Old Bath Road, Charvil,

Berkshire

Ecological Impact Assessment

2025

Client	Partington Associates
Project Title	Old Bath Road, Charvil, Berkshire
Project Reference	RHE.4456
Project Leader	Lucia Ruiz Mut
Contact Details	lucia@rachelhackingecology.co.uk

	Name	Position	Date
Author	Lucia Ruiz Mut	Ecologist	17/02/2025
Reviewer	Simon Holden	Associate	21/10/2025
Revision	Lucia Ruiz Mut	Senior Ecologist	20/10/2025

RACHEL HACKING ECOLOGY

The Stables, Paradise Wharf, Ducie Street, Manchester, M1 2JN

0161 465 8971

www.rachelhackingecology.co.uk

mail@rachelhackingecology.co.uk

Report Contents

Executive Summary

Development Details

The client is proposing residential an industrial development at Old Bath Road, Charvil, 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.

Ecological Interest

The site has a low level of ecological interest. The site and immediate surroundings offer suitable terrestrial habitat for amphibians and reptiles, nesting opportunities for birds, dispersal and foraging opportunities for [redacted]Hedgehog and bats. Ecological features range from site to county level importance. The site is adjacent to Twyford Gravel Pits (Loddon Reserve & Charvil Country Park) and Charvil Country Park West & Charvil Meadows which feature Habitats of Principal Importance. Of relevance is the wet woodland adjacent to the southern boundary of the site.

Outcomes

Further survey work is required to establish the suitability for roosting bats and inform mitigation requirements.

No direct impacts to wildlife designations or habitats of ecological importance are anticipated. Indirect impacts such as pollution or habitat degradation will be avoided via implementation of a Construction Ecological Management Plan (CEMP). Potential impacts to protected and/or notable species will be effectively avoided or sufficiently minimized by implementation of Reasonable Avoidance Measurements.

The proposals will result in a >10% biodiversity net gain, however trading rules are not met due to the loss of trees which will be highly unlikely to survive if retained. Proposed tree planting is maximized on site. It is considered that the mitigation and enhancements described within this report should enable the proposed development to be delivered in conformity with national and local planning policy.

1. Introduction

1.1 Project Brief

1.1.1 Rachel Hacking Ecology Limited was commissioned in 2025 by Partington Associates to carry out an Ecological Impact Assessment (EcIA) and Biodiversity Net Gain Assessment of land at Old Bath Road, Charvil, Berkshire, here after referred to as the 'site'. The site is located at O.S. grid reference: SU 78155 76027 (see Figure 1).

Figure 1. Map showing the location of the site. Basemap source Open Street Maps.

1.1.2 The site comprises Grove Service Station which consists of developed land including four buildings. To the south of the site is Loddon Nature Reserve, featuring several large water bodies and areas of wet woodland. To the east and west of the site are residential areas and to the north are areas of arable land with associated hedgerows.

Description of Development

1.1.3 The site will be the subject of a planning application for a change of use of the site to create a fuel oil storage and distribution facility, including installation of fuel oil storage tanks and parking spaces plus ancillary development which will require the demolition of the central garage and the two small outbuildings.

Revision

1.1.4 The development proposals have been updated resulting in changes in the red line boundary, landscape proposals, and further works to an existing building on site. Additionally, further survey work regarding the status of roosting bats on site has now been undertaken[1]. Subsequently, the present Ecological Impact Assessment has been revised to account for those changes and re-assess the potential ecological impact derived from the proposed development.

1.2 Scope of Work

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

- Desk-based study, including data search request to Thames Valley Environmental Records Centre to obtain details of designated sites, protected and notable species within a 2km radius of the site.
- Habitat survey of the site, to the UK Habitat Classification System (UKHabs) standards, including taking botanical species list.
- Assessment of the habitats on site and immediately adjacent for their potential to support protected species and survey for invasive non-native species on site.
- Ground-level tree assessment of mature trees on for their potential to support roosting bats.
- Biodiversity Net Gain Assessment to include calculation of baseline biodiversity score using the habitat survey data collected and the Statutory Defra Metric, and evaluation of predicted changes in biodiversity units using detailed landscape and planting plans (to be provided by the client landscaping team).
- Detailed report including full species list and a digitised habitat map of the site plus recommendations for further protected species surveys, if necessary, and BNG Assessment.

1.3 Aims of the Assessment

1.3.1 The aims of the assessment were to:

- Identify and evaluate the ecological baseline conditions.
- Identify potentially significant ecological impacts likely to result from the Proposed Development.
- Identify appropriate mitigation measures to avoid, minimise or compensate for ecological impacts.
- Identify residual ecological impacts (after mitigation measures).

[1] James Webster (2025). Old Bath Road, Charvil, Berkshire. Bat Emergence Survey 2025.

- Assess the legal and policy implications of residual ecological impacts.
- Identify appropriate measures to enhance the biodiversity value of the Site.

1.3.2 This report has been produced with reference to current EcIA guidelines[2] and BS 42020:2013[3] which involves the evaluation of the ecological receptors and potential adverse effects upon them.

[2] CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.2. Chartered Institute of Ecology and Environmental Management, Winchester

[3] BSI (2013) BS42020:2013 Biodiversity: Code of Practice for Planning and Development. London:BSI

2. Methods

2.1 Scope

2.1.1 The Zone of Influence (ZoI) is the area over which the proposed development may affect important ecological features. In this case, it is considered that the ZoI of the Proposed Development is limited to the application boundary and immediately adjacent habitats.

2.1.2 The study area extends beyond the application boundary to include:

- Statutory designated sites of international importance such as Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar Sites within 5km.
- Statutory designated sites of national importance such as Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs) within 2km.
- Non-statutory designations such as Local Wildlife Sites (LWSs) within 2km.

2.1.3 Ecological features considered within the scope of the assessment comprise:

- Designated sites for nature conservation as listed above.
- Species protected by legislation (see Appendix 1) and habitat and species of principal importance for the conservation of biodiversity, as identified under the S41 of the NERC Act 2006.
- Habitats and species identified as priorities in the Berkshire Biodiversity Action Plan (LBAP).

2.2 Desk Study

2.2.1 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.

2.2.2 The site was checked to determine if it is located within an Impact Risk Zones for any Site of Special Scientific Interest (SSSI) and if so, whether the Local Planning Authority will need to consult Natural England.

2.2.3 The Biological Record Centre (Thames Valley Environmental Record Centre) was contacted to provide details of non-statutory designated sites and records of protected and notable species within a 2km radius of the site. Records more than 10 years old have not been included in this assessment.

2.3 Field Survey

Extended Phase 1 Habitat Survey

2.3.1 Lucia Ruiz Mut (Ecologist) and Matthew Bottomley (Ecologist) visited the site on 13th February 2025. Lucia and Matthew have over three years' professional experience carrying out similar surveys and are fully trained and experienced in using the Defra Metric and carrying out condition assessments. Lucia is a Qualifying member of CIEEM. The weather at the time of the survey was cold and overcast but dry. Weather conditions were suitable for a full assessment to be undertaken.

2.3.2 In accordance with JNCC guidelines[4] and the UK Habitat Classification System[5] 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.

2.3.3 During the walkover habitat and features were assessed for their suitability to support protected and notable species in accordance with CIEEM guidelines[6]. Field signs of protected, notable, and invasive non-native species, if encountered, were mapped, and described.

Bats

2.3.4 A Preliminary Bat Roost Assessment (PRA) was undertaken by Rachel Richards BSc (Hons) Consultant in September 2024. The results and recommendations of that assessment[7] have been reviewed and are included in this report.

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

2.3.6 A Dusk Emergence Survey was undertaken by James Webster MCIEEM in June 2025[1] in accordance with the Bat Conservation Trust Bat Survey Good Practice Guidelines (2023[8]) and Bat Workers Manual (Mitchell-Jones & McLeish, 2004[9]).

