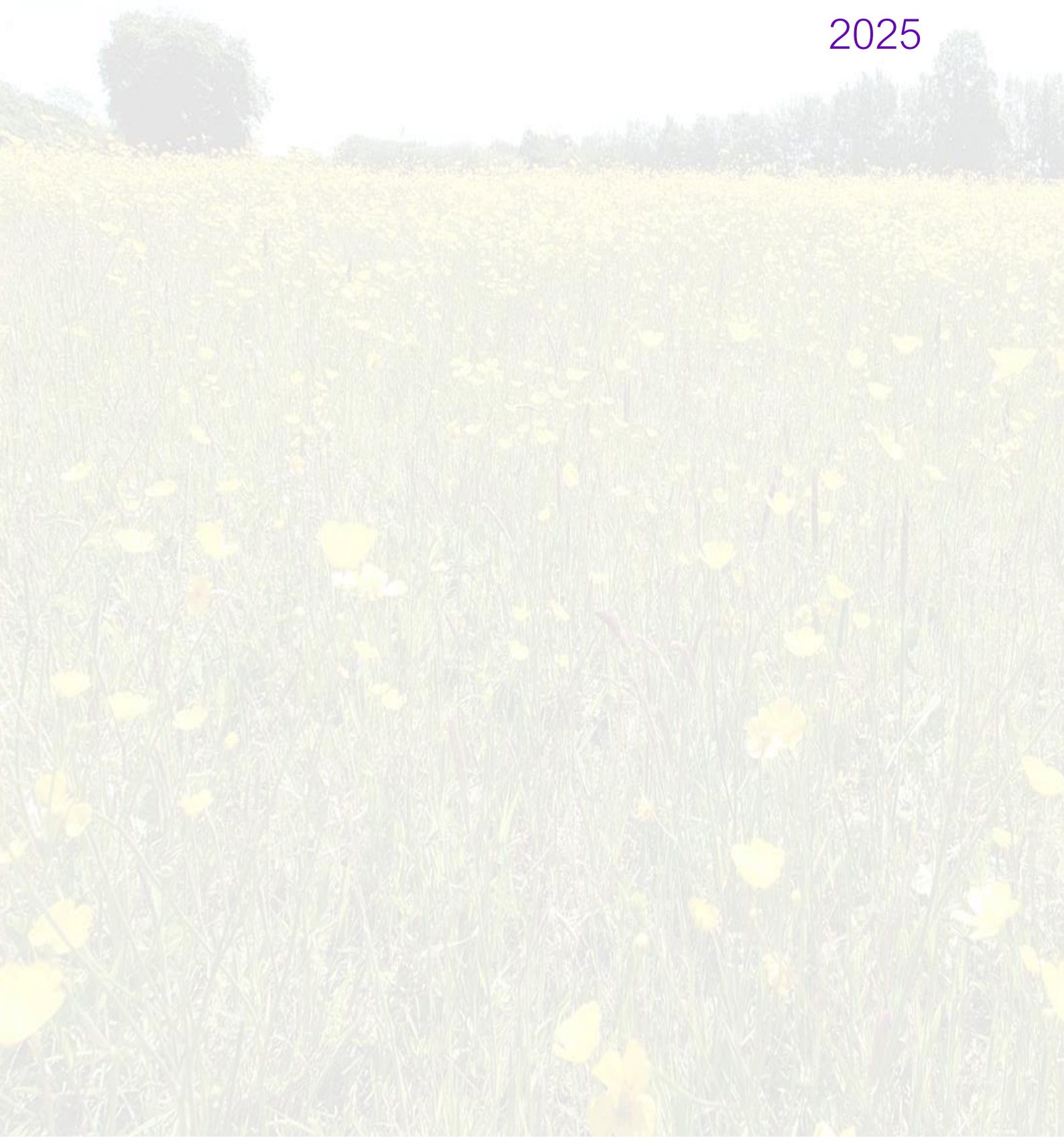


Land off Stakehill Lane, Middleton

2025



Client Trustees of J. P. Milne Will Trust

Project Title Land off Stakehill Lane, Middleton

Project Reference RHE.4098.01

Project Leader Matthew Bottomley

Contact Details matthew@rachelhackingecology.co.uk

	Name	Position	Date
Author	Simon Holden	Associate	03/03/2025
Reviewer	Mark Woods	Principal Ecologist	03/03/2025
Revision	Simon Holden	Associate	19/03/2025



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	6
3. Results	9
4. Assessment	14
5. Recommendations	18
Appendix 1: Planning Policy & Legislation	20
Appendix 2: Desk Study	24
Appendix 3: Target Notes	25
Appendix 4 Habitat Suitability Index	29
Appendix 5: Habitat Plans	30
Appendix 6: Landscape Proposal	34
Appendix 6: Illustrative Masterplan	36



Executive Summary

Development Details

The client is proposing mixed use development at Land off Stakehill Lane, Middleton, hereafter referred to as the 'site'.

This report describes the ecological features of the site and its surroundings and assesses the potential impacts. Recommendations are provided so that the development is compliant with biodiversity policy and legislation.

Ecological Interest

The site is predominantly agricultural and is of site ecological importance. Baseline habitats score 86.39 area units and 5.1 hedgerow units.

The Rochdale Canal SAC/SSSI/SBI is located 130m west of the site (international importance).

