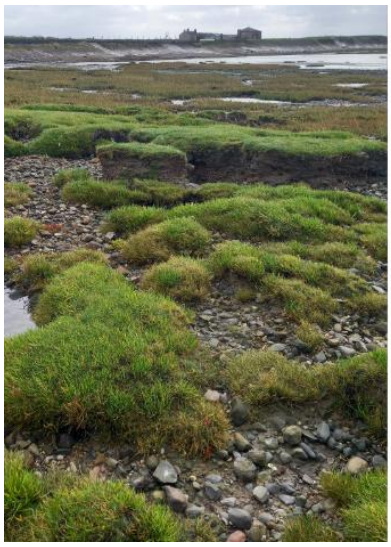
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Ecological Impact Assessment

Penistone Station Car Park

For

Barnsley Metropolitan Borough Council

Report Ref.: BAR010-004-003/001/001

October 2026

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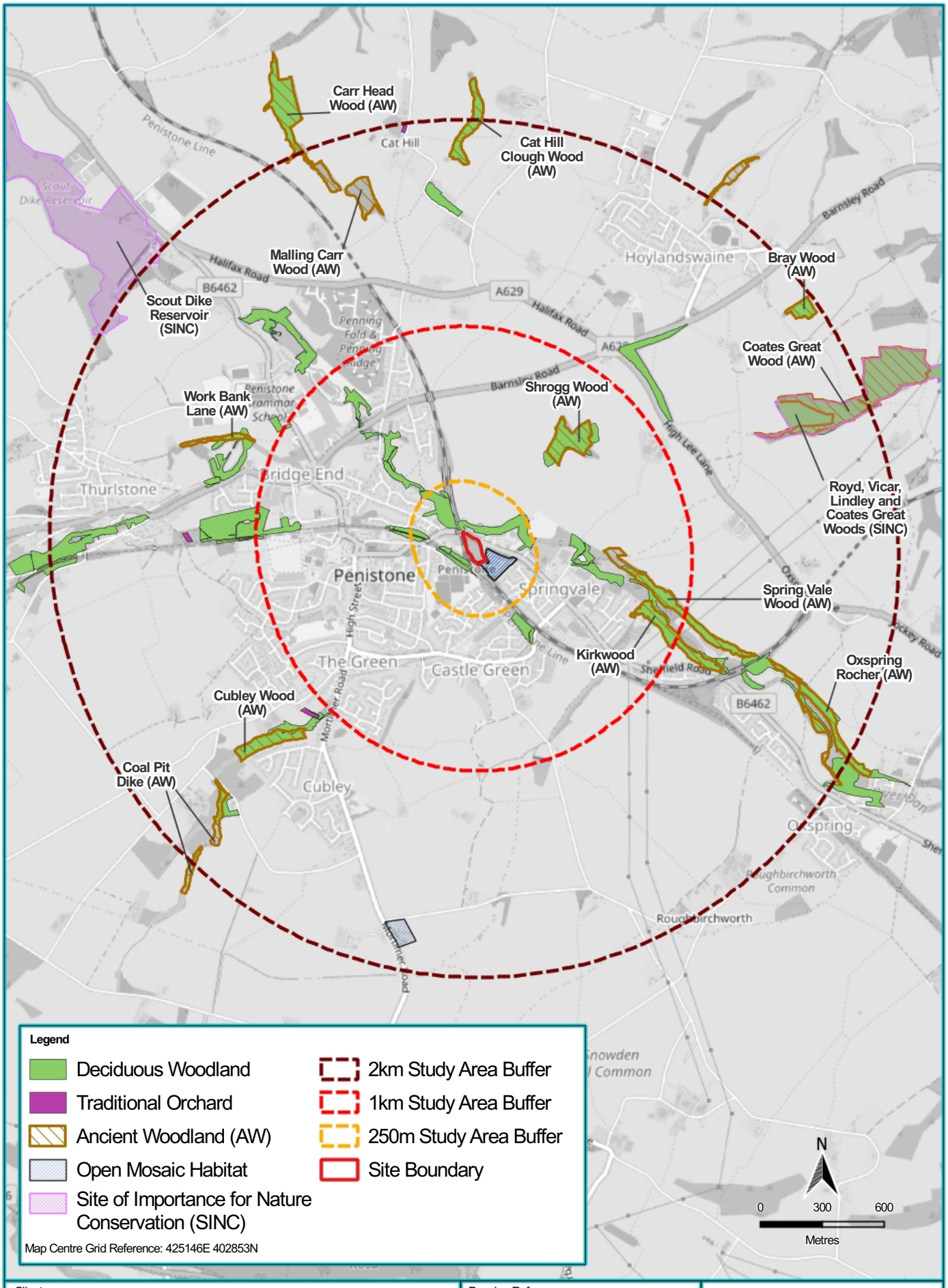
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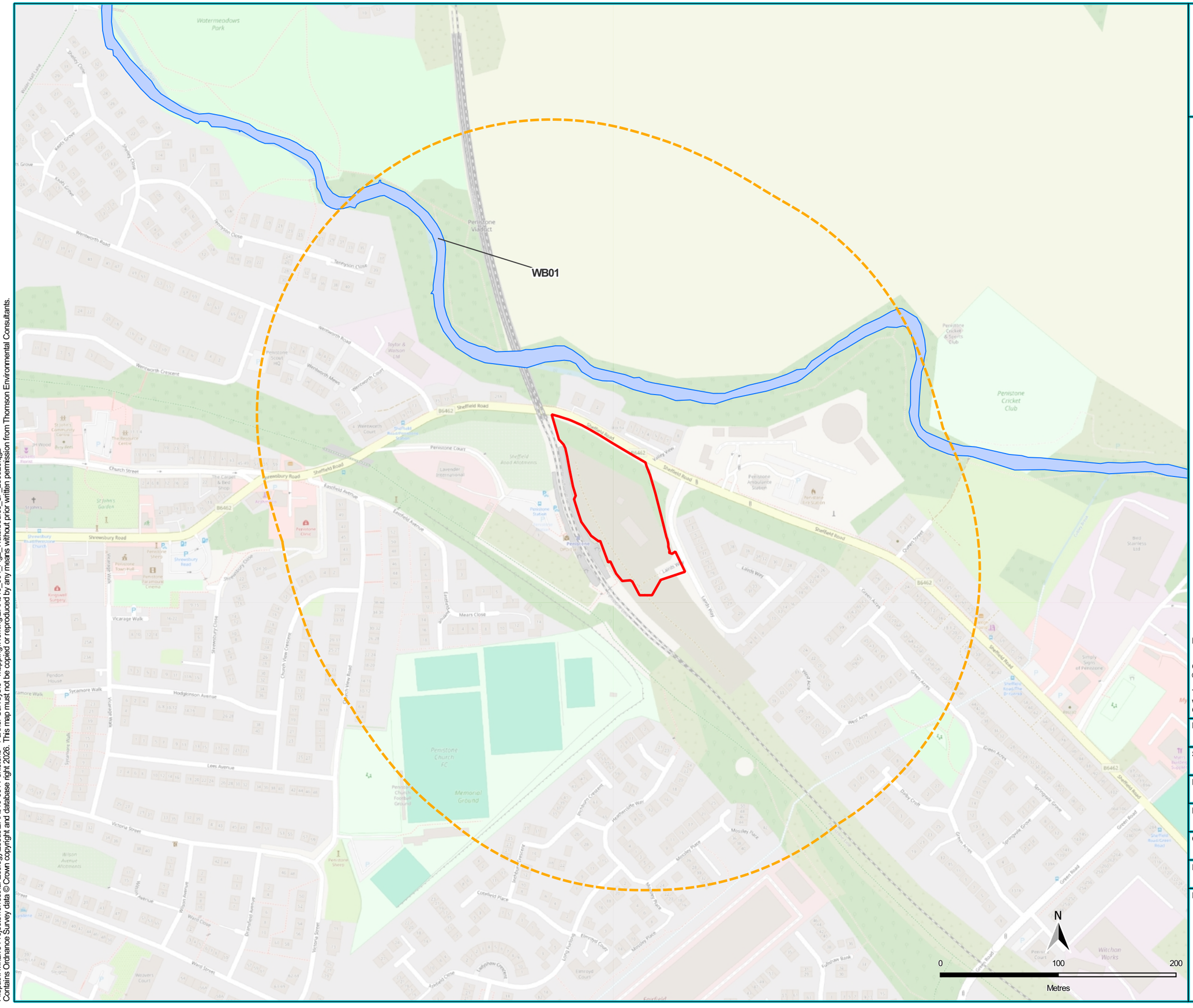
Figure 1: Site Location, Study Area and Desk Study Results
Figure 2: Waterbodies within 250m
Figure 3: UK Habitat Classification Survey Results