---

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

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

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

[7] Rachel Richards BSc. (Hons) 2024. Preliminary Roost Assessment. Grove Service Station, Old Bath Road, Charvil, Twyford RG10 9QJ P.

[8] Collins J. (ed) (2023) Bat Surveys for Professional Ecologist: Good Practice Guidelines (4th Edition). The Bat Conservation Trust, London.

[9] Mitchell-Jones, A.J., & MacLeish, A.P. Ed., (2004), 3rd Edition Bat Workers' Manual, Joint Conservation Committee, Peterborough.

2.4 Field Surveys Constraints

2.4.1 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.

2.4.2 The site was fully accessible, and no constraints exist.

2.5 Assessment

2.5.1 Ecological features were evaluated using professional judgement, in accordance with published guidance[2]. Designated sites, habitats and species within the study area were assigned a geographical level of importance as follows:

- International
- National (UK)
- Regional (South East)
- County (Berkshire)
- Local (Charvil, Reading)
- Site (within the context of the Site)
- Negligible

2.5.2 Ecological impacts can be direct (e.g. habitat loss or mortality of animals) or indirect (e.g. habitat fragmentation or a reduction in population numbers). Impacts may be positive as well as negative. Impact assessment considers the permanence or reversibility of impacts and the extent over which they have an effect.

2.5.3 Ecological impacts were assessed as being significant if they are likely to result in any changes to the integrity of designated sites or priority habitats, any changes to the conservation status of protected or priority habitats or species, or if they are likely to contravene legislation or planning policy.

2.6 Biodiversity Net Gain

2.6.1 During the site walkover the ecological condition of each habitat was assessed in accordance with the Defra (2024) guidelines[10].

[10] The_Statutory_Biodiversity_Metric_-_User_Guide_.pdf (publishing.service.gov.uk)

2.6.2 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.

2.6.3 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.

2.6.4 The pre- and post-development values were compared to determine whether the yield of biodiversity units achieved a deficit or gain.

2.7 Mitigation Hierarchy

2.7.1 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. Baseline and Evaluation

3.1 Designated Sites

3.1.1 The desk study provided information on the statutory and non-statutory designated sites. These are listed below in Table 1.

3.1.2 The desk study identified that the site was located within the Impact Risk Zone of Lodge Wood & Sandford Mill Site of Special Scientific Interest (SSSI). The proposal is aimed at storage and distribution of oil, but not extraction. Thus, the proposed development will not require the Local Planning Authority to consult with Natural England since it does not meet the criteria for such requirement.

3.1.3 The site falls within the Loddon Valley Gravel Pits Biodiversity Opportunity Area (BOA).

Table 1. Designated Sites

Name	Status	Location/distance	Interest
Alder Moors	**Local Nature Reserve (LNR)** Statutory Designation – National Importance **Local Wildlife Site (LWS)** Non-statutory designation – County Importance	1.8km Southwest	Alder Moors is designated as LNR due to comprising an ancient woodland dominated by **Alder** *Alnus glutinosa* and featuring other broadleaved native trees. Coppicing has encouraged the growth of the ground flora which shows the characteristic NVC ancient woodland composition. It is also designated as LWS for similar reasons.
Twyford Gravel Pits (Loddon Reserve & Charvil Country Park)	**LWS** Non-statutory designation – County Importance	Adjacent to the southern boundary of the site.	This site consists of two gravel pits that lie on either side of one of the channels of the River Loddon. The eastern pit is a nature reserve managed by BBOWT while the western pit lies within Charvil Country Park owned by the district council. The pits are important for overwintering and breeding birds. The site also supports invertebrates such as the damselflies. There are small areas of woodland, tall herb fen, scrub and open rough grassland at the edge of the pits. The lakes have some submerged aquatic plants. In the 2023 survey, there were 13 indicator species of woodland and 10 typical species of lowland fen recorded.
Charvil Country Park West & Charvil Meadows	**LWS** Non-statutory designation – County Importance	Adjacent to the southwestern corner of the site.	This site was created in 2022 following the amalgamation of two proposed Local Wildlife Sites (Charvil Country Park West, and Charvil Meadows). Charvil Country Park West consists of a variety of grassland habitats with some species of lowland meadow present, acidic and calcareous areas, fen habitats, floodplain grazing marsh, broadleaved seminatural woodland, wet woodland, willow carr on two old gravel pit sites and a third gravel pit in the south. Overwintering wildfowl use the site. Charvil Meadows comprises a series of traditionally managed, periodically inundated meadows bordering the River Loddon, interspersed with hedgerows and a wide scrub and tree-lined ditch. The

			meadows support some typical grassland wildflowers along with localised areas of sedges and wetland species.
Loddon	Berkshire Buckinghamshire Oxfordshire Wildlife Trust Site (BBOWT) Non-statutory designation – County Importance	0.145km East	This large, flooded gravel pit has several islands and a ragged, scrubby fringe that skirts around the shallows. This creates ideal conditions for wetland and wintering birds. The plant life around the lake attracts a range of butterflies, dragonflies and other aquatic insects. In the summer months bats will take advantage of the rich pickings as they hunt over the lake.
Loddon River (Part)	LWS Non-statutory designation – County Importance	0.013km East	A seventeen kilometre stretch of the River Loddon running from Swallowfield to its confluence with the River Thames near Wargrave. This section of the river has a diversity of features such as adjacent marsh, islands, inlets, riffles, river cliffs and extensive and varied channel vegetation. This includes the uncommon Loddon Pondweed *Potamogeton nodosus*. Water Vole *Arvicola amphibius* and a variety of dragonflies and damselflies are also found along its length.
Sandpit Copse	LWS Non-statutory designation – County Importance	1km Southwest	This site is a small area of ash and Hazel *Corylus avellana* woodland with alder dominating the wetter areas around the stream that flows through the site. There is a bank on the southern edge where Oak *Quercus sp.* and Birch *Betula sp.* dominate. Although not ancient woodland the site has several species associated with long established woodland including an abundance.
Whistley Mill Farm Woodland	LWS Non-statutory designation – County Importance	1.1km Southeast	This site is a small area of woodland that lies next to the River Loddon. It is damp in nature but not wet woodland. Oak is the dominant tree. It is not ancient woodland but has a number of species associated with long established woodland. There are also several wetland species.
Norris Copse Bird Sanctuary	LWS Non-statutory designation – County Importance	1.3km Southwest	The northern end of Norris Copse is within the ancient woodland inventory. The few areas of wet woodland are mainly islands within the lake. The former gravel pit known as the Bird Sanctuary is leased out to a local fishing syndicate who specialise in carp. The lake supports a variety of breeding and overwintering wildfowl. In the 2023 survey, there were 19 indicator species of woodland, and 3 typical species of lowland fen recorded.
Ruscombe Village Pond	LWS	1.4km East	This pond supports populations of Great Crested Newt *Triturus cristatus*.

	Non-statutory designation – County Importance		
Ruscombe and Vale Woods	**LWS** Non-statutory designation – County Importance	1.8km East	Ruscombe Wood is an area of largely Ash *Fraxinus excelsior* dominated woodland with areas of Hazel coppice without standard trees. Bluebell *Hyacinthoides non-scripta* is often dominant in the ground flora. The wood has patches of Early-purple Orchid *Orchis mascula,* and Twayblade *Neotia ovata* and other species associated with long established woodland. The site has wet depressions probably resulting from quarrying in the past. One is dominated by Willows Salix sp. and the other supports Greater Pond-sedge *Carex riparia* swamp with willows at the edge. To the west the site includes a pond and an area of rough grassland. Vale Wood consists of Ash woodland with some Hazel coppice.

3.2 Habitats

3.2.1 Target Notes and habitats photographs are contained in Appendix 3. The habitats survey plan is contained in Appendix 4 and species lists are provided in Appendix 5. Condition Assessments are supplied as a separate spreadsheet.