Outcomes

Habitat loss would be significant at the site level only and higher quality habitats can be created as part of the proposed development. The BNG assessment indicates that there would be a net loss of approximately 3.87 area units (-4.48%). Offsetting will be required to achieve 10% net gain. Notable species are unlikely to be significantly affected the proposed development.

Potential impacts to the nearby Rochdale Canal SAC will require a Habitat Regulations Assessment.

1. Introduction

1.1 Project Brief

- 1.1.1 Rachel Hacking Ecology Ltd (RHE) was commissioned in 2024 by the Trustees of the JP Milne (Deceased) Will Trust (the Client) to carry out an ecological appraisal of land off Stakehill Lane, Middleton, hereafter referred to as the 'site'. The site is located at O.S. grid reference: SD893084 (see Figure 1).



Figure 1. Map showing the location of the site (Open Street Maps)

- 1.1.2 The site extends to approximately 25ha and is dominated by pastoral farmland. The north boundary of the site is the A627(M) road, the east boundary is the A62(M) road, and the southwest is bordered by Stakehill Lane, beyond which lies Stakehill Industrial Estate.

Description of Development

- 1.1.3 The site will be the subject of an outline planning application for up to 314 houses and 140,440sq ft of employment floorspace.

Relevant Planning History

- 1.1.4 Previous ecology surveys were undertaken by Dunelm Ecology in 2018.

1.2 Scope of Work

- 1.2.1 The Client commissioned RHE to carry out the following works:

- A desk study to identify designated sites and notable species records.
- A walkover survey to update/verify the previous results and record the extent, type, and condition of habitats within the site.
- Calculate the baseline and predicted post-development biodiversity units.
- Search for signs of protected species and assess the potential of habitats and features to support protected and notable species.



2. Methods

2.1 Desk Study

- 2.1.1 The Magic website (Multi-Agency Geographical Information for the Countryside) was interrogated for the presence of Statutory Designated Sites (and European Protected Species licences) within a 2km radius of the site.
- 2.1.2 The site was checked to determine if it is located within an Impact Risk Zone for any Site of Special Scientific Interest (SSSI) and if so, whether the Local Planning Authority will need to consult Natural England.
- 2.1.3 Greater Manchester Local Record Centre was consulted in January 2025 to obtain records of non-statutory designated sites and notable species within 1km of the site.

2.2 Field Survey

Extended Phase 1 Habitat Survey

- 2.2.1 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.
- 2.2.2 During the walkover habitat and features were assessed for their suitability to support 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.
- 2.2.3 The survey was undertaken on 27th March 2024 by Simon Holden MCIEEM (Associate Ecologist), Ben Crossthwaite MCIEEM (Senior Ecologist) and Kate Reed (Senior Ecologist).

Bats

- 2.2.4 Any trees on the site that are to be affected by the proposals were given a ground-level assessment, searching for Potential Roosting Features (PRFs), such as flaking bark, woodpecker holes, knot holes and limb splits.

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.

2.3 Biodiversity Net Gain

- 2.3.1 During the site walkover the ecological condition of each habitat was assessed in accordance with the Defra (2024) guidelines³. Habitat types recorded and mapped during the field survey were converted from the JNCC system to the UK Habitat Classification system⁴.
- 2.3.2 Habitat data including type, area (or length), condition and strategic location were uploaded to the Defra Statutory Biodiversity Metric Calculator 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.
- 2.3.3 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.
- 2.3.4 The pre- and post-development values were compared to determine the predicted change in biodiversity units.
- 2.3.5 The impact of tree loss on was estimated using the Tree Constraints Report, whereby trees in category 'U' were assumed to be lost and all other trees/hedgerows were assumed to be retained. This provides an indication but is unlikely to be highly accurate. Detailed assessment of the Arboricultural Implications Assessment will be required to inform a more accurate BNG assessment. This will be informed by detailed design.

2.4 Habitat Suitability Index

- 2.4.1 Ponds on site were evaluated for their suitability to support Great Crested Newt *Triturus cristatus* using standard methodology⁵.

2.5 Mitigation Hierarchy

- 2.5.1 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:

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

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

⁵ Oldham R. S., Keeble J., Swan M. J. S. & Jeffcote M. 2000. Evaluating the suitability of habitat for the great crested newt (*Triturus cristatus*). Herpetological Journal 10: 143-155.

- 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 The field survey was undertaken in March, which is outside of the optimal period for botanical surveys. However, the habitats on site are species poor and it was possible to categorise them with confidence. This did not present a significant constraint.

3.2 Designated Sites

- 3.2.1 Statutory designated sites within 2km of the site are listed below in Table 1.

Table 1. Statutory Designated Sites			
Name	Status	Location/distance	Interest
Rochdale Canal	Special Area of Conservation (SAC)	130m west	Floating water-plantain <i>Luronium natans</i> .
Rochdale Canal	Site of Special Scientific Interest (SSSI)	130m west	Macrophyte and invertebrate assemblages.
Hopwood Woods	Local Nature Reserve (LNR)	400m west	Woodland, ponds and running water.

- 3.2.2 The site is located within the Impact Risk Zone for Rochdale Canal SSSI. The proposed development will require the Local Planning Authority to consult with Natural England.
- 3.2.3 Non-statutory sites within 1km of the site are listed in Table 2.