Client	Barnsley Metropolitan Borough Council	Drawing Ref	BAR010-004/410606/3
Figure Number	1	Scale at A4	1:25,000
Figure Title	Site Location, Study Area and Desk Study Results	Drawn: SF / Checked: AS	
		Date: 02/10/2026	Date: 02/10/2026

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Legend

- Waterbodies
- 250m Study Area Buffer
- Site Boundary

Map Centre Grid Reference: 425132E 403313N

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Client	Barnsley Metropolitan Borough Council
Figure Number	2
Figure Title	Waterbodies within 250m

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Legend

- Target Note Point
- g3c(80) - Other Neutral Grassland (Open Mosaic Habitat)
- h3d - Bramble Scrub
- u1 - Built-up Areas and Gardens
- u1b - Developed Land, Sealed Surface
- u1b5 - Buildings
- w1f7 - Other Lowland Mixed Deciduous Woodland
- w1g - Other Woodland, Broadleaved
- u1f - Sparsely Vegetated Urban Land
- u1f(80) - Sparsely Vegetated Urban Land (Open Mosaic Habitat)
- Target Note Area
- Site Boundary

Map Centre Grid Reference: 425141E 403307N

This map has been drawn at a sufficient level of accuracy to fulfil the requirements of a UK Habitat Classification Survey. The level of accuracy depends on both the size of the area involved and the base mapping. Every effort has been made to create a map that is as accurate as possible. However, this map is not intended to represent a scaled landscape survey so should not be used to pin-point accurate engineering work or as a basis for detailed site planning.

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Figure Number	3
Figure Title	UK Habitat Classification Survey Results

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1. Summary

1.1 Introduction

1.1.1 Thomson Environmental Consultants was commissioned by Barnsley Borough Metropolitan Council to undertake an Ecological Impact Assessment (EcIA) of the proposed construction of a new car park at Penistone train station in South Yorkshire. This report documents the EcIA, which was undertaken in accordance with BS42020:2013 and following Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines (2018). The work was carried out by members of CIEEM in accordance with CIEEM's Code of Conduct and following standard published methods. The ecological baseline for the site was derived through desk study and ecological site surveys, including birds, bats, reptiles, invertebrates, and open mosaic condition assessment survey.

1.2 Baseline

Habitats

- Other neutral grassland
- Other neutral grassland (OMH)
- Bramble scrub
- Developed land, sealed surface
- Buildings
- Artificial unvegetated unsealed surface
- Sparsely vegetated urban land
- Sparsely vegetated urban land (OMH)
- Other lowland mixed deciduous woodland,
- Other woodland, broadleaved

Important species

- Bats
- Badger
- Birds
- Reptiles
- Amphibians
- Invertebrates
- Small mammals

1.3 Potential effects, mitigation, compensation and enhancement

1.3.1 Habitat loss is expected across the site with onsite mitigation and offsite compensation required. In addition, compensation and enhancement is required for multiple species on site due to this habitat loss.

1.4 Residual effects

1.4.1 The proposed development would have no residual negative effects on any designated sites of nature conservation importance, and no effects on the integrity of European designated sites are predicted. Assuming the implementation of all mitigation, compensation and enhancement measures identified in this report, effects on priority habitats, protected and notable species would be either neutral or minor positive in the medium to long-term.

1.5 Conclusion

1.5.1 The proposed development would avoid significant ecological harm and has potential to enhance the overall biodiversity interest of the site in accordance with policies concerning the conservation of biodiversity in the National Planning Policy Framework (2026) should all mitigation and enhancement be implemented.

2. Introduction

2.1 Background

2.1.1 Thomson Environmental Consultants (Thomson) was commissioned by Barnsley Metropolitan Borough Council to undertake an Ecological Impact Assessment (EcIA) for the proposed development of a car park at land adjacent to Penistone train station, located on Laird's way (approximate OS grid reference: SE 25142 03309) hereafter referred to as the 'site'. The location of the site is shown on Figure 1.

2.1.2 This report documents the EcIA, which was undertaken in accordance with BS42020:2013 and following Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines (2018). It includes sections providing the following information:

- Description of the existing ecological baseline;
- Identification of the potential impacts of the proposals during and post-construction;
- Identification of proposed avoidance, mitigation and compensation measures for negative impacts, and further enhancement measures;
- Summary of residual ecological effects;
- Consideration of cumulative effects; and
- Conclusions, including assessment of compliance with wildlife legislation and planning policy.

2.1.3 This report has been prepared by the following competent individuals within Thomson:

- Principal author – Jack Crutchley BSc (Hons) MSc ACIEEM – Senior Ecologist

2.1.4 The individual listed above is a member of the Chartered Institute of Ecology and Environmental Management (CIEEM) with appropriate expertise in the ecology sector. Jack is highly experienced with a strong track record in the provision of ecological advice for development projects.

2.1.5 A number of ecologists have been involved with the collection of ecological survey information at the site. All surveyors are members of CIEEM and are appropriately qualified and experienced, holding species specific licences where appropriate. Details of the surveyors and their qualifications are provided within the technical appendices.

2.1.6 The purpose of this report is to identify and describe all potentially significant ecological effects associated with the proposed development; to set out the mitigation measures required to ensure compliance with nature conservation legislation and to address any potentially significant ecological effects; to identify how mitigation measures will/could be secured; to provide an assessment of the significance of any residual effects; to identify appropriate enhancement measures; and to set out the requirements for post-construction monitoring.

2.1.7 The site is approximately 0.8ha, located to the east of the railway near to Penistone railway station, Barnsley, South Yorkshire. The site itself currently consists of grassland, woodland and urban areas, with one structure and one building. Habitats on site were assessed to provide suitability for multiple protected species including nesting birds, bats, reptiles, and invertebrates, as well as containing open mosaic habitats.

2.1.8 Barnsley Metropolitan Borough Council are preparing a planning proposal for the construction of a new car park at the site. The project with require the clearance of multiple vegetated habitats and the demolition of buildings. The planned start and duration of the project is currently unknown.

2.1.9 Multiple surveys have been completed at the site, with previous reports submitted including:

- Preliminary Ecological Appraisal (PEA), Potential Roost Assessment (PRA) and Ground Level Tree Assessment (GLTA) Report
- Reptile Survey Report
- Bat Emergence Survey
- Invertebrate Survey
- Open Mosaic Habitat Condition Assessment
- Arboricultural Survey Report

2.1.10 This report supersedes all previous reports appended, particularly in relation to the PEA where a larger red line boundary was assessed before the full extent of works was known.