3.2.2 All habitats on-site and up to a 30m buffer, where possible, were surveyed. However, only those within the red line boundary are included in the Statutory Biodiversity Metric Calculation and subject to the Statutory Metric Condition Assessment.

3.2.3 All habitats are formally identified under the local strategy as within the BOA and, therefore, these are all of high strategic significance.

Buildings

3.2.4 The are four buildings including a central garage (B1), two outbuildings (B2 & B3) and a second larger garage (B4). This habitat, which is classified as 'Developed land; sealed surface' within the metric is of very low distinctiveness and does not require condition assessment. It does not deliver biodiversity units.

3.2.5 On its own, this habitat has no ecological value and is considered of **negligible importance**. However, it can provide suitable habitat for roosting bats.

3.2.6 The buildings, except from B4, have been described in detail and assessed for their suitability to support roosting b

3.2.7 ats within the PRA report[7], see more in Section 3.4 Bats.

Developed Land; Sealed Surface

3.2.8 This habitat refers to the area of hardstanding (1) surrounding the buildings which comprises most of the site. It is of very low distinctiveness and does not require condition assessment. It does not deliver biodiversity units.

3.2.9 There is an open excavation at the southern half of the site (TN1) and spoil and debris mounds at two discrete locations (TN2) and (TN3).

3.2.10 This habitat has no ecological value and is considered of **negligible importance**.

Modified Grassland

3.2.11 This habitat refers to a small road verge (2) located along the northern boundary of the site. It is managed as amenity grassland showing short sward and is exposed to nutrient enrichment given its proximity to the road. However, it features a higher diversity species than what would be expected for intensively managed modified grasslands.

3.2.12 This habitat is classified within the metric as 'Modified grassland', which is of low distinctiveness and has been assesses using Condition Assessment sheet 5A. GRASSLAND LOW resulting as in moderate

condition. This habitat delivers 0.05 habitat units. Only the area within the red line boundary has been considered in the calculation.

3.2.13 This habitat is of low ecological value, common and widespread and is considered of **site level importance.**

Ruderal/Ephemeral

3.2.14 This refers to a small strip of vegetation within the site, adjacent to B4 to the east and a small plant bed north of the northeast corner of B4. The same habitat also features the vegetated fringe extending along the eastern boundary of the site, which is outside the red line boundary. This habitat features patches of bare ground which has been sparsely colonized by short perennial and ephemeral vegetation (3).

3.2.15 This habitat is classified in the metric as 'Ruderal/Ephemeral', which is of low distinctiveness and has been assessed using Condition Assessment sheet 22A. URBAN resulting as in poor condition. This habitat delivers 0.01 habitat units. Only the area within the red line boundary had been considered in the calculation.

3.2.16 This habitat is of low ecological value, common and widespread and is considered of **site level importance.**

Tall Forbs

3.2.17 This habitat featuring tall ruderal annual herbs (4) is present within a small section east of the path that gives access to the LWS from the road. Bramble scrub is also present sparsely and large accumulation of brash (TN4).

3.2.18 This habitat is classified in the metric as 'Tall forbs', which is of low distinctiveness and has been assessed using Condition Assessment sheet 22B. URBAN resulting as in moderate condition. This habitat delivers 0.01 habitat units. Only the area within the red line boundary has been considered in the calculation.

3.2.19 This habitat is of low ecological value, common and widespread and is considered of **site level importance.**

Bramble Scrub

3.2.20 The southern half of the eastern boundary of the site, which continues up to a third of the southern edge features dense Bramble scrub (5) with some scattered trees (see Individual Trees below). There are several instances of deadwood (TN5) within it.

3.2.21 This habitat is outside the red line boundary and is not included in the metric calculations or condition assessment. However, potential impacts to this habitat have been considered (see Section 4.3 Impacts on Habitats).

3.2.22 This habitat is of moderate ecological value, common and widespread and is considered of **site level importance.**

Wet Woodland

3.2.23 This habitat is adjacent to the south of the site, which is part of the LWS. It features broadleaved wet woodland (6) dominated by Willow species including White Willow *Salix alba* and Goat Willow *S. caprea*. Swamp areas were present. Ground cover was comprised of grasses and ruderal herbs with no consistent understorey except for scattered Bramble scrub. There is a path crossing the woodland featuring unvegetated unsealed surface (TN8).

3.2.24 The woodland is included within Twyford Gravel Pits LWS. It is outside the red line boundary and, therefore, not included in the metric calculations or condition assessment. However, potential impacts to this habitat have been considered (see Section 4.3 Impact on Habitats).

3.2.25 This habitat is of moderate ecological value and locations are restricted within the area. It is considered of **county level importance.**

Lake

3.2.26 This refers to the lake (7) south of the site, located approximately 0.03km away from the southern boundary of the site. The lake is part of Twyford Gravel Pits LWS and it comprises an inundated gravel pit showing rough grassland and sedges at the edge.

3.2.27 This habitat is outside the red line boundary and is not included in the metric calculations or condition assessment. However, potential impacts to this habitat have been considered (see Section 4.3 Impact on Habitats).

3.2.28 This habitat is of moderate ecological value given the plant community it supports and its importance for overwintering and breeding birds. It is considered of **county level importance.**

Individual Trees

3.2.29 There are several trees within the survey area. These are mostly medium to large native trees and a small number of ornamental, non-native conifer trees. Further details are provided in the Tree Survey Report[11].

3.2.30 Only the trees within the red line boundary or immediately adjacent to it are included in the calculations. These have been assessed using Condition Assessment spreadsheet 9B. INDIVIDUAL TREES. To facilitate the assessment the trees has been grouped as follows:

- Group A (GA): Trees within the road verge north of the site including, as referred to in the Tree Survey Report, T1 – T8. This group is in moderate condition and includes three small

[11] Tom Grayshaw (2025). TGA. 2688.Tree Survey

and five medium trees. This group provides 0.86 habitat units. These are **important at the local level.**

- Group B (GB): Ornamental trees at the northeast corner of the Garage building, including T9, T10, T12 and T13. This group is in poor condition and all trees are small. This group provides 0.07 habitat units. These trees are of low ecological value and **important at the site level.**
- Group C (GC): Trees along the eastern and southeastern edge boundary, including T23 – T34. This group is in moderate condition and includes two medium and ten small trees. This group delivers 0.67 habitat units. These trees are of moderate ecological value and important at the **local level.**

3.2.31 The Willow specimens (T14-T22) south of the site and the Common Oak (T11) at the southwestern corner of the site are outside the red line boundary and, therefore, not included in the calculations. However, potential impacts to these have been considered as part of the Wet Woodland habitat (see Section 4.3 Impacts on Habitats).

3.2.32 Trees were also assessed for their suitability to support roosting bats (see Section 3.3 Bats).

3.3 Species

Invertebrates

3.3.1 The desk study returned 305 records of invertebrate species within the study area including species listed under the NERC s.41 and/or given certain level of protection under Sch.5 of The Wildlife and Countryside Act 1981 (WCA) such as Five-banded Weevil-wasp *Cerceris quinquefasciata*, Stag Beetle *Lucanus cervus*, White-letter Hairstreak *Satyrium w-album* and Cinnabar *Tyria jacobaeae.*

3.3.2 Habitats within the red line boundary offer very limited suitability for invertebrate species, limited to the grassland (3), ephemeral/ruderal (3) and trees on-site. It is considered highly unlikely that the site supports an important invertebrate assemblage. However, boundary habitats such as the scrub (5) and wet woodland (6) have potential to support small numbers of notable species of invertebrates. Overall, the invertebrate population expected to be found within the ZoI is considered **important at the site level** only.