Table 2. Non-statutory Designated Sites			
Name	Status	Location/distance	Interest
Rochdale Canal (Scowcroft to Warland)	Site of Biological Importance (SBI)	150m west	Aquatic vegetation. White-clawed Crayfish (2011). Canals, woodlands and grassland.
A627M by Tandle Hill	SBI	35m northeast	Grassland.
Gerrard Wood	SBI	225m east	Woodland.
Lords Wood	SBI	410m west	Ancient woodland. Ponds. Birds.
Tandle Hill Country Park	SBI	660m east	Birds. Fungi.

Table 2. Non-statutory Designated Sites

Name	Status	Location/distance	Interest
Hopwood Clough	SBI	800m southwest	Ancient woodland.

3.3 Habitats

- 3.3.1 Target Notes and photographs are contained in Appendix 3 and the habitats survey plan is contained in Appendix 5. Condition Assessments are supplied as a separate spreadsheet.

Grassland

- 3.3.2 The site is dominated by modified (improved) grassland cut for silage and aftermath grazed (TN1). This habitat is species poor with Yorkshire Fog *Holcus lanatus*, Perennial Rye-grass *Lolium perenne* and Creeping Buttercup *Ranunculus repens*.
- 3.3.3 Two fields in the south of the site support grassland of a higher distinctiveness (poor semi-improved/other neutral grassland; TN2). Species here include Smooth Meadow-grass *Poa Pratensis*, Creeping Bent *Agrostis stolonifera*, Red Fescue *Festuca rubra*, Sweet Vernal-grass *Anthoxanthum odoratum*, Cock's-foot *Dactylis glomerata*, Meadow Foxtail *Alopecurus pratensis*, Field Wood-rush *Luzula campestris*, Yarrow *Achillea millefolium* and Dandelion *Taraxacum* agg.

Scrub

- 3.3.4 Patches of Bramble *Rubus fruticosus* agg. scrub are present around the edges of fields. Small parcels of mixed scrub are present in the form of relic hedgerows.

Tall Ruderal Herb

- 3.3.5 Tall ruderal vegetation is present in areas that have been subject to disturbance. Typical species include Common Nettle *Urtica Dioica*, Rosebay Willowherb *Chamaenerion angustifolium* and Himalayan Balsam *Impatiens glandulifera*.

Ponds

- 3.3.6 Several ponds are present on site. Ponds 1-5 are small reservoirs, now stocked and managed as coarse fisheries (TN3). A very small field pond is present towards the centre of the site (TN4).

Bare Ground

- 3.3.7 Areas of exposed earth are present where agricultural practices have disturbed the ground. (TN5).

Hedgerows and Lines of Trees

- 3.3.8 Numerous hedgerows are present as field boundaries. These are generally species poor native hedgerows dominated by Hawthorn *Crataegus monogyna*. Most of the hedgerows are intensively managed (flail cut) and in good condition, only failing the nutrient enrichment criterion (TN6). Some of

the hedgerows have developed into tree-lines. Small sections of ornamental hedgerow are also present (TN7).

Horticultural

- 3.3.9 Areas used as a commercial plant nursery are present towards the centre of the site.

3.4 Animal Species

Invertebrates

- 3.4.1 No records of notable invertebrate species were returned from or near the site. White-clawed Crayfish *Austropotamobius pallipes* was recorded in the Rochdale Canal in 2015.
- 3.4.2 Habitats on site are of limited value for invertebrates and are likely to support an assemblage of common and widespread species. No suitable habitat for White-clawed Crayfish is present on site.

Amphibians

- 3.4.3 Records of Great Crested Newt *Triturus cristatus* were returned from 1km northwest of the site (2024).
- 3.4.4 Ponds 1-5 are managed as coarse fisheries. Ponds 1-5 offer poor suitability and Pond 6 offers below average suitability for Great Crested Newt (see Appendix 4). These ponds and a further pond off-site were surveyed in 2019 and negative results were returned.
- 3.4.5 The site is largely isolated from other suitable habitat by motorways and urban development and this species is unlikely to be present.
- 3.4.6 Common Toad *Bufo bufo* is recorded in the wider area. Ponds 1-5 offer suitable breeding habitat for this species, which can co-exist with fish stock.

Reptiles

- 3.4.7 Occasional records of Grass Snake *Natrix helvetica* (1993) and Slow Worm *Anguis fragilis* (1995) were returned from Tandle Hill, east of the motorway.
- 3.4.8 Habitats on site are largely unsuitable for reptile species and the site's isolation makes the presence of reptiles very unlikely.

Birds

- 3.4.9 Numerous bird records were returned. The only record of interest was of Barn Owl *Tyto alba* from a building adjacent to the south of the site in 2017. It was also recorded 700m north (2022).
- 3.4.10 A Barn Owl box was recorded on a tree in the south of the site (TN8). This is likely to have been installed as mitigation during neighbouring building works. The unmanaged grassland (TN2) offers suitable foraging habitat and is connected to further habitat to the south. However, the adjacent motorway is

likely to act as a barrier to habitats to the north and east. It also reduces the likelihood of this species being present on site⁶. However, this cannot be discounted without further assessment.

- 3.4.11 A breeding bird survey was undertaken in 2018 (Dunelm Ecology). Thirty-five species were recorded with most activity associated with the habitats bordering the site.
- 3.4.12 Habitats on site are likely to support an assemblage of common and widespread bird species.