2.2 Limitations

2.2.1 The species data collated during the desk study is mainly derived from records submitted by members of the public and ad hoc surveys undertaken by volunteers. Therefore, it should not be taken as a definitive list of the protected species and other species of conservation concern that occur in the local area.

2.2.2 Some species records (grid references) received from the local environmental records centre were only available at four figure resolution. As such it was not possible to say if they fall within the study area for this project. In the case of doubt, a cautious approach was taken and they were assumed to be within 1km of the site.

2.2.3 The invertebrate surveys did not cover the full survey season however this was not deemed a significant limitation: '*The site was sampled during the late summer months (July to September) resulting in a partial dataset being obtained and from which to analyse the site and its value to invertebrates. However, it is considered that a reliable view of the site can be gained from the data and also the site visits from which information including habitat, botany, and habitat structure could be assessed.*' (Conops Entomology Ltd. 2026)

3. Planning Policy and Legislation

3.1 Background

3.1.1 National legislation and planning policy relating to ecology and biodiversity, relevant to the proposed works, is summarised below and further detail is given in Appendix 1. Local policies relevant to the project are described below.

3.1.2 This report refers to 'ecological features' which includes:

- Non-statutory designated sites for nature conservation;
- Priority habitats for nature conservation, including ancient woodland;
- Protected species;
- Species of conservation concern; and
- Invasive non-native species.

3.2 Designated sites

3.2.1 Local Nature Reserves (LNRs) are designated sites of 'local importance' that receive protection under the National Parks and Access to the Countryside Act 1949.

3.2.2 Non-statutory designated sites, such as Sites of Nature Conservation Interest (SNCIs), Sites of Interest to Nature Conservation (SINCs) and Local Wildlife Sites (LWSs) are of 'local importance'. These sites are not protected under legislation. However, local authorities take account of local sites when formulating local plans and when considering planning applications.

3.2.3 Policy BIO1 of the Barnsley Local Plan, (Barnsley Metropolitan Borough Council, 2019) states that; "*Development will be expected to conserve and enhance the biodiversity and geological features of the borough by:*

- *Protecting and improving habitats, species, sites of ecological value and sites of geological value with particular regard to designated wildlife and geological sites of international, national and local significance, ancient woodland and species and habitats of principal importance identified via Section 41 of the Natural Environment & Rural Communities Act 2006 (for list of the species and habitats of principal importance) and in the Barnsley Biodiversity Action Plan.*
- *Maximising biodiversity and geodiversity opportunities in and around new developments.*
- *Conserving and enhancing the form, local character and distinctiveness of the boroughs natural assets such as the river corridors of the Don, the Dearne and Dove as natural floodplains and important strategic wildlife corridors.*
- *Proposals will be expected to have followed the national mitigation hierarchy (avoid, mitigate, compensate) which is used to evaluate the impacts of a development on biodiversity interest.*
- *Protecting ancient and veteran trees where identified.*
- *Encouraging provision of biodiversity enhancements.*
- *Development which may harm a biodiversity or geological feature or habitat, including ancient woodland and aged or veteran trees found outside ancient woodland, will not*

be permitted unless effective mitigation and/or compensatory measures can be ensured.".

3.3 Priority habitats

3.3.1 In this report priority habitats for nature conservation include:

- Habitats of Principal Importance listed under Section 41 of the NERC Act;
- Habitats listed under Local Biodiversity Action Plans (LBAPs); and
- Ancient woodland.

3.3.2 The NERC Act requires planning authorities to have particular regard to the Habitats of Principal Importance listed under Section 41 of the act which should be treated as a material consideration in the planning process.

3.3.3 Ancient woodland is any area that has been wooded continuously since at least 1600 AD. Ancient woodland, as well as ancient and veteran trees, are regarded as an 'irreplaceable habitat'.

3.4 Protected species

3.4.1 Rare and declining plant and animal species in the UK are generally protected under national legislation. Species protected under the Conservation of Habitats and Species Regulations 2017 (as amended) are often referred to as European Protected Species (EPS) because the requirement to protect them under national legislation originally derives from the fact that these species are listed under the European Habitats Directive. These species can be considered to be of 'international importance' because they are rare or declining in Europe as well as the UK. These species are not only protected from killing and injury, but their breeding sites and resting places (habitat) are also protected. These species include:

- Great crested newt, natterjack toad and pool frog;
- Sand lizard and smooth snake;
- Bats;
- Hazel dormouse; and
- Otter.

3.4.2 Other species are protected under the Wildlife and Countryside Act 1981, as amended (WCA). In addition to the species listed above, which also receive some protection under the WCA, protection under this legislation is given to prevent killing and injury of:

- Common lizard, slow worm, adder and grass snake;
- Birds; and
- Water vole.

3.4.3 In the case of birds, as well as adult birds being protected from killing or injury, it is also an offence to take, damage or destroy a nest that is in use or being built and to take or destroy eggs of wild birds. Additional protection applies to birds listed in Schedule 1 of the WCA, meaning it is also an offence to disturb these species when building a nest or when the nest is active.

3.4.4 The badger receives protection under the Protection of Badgers Act 1992. Whereby it would be an offence to injure or kill a badger, interfere with a badger sett, or treat a badger cruelly.

3.4.5 Other mammal species, including rabbit, fox and hedgehog, are protected under the Wild Mammals (Protection) Act 1996, which makes it an offense to inflict any unnecessary suffering, including crushing or asphyxiation of a wild mammal.

3.5 Species of conservation concern

3.5.1 Other rare or declining species may not receive strict legal protection but may be recognised on published lists as species of conservation concern that should be protected as a matter of best practice.

3.5.2 Under Section 41 of the NERC Act, the Secretary of State must publish a list of the living organisms which in the Secretary of State's opinion are species of principal importance for the purpose of conserving biodiversity. Planning authorities are required to have particular regard to these species and treat them as a material consideration in the planning process. Most protected species are also listed as species of principal importance.

3.5.3 Rare or declining bird species are listed as Red or Amber in Birds of Conservation Concern (BOCC) (Stanbury *et al.*, 2021) a list that is periodically updated.

3.5.4 Consideration of species of conservation concern during development projects is a requirement of the NERC Act which states that any *"public authority must, in exercising its functions, have regard … to the purpose of conserving biodiversity" and "conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat".*

3.5.5 Species considered of local nature conservation importance may also be listed in Local Biodiversity Action Plans (LBAPs). Species of Principal Importance or species listed on LBAPs are henceforth referred to as 'priority species'. Most protected species are also listed as Species of Principal Importance, including:

- Species of amphibian not protected from killing and injury under the WCA but listed as species of principal importance including common toad;
- All native reptile species in England;
- Otter, water vole, hazel dormouse and several species of bat;
- Many invertebrates, including white-clawed crayfish; and
- Many species of fish, bird, plant, fungi and lichen.

3.6 Invasive non-native species

3.6.1 Invasive non-native plants are those listed as species of special concern because they have the potential to cause severe problems for native UK plants and the environment

3.6.2 In the UK it is an offence under the Wildlife and Countryside Act 1981 (as amended) to "*plant or otherwise cause to grow in the wild*" any plant species listed in Schedule 9 of the Act.

4. Methods

4.1 Overview of approach

4.1.1 EcIA is the process of identifying, quantifying and evaluating the potential effects of development-related or other proposed actions on relevant habitats, species and ecosystems (important ecological features). The assessment approach applied is based upon recognised good practice Guidelines for Ecological Impact Assessment in the UK and Ireland published by CIEEM (CIEEM, 2024). The aims of this EcIA are to:

- Identify important ecological features (i.e. designated sites, habitats, species or ecosystems) which may be impacted;
- Provide a scientifically rigorous and transparent assessment of the likely ecological impacts and resultant effects of the proposed development;
- Determine the consequences of the proposed development in terms of national, regional and local policies relevant to nature conservation and biodiversity; and
- Set out what steps would be taken to ameliorate negative effects and adhere to legal requirements relating to the relevant ecological features concerned.