Amphibians

3.3.3 The desk study returned 52 records of amphibians including fifteen record of Great Crested Newt *Triturus cristatus,* which is protected under the Conservation of Habitats and Species Regulations 2017 (as amended). The closest record lies 0.66km north of the site and dated 2023.

3.3.4 The MAGIC website search showed that there is one suitable pond within a 250m buffer of the site, located 0.1km southwest of the site between the two large gravel pits that form the LWS. Other waterbodies are considered unsuitable given their large area (gravel pits) or due to featuring running

water (River Loddon). No positive GCN surveys or European Protected Species Licence (EPSL) for GCN were returned within a 250m buffer of the site.

3.3.5 The site does not offer suitable breeding habitat for GCN within the red line boundary. The swamp areas within the wet woodland (6) may provide sub-optimal habitat which could potentially be used opportunistically when sufficient water levels are available. However, this swamp it appears to be flooded only temporally and does not provide sufficient depth to support a regular usage. Besides, it is considered highly unlikely that newts will access the site from this habitat, considered the bare, steep embankment that separates the site from the wet woodland habitat.

3.3.6 The vegetation cover provided by the woodland, scrub, deadwood and brash surrounding the site may provide suitable terrestrial habitat for GCN.

3.3.7 Given the restricted habitat suitability, the site is unlikely to support a population of GCN. Individuals may use the site surroundings for foraging and dispersal opportunistically. Thus, GCN are considered of **importance at site level** should they be present on site.

Reptiles

3.3.8 The desk study returned 30 records of reptile species including Grass Snake *Natrix helvetica* and Slow Worm *Anguis fragilis*. The closest record refers to Grass Snake and is located 0.32km southeast of the site.

3.3.9 The habitats surrounding the site provide suitable refugia and shelter opportunities for common and widespread reptile species, such as the above-mentioned, which are only granted partial protection under Sch.5 of the WCA which might accidentally or opportunistically enter the site attracted by the presence of spoil mounds, rubble and other debris. However, given the restricted habitat suitability, the site is considered unsuitable to support important breeding population of common reptiles, or to offer potential for other rare, notable species, which have more restricted distribution and specific habitat requirements. Reptiles are considered of **importance at site level**, should they be present on site.

Birds

3.3.10 The desk study returned 7,660 records of birds within the study area. These includes species listed under the NERC s.41 and Sch.1 of the WCA such as Barn Owl *Tyto alba*, Red Kite *Milvus milvus*, Kingfisher *Alcedo atthis*, Green Sandpiper *Tringa ochropus*, Fieldfare *Turdus pilares*, Redwing *Turdus iliacus* among others. The LWS south of the site is important for overwintering and breeding birds, including warblers and coastal birds, which justify the large number of records.

3.3.11 Within the ZoI of the site, there is only limited nesting opportunities for passerine birds and small raptors in the form of scrub, individual trees and the existing buildings. Given the restricted habitat suitability, birds on site are considered of **importance at site level**.

Water Vole

3.3.12 No records of Water Vole *Arvicola amphibius* were returned within the study area.

3.3.13 There is no suitable habitat for Water Vole within the site. Potential suitable habitat for Water Voles such as slow flowing section of the River Loddon, and associated streams and ditches or the lakes edges are outside the ZoI of the development. It is considered highly unlikely that Water Vole will be present on site.

Otter

3.3.14 The desk study returned three records of Otter *Lutra lutra* within the study area. The closest was located 1.3km west of the site and dated 2015.

3.3.15 There is no suitable habitat for Otter within the site. Potential suitable habitat for Otter such the River Loddon, and associated streams, canal and lakes are outside the ZoI of the development. It is considered highly unlike that Otter will be present on site.

Hazel Dormouse

3.3.16 No records of Hazel Dormouse *Muscardinus avellanarius* were returned within the study area.

3.3.17 The site boundary habitats, namely the scrub (5) and wet woodland (6) may offer foraging and dispersal opportunities for Hazel Dormouse. However, given the scarcity and restricted distribution of this species, the lack of local records, and the sub-optimal quality of the habitat within the ZoI of the development, which do not provide a dense understorey that could allow for three-dimensional dispersal, it is considered highly unlikely that Hazel Dormouse will be present on site.

[redacted]

Hedgehog

3.3.22 The desk study returned 83 records of Hedgehog *Erinaceus europaeus* within the search area. The closest is found 0.03km north of the site and dated 2023.

3.3.23 No signs of Hedgehog were recorded during the survey. The boundary habitats (5, 6) offer suitable breeding, hibernating, foraging and commuting habitat for Hedgehog, particularly given the presence of brash (TN4) and deadwood (TN5). However, the Site is unlikely to be important in maintaining the conservation status of the local population since suitable habitat is abundant in the wider area. Thus, they are considered of **importance at the site level**.

Bats

3.3.24 Within the search area, the desk study returned 570 records of eleven species including Brown Long-eared Bat (BLE) *Plecotus auritus*, Common Pipistrelle *Pipistrellus pipistrellus*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Nathusius's Pipistrelle *Pipistrellus nathusii*, Myotis Bat species *Myotis spp*., Daubenton's Bat *Myotis daubentonii*, Natterer's Bat *Myotis nattereri*, Noctule Bat *Nyctalus noctula*, Leisler's Bat *Nyctalus leisleri*, Serotine *Eptesicus serotinus* and Western Barbastelle *Barbastella barbastellus*, within the search area. The nearest record refers to Common Pipistrelle located 0.13km east of the site. Most records refer to common and widespread species such as Brown Long-eared Bat, Common and Soprano Pipistrelle and Noctule Bat, with only small numbers of other rare species such as Leisler's Bat (no.7), and Barbastelle Bat (no.1).

3.3.25 A search on the MAGIC database for granted EPSLs within a 2km radius yielded a total of six granted EPSL. These are shown in Table 2, below.

Table 2. Granted EPSLs for bats within 2km of the site

EPSL reference	Bat species affected	Location/ Distance	Impacts allowed by licence
EPSM2010-2250	BLE	0.49km E	Destruction of a resting and breeding place
2019-43241-EPS-MIT	BLE, C. Pipistrelle, S. Pipistrelle	0.56km SW	Destruction of a resting place
2020-44644-EPS-MIT	BLE, C. Pipistrelle	1km NE	Destruction of a resting place
2020-49294-EPS-MIT	C. Pipistrelle, S. Pipistrelle	1.3km E	Destruction of a resting place
2014-2526-EPS-MIT	S. Pipistrelle	1.3km NW	Destruction and damage of a resting place
2018-36568-EPS-MIT	BLE, C. Pipistrelle	1.9km SW	Damage of a resting place

3.3.26 The Preliminary Roost Assessment (PRA) carried out in September 2024[7] concluded that B1 offered low suitability for roosting bats and B2 and B3 offered negligible suitability for roosting bats. B4 was

not included in the PRA[7] since no works impacting that building were proposed when the survey was undertaken.

3.3.27 During the field survey undertaken in February 2025 by RHE, a ground-level tree assessment of the trees within or adjacent to the site was also carried out. This yielded a total of three trees offering PRFs for bats. The location of all trees offering PRFs are shown on the UK Habitats Classification Map contained in Appendix 4. All trees offering PRFs are outside, but in close proximity to the red line boundary of the development. The trees and PRFs within are described in detail in Table A3, Appendix 7.

