Science and Industry Museum

Manchester

(Upper Yard and Station Approach)

Ecological Appraisal

2024

RACHEL
HACKING
ECOLOGY

Client	Science Museum Group
Project Title	The Science and Industry Museum, Manchester
Project Reference	RHE.1805.05
Project Leader	Simon Holden
Contact Details	simon@rachelhackingecology.co.uk

	Name	Position	Date
Author	Simon Holden	Associate Ecologist	21/03/2024
Reviewer			
Revision			

RACHEL HACKING ECOLOGY

The Stables
Paradise Wharf
Ducie Street
Manchester
M1 2JN

0161 465 8971

www.rachelhackingecology.co.uk

mail@rachelhackingecology.co.uk

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Executive Summary

Development Details

The client is proposing landscaping works to the Upper Yard and Station Approach plus temporary landscaping to allow for temporary access, removal of the vehicle ramp and associated making good works, and works to the plant room deck at the Science and Industry Museum, Manchester, hereafter referred to as the 'site'.

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.

Outcomes

Habitats on site comprise hardstanding and bare ground, with small areas of ephemeral vegetation and ornamental planting. These are of ecological importance at the site level only.

No potential for protected or notable species is present. Opportunities to enhance the value of the site for wildlife have been identified.

1. Introduction

1.1 Project Brief

1.1.1 Rachel Hacking Ecology Limited was commissioned by the Science Museum Group to carry out an ecological appraisal at The Science and Industry Museum, Manchester, hereafter referred to as the 'site'. The site is in Castlefield on the site of the former Liverpool Road railway station at O.S. grid reference: SJ 830978 (see Figure 1).

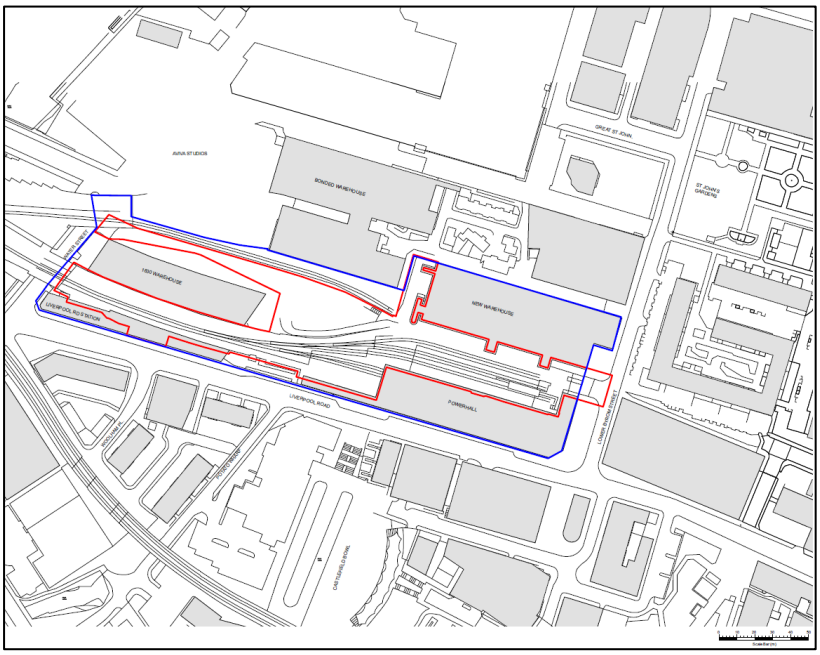


Figure 1. Map showing the red line boundary

Description of Development

1.1.2 Due to the Site's location within the curtilage of, and adjoining, several listed assets, six listed building consent applications will be submitted alongside one planning application for the works. The proposals are for landscaping works to the Upper Yard and Station Approach plus temporary landscaping between these two areas to allow for temporary access, removal of the vehicle ramp and associated making good works, and works to the plant room deck.