Badger

- 3.4.13 The desk study returned several records of Badger *Meles meles*. Most of these are on land separated by major roads.
- 3.4.14 No setts were recorded during the survey. Occasional mammal paths were recorded, and it is possible that Badgers use the site to forage and commute, but no conclusive evidence was identified.

Bats

- 3.4.15 The desk study returned records of Common Pipistrelle *Pipistrellus pipistrellus*, unidentified Pipistrelle species *Pipistrellus* sp. and Noctule *Nyctalus noctula*.
- 3.4.16 Woodland edge, mature trees, hedgerows and ponds on site offer foraging opportunities, but the proximity of major roads reduces the value of these habitats.
- 3.4.17 Bat activity survey in 2019 recorded very low levels of activity by small numbers of common widespread species.
- 3.4.18 There are no buildings or structures on site. Mature trees may offer potential to support roosting bats, but significant roosts are unlikely to be present due to the low-quality foraging habitats.

Otter

- 3.4.19 No records of Otter *Lutra lutra* were returned and no evidence was recorded during the survey.
- 3.4.20 Ponds 1-5 offer suitable foraging habitat for Otter. A tributary of Whit Brook flows to the southeast of the site but a culvert reduces connectivity to the site. Ponds 1-5 could potentially be used by Otter, but it is unlikely that Otters would be using the site for shelter or breeding.

Water Vole

- 3.4.21 Records of Water Vole *Arvicola amphibius* were returned from the Rochdale Canal 800m southwest of the site (2000).
- 3.4.22 Ponds 1-5 offer sub-optimal habitat and due to its isolation, the site is unlikely to support Water Voles.

Other Mammals

- 3.4.23 Numerous records of Brown Hare *Lepus europaeus* were returned, mostly from land north and east of the motorway. Habitats on site could potentially be used by Brown Hare but the site is unlikely to be important in maintaining the species.

⁶ <https://www.barnowltrust.org.uk/product/barn-owls-and-major-roads-results-and-recommendations-from-a-15-year-research-project/>

- 3.4.24 Hedgehog *Erinaceus europaeus* is recorded in the wider area and could potentially use habitats on site for foraging and dispersal.

3.5 Invasive Species

Plants

- 3.5.1 No records of any invasive non-native species were returned.
- 3.5.2 Himalayan Balsam is present across much of the site (TN9). Variegated Yellow Archangel *Lamiastrum galeobdolon argentatum* is also present in places (TN10).

4. Assessment

4.1 Development Context

- 4.1.1 The following assessment assumes that the site will be cleared and remodelled to enable the development of 350 dwellings, commercial units and associated infrastructure (see Appendix 6).

4.2 Impacts on Designated Sites

- 4.2.1 No direct impacts to any statutory or non-statutory designated sites are predicted. There is potential for impacts to affect the qualifying features of the Rochdale Canal SAC, SSSI, SBI due to changes in water quality or hydrology.
- 4.2.2 Recreational pressure is considered unlikely to affect any designated sites within the study area. The Rochdale Canal SAC, SSSI, BSI is designated for its macrophyte interest, including Floating-leaved Pondweed. Increased numbers of people using the towpath for walking and cycling. would not affect these features.
- 4.2.3 A Habitat Regulations Assessment will be required to assess the potential for likely significant effects on the SAC. Further assessment is beyond the scope of this report.

4.3 Impacts on Habitats

- 4.3.1 The proposed development will result in the loss of the majority of habitats on site. These habitats are generally of low distinctiveness and their loss is significant at the site level.
- 4.3.2 The native hedgerows are habitats of principal importance under the NERC Act.
- 4.3.3 Ponds 1-5 will be retained.
- 4.3.4 Retained trees and hedgerows could be damaged during construction. Retained ponds could be polluted during construction.
- 4.3.5 The proposal includes the de-culverting of a tributary of Whit Brook, which currently passes beneath the site. This will create new riparian habitat and is a positive impact at the site level.

4.4 Biodiversity Net Gain

- 4.4.1 Baseline area habitat scores are presented in Table 3.

Table 3. Baseline Biodiversity Units		
Habitat	Area (ha)	Units
Grassland	21.53	64.05
Scrub	0.325	1.5
Ponds (non-priority)	1.06	4.32
Ruderal (tall forbs)	0.345	0.79
Ruderal (ephemeral)	0.077	0.18
Introduced Shrub	0.047	0.11
Bracken	0.046	0.11
Bare Ground	0.336	0.77
Non-cereal Crops	0.024	0.06
Developed Land (sealed surface)	1.094	0.00
Individual trees	1.56	14.52
Total	24.88 (excluding trees)	86.39

4.4.2 Hedgerows on site total 1.57km in length. They score 5.1 hedgerow units.

4.4.3 The application is outline and a detailed landscaping scheme is not required at this stage. An indicative landscape plan (see Appendix 5) indicates the proposed development could deliver 61 biodiversity units (see Table 4). With retained habitats this is predicted to deliver a post-development score of 82.52 habitat units.

Table 4. Potential Biodiversity Units		
Habitat	Area (ha)	Units
Other Neutral Grassland	2.32	9.95
Amenity Grassland	0.32	0.71
Mixed Scrub	5.24	40.37
Urban Trees	0.56	1.96
Rain Garden	0.48	1.97
Sustainable Drainage System	0.813	2.25
Developed Land (sealed surface)	12.82	0.0
Total	23.07 (excluding trees)	61.53

4.5 Impacts on Animal Species

Invertebrates

- 4.5.1 No notable invertebrate species or assemblages are likely to be affected. New habitats created will provide resources for invertebrates. This would be a positive impact at the site level.