3.3.28 As a result of the Dusk Emergence Survey conducted by James Webster in June 2025[1] the target Building (B1) is deemed as not currently supporting a bat roost. A total of three species of bats were recorded, namely, Common pipistrelle *Pipistrellus pipistrellus,* Soprano pipistrelle *Pipistrellus pygmaeus* and Bechstein's bat *Myotis Bechsteninii.*

3.3.29 Overall, the PRA[7] and Dusk Emergence Survey[1] results suggest that it is unlikely for bats to be roosting on site. However, given the available surrounding foraging and commuting habitat, and the remaining uncertainty regarding the roosting potential of B4, it is considered that that the site may support a bat assemblage of **site level importance.**

3.4 Invasive Species

Plants

3.4.1 The desk study returned 19 records of invasive, non-native plant species as listed on Sc.9 of the WCA, including Floating Pennywort *Hydrocotyle ranunculoides,* Himalayan Balsam *Impatiens glandulifera*, Japanese Knotweed *Reynoutria japonica*, New Zealand Pigmyweed *Crassula helmsii*, Nuttall's Waterweed *Elodea nuttallii*. The closest record refers to Himalayan Balsam, located0.1km east of the site.

3.4.2 No invasive, non-native plant species were found on site during the field survey. Therefore, these are not considered further in this report.

Animals

3.4.3 The desk study returned one record of American Mink *Neovison vison* located 0.64km north of the site.

3.4.4 No invasive, non-native animal species or evidence of them were found during the field survey. Therefore, these are not considered further in this report.

4. Potential Impacts

4.1 Development Context

4.1.1 The following assessment assumes that the proposed development will be restricted to the sealed surface area. It will entail the demolition of B1 and removal of B2 and B3, and subsequent erection of a new building and redesign of the hardstanding surface to provide vehicular access and parking areas.

4.1.2 Upon revision of the proposals, in addition to the above-mentioned works, an existing single storey building annexed to B4 will be demolished and the removal of trees unsuitable for retention[11] has been scheduled. The most up-to-date Proposed Site Plan is shown in Appendix 6.

4.2 Impacts on Designated Sites

4.2.1 Neither direct nor indirect impacts to any statutory designated sites are anticipated due to the distance involved and lack of impact pathways.

4.2.2 No direct impact, such as habitat removal or disturbance, are anticipated to any of the non-statutory designations given the distance involved and the restricted area affected by the proposals.

4.2.3 No indirect impacts to most of the LWS are anticipated for the above-mentioned reasons. However, in the absence of mitigation, Twyford Gravel Pits and Charvil Country Park West and Charvil Meadows may be indirectly impacted due to pollution or spillage during construction and operation of the proposed development. This would result in a **negative impact of local scale**.

4.3 Impacts on Habitats

4.3.1 Impacts to habitats of no ecological value (Buildings and Hardstanding) and scoped out from this assessment.

Habitats of Low Ecological Value

4.3.2 These refers to the modified grassland (2), ephemeral/ruderal (3) and tall ruderal (4). These habitats will not be directly affected by the proposals and are at sufficient distance from where the demolition and construction works will take place. Therefore, no direct or indirect impacts are anticipated. No specific mitigation is considered necessary.

Bramble Scrub

4.3.3 This habitat will not be directly affected by the proposals. However, in the absence of mitigation, there is a low risk of negative impacts such as habitat degradation, pollution (e.g., fuel and dust leaks) and sediment run-off, which may result from the construction works. This will incur a **negative impact at the site level.**

Wet Woodland and Lake

4.3.4 These are considered Habitats of Principal Importance. Similarly to the Bramble scrub habitat, these habitats will not be directly affected by the proposals. However, in the absence of mitigation, there is a low risk of negative impacts such as habitat degradation, pollution (e.g., fuel and dust leaks) and sediment run-off, which may result from construction and operation. This will incur a **negative impact at the county level**.

Individual Trees

4.3.5 Upon revised proposals, it has now been acknowledged that T27, T32 and T33 will be removed as considered unsuitable for retention by the appointed Arboricultural Consultant[11]. This is considered a **neutral impact** since trees vitality is already compromised, therefore, these are highly unlikely to survive if retained.

4.3.6 Pruning works may be required to facilitate the works during the construction phase. Excessive pruning can compromise the condition and viability of the trees. Besides, groundworks may encroach the Root Protection Areas (RPAs)of individual trees. Therefore, in the absence of mitigation, depending on the importance of the trees affected, the proposal may **incur in a negative impact at the site or local scale**.

4.4 Biodiversity Net Gain Assessment

4.4.1 The Statutory Biodiversity Metric Calculation and Condition Assessment spreadsheets are supplied as separate spreadsheets. Calculations are based on the Proposed Planting Plan produced by DEP Landscape Architecture Ltd (April 2025) as shown in Appendix 7. The Statutory Biodiversity Metric Headline Results are shown in Appendix 8.

Biodiversity Baseline

4.4.2 The baseline biodiversity value within the red line development is 1.68 habitat units. No hedgerow units or watercourse units are present.

Biodiversity Post-development

4.4.3 Post-development, the biodiversity value of the site is 1.93 habitat units and 0.65 hedgerow units. Contributions to the metric are as follows:

- Most trees on site will be retained except for T27, T32 and T33. This contributes 1.38 habitat units.
- Modified grassland (2), Ephemeral/Ruderal (3) and tall forbs (4) within the site will be retained providing 0.05, 0.01 and 0.01 habitat units, respectively.
- Species-rich grassland habitat targeted at achieving moderate condition within 5 years will be created. This is classed as 'Other neutral grassland' in the metric and will deliver 0.18 habitat units.
- Native shrub habitat targeted at achieving moderate condition within 5 years will be created. This is classed as 'Mixed scrub' in the metric and will deliver 0.20 habitat units.
- A total of 6 native trees will be planted, targeted at achieving moderate condition within 27 years. These are classes as 'Individual trees' in the metric and will deliver 0.09 habitat units.
- New native hedgerow will be created, targeted at achieving moderate condition within 5 years. This will deliver 0.65 hedgerow units.

Predicted Change

4.4.4 The proposals will result in a net gain of 0.25 (+14.92%) habitat units and 0.65 hedgerow units (gain from zero). However, the proposal does not meet the trading rules. This is due to the removal of trees.

Assessment

4.4.5 The proposals result in a biodiversity net gain over the 10% minimum required for both habitats and hedgerows. However, due to the loss of trees the trading rules are not being met. These trees will be removed due to their unsuitability for retention, and tree planting to compensate for their loss is proposed and maximized within the site.

4.4.6 Further Biodiversity Enhancements which are not considered under the Biodiversity Metric Calculation are proposed in Section 6 of this report.

4.5 Impacts on Species

Invertebrates

4.5.1 Construction works may cause killing/injuring of common and widespread invertebrate individuals which will not have an impact in the conservation status of the local population. This is therefore considered a **negligible impact**.

4.5.2 There is a very low risk of rare or notable species being negatively affected due to potential impacts (e.g., pollution, habitat degradation, etc.) to the scrub and wet wetland habitat. This will be avoided through the habitat mitigation proposed and therefore, invertebrates are not considered further in this report.

Amphibians

4.5.3 There is no suitable breeding habitat within the site. Amphibian species, including GCN, could potentially be present within the boundary habitats of the site and accidentally or opportunistically use potential terrestrial habitats (TN2 & TN3) on site. This is considered highly unlikely given the bare embankment (TN7) that separates the site from the wet woodland habitat.

4.5.4 In the absence of mitigation, there is a very low risk of killing/injuring individual amphibian species during the construction works, should they be present on site. This is considered a **negative impact at the site level.**

Reptiles

4.5.5 Reptile species might be present within the boundary habitats of the site and accidentally or opportunistically use potential terrestrial habitats (TN2 & TN3) on site.

4.5.6 In the absence of mitigation, there is a very low risk of killing/injuring reptile species during the construction works, should they be present on site. This is considered a **negative impact at the site level.**

Birds

4.5.7 Removal of trees and demolition works could result in nesting birds being harmed/disturbed, should they be present. This will entail a **negative impact at the site level.**

Water Vole and Otter

4.5.8 No direct impacts are anticipated to Water Vole and/or Otter since it is highly unlikely that these may be present within the ZoI of the development.