4.1.2 The principal steps involved in the CIEEM approach can be summarised as:

- Ecological features that are present and might be affected by the proposed development are identified through a combination of targeted desk-based study and field survey work to determine the ecological baseline conditions;
- The importance of the identified ecological features is evaluated to place their relative biodiversity and nature conservation value into geographic context, and this is used to define the relevant ecological features that need to be considered further within the EcIA process;
- The changes or perturbations predicted to result as a consequence of the proposed development (i.e. the potential impacts), and which could potentially affect relevant ecological features identified and their nature described. Established best-practice, legislative requirements or other incorporated design measures to minimise or avoid impacts are also described and are taken into account;
- The likely effects (beneficial or adverse) on relevant ecological features are then assessed, and where possible quantified;
- Measures to avoid or reduce any predicted significant effects are then developed in conjunction with other elements of the design (including mitigation for other environmental disciplines). If necessary, measures to compensate for effects on features of nature conservation importance are also included;
- Any residual effects of the proposed development are reported; and
- Scope for ecological enhancement is considered.

4.1.3 In accordance with the CIEEM guidelines (CIEEM, 2024) the terminology used within the EcIA draws a clear distinction between the terms ‘impact’ and ‘effect’. For the purposes of the EcIA these terms are defined as follows:

- Impact – Actions resulting in changes to an ecological feature. For example, the construction activities of a development removing a hedgerow.

- Effect – Outcome to an ecological feature from an impact. For example, the effects on a dormouse population from loss of a hedgerow.

4.2 Identifying important ecological features

4.2.1 Data obtained through consultation, desk studies and field surveys has been used to identify relevant ecological features. Not all features require detailed consideration within the EcIA. It is not necessary to "*carry out detailed assessment of ecological features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable*", although this does not mean that efforts should not be made to safeguard wider biodiversity, and national policy documents emphasise the need to achieve no net loss of biodiversity and enhancement of biodiversity (CIEEM, 2024).

4.2.2 CIEEM guidance states that it is only necessary to "*undertake a systematic assessment of relevant ecological features that could be significantly affected (including adverse and beneficial effects*)". Such an approach also has the benefit of helping to keep EcIA focussed and manageable.

4.2.3 To support focussed EcIA there is a need to determine the scale at which the specific ecological features identified through the desk studies and field surveys undertaken for the proposed development are of importance. Assessing level of importance of ecological features provides a rationale for scoping of features that require further assessment.

4.2.4 Ecological features can be of importance for a variety of reasons such as the quality or extent of designated sites or habitats, habitat/species rarity, extent to which they are threatened throughout their range, or their rate of decline.

4.2.5 Importance may be defined by the quality or extent of designated sites or habitats, their rarity in a geographical context, and their rate of decline either locally or nationally. CIEEM (2024) identifies a number of characteristics that can be used to identify ecological features likely to be important in terms of their biodiversity value as follows:

- Animals or plant species, subspecies or varieties that are rare or uncommon, internationally, nationally or more locally;
- Ecosystems and their component parts that provide the habitats required by the above species, population and/ or assemblages;
- Endemic species or locally distinct sub-populations of a species;
- Habitat diversity, connectivity and/ or synergistic associations;
- Notably large populations of animals or concentrations of animals considered uncommon or threatened in a wider context;
- Plant communities (and their associated animals) that are considered to be typical of valued natural/ semi-natural vegetation types;
- Species on the edge of their range, particularly where their distribution is changing as a result of global trends and climate change;
- Species-rich assemblages of plants or animals; and
- Typical faunal assemblages that are characteristic of homogenous habitats.

4.2.6 Where available, relevant guidance is used to inform the determination of importance of ecological features. Resources relevant to the study area have been consulted including local guidance

4.2.7 The status of habitats and species that are rare or threatened is outlined nationally in various Red Data Books and Lists, and also in the NERC Act s41 list of habitats and species of principal importance for nature conservation in England. There are national criteria for rarity and level of threat to populations for different groups of species, and guidance on the assessment of relative value such as the Ratcliffe Criteria (Ratcliffe, 1977). Species may be widespread or common nationally, but of scarce occurrence in the county or district. Conversely, a species may be common in a county or district context but considered rare nationally.

4.2.8 In addition, some species termed legally protected species, such as bats, badger and reptiles, are given statutory protection that protects them from harm or forms of disturbance but that does not necessarily translate to biodiversity value e.g. a transitory occurrence of a single individual of a protected bat species would not be afforded the same weight as a regularly occurring large population of bats.

4.2.9 Expert judgement has also been used as appropriate when assigning value, particularly where species or habitats are poorly known or guidance is lacking. Ecological features may be identified that are not included in lists of notable habitats and species, but that can be considered important on the basis of expert judgment e.g. because of their local rarity or because they enable effective conservation of other important features.

4.2.10 The value of ecological feature has been defined with reference to the geographical level at which it matters. The frames of reference used for this assessment, and based on CIEEM guidance, are:

- International (European context);
- National (Great Britain);
- Regional (Yorkshire and Humber);
- County (South Yorkshire);
- District (Barnsley Metropolitan Borough);
- Local (ecological features considered appreciably important within the parish or neighbourhood); and
- Negligible (has a very low value, not considered to merit retention or mitigation).

4.3 Characterising impacts

4.3.1 When describing potential impacts (and where relevant the resultant effects) reference is made to the following characteristics:

- Beneficial/adverse - i.e. is the change likely to be in accordance with nature conservation objectives and policy:
  - beneficial (i.e. positive) - a change that improves the quality of the environment, or halts or slows an existing decline in quality e.g. increasing the extent of a habitat of conservation value;
  - adverse (i.e. negative) - a change that reduces the quality of the environment. e.g. destruction of habitat or increased noise disturbance.
- Magnitude - the ‘size’, ‘amount’ or ‘intensity’ of an impact - this is described on a quantitative basis where possible;
- Spatial extent - the spatial or geographical area or distance over which the impact/effect occurs;

- Duration - the time over which an impact is expected to last prior to recovery or replacement of the resource or feature. The likely duration of the impact should be quantified (e.g. 2 weeks duration; 5 to 10 years). Consideration has been given to how this duration relates to relevant ecological characteristics such as a species' lifecycle. However, it is not always appropriate to report the duration of impacts in these terms. The duration of an effect may be longer than the duration of an activity or impact;
- Reversibility - i.e. is the impact temporary or permanent. A temporary impact is one from which recovery is possible or for which effective mitigation is both possible and enforceable. A permanent effect is one from which recovery is either not possible, or cannot be achieved within a reasonable timescale (in the context of the feature being assessed); and
- Timing and frequency - i.e. consideration of the point at which the impact occurs in relation to critical life-stages or seasons.

4.3.2 For each receptor only those characteristics relevant to understanding the ecological effect and determining the significance are described.

4.4 Determination of significant effects

4.4.1 Impacts are initially assessed based on the project description, including any embedded mitigation measures such as standard industry best practice (e.g. implementation of standard dust suppression and pollution prevention measures). Where significant adverse effects are identified additional mitigation measures (including avoidance, mitigation or compensation) are prescribed. The residual impact is then determined taking into account the application of the additional mitigation.