Amphibians

- 4.5.2 No impacts to Great Crested Newt are likely. Ponds 1-5 will be retained so suitable breeding habitat for Common Toad will be retained. New ponds will be created as part of the sustainable drainage system. These will provide additional habitat for amphibians. This would be a positive impact at the site level.

Reptiles

- 4.5.3 No impacts to reptiles are likely.

Birds

- 4.5.4 Clearance of trees, hedgerows and scrub could impact on nesting birds, should they be present. This would be a short-term negative impact at the site level. Wild birds are protected against killing and injuring and damage or destruction of nests.

Barn Owl

- 4.5.5 Construction activities could result in disturbance to Barn Owl, should this species be nesting on site. This would be a short-term negative impact at the site level. As a Schedule 1 listed species, Barn Owl is protected against disturbance while nesting.
- 4.5.6 Loss of grassland habitat may result in a minor availability of foraging habitat.

Badger

- 4.5.7 No impacts to Badger setts are predicted. Loss of modified grassland will reduce the availability of foraging habitat, but this is not considered significant.
- 4.5.8 Badgers could potentially be harmed if they access a construction site.

Bats

- 4.5.9 No impacts to bat roosts are likely to occur. Removal of mature trees could potentially result in the loss of a bat roost and harm to individual bats, should they be present. The presence of any significant roosts is considered unlikely.
- 4.5.10 Loss of hedgerows and trees may reduce the availability of foraging habitats. This is unlikely to be of significance due to the low value of the habitats on site.
- 4.5.11 Increased artificial light is unlikely to impact bats significantly as proximity to major roads severely limits the value of the site for foraging bats.
- 4.5.12 New habitats created will provide foraging and roosting opportunities for bats.

Other Mammals

- 4.5.13 No impacts to Brown Hare are likely to occur.
- 4.5.14 The proposed development could result in habitats being fragmented due to fencing. Small numbers of Hedgehogs could be harmed during site clearance. These would be negative impacts at the site level.

4.6 Invasive Species

Plants

- 4.6.1 Earthworks and site clearance could result in the spread of Himalayan Balsam and Variegated Yellow Archangel through the transport of soil and other materials. This would result in an offence under the Wildlife and Countryside Act 1981 (as amended).

Animals

- 4.6.2 No impacts associated with invasive non-native animal species are predicted.

5. Recommendations

5.1 Further Surveys

Barn Owl

- 5.1.1 The Barn Owl box on site should be inspected by a licensed surveyor to determine whether it is in use and whether it is likely to be a nest site. Survey should be undertaken between April and August.

Badger

- 5.1.2 A pre-construction Badger survey should be undertaken to check for any new setts that could be created on or adjacent to the site.

Bats

- 5.1.3 Although the bat activity survey was undertaken in 2018, habitats on site have not changed significantly and it is unlikely that the status of bats at the site has changed. Potential impacts to bats can be mitigated through sensitive design, ensuring suitable foraging habitats and dark areas are created.
- 5.1.4 Any mature trees to be removed should be subject to an assessment by a suitably qualified ecologist to determine the potential for roosting bats.

5.2 Mitigation and Enhancement 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 Offsite woodland and retained trees and hedgerows will be protected during construction with fencing in accordance with a Tree Protection Plan.
- 5.2.3 Ponds will be protected from pollution by silt, fuels and building materials during construction.
- 5.2.4 Some offsetting will be required to achieve 10% Biodiversity Net Gain. This could be through management of other land controlled by the developer or by purchase of units from a third party.

Nesting Birds

- 5.2.5 Impacts on nesting birds will be avoided by carrying out site clearance and similar operations outside of the bird breeding season (March- August). If vegetation has to be cleared during the bird breeding season 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.
- 5.2.6 New buildings should incorporate nesting bricks for species such as Swift *Apus apus* and House Sparrow *Passer domesticus*.

Badgers

- 5.2.7 Standard mitigation measures will avoid risks to Badgers during construction.

Bats

- 5.2.8 Dark corridors should be maintained across the site to maintain and enhance foraging opportunities.
- 5.2.9 New buildings should incorporate roosting bricks for bats.

Hedgehog

- 5.2.10 Garden fences will be fitted with Hedgehog gaps at the bases (13cm x 13cm) to enable Hedgehogs to move through the site. Hedgehog houses should be installed in dense vegetation within green infrastructure.

Appendix 1: Planning Policy & Legislation

National Policy

The National Planning Policy Framework (NPPF 2025) 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 187 and 193, shown below:

- 187. 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 and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs;
 - 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.
- 193. 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 reasons⁷⁰ 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 Act 2023 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 Act 2023 strengthens the duty on public authorities (NERC Act, 2006) to have regard to the conservation of biodiversity.

The Environment Act 2023 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: Desk Study

The report includes a summary of the species records that were made available. For further details please submit a written request to Rachel Hacking Ecology. Some records cannot be shared without the owner's permission.



Appendix 3: Target Notes

Reference No.	Habitat	Photograph
1	Modified grassland	
2	Modified grassland in south (poor semi-improved). Appears unmanaged with tussocky sward. Foraging opportunities for Barn Owl/Kestrel.	

