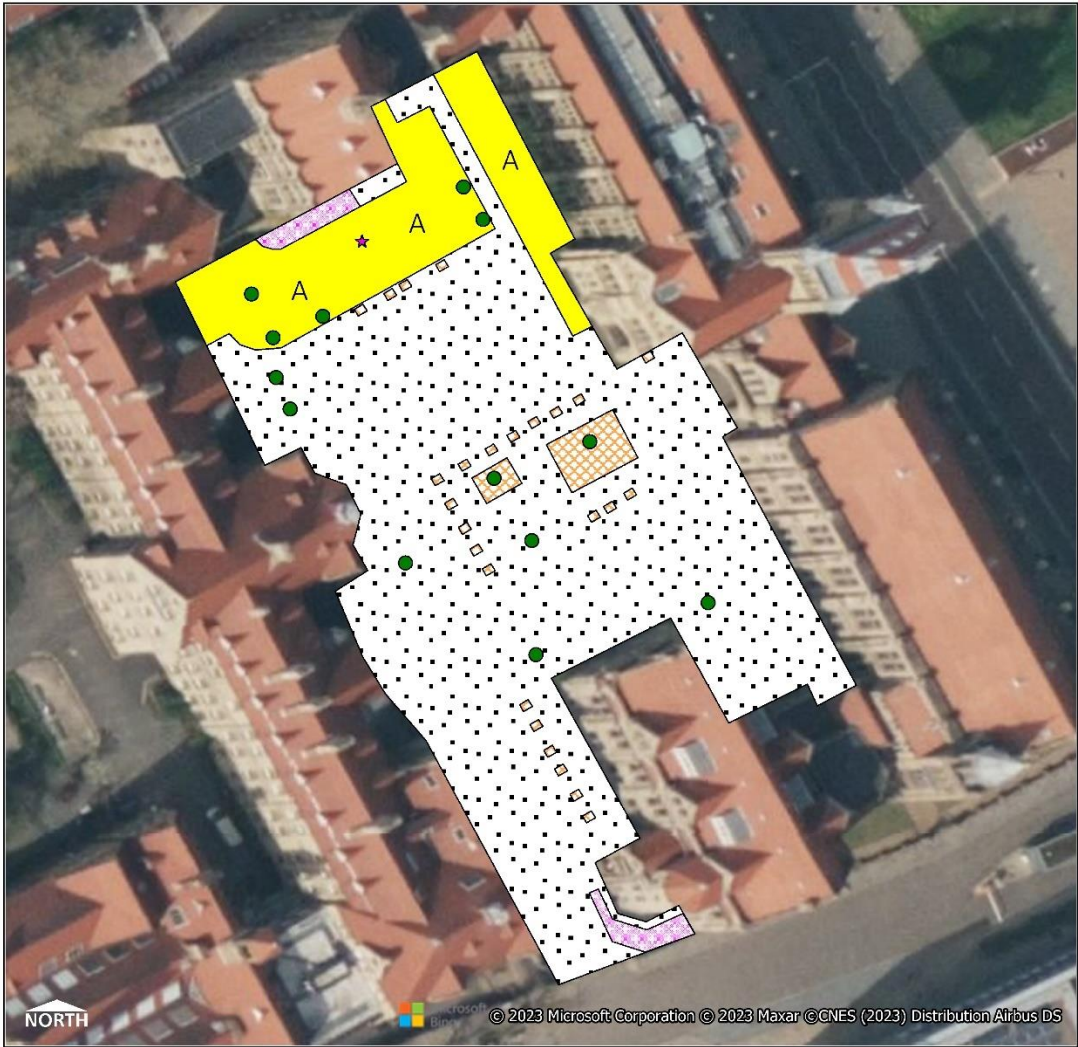
The Protection of Badgers Act 1992 makes it an offence to wilfully, or to attempt to kill, injure, take, possess or cruelly ill-treat a Badger, or intentionally or recklessly interfere with a sett. Interference of a sett includes disturbing badgers during occupation of a sett, or damaging or destroying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



Appendix 2: Habitat Plan



Phase 1 Habitat Map

Key

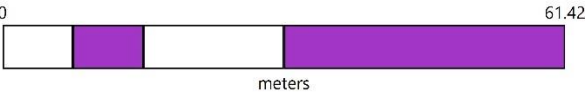
- A Amenity Grassland
- Bare Ground
- Introduced Shrub
- Introduced Shrub - Cotoneaster
- ★ Cotoneaster
- Scattered Tree

Project Name:
The Old Quadrangle, Oxford Road, Manchester

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Drawn By:
Ben Crossthwaite

Date:
09/08/2023



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Appendix 3: Species List

Table 3. Species List		
Common Name	Latin Name	Abundance (or Notes)
Perrenial rye-grass	<i>Lolium perenne</i>	
Common Daisy	<i>Bellis perennis</i>	
Annual Meadowgrass	<i>Poa annua</i>	
Boston Ivy	<i>Parthenocissus tricuspidata</i>	
Pedunculate Oak	<i>Quercus robur</i>	
Norway Maple	<i>Acer platanoides</i>	
Euonymus	<i>Euonymus japonicus</i>	
Pieris var.	<i>Pieris japonica</i>	
Skimmia var.	<i>Skimmia japonica</i>	
Sorbus var.	<i>Sorbus sp.</i>	
Petunia var.	<i>Petunia sp.</i>	