4.5.9 There is a low risk of these species being negatively affected due to potential impacts (e.g., pollution, habitat degradation, etc.) to Twyford Gravel Pits and Charvil Country Park West and Charvil Meadows and lake habitat. This will be avoided through the designation and habitat mitigation proposed and therefore, these species are not considered further in this report.

Hazel Dormouse

4.5.10 No direct impacts are anticipated to Hazel Dormouse since it is highly unlikely that it may be present within the ZoI of the development.

4.5.11 There is a very low risk of this species being negatively affected due to potential impacts (e.g., pollution, habitat degradation, etc.) to the scrub and wet wetland habitat. This will be avoided through the habitat mitigation proposed and therefore, this species is no considered further in this report.

[redacted]

[redacted]

Hedgehog

4.5.13 Hedgehogs could also be harmed if they access construction sites [redacted] This will entail a **negative impact at the site level.**

Bats

4.5.14 The proposed development will result in the demolition of buildings B1-B3 and partial demolition of B4. At the time of writing, B4 has not been assessed for its suitability to support roosting bats.

4.5.15 Given the results of the PRA and Dusk Emergence Survey, no impacts to roosting bats are anticipated from the works proposed to B1-B3. However, potential impacts from works scheduled at B4 cannot be fully assessed.

4.5.16 In general, the proposed works have the potential to damage and destroy bat roosts and cause disturbance, death or injury to bats, should these be present in B4. In addition, proposals may cause disturbance to both foraging/commuting and roosting bats due to higher levels of lighting, noise and human disturbance during the construction phase. Pruning works, if necessary, may also cause disturbance to bats. This is considered a **negative impact at the site level.**

5. Mitigation and Residual Impacts

5.1 Designated Sites

5.1.1 Potential indirect impacts to Twyford Gravel Pits and Charvil Country Park West and Charvil Meadows will be avoided via implementation of a Construction Environmental Management Plan (CEMP).

5.1.2 The CEMP must provide a risk assessment of potentially damaging constructions activities and identify "biodiversity protection zones" which must be effectively excluded and identify practical measures, both physical measures and sensitive working practices to avoid impacts during development, for protecting biodiversity through the control or regulation of construction-type activities.

5.1.3 Assuming an appropriate CEMP is produced and enforced, **residual impacts to designated sites are assessed as neutral.**

5.2 Habitats

5.2.1 Potential indirect impacts to the Bramble scrub, wet woodland and lake habitats will also be avoided via production and enforcement of the above-mentioned CEMP.

5.2.2 Additionally, to avoid negative impacts to individual trees and/or trees within boundaries, the RPAs of all trees should be established by a suitably qualified Arboricultural Consultant and ground disturbance must be avoided within RPAs.

5.2.3 Provided mitigation is implemented, **residual impacts to habitats are assessed as neutral.**

5.3 Species

Amphibians & Reptiles

5.3.1 In order to avoid the low risk of harming herptile species, including GCN, the implementation of a Reasonable Avoidance Method Statement (RAMS) is advised.

5.3.2 Avoidance measures might include, but are not limited to:

- All contractors will be provided with a Toolbox Talk highlighting existing risk to GCN on-site, where can they be found and how to identify them, what to do in case one is encountered and what are the legal consequences if GCN is harmed during the construction works.
- Any piles of debris, rubble or discarded materials, etc. be dismantled by hand. No dismantling should take place during the herptiles hibernation period (October – February inclusive)

- Construction materials or debris should not be storage on the ground over time. Otherwise, this may be use by GCN, becoming a shelter site for the species which will be then protected by law.
- Vegetation clearance is not anticipated, however, if this becomes required it will be carried out under ecological supervision. Tall dense vegetation should be cleared in two stages, up to 10cm first and down to ground level 24hrs after.

5.3.3 Given the above-mentioned measures are implemented, **residual impacts to amphibians and reptiles are assessed as neutral.**

Birds

5.3.4 Impacts on nesting birds should be avoided by carrying out demolition works, tree removal and/or site clearance and similar operations outside of the bird breeding season (March- August). Construction activities that might directly impact upon breeding birds should hence be limited to the September-February period. If the demolition works and/or vegetation clearance have to be carried out 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.

5.3.5 Provided this mitigation measurements are implemented, it is highly unlikely that birds will be harmed and therefore, **residual impacts to birds are considered negligible.**

[redacted] Hedgehog

5.3.6 To ensure that [redacted] any other mammals are not trapped or harmed during the construction work, smaller excavations should be covered if left overnight. Larger excavations, if left overnight or for longer periods, should be ramped to enable animals to escape.

5.3.7 These measurements will reduce to the minimum possible the likelihood of [redacted] Hedgehog or other small mammals being harmed by the proposal. **Residual impacts are considered negligible.**

Bats

5.3.8 As recommended in the Preliminary Roost Assessment Report[7] one Bat Emergence Survey[1] was carried out at B1 which confirmed the likely absence of a bat roost in the building.

5.3.9 In order to assess potential impacts and mitigation requirements regarding B4, a PRA survey of this building must be undertaken prior any works impacting it are carried out.

5.3.10 During the construction phase no works should be undertaken overnight and no light will be directed to the wet woodland (6). Post-development, a suitable lighting scheme that minimises disturbance should be implemented. In any case, lighting should be directional, and motion triggered only.

5.3.11 Further mitigation requirements and residual impacts will be assessed upon the dusk survey results.

6. Biodiversity Enhancements

6.1.1 The site lies within Loddon Valley Gravel Pits Biodiversity Opportunity Area (BOA). Therefore, recommendations for biodiversity enhancements should be included in the proposals. Implementation of the following are recommended:

- Bird boxes and bat boxes will be erected on the new buildings where possible.
- 'Hedgehog holes'; to be incorporated into any fencing.

7. Conclusion

7.1.1 Given the mitigation measures recommended within this report are provided, residual ecological impacts to designated sites, habitat and species of ecological importance are considered neutral or negligible, except for bats which require further assessment.

7.1.2 Ecologically valuable habitats such species-rich grassland, native shrub, native hedgerows and tree planting are included within the proposals. Additional enhancements include nest and bat boxes.

7.1.3 Whereas BNG trading rules have not been satisfied, the proposals result in >10% biodiversity net gain. Given the trading rules are unsatisfied due to the loss of trees which will be highly unlikely to survive if remain and that tree planting is maximized on site, it is concluded that the mitigation and enhancements described within this report should enable the proposed development to be delivered in conformity with national and local planning policy.

Appendix 1: Planning Policy & Legislation

National Policy

The National Planning Policy Framework (NPPF 2024) 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 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 Act 2021 strengthens the duty on public authorities (NERC Act, 2006) to have regard to the conservation of biodiversity.

The Environment Act 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: Desk Study

The report includes a summary of the species records that were made available. Should you wish to see further details please submit a written request to Rachel Hacking Ecology.