3	Ponds 1-5 are former lodges, now stocked and managed as coarse fisheries.	
4	Small field pond SD89380819	
5	Bare ground	

6	Species poor hedgerow	
7	Ornamental hedgerow	
8	Barn Owl box on tree in south.	

9	Himalayan Balsam seedlings	
10	Variegated Yellow Archangel	

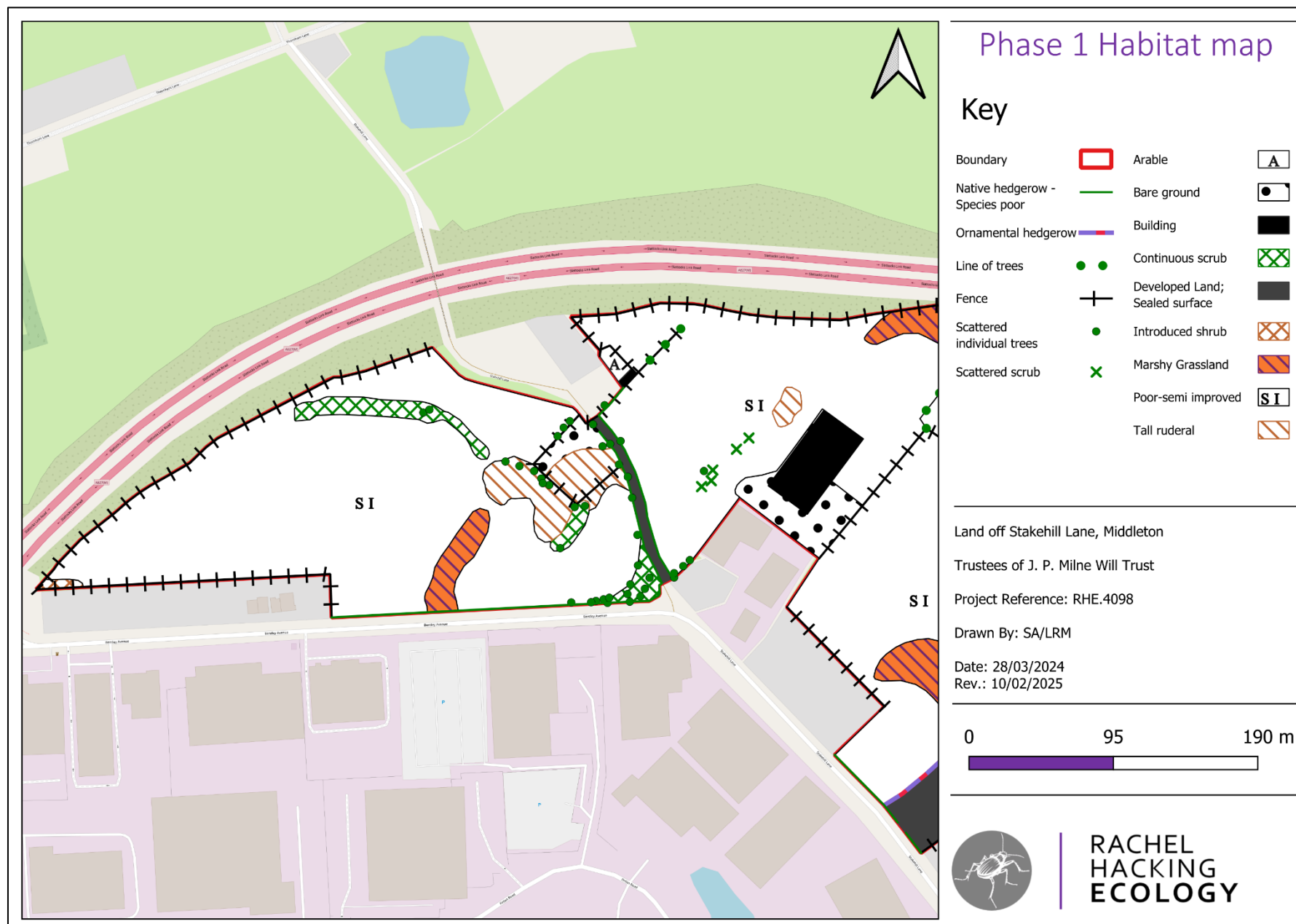
Appendix 4 Habitat Suitability Index

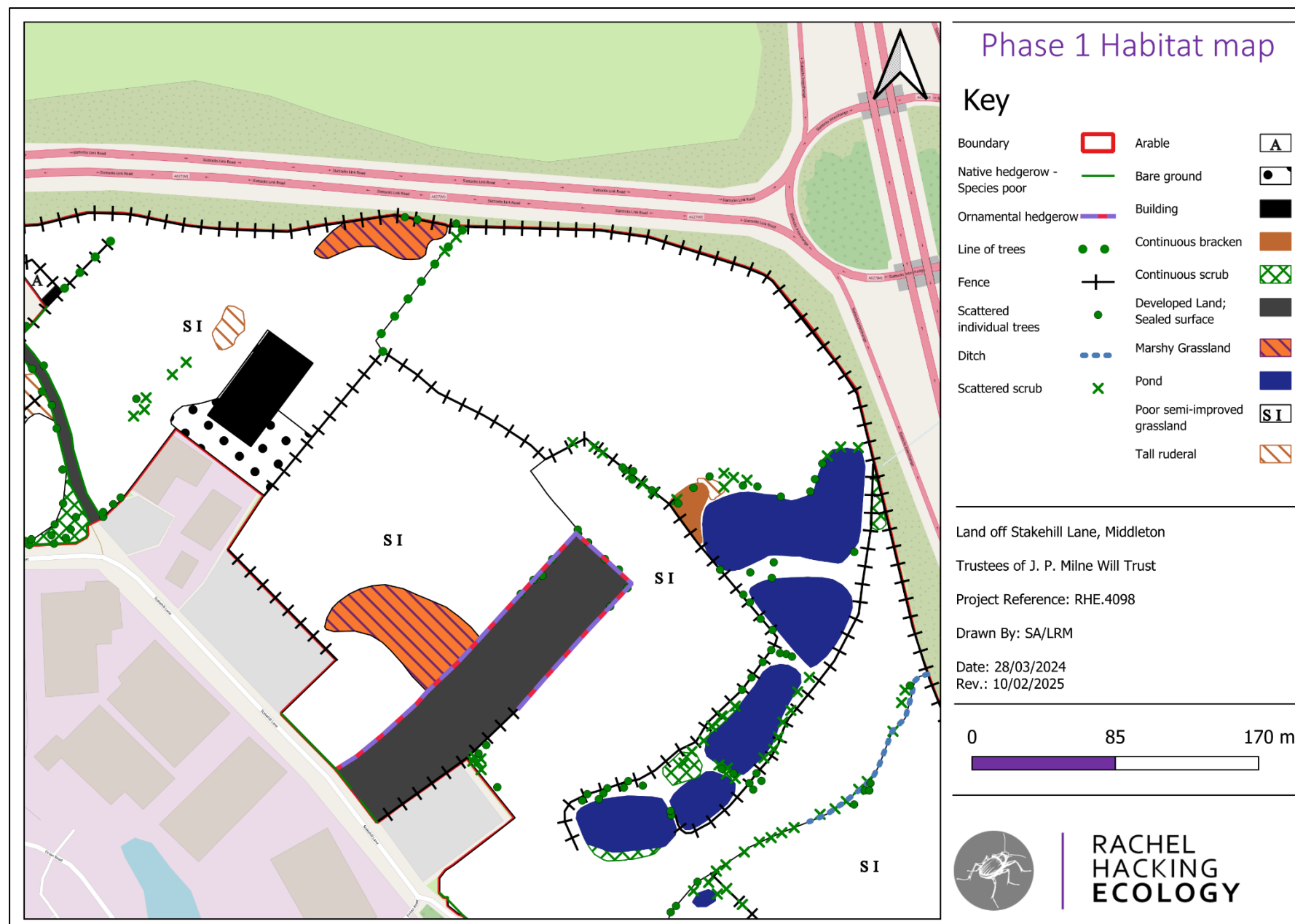
Pond 1	SI ₁		SI ₂		SI ₃		SI ₄		SI ₅		SI ₆		SI ₇		SI ₈		SI ₉		SI ₁₀		Product	HSI	Suitability
	Location		Pond Area		Pond Drying		Water Quality		Shade		Fowl		Fish		Ponds		Terrestrial Habitat		Macrophytes				
	Zone A	1	>2000m2	0.8	Never Dries	0.9	Moderate	0.67	0-60%	1	Major	0.01	Major	0.01	6	0.84	Moderate	0.67	6-10%	0.4	1.1E-05	0.3188	Poor
Pond 2	SI ₁		SI ₂		SI ₃		SI ₄		SI ₅		SI ₆		SI ₇		SI ₈		SI ₉		SI ₁₀		Product	HSI	Suitability
	Location		Pond Area		Pond Drying		Water Quality		Shade		Fowl		Fish		Ponds		Terrestrial Habitat		Macrophytes				
	Zone A	1	1900m2	0.81	Never Dries	0.9	Moderate	0.67	0-60%	1	Major	0.01	Major	0.01	5	0.75	Moderate	0.67	6-10%	0.4	9.8E-06	0.3156	Poor
Pond 3	SI ₁		SI ₂		SI ₃		SI ₄		SI ₅		SI ₆		SI ₇		SI ₈		SI ₉		SI ₁₀		Product	HSI	Suitability