4.4.2 Potential impacts on relevant ecological features are assessed and a judgement reached on whether or not the resultant effect on conservation status or structure and function is likely to be significant. This process takes into consideration the characteristics of the impact, the sensitivity of the ecological feature concerned, and the geographic scale at which the feature is considered important. A significant effect is simply an effect that is sufficiently important to require assessment and reporting so that the decision maker is adequately informed of the environmental consequences of permitting a project.

4.4.3 CIEEM (2024) states that: "*For the purposes of EcIA a 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' (i.e. relevant ecological features) or for biodiversity in general … In broad terms, significant effects encompass impacts on the structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species (including extent, abundance and distribution).*"

4.4.4 For nature conservation designations, other defined habitats and ecosystems the assessment considers what effect the potential impacts are likely to have on conservation objectives or interest/qualifying features. For ecosystems, consideration is given to whether a change in ecosystem structure and/or function is likely that would substantively alter its ecological integrity.

4.4.5 For habitats and species, the assessment considers what effect the potential impacts will have on "conservation status", and whether or not the effect is likely to substantively alter the

ecological integrity of the habitat or species under consideration. Further guidance on how to assess conservation status is provided in CIEEM (2024) as follows:

- For habitats: “conservation status is determined by the sum of the influences acting on the habitat that may affect its extent, structure and functions as well as its distribution and its typical species within a given geographical area”; and
- For species: “conservation status is determined by the sum of influences acting on the species concerned that may affect its abundance and distribution within a given geographical area.”

4.4.6 In considering effects on conservation status, reference is made to relevant available guidance on the current conservation status of the ecological feature under consideration. Effects will either be:

- Not significant (i.e. no ecologically meaningful effect on conservation status); or
- Significant (i.e. an ecologically meaningful effect on conservation status).

4.4.7 Judgements on significance are based, wherever possible, on quantitative evidence. However, where necessary the professional judgement of an experienced ecologist has been applied.

4.4.8 For those effects considered significant, the effect will also be characterised as appropriate (e.g. adverse or beneficial),and qualified with reference to the geographic scale at which the effect is significant (e.g. an adverse effect significant at a national level).

4.4.9 The scale of significance of an effect may not be the same as the geographic context in which the feature is considered important. For example, a local effect on a species of principal importance for nature conservation at the national level (as listed on NERC Act s41) may not have a significant effect on the national population of that species.

4.5 Application of the mitigation hierarchy

4.5.1 The identification and specification of mitigation proposals in this assessment has been undertaken with regard to the principles of the mitigation hierarchy i.e.:

1. Avoid ecological features where possible;
2. Reduce (minimise) the magnitude of the potential impact e.g. through iterative design and/ or advance commitment to sensitive methods or timing of working (sometimes termed as embedded mitigation or mitigation by design);
3. Mitigate the potential effect through the application of additional proven measures, such that the residual effect realised is reduced in magnitude (non-embedded mitigation); and
4. Compensate for significant residual effects, e.g. by providing suitable habitats elsewhere. Proposals should achieve appropriate compensation in a reasonable timeframe and be legally enforceable.

4.5.2 This hierarchy requires the highest level to be applied where possible. Only where this cannot reasonably be adopted should lower levels be considered. Where it is reasonably practicable to do so then attempts have been made to avoid potential impacts. Where impacts cannot be avoided then efforts have been made to limit the magnitude of the potential impact and to mitigate the resultant effects through the provision of appropriate measures. Where effects

cannot be mitigated to a level where they are not significant then compensatory measures have been employed to (as far as is reasonably possible) offset any remaining adverse effects.

4.6 Determination of ecological baseline

4.6.1 The ecological baseline was determined through desk study and site survey. For the purposes of this report, the 'site' refers to the proposed development area within the boundary of the proposed carpark as shown on Figure 1.

4.6.2 From the initial site surveys conducted in February 2026 the site boundary has been reduced by the client to the new boundary (PNS-SLC-XX-DRG-EMF-0001) received 18th September 2026.

Desk Study

4.6.3 Biodiversity information was requested for a study area of a 1km radius around the site boundary (extended to 2km for bats) from Sheffield Biological Records Centre in February 2026. Information requested included the location and details of the following:

- Designated sites of nature conservation importance (statutory and non-statutory; to 1km for European statutory designated sites and 0.5km for other statutory sites using the Defra MAGIC website); and
- Previous records of protected and/or notable species, including Priority Species (Species of Principal Importance for Conservation in England listed on Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006) and Sheffield Biodiversity Action Plan (BAP) Priority Species.

4.6.4 Information was also obtained from the following websites on 4th March 2026:

- https://magic.defra.gov.uk/MagicMap.aspx – Information on protected sites;
- http://jncc.defra.gov.uk – information on protected sites, Priority Habitats and Species; and
- https://www.gov.uk/government/organisations/natural-england – information on protected sites and standing advice.

Field Survey

4.6.5 A UK Habitat Classification Survey (UKHab) of the site was undertaken on 25th February 2026 (Thomson, 2026a). This survey identified the main habitat types on the site and the presence/potential presence of protected and notable species. The results of the survey were detailed on a habitat map, with target notes used to identify specific features of ecological interest (Figure 3). A botanical species list was also recorded for each identified habitat. The survey method and results are given in Appendix 3.

4.6.6 Further (Phase 2) surveys were subsequently undertaken to determine if such species were present. A summary of these surveys is provided in Table 4.1 below; full details of methodologies and results are contained in Appendices 1-9. All surveys were carried out following standard published methods.

Table 4.1: Summary of Phase 2 ecological surveys

Survey	Date	Details
Bat roost assessment	25th February 2026	Preliminary roost assessment of trees and buildings for potential bat roost features. Refer to Appendix 3.
Bat emergence survey	01/06/2026 - 14/07/2026	Dusk emergence and dawn re-entry surveys of trees/buildings with roost suitability that would be affected by the development. Refer to Appendix 5.
Reptile survey	05/05/2026 - 03/07/2026	Deployment and seven checks of artificial refugia in suitable habitat. Refer to Appendix 4.
Invertebrate survey	16/07/2026 - 03/09/2026	Three visits, using a range of survey methods to assess the value to invertebrates of the site. Refer to Appendix 6.
Open Mosaic Habitat condition assessment	25th June 2026	Assessment to determine whether habitat on site meets to definition of Open Mosaic Habitat. Refer to Appendix 8.

5. Baseline ecological conditions

5.1.1 The baseline ecological condition for ecological features (designated sites, habitats and species) present on the site or within the desk study buffer of the development is summarised below. This information is derived from the Preliminary Ecological Appraisal, Preliminary Roost Assessment and Ground Level Tree Assessment (Thomson Environmental Consultants (Thomson), 2026a), Reptile Survey Report (Thomson, 2026b), Bat Emergence Survey Report (Thomson, 2026c), Invertebrate Assessment (Conops Ecology, 2026), Arboriculture Survey Report (Thomson, 2026f) and OMH condition assessment. Table 5.1 provides a summary of the importance of ecological features and a rationale for scoping features in or out for impact assessment.

5.2 Designated sites

5.2.1 The desk study returned four designated sites within 2km of the site boundary, comprising two SINCs, the closest of which is 1.4km from the site, as shown on Figure 2. Details of these sites can be seen in Appendix 1. Due to the distance from the development and the lack of pathways for damage to the qualifying features it is considered reasonably unlikely the construction and operational phases will impact this site.

5.3 Habitats within the site boundary

5.3.1 During the UKHab survey (Appendix 1) the site consisted of grassland, woodland, scrub, and urban areas. During a follow up survey to reassess the condition of some parcels during optimal season, one parcel of scrub and one parcel of grassland were classified as a priority habitat as per the UK Biodiversity Action Plan definition (Appendix 2). Figure 2 shows the habitats recorded within the current site boundary.