Appendix 3: Habitats and Target Notes

Photographs

Table A1. Habitats and Target Notes photographs		
Reference No.	Habitat	Photograph
1	Developed land; sealed surface	
2	Modified grassland	
3	Ephemeral/Ruderal	 

4	Tall forbs	
5	Bramble scrub	
6	Wet woodland	
7	Lake	

TN1	Excavation	
TN2	Spoil/Rubble	
TN3	Spoil/Rubble	
TN4	Brash	

TN5	Deadwood	
TN6	Mammal hole	
TN7	Embankment	

TN8	Unvegetated unsealed surface (path)	

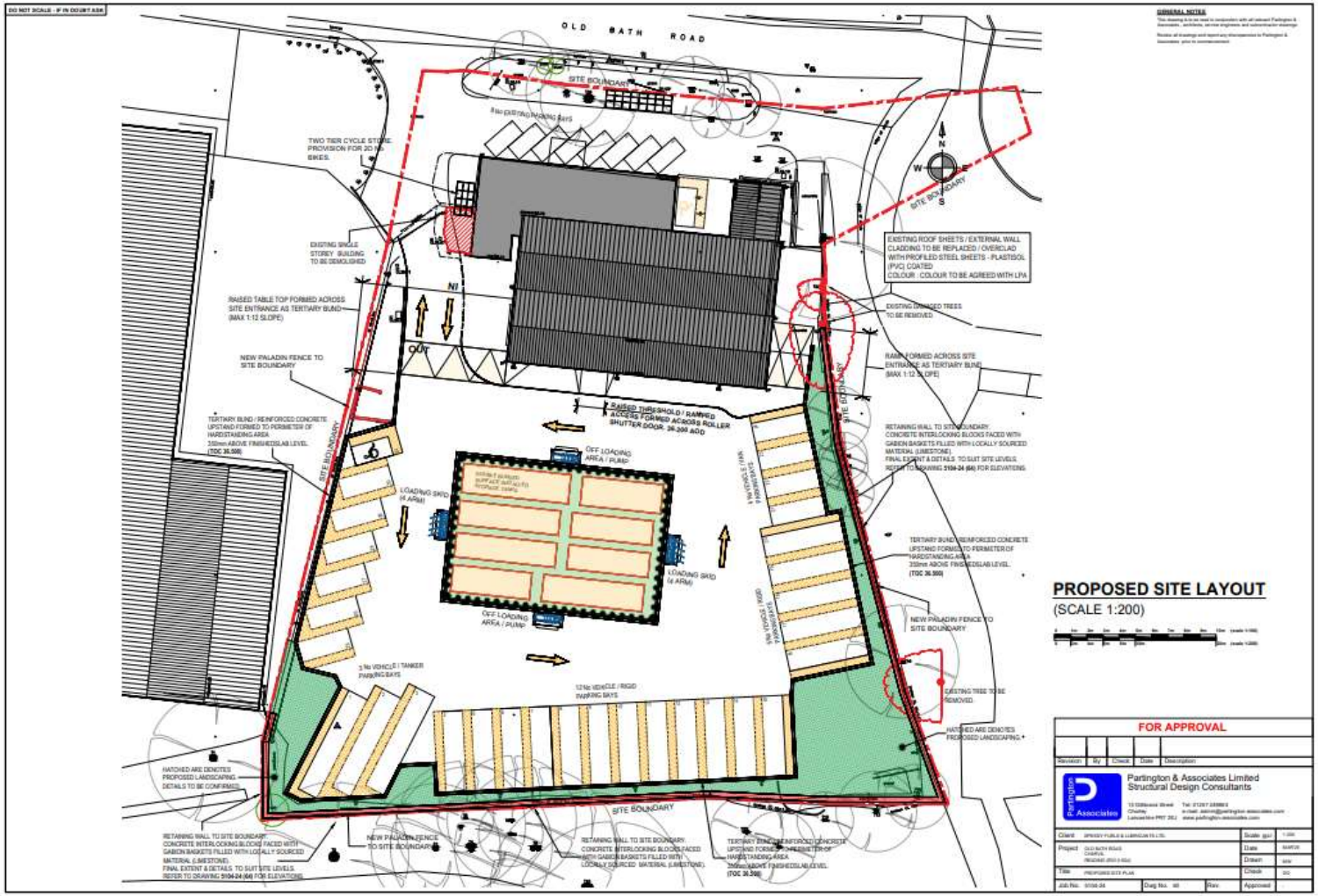
Appendix 4: UK Habitats Classification Map

Appendix 5: Species Lists

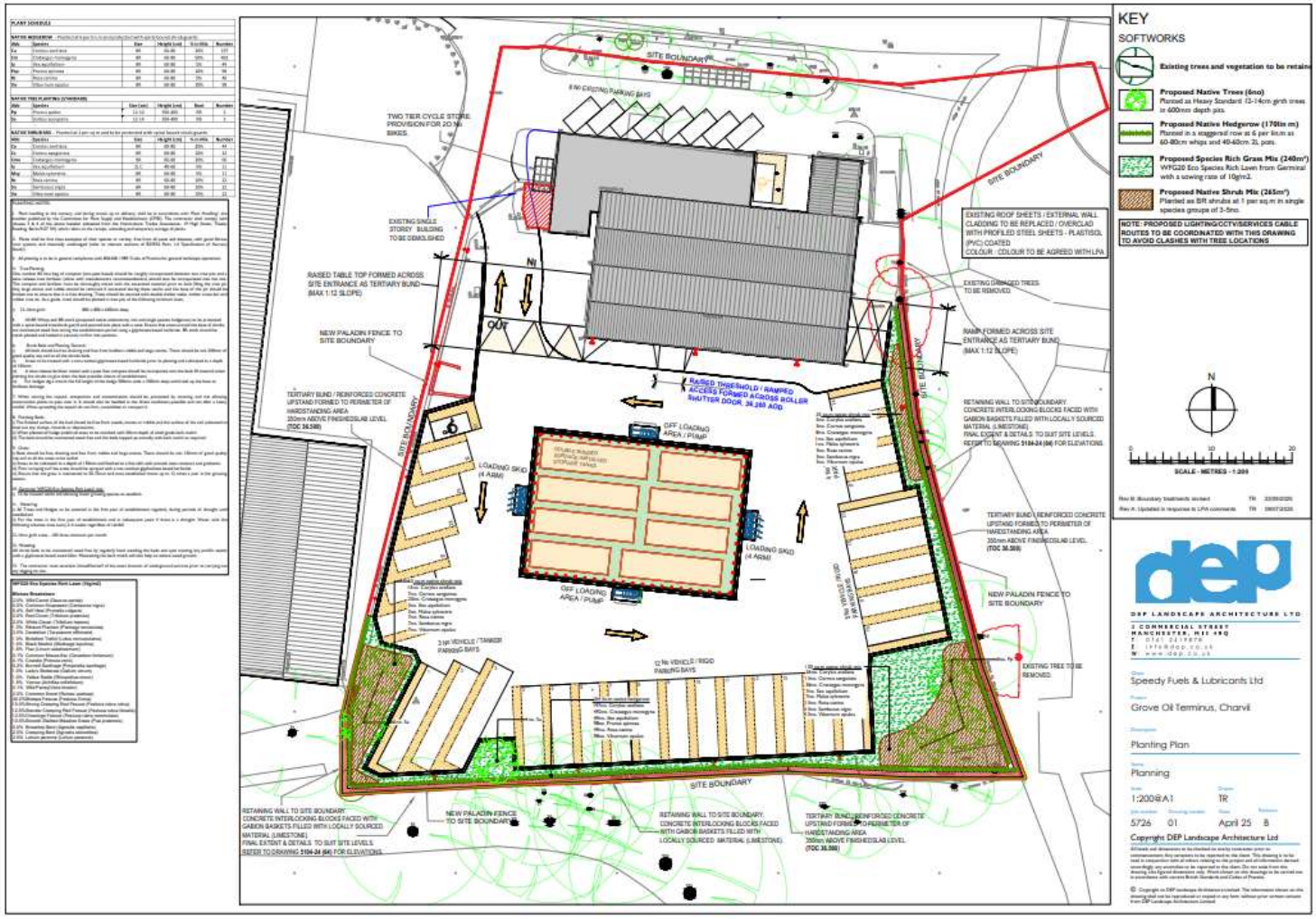
Table A2. Species Lists		
Modified Grassland		
Common Name	**Latin Name**	**Abundance (or Notes)**
Fescue	*Festuca spp.*	Dominant
Yorkshire Fog	*Holcus lanatus*	Dominant
Creeping Bent	*Agrostis stolonifera*	Dominant
Common Nettle	*Urtica dioica*	Frequent
Crane's Bill	*Geranium sp.*	Frequent
Red Dead-Nettle	*Lamium purpureum*	Frequent
Dandelion	*Taraxacum officinale agg.*	Frequent
Cow Parsley	*Anthriscus sylvestris*	Frequent
Rosebay Willowherb	*Chamaenerion angustifolium*	Occasional
Wood Avens	*Geum urbanum*	Occasional
Lesser Celandine	*Ficaria verna*	Occasional
Yarrow	*Achillea millefolium*	Occasional
Creeping Buttercup	*Ranunculus repens*	Occasional
Common Mouse-ear	*Cerastium fontanum*	Occasional
Wild Carrot	*Daucus carota*	Rare
Alexanders	*Smyrnium olusatrum*	Rare
Smooth Cat's ear	*Hypochaeris radicata*	Rare
Daisy	*Bellis perenne*	Rare
Ephemeral/Ruderal		
Fescue		Abundant
Creeping Bent		Abundant
Ribwort Plantain	*Plantago lanceolata*	Occasional
Bittercress	*Cardamine sp.*	Occasional
Dandelion		Occasional
Rosebay Willowherb		Rare
Tall Forbs		
Common Nettle		Abundant
Rosebay Willowherb		Abundant