	Location		Pond Area		Pond Drying		Water Quality		Shade		Fowl		Fish		Ponds		Terrestrial Habitat		Macrophytes				
	Zone A	1	1500m2	0.88	Never Dries	0.9	Moderate	0.67	0-60%	1	Major	0.01	Major	0.01	5	0.75	Moderate	0.67	6-10%	0.4	1.1E-05	0.3183	Poor
Pond 4	SI ₁		SI ₂		SI ₃		SI ₄		SI ₅		SI ₆		SI ₇		SI ₈		SI ₉		SI ₁₀		Product	HSI	Suitability
	Location		Pond Area		Pond Drying		Water Quality		Shade		Fowl		Fish		Ponds		Terrestrial Habitat		Macrophytes				
	Zone A	1	500-700m2	1	Never Dries	0.9	Moderate	0.67	0-60%	1	Major	0.01	Major	0.01	5	0.75	Moderate	0.67	6-10%	0.4	1.2E-05	0.3224	Poor
Pond 5	SI ₁		SI ₂		SI ₃		SI ₄		SI ₅		SI ₆		SI ₇		SI ₈		SI ₉		SI ₁₀		Product	HSI	Suitability
	Location		Pond Area		Pond Drying		Water Quality		Shade		Fowl		Fish		Ponds		Terrestrial Habitat		Macrophytes				
	Zone A	1	1400m2	0.895	Never Dries	0.9	Moderate	0.67	0-60%	1	Major	0.01	Major	0.01	5	0.75	Moderate	0.67	6-10%	0.4	1.1E-05	0.3188	Poor
Pond 6	SI ₁		SI ₂		SI ₃		SI ₄		SI ₅		SI ₆		SI ₇		SI ₈		SI ₉		SI ₁₀		Product	HSI	Suitability
	Location		Pond Area		Pond Drying		Water Quality		Shade		Fowl		Fish		Ponds		Terrestrial Habitat		Macrophytes				
	Zone A	1	<50m2	0.05	Never Dries	0.9	Poor	0.33	0-60%	1	Absent	1	Absent	1	5	0.75	Moderate	0.67	6-10%	0.4	0.00298	0.5591	Below Average