5.3.2 Priority habitats recorded on the site are listed below:

- g3c Other neutral grassland – One parcel qualifies as priority habitat Open mosaic habitats on previously developed land.
- u1f Sparsely Vegetated Urban Land - One parcel qualifies as priority habitat Open mosaic habitats on previously developed land (OMH).

5.3.3 Non priority habitats recorded on the site are listed below:

- g3c Other neutral grassland
- h3d Bramble scrub
- u1b Developed land, sealed surface
- u1b5 Buildings
- u1c Artificial unvegetated unsealed surface
- u1f Sparsely vegetated urban land
- w1f7 Other lowland mixed deciduous woodland (non priority)
- w1g Other woodland, broadleaved

5.3.4 The site is currently disused and closed to the public. It was previously part of rail infrastructure followed by some small-scale industrial use. Full habitat descriptions and species lists can be found in Appendix 3.

5.3.5 The arboriculture survey report also categorised 26 individual trees on site which were listed in the Tree Schedule (Thomson, 2026f) all of which were category A, B or C.

5.4 Adjacent habitats

5.4.1 The desk study returned records of 16 parcels of two types of priority habitats within 1km of the site, open mosaic on previously developed land and deciduous woodland, both of which are adjacent to the site. Further details are provided in Appendix 3, and parcels are shown on Figure 2. In addition, the site is surrounded by the rail corridor to the west with road and residential infrastructure to the east.

5.4.2 Three parcels of ancient woodland were returned in the desk study within 1km of the site, the closest of which is 0.53km from the site.

5.4.3 In addition, one waterbody (WB1 – River Don) is located 33m north of the site.

5.5 Species and species groups

5.5.1 During the PEA and Phase 2 surveys listed in Table 4.1 the site was identified to be suitable for the following species or groups of species.

Bats

5.5.2 Records of five bat species were returned in the desk study. A PRA for buildings and structures with a GLTA was undertaken in February 2026 (Thomson, 2026a). This identified six buildings, one structure and five trees with potential roost features (PRFs) requiring further ecological survey and/or mitigation. Following an update to the site boundary multiple buildings and trees were removed from the scope leaving the following buildings, structures and trees within the site boundary that were suitable for roosting bats: buildings 1 (B1) and 2 (B2), trees 1 (T1) and 2 (T2), and structure 1 (S1). These buildings, structures and trees were subject to emergence surveys to determine the presence or likely absence of bats roosts (Thomson, 2026c).

5.5.3 Following a total of three visits for B1, T1 and T2, and a single visit for each of B2 and S1, no bats were observed emerging and roosting bats were assessed to be likely absent.

5.5.4 Incidental recordings of a small numbers of bats, across three species, common pipistrelle (*Pipistrellus pipistrellus)*, soprano pipistrelle (*Pipistrellus pygmaeus*) and common noctule (*Nyctalus noctule)* were recorded across all emergence surveys using the site for foraging and commuting. The population is likely to be of local nature conservation importance, due to the small size of the site and the amount of suitable foraging and commuting habitat present on-site and the assemblage of species recorded.

Badger

5.5.5 Badger records were returned in the PEA desk study (Thomson, 2026a) and no badger signs were recorded during any survey on the site. The development will result in the loss of some grassland, woodland and scrub habitat which could be used by badger for foraging. If the badger are foraging on-site, the population is likely to be of local nature conservation importance, due to the small size of the site and the amount of suitable habitat present on-site.

Birds

5.5.6 Records of bird species were returned within the desk study, including records of Schedule 1 birds such as barn owl (*Tyto alba*) and fieldfare (*Turdus pilaris*). Evidence was observed during the habitat survey of common nesting birds nesting activity on site. There is suitable habitat including woodland and scrub present for common nesting birds, however, the site does not support suitable nesting habitat for Schedule 1 bird species' (Thomson, 2026a). The bird population on-site is considered to be of local importance for nature conservation, as on-site suitable habitat is abundant with good connectivity to surrounding habitats.

Reptiles

5.5.7 Although there were no desk study records for reptiles identified during the PEA, during the extended UKHab survey, suitable habitat for reptiles, including scrub, grassland and urban areas were recorded within the site (Thomson, 2026a).

5.5.8 A reptile survey recorded no reptiles on the site and it is therefore concluded that they are likely absent from the site (Thomson, 2026b).

Amphibians

5.5.9 No records of great crested newt (GCN) were identified during the desk study within 1km of the site and no potentially suitable waterbodies were identified within 250m of the site. Although there is suitable terrestrial habitat for GCN on the site, it is considered unlikely that they will be present due to a lack of suitable breeding sites within 250m (Thomson, 2026a).

5.5.10 Other common amphibians may use the terrestrial habitat on site for foraging or commuting as well as suitable refugia locations being noted during the PEA (Thomson, 2026a). The common amphibian population is likely to be of local nature conservation importance, due to the small size of the site and the amount of suitable habitat present on-site.

Invertebrates

5.5.11 A range of invertebrates were incidentally identified during site surveys including the priority butterfly dingy skipper (*Erynnis tages*) which is also local priority species for Barnsley. Bird's-foot trefoil, the larval foodplant of the dingy skipper, was abundant on site along with a range of other flowering plants, deadwood, and bare ground. Insects, including butterflies, micromoths, bees, beetles, grasshoppers, hoverflies, ladybirds and shield bugs, were all observed during the reptile surveys.

5.5.12 The results of the invertebrate surveys evaluated the site as follows: '*The site comprises, or is thought to comprise, a moderate-diversity invertebrate fauna that supports scarce invertebrates associated with mosaic habitats, primarily patchy bare ground, short turf, and scrub fringes, complemented by deadwood and tall, flower-abundant swards.*' (Conops Entomology, 2026)'

5.5.13 The invertebrate assemblage on site was considered to be of district (low) importance.

Other Mammals

5.5.14 Records of one other mammal species was returned within the desk study, brown hare (*Lepus europaeus*). Suitable habitat for brown hare, rabbit (*Oryctolagus cuniculus*) and hedgehog (*Erinaceus europaeus*), including woodland and scrub, was recorded on site (Thomson, 2026a). If any of the above species are present on the site, the population is likely to be of local nature conservation importance, due to the small size of the site and the amount of suitable habitat present on-site.

5.6 Evaluation and confirmation of important ecological features

5.6.1 An evaluation of the ecological features within the study area is provided in Table 5.1 below. This also includes confirmation of 'important' ecological features in the context of the proposed development, i.e. those that have been included in, or excluded from, further assessment.

Table 5.1: Evaluation of important ecological features

Ecological Feature	Ecological Importance	Included in detailed assessment?	Rationale
Designated sites of nature conservation importance			
Royd, Vicar, Lindley and Coates Great Woods Local Wildlife Site (LWS)	Local	No	Due to the distance from the development and the lack of pathways for damage to the qualifying features it is considered reasonably unlikely the construction and operational phases will impact this site.
Scout Dike Reservoir LWS	Local	No	Due to the distance from the development and the lack of pathways for damage to the qualifying features it is considered reasonably unlikely the construction and operational phases will impact this site.
Habitats on site			
Other neutral grassland	Negligible	Yes	Common, widespread habitat of negligible ecological importance.
Other neutral grassland (OMH)	National	Yes	Parcels are a Priority Habitat and provide ecological connectivity. Impacted by the development.
Bramble scrub	Negligible	No	Common, widespread habitat of negligible ecological importance.
Developed land, sealed surface	Negligible	No	Common, widespread habitat of negligible ecological importance.