Cow Parsley		Abundant
Cammon Comfrey	*Symphytum sp.*	Occasional
Cleavers	*Galium aparine*	Occasional
Creeping Buttercup		Occasional
Bramble	*Rubus fruticosus agg.*	Rare
Bramble Scrub		
Bramble		Dominant
Ivy	*Hedera helix*	Abundant
Crane's Bill		Occasional
Cleavers		Occasional
Yorkshire Fog		Occasional
Wet Woodland		
White Willow	***Salix alba***	Abundant
Bramble		Frequent
Reed Canary-grass	*Phalaris arundinacea*	Frequent
Dock	*Rumex sp.*	Occasional
Hemlock	*Conium maculatum*	Occasional
Meadow Buttercup	*Ranunculus acris*	Occasional
Common Nettle		Occasional
Cleavers		Occasional

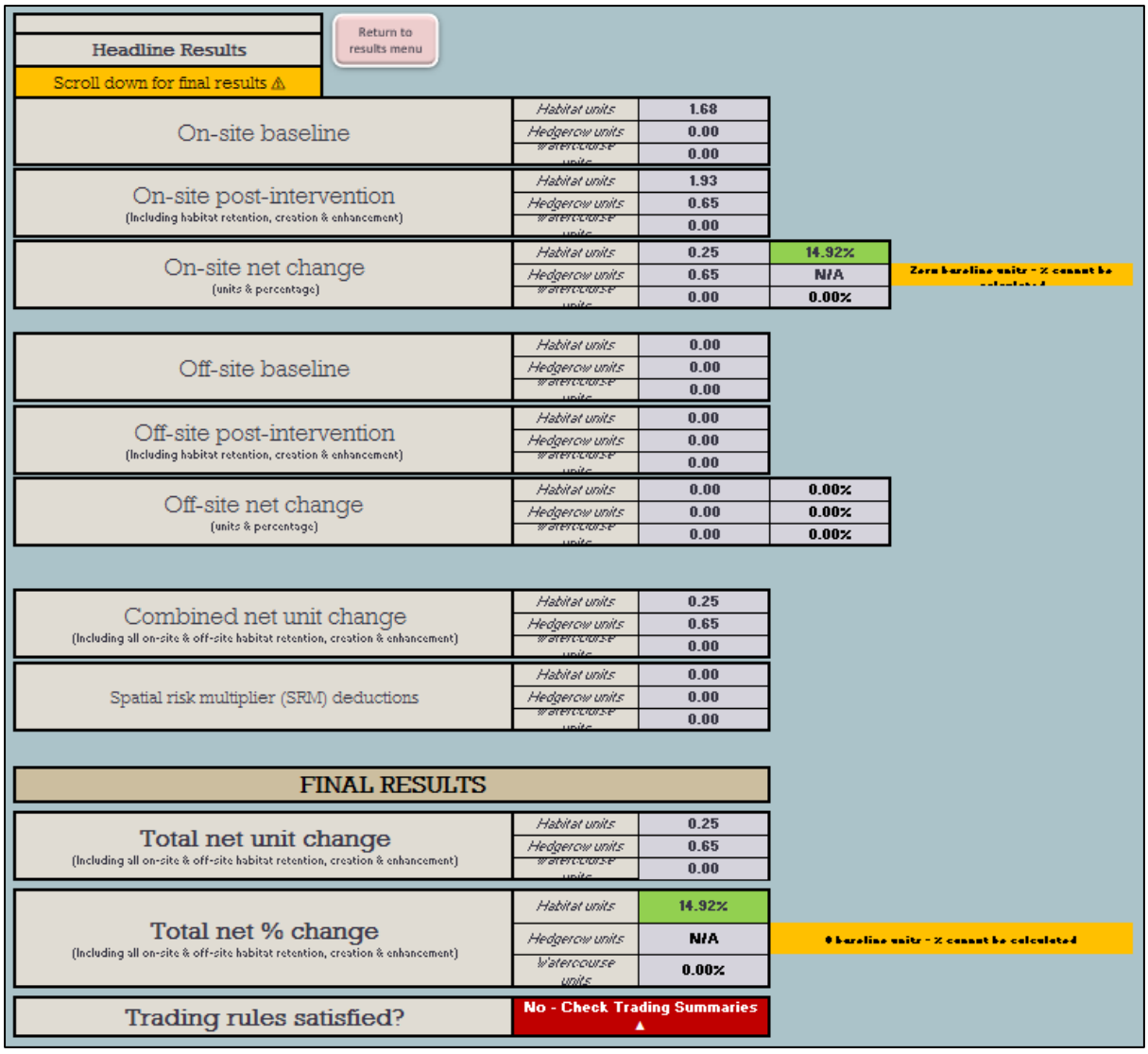
Appendix 6: Proposal Plan



Appendix 7: Planting Plan



Appendix 8: BNG Headline Results



Headline Results				
Return to results menu				
Scroll down for final results ⚠				
On-site baseline	Habitat units	1.68		
	Hedgerow units	0.00		
	Watercourse units	0.00		
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	1.93		
	Hedgerow units	0.65		
	Watercourse units	0.00		
On-site net change (units & percentage)	Habitat units	0.25	14.92%	
	Hedgerow units	0.65	N/A	Zero baseline units - % cannot be calculated
	Watercourse units	0.00	0.00%	
Off-site baseline	Habitat units	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Off-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Off-site net change (units & percentage)	Habitat units	0.00	0.00%	
	Hedgerow units	0.00	0.00%	
	Watercourse units	0.00	0.00%	
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.25		
	Hedgerow units	0.65		
	Watercourse units	0.00		
Spatial risk multiplier (SRM) deductions	Habitat units	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
FINAL RESULTS				
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.25		
	Hedgerow units	0.65		
	Watercourse units	0.00		
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	14.92%		
	Hedgerow units	N/A	0 baseline units - % cannot be calculated	
	Watercourse units	0.00%		
Trading rules satisfied?	No - Check Trading Summaries ▲			

Appendix 9: Ground-level Tree Assessment

Table A3. Ground-level Tree Assessment Results						
Tree Reference	Tree Species	Location (What3words)	Tree Suitability	PRF description	PRF suitability	Photographs
T1	Hawthorn	///poster.merchant.stickler	PRF	Lifted bark throughout main stem and branches	PRF-I	 

T15	White Willow	///completed.acid.submerged	PRF	Transverse snap on branch circa 4m high, facing north	PRF-I	 

T16	White Willow	///dozen,bowhead.chainshaw	PRF	Multiple rot holes, lifting bark and wounds & cankers throughout stem and branches.	PRF-I	 

						
T17	White Willow	///arose.adopt.talked	PRF	Wounded branch circa 4m high extending towards NE exposing cavity.	PRF-I