1.2 Scope of Work

1.2.1 The Client commissioned Rachel Hacking Ecology to carry out the following works:

- Desk-based study to obtain details of designated sites within 2km

- Record the extent, type, and condition of habitats within the site
- Assess the sites potential to support protected and notable species
- Identify the requirement for any further detailed surveys

2. Methods

2.1 Desk Study

2.1.1 The Magic (Multi-Agency Geographical Information for the Countryside) was interrogated for the presence of Statutory Designated Sites (and European Protected Species licences) within 2km radius of the site.

2.1.2 The Impact Risk Zones for any Site of Special Scientific Interest (SSSI) within 5km of the site was checked to determine whether the Local Planning Authority will need to consult with Natural England.

2.2 Extended Phase 1 Habitat Survey

2.2.1 In accordance with JNCC guidelines[1] 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.

2.2.2 During the walkover habitat and features were assessed for their suitability to support of protected and notable species in accordance with CIEEM guidelines[2]. Field signs of protected, notable, and invasive non-native species, if encountered, were mapped, and described.

2.2.3 The Extended Phase 1 Habitat Survey was undertaken by Simon Holden MCIEEM (Associate Ecologist) on 2nd February 2023. Simon has 18 years' professional experience and is suitably qualified to undertake this type of assessment.

2.2.4 Weather during the survey was dry and overcast with a temperature of 10°C.

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: (CEMP: Biodiversity) which can be attached as a planning condition to the Decision Notice of the forthcoming consent. This process from proposal to implementation needs to consider the 'mitigation hierarchy' of avoid, reduce, compensate, and enhance:

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[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.

- 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 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.

3.2 Designated Sites

3.2.1 No statutory designated sites were identified within the study area.

3.2.2 The site is not within an Impact Risk Zone.

3.2.3 No non-statutory designated sites were identified within the study area.

3.3 Habitats

3.3.1 The habitats survey plan is provided at Appendix 2 (the plan covers a wider area than the application area).

Developed Land; Sealed Surface

3.3.2 Much of the site is surfaced with cobblestones or tarmac (see Photograph 1). This is mapped as bare ground.



Photograph 1 showing the bare ground/sealed surface

Ephemeral/Short Perennial

3.3.3 Small areas of railway ballast and platform are colonised by short perennial species including Sticky Ragwort *Senecio viscosus*, Herb Robert *Geranium robertianum*, Hare's-tail Grass *Lagurus ovatus*, Black Medick *Medicago lupulina* and Bird's-foot Trefoil *Lotus corniculatus* (see Photograph 2).



Photograph 2 showing the short ephemeral vegetation

Bare Ground (Unsealed Surface)

3.3.4 Some of the railway ballast is free of vegetation (see Photograph 3). This is mapped as bare ground.



Photograph 3 showing the unvegetated railway ballast

Ornamental Planting

3.3.5 Several containers are planted with a range of ornamental herbs and grasses.

Individual Trees

3.3.6 Four small Birch and Cherry trees are present within planters.

3.4 Species

Invertebrates

3.4.1 The areas of ephemeral/short perennial vegetation on railway ballast and ornamental planting offer suitable habitat for a range of invertebrates. These areas are small and of importance at the site level only.

4. Assessment

4.1 Development Context

4.1.1 The following assessment is based on the description of proposed works in the document *Capital Works 22-25 New Warehouse* (David Brown 2023).

4.2 Impacts on Designated Sites

4.2.1 No impacts to any statutory or non-statutory designated sites are predicted due to the absence of any impact pathways.

4.3 Impacts on Habitats

4.3.1 The proposed works will result in the temporary disturbance of the habitats on site, but these are of negligible ecological importance.

4.4 Impacts on Species

4.4.1 No impacts to any protected or notable species are anticipated.

5. Recommendations

5.1 Mitigation and Enhancement Measures

Planting

5.1.1 Landscaping proposals include the provision of small trees and ornamental planters. These will provide additional resources for invertebrates at the site level.

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 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 3: Habitats Plan