Ecological Feature	Ecological Importance	Included in detailed assessment?	Rationale
Buildings	Negligible	No	Common, widespread habitat of negligible ecological importance.
Artificial unvegetated unsealed surface	Negligible	No	Common, widespread habitat of negligible ecological importance.
Sparsely vegetated urban land	Negligible	Yes	Common, widespread habitat of negligible ecological importance.
Sparsely vegetated urban land (OMH)	National	Yes	Some parcels are a Priority Habitat and provide ecological connectivity. Impacted by the development.
Other lowland mixed deciduous woodland	Local	Yes	Woodland can be important ecological features and several trees on site will be directly impacted.
Other woodland, broadleaved	Local	Yes	Woodland can be important ecological features and several trees on site will be directly impacted.
Adjacent habitats			
Waterbodies – River Don	Local	Yes	Separated from the works area by the retained woodland, the B6464, residential properties and further woodland. However, pollution mitigation required.
Deciduous woodland	National	Yes	Priority habitat 9m north of the site.

Ecological Feature	Ecological Importance	Included in detailed assessment?	Rationale
Open mosaic habitats on previously developed land	National	Yes	Priority habitat adjacent to site boundary
Important species			
Bats	Local	Yes	No roosts would be affected; however, the development could result in impacts on commuting/foraging habitat used by at least three bat species.
Badger	Local	Yes	No badger setts are likely to be impacted, although this species could potentially be affected by construction activities and a loss of foraging habitat.
Birds	Local	Yes	Nesting habitat of common and widespread birds would be potentially affected by the development.
Reptiles	Negligible	Yes	Reptiles considered likely absent from the site.
Amphibians	Local	Yes	No records of great crested newt (GCN) were identified within the desk study within 1km of the site and no potentially suitable waterbodies were identified within 250m of the site. Although there is suitable terrestrial habitat for GCN on the site, it is considered unlikely that they will be present due to a lack of suitable breeding sites within 250m.

Ecological Feature	Ecological Importance	Included in detailed assessment?	Rationale
			There is potential for common amphibians to be present on-site and adversely impacted by the proposed development.
Other mammals	Local	Yes	There is potential for hedgehogs, rabbit and hare to be present on site and be adversely impacted by the proposed development.

6. Description of the proposed development

6.1 Development description[E

6.1.1 The works will involve the removal of existing vegetation and structures to create a new car park on the east side of the railway to increase the existing parking facilities located on the west side of the track at the station forecourt. The car park is to be open 24 hours seven days a week with construction planned between spring 2027 and spring 2028 with all construction currently planned for day time hours.

6.1.2 The works include the following as per plan PNS-SLC-XX-DRG-CIV-9012 (SLC, 2026c):

- Resurfacing the areas to incorporate 101 new parking space, including 30 electric vehicle charging spaces, plus five motorcycle spaces and an access road;
- The construction of a covered cycle shelter and waiting shelter;
- The construction of a substation in the north of the site, adjacent to the car park;
- Installation of a timber post and rail fence around the car park with access gates;
- Installation of car park and street lighting;
- Installation of a Sustainable Urban Drainage System;

6.1.3 The plans for the site are shown in Appendix 2.

6.2 Zone of Influence

6.2.1 All ecological features within the working area including habitats to be cleared partially or in full will be affected by clearance and replacement with other habitats, predominantly hard standing.

6.2.2 Pollution caused by construction activities could impact habitats and species within 250m, including the river (WB1).

6.2.3 Operational lighting could impact nocturnal species such as bats and moths within the site as there is already artificial lighting surrounding the site from road lighting, the train station and residential properties. Retained woodland along the northern boundary within the site will act as a buffer between the car park and deciduous woodland outside of the site. A small amount of woodland outside of the site but connected to that within the site should also be considered within the zone of influence

6.3 Ecological design and avoidance measures

6.3.1 The habitats that will be removed from the development are of local and national ecological importance and will be replaced on a like-for-like basis within the new design scheme if not, BNG credits will need to be purchased. This is evidenced in the BNG report (Thomson, 2026e) which stipulates what is needed to achieve this 10% gain offsite or through credits. This will be accompanied by a habitat management and monitoring plan (HMMP), or similar.

6.3.2 Species enhancements for the site will be outlined in an Ecological Enhancement Plan (EEP), or similar. Avoidance measures include the retention of habitats such as woodland (w1g and w1f7) both of which are suitable for multiple species on site, including nesting common birds, small mammals and foraging bats.

6.3.3 Works shall be designed where possible so that vegetation clearance is undertaken outside of breeding bird season.

7. Assessment of effects and mitigation measures

7.1 Habitats on site

Unmitigated effects during construction

7.1.1 There are some habitats within the north-eastern corner of the site being retained that will be in close proximity to the proposed development. Retained trees are at risk of impacts posed by the construction period from tracked machinery and associated construction work.

7.1.2 Current proposals will result in the removal of large areas of the grassland and sparsely vegetated land, including the areas identified as priority habitat. In addition, areas of woodland, scrub and urban areas will also be lost.

7.1.3 The habitats that are being retained on site have the potential to be damaged during the construction phase from dust, sediment and chemicals,

Unmitigated effects post construction

7.1.4 There are no significant impacts expected on retained habitats during the operational phase of the development.

Mitigation measures

7.1.5 Loss of habitats on site, including priority habitats will be compensated for onsite and, where this is not possible, off site, as described in the BNG report (Thomson, 2026).

7.1.6 Best practice pollution measures, such as Heras fencing with dust sheeting, should be implemented to prevent any contamination of soil or air. This includes prevention of emissions of sediment, dust and chemicals. General pollution prevention measures should be implemented throughout the duration of the works to minimise the impact of spills, fumes and dust. Details of these avoidance measures should be provided in a Construction Environmental Management Plan (CEMP).

7.1.7 The Arboricultural Survey Report (Thomson, 2026f) clearly defines the actions and measures to be taken to protect retained trees within and immediately adjacent the site throughout the entire course of the enabling/demolition phase and construction phase of the development. This involves the erection of tree protection fencing and a variety of site-specific measures.

Significance of residual effects

7.1.8 The loss of priority habitats, will need to be compensated for on or near the site for the effect to be not significant.

7.2 Habitats adjacent to the site

Unmitigated effects during construction

7.2.1 The habitats adjacent to the site comprise a suburban mosaic of developed and natural surfaces, which may provide habitat connectivity for protected species/species of conservation concern. This includes the railway corridor to the west of the site, priority deciduous woodland 9m north of the site, and OMH adjacent to the south of the site. The quality of this habitat may be impacted during construction by dust, sediment and chemicals.

Unmitigated effects post construction

7.2.2 It is considered unlikely that there will be any impacts on the adjacent habitats during the operational phase.

Mitigation measures

7.2.3 Best practice pollution measures, such as Heras fencing with dust sheeting, should be implemented to prevent any contamination of soil or air. This includes prevention of emissions of sediment, dust and chemicals. General pollution prevention measures should be implemented throughout the duration of the works to minimise the impact of spills, fumes and dust. Details of these avoidance measures should be provided in a CEMP.

Significance of residual effects

7.2.4 If the above measures are successfully implemented, then residual impacts of the development on the habitats adjacent to the site will not be significant.

7.3 Bats

Unmitigated effects during construction

7.3.1 Buildings, structures and two trees with potential roosting features will be cleared from the site and, although no roosting bats were recorded during the survey, these features will be unavailable for future use.

7.3.2 Clearance of habitats on the site will reduce bats foraging habitat.

Unmitigated effects post construction

7.3.3 Nighttime lighting of the site could adversely impact foraging and commuting bats and their invertebrate food source.

