

Keepers Cottage,
Shackerstone
Biodiversity Impact Assessment
2024



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Client	Dawn and Brian Matthews
Project Title	Keepers Cottage, Shackerstone Lane, Shackerstone
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1. Introduction

1.1 Project Brief

- 1.1.1 Rachel Hacking Ecology Limited was commissioned in 2024 by David Granger Architectural Design Ltd on behalf of Dawn and Brian Matthews to carry out a Biodiversity Impact Assessment of land at Keepers Cottage, Shackerstone Lane, Shackerstone (O.S. grid reference: SK 3810507930, Figure 1).

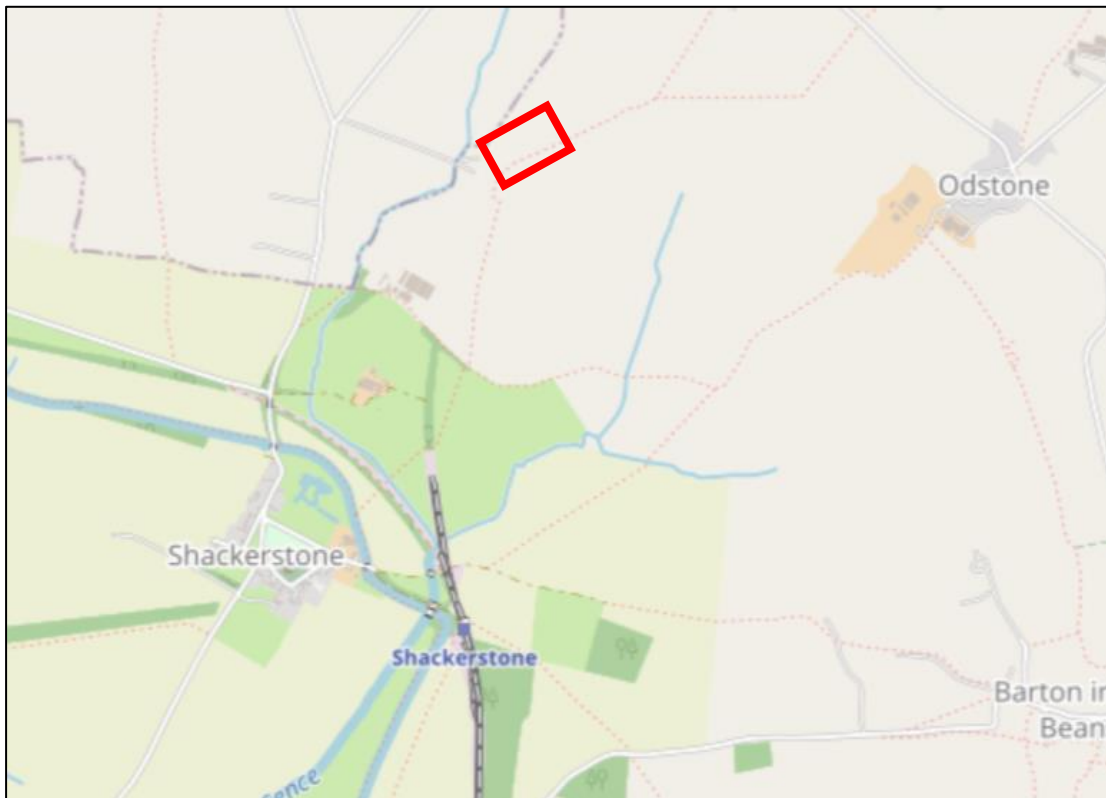


Figure 1. Location Map courtesy of Open Street Maps.

- 1.1.2 The proposed development site is part of the amenity-managed grassland in the rear garden of Keepers Cottage. An old mill race lies on the east boundary which is now blocked off and dry, and a dismantled railway lies along the northwest boundary.

Description of Development

- 1.1.3 The site will be the subject of a planning application for the building of a new stable block on a 14 x 9m concrete base.

1.2 Scope of Work

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

- Record the extent, type, and condition of habitats within and next to the site.
- Calculate the baseline and post-development biodiversity units.



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.

2.2 Biodiversity Net Gain

- 2.2.1 Habitat type, area, and strategic location were uploaded to the Defra Statutory Biodiversity Metric Calculator spreadsheet to determine the baseline value of the site.
- 2.2.2 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.
- 2.2.3 The proposed development site is a vegetated garden which has no requirement for a condition assessment.

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

3. Results

3.1 Pre-development

- 3.1.1 Target notes and photographs are contained in Appendix 1. The habitat survey plan is contained in Appendix 2.

Vegetated Garden

- 3.1.2 The vegetated garden (TN1) consists of an amenity managed grassland of Perennial Ryegrass *Lolium perenne*, with species such as Bulbous buttercup *Ranunculus bulbosus*, White Clover *Trifolium repens* and Dandelion *Taraxacum* sp.. There is a compost heap in the west corner. There is no condition assessment for this habitat.

Hedgerow and Line of Trees

- 3.1.3 A line of trees (TN2) lies along the northwest boundary with tree species such as Holly *Ilex aquifolium* and Ash *Fraxinus excelsior*.
- 3.1.4 A line of trees (TN3) lies along the boundary with the disused mill race to the east. Species include Ash and Oak *Quercus robur* with Hawthorn *Crataegus monogyna*.
- 3.1.5 These are to be retained and are outside the development boundary, so they are not considered any further in this report and they do not have a condition assessment.