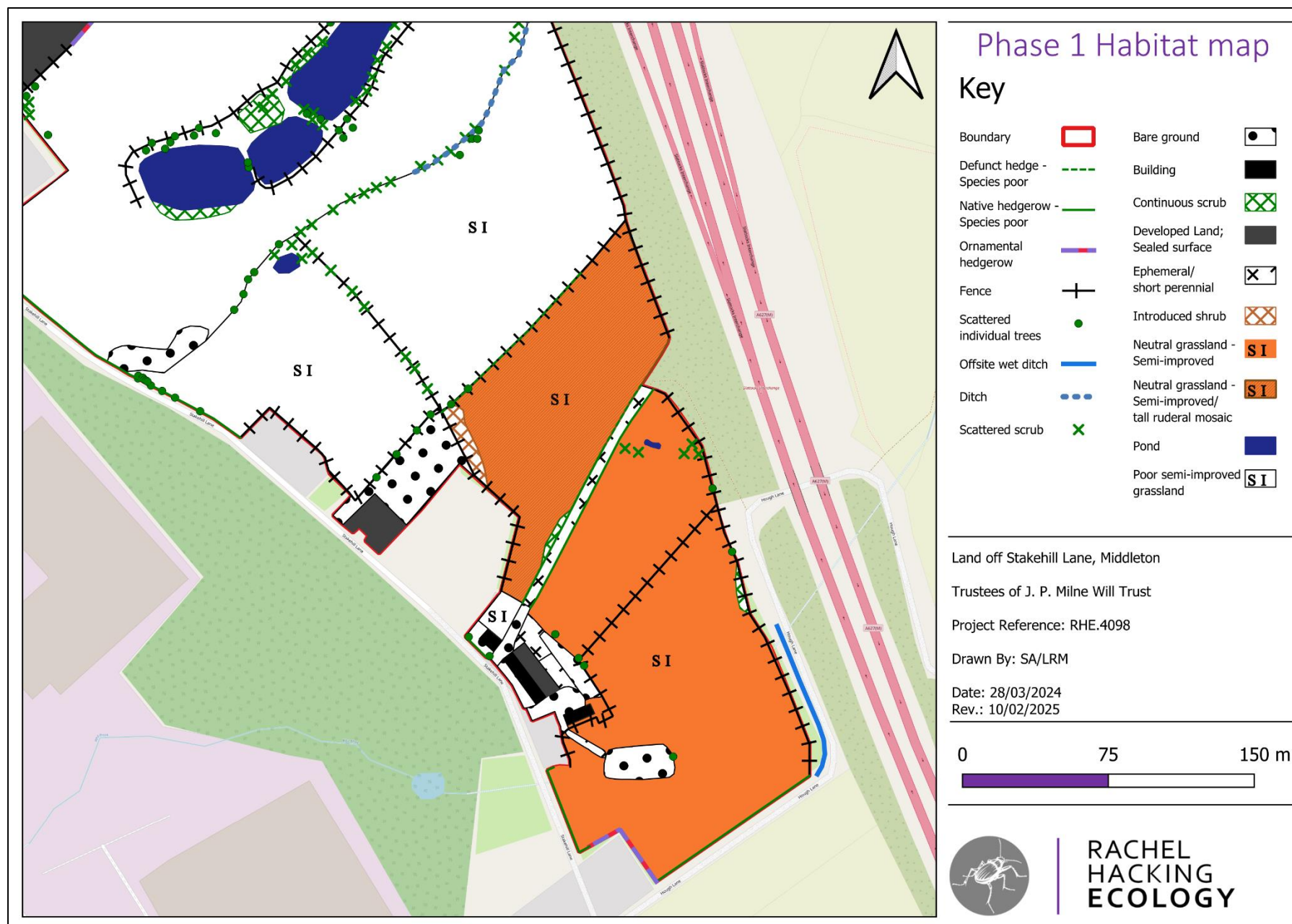
HSI Calculator ©Owen Crawshaw, 2015. All Rights Reserved. Use of This Resource (HSI Calculator) Without Accreditation of The Copyright Holder is Strictly Prohibited.

Appendix 5: Habitat Plans









Appendix 6: Landscape Proposal





Appendix 6: Illustrative Masterplan