3.2 Biodiversity Net Gain

- 3.2.1 The baseline Vegetated Garden (TN1; 0.0126 ha) has a value of 0.03 Biodiversity Units. There are no linear habitats within the red line boundary.

3.3 Post-development

- 3.3.1 The proposed development of a 14 x 9m (0.0126ha) concrete base for a stable block, has a value of 0.00 Biodiversity Units. This is a net loss of 0.03 area habitat units (100%).
- 3.3.2 For the proposed development to achieve a 10% net gain for biodiversity it will be necessary to seek mitigation or compensation for any shortfall in units either by direct management of land by the applicant or the purchase of biodiversity units from a third party.



- 3.3.3 Scenario A is on-site mitigation, which will be required to achieve > 0.033 area units, to meet the 10% Biodiversity Net Gain threshold. On-site mitigation is insufficient to deliver a post-development net gain for biodiversity, so the other option is to secure local compensatory habitat creation.
- 3.3.4 It is proposed that three Silver Birch trees are planted along the site boundary to the north (see Figure 2). This would provide 0.03 area biodiversity units, with an overall net unit change of 0.01 (35.61%) habitat units.
- 3.3.5 Trees should be planted as light standards, with a cross-bar support, rabbit spiral and mulch mat. For a period of five years after planting annual inspection will be carried out. Dead or diseased trees will be replaced and any die-back will be pruned. Missing or damaged guards, ties and supports will be replaced. Trees should be high-pruned and fenced to prevent browsing.
- 3.3.6 The trees will be planted in winter and a five-year aftercare period will involve replacement in the event of any tree dying. Repairs / replacement to exclusion fencing, guards, supports and mulch mats (or chippings) will be carried out if required.

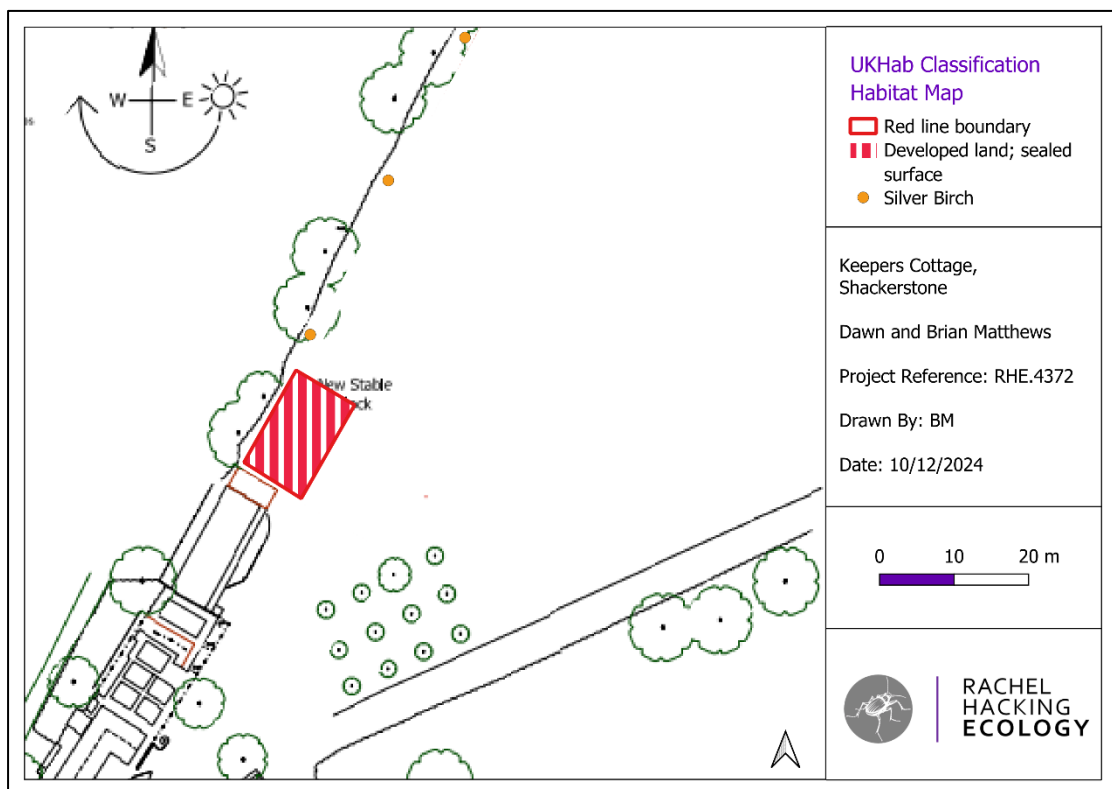


Figure 2. Proposed post-development habitats.

4. Conclusions

- 4.1.1 The site has a baseline habitat value of 0.03 area units. If the proposed on-site development does not provide sufficient mitigation to meet Biodiversity Net Gain legislation and policy, offsite compensation or payment to a third party² would be required to provide compensatory units. It is proposed that three Silver Birch trees will be planted off-site to provide sufficient mitigation.
- 4.1.2 Three light (or half-) standard Silver Birch trees will be planted at least 20m apart on the edge of the existing lawn.
- 4.1.3 The Local Planning Authority may require monitoring over a 30-year period. It is anticipated that this will be detailed in a planning condition.

² <https://www.thehabitat-bank.co.uk/> or <https://environmentbank.com/>



Appendix 1: Target Notes

Reference No.	Habitat	Photograph
1	Vegetated Garden	
2	Line of trees	
3	Line of trees	

Appendix 2: Baseline Habitat Plan