Mitigation measures

7.3.4 The felling of T1 and T2, the only trees with roost potential identified within the planned works, should be carried out under ecological supervision, to confirm likely absence of bats (Reason & Wray, 2023). B1 and B2 should be demolished under ecological supervision, with PRF's checked using an endoscope prior to demolition.

7.3.5 During construction, all works should ideally be conducted during daylight hours. If work needs to be conducted after dark or during night hours, all lighting should be hooded and directional to avoid glare. This can be achieved by adopting from best practice guidelines such as lights should be directed below a 70° angle to create a large volume of darker space above and ensuring there is no vertical light spill (ILP,2023).

7.3.6 A permanent lighting strategy is recommended to prevent the proposed development from having adverse impacts to surrounding habitat suitable for bat foraging and commuting, such as woodland and grassland.

Significance of residual effects

7.3.7 If the mitigation measures outlined above are followed, the residual impact to bats is not considered to be significant.

7.4 Badger

Unmitigated effects during construction

7.4.1 There will be some loss of low suitability foraging habitat in the form of woodland, grassland and scrub. A small amount of higher suitability foraging habitat in the form of woodland will also be lost.

7.4.2 Individual badgers could be at risk during the works.

Unmitigated effects post construction

7.4.3 There is no effect expected in the operation phase due to the site boundaries being erected between suitable habitat and the car park, thus removing the commuting route. However, this will reduce the amount of available foraging habitat for badger.

Mitigation measures

7.4.4 A walkover survey within the site boundary should be carried out a minimum of one month prior to the works to ensure no new setts have been made which could be affected.

7.4.5 If any active badger setts are identified, a licence to close the sett will be required. The licence application would be followed by an exclusion exercise and 21 days of monitoring, which can only take place between July – November.

7.4.6 As the site is suitable for foraging and commuting badger, any excavations during the construction phase should be covered overnight or have a ramp installed to prevent badger and other mammals becoming trapped.

Significance of residual effects

7.4.7 Following mitigation measures, direct impacts on badger are very unlikely and, although access to foraging habitat will be reduced, the residual impact on badger is not considered to be significant.

7.5 Birds

Unmitigated effects during construction

7.5.1 Suitable nesting habitat for common birds in the form of woodland and scrub will be lost during the development.

7.5.2 Active bird nests could be destroyed during vegetation clearance.

Unmitigated effects post construction

7.5.3 Due to the suitability of the site for common nesting birds only, no effects post construction are anticipated for nesting birds in retained and created habitats.

Mitigation measures

7.5.4 There will be scrub planting on the site providing new opportunities for nesting birds.

7.5.5 Building and suitable vegetation clearance should be undertaken outside of the nesting bird season (March to September, inclusive).

7.5.6 Should clearance need to be carried out during the nesting bird season, a Precautionary Method of Works (PMoW) document should be produced detailing necessary mitigation measure including the requirement for a nesting bird check within 48 hours of works commencing.

Significance of residual effects

7.5.7 Due to the retention of woodland on the site and the planting of new areas of scrub, it is expected that the residual effects for birds due to loss of nesting habitat will not be significant.

7.5.8 If the mitigation measures outlined above are followed relating to active bird nests, the residual impact is not considered be significant.

7.6 Reptiles

Unmitigated effects during construction

7.6.1 Although no reptiles were recorded on the site during the reptile survey, there is still potential for them to be present. Therefore, there is a risk of killing or injury of individuals during site clearance and there will be a loss of suitable habitat on the site including urban areas, grassland and scrub.

Unmitigated effects post construction

7.6.2 There is no effect expected in the operation phase due to a timber fence being erected between suitable habitat and the car park, thus removing access to the site. However, this also removes access to some suitable habitat.

Mitigation measures

7.6.3 Ahead of site clearance, a PMoW document should be produced detailing avoidance and mitigation measures required to protect reptiles, under the supervision of an ecologist.

7.6.4 The design of boundary fencing should consider the movement of the above species and gaps should be left at the bottom of fencing to allow dispersal from the site or through the site.

Significance of residual effects

7.6.5 If the mitigation measures outlined above are followed, no death or injury of reptiles is anticipated and therefore the residual impact of killing or injury is considered not be significant.

7.6.6 Some habitat loss cannot be mitigated for, however due to the small area of habitat being lost and the likely absence of reptiles from the site the residual impact of habitat loss on reptiles is not considered to be significant

7.7 Amphibians

Unmitigated effects during construction

7.7.1 There is potential that during site clearance common amphibians may be killed or injured and there will be some loss of suitable terrestrial habitat.

Unmitigated effects post construction

7.7.2 There is no effect expected in the operation phase due to a timber fence being erected between suitable habitat and the car park, thus removing access to the site. However, this also removes access to some suitable habitat.

Mitigation measures

7.7.3 Ahead of site clearance, a PMoW document should be produced detailing avoidance and mitigation measures required to protect amphibians, under the supervision of an ecologist.

7.7.4 The design of boundary fencing should consider the movement of the above species and gaps should be left at the bottom of fencing to allow dispersal from the site or through the site.

Significance of residual effects

7.7.5 If the mitigation measures outlined above are followed, no death or injury of common amphibians is anticipated and therefore the residual impact of killing or injury is considered not be significant.

7.7.6 Some habitat loss cannot be mitigated for, however due to the small area of habitat being lost the residual impact of habitat loss on amphibians is not considered to be significant.

7.8 Invertebrates

Unmitigated effects during construction

7.8.1 Important habitats for invertebrates, including priority species, will be lost including:

- Flowering swards; relating to g3c-1 in Figure 3, Other neutral grassland
- Open, patchy bare ground and short turf, relating to g3c-1 in Figure 3, Other neutral grassland and u1f Sparsely vegetated urban land; and
- Scrub fringe, relating to h3d in Figure 3, Bramble scrub

Unmitigated effects post construction

7.8.2 Light disturbance from installed street lighting has the potential to effect nocturnal invertebrate populations.

Mitigation measures

7.8.3 Recommendations to address the loss of habitats are detailed in the invertebrate report (Conops Entomology, 2026) and are summarised below:

- Flowering areas should be sown/planted with an appropriate mix of flowering plants. This mix should benefit the pollen- and nectar-foraging invertebrates.
- Open, patchy bare ground and short turf habitat should be replicated on site. low-fertility substrates should be used with bare ground should making up 30–40% of the overall short sward-bare ground habitat mosaic. Fine-leaved grasses and a range of flowering plants should complete the mosaic.
- A scrub fringe should be maintained.
- Deadwood should be included along the scrub fringes as standing deadwood posts.

7.8.4 A lighting strategy, as recommended in the Bat Emergence Survey report (Thomson, 2026c) will also benefit nocturnal invertebrates.

Significance of residual effects

7.8.5 Due to the area of vegetated habitats that are lost on the site to the car park it is unlikely that sufficient new habitats can be created to replace those lost, particularly the flowering sward and open, patchy bare ground and short turf. The loss of these habitats will be significant at the local level.

7.8.6 If a sensitive lighting plan is successfully implemented, then residual impacts of additional lighting on nocturnal invertebrates will not be significant.

7.9 Other mammals

Unmitigated effects during construction

7.9.1 There is potential that during site clearance small mammals, including hedgehog may be killed or injured.

7.9.2 Habitat to support small mammals will be lost.

Unmitigated effects post construction

7.9.3 There is no effect expected in the operation phase due to the site boundaries being erected between suitable habitat and the car park, thus preventing access to the car park.

Mitigation measures

7.9.4 Ahead of site clearance, a PMoW document should be produced detailing avoidance and mitigations measures required to protect this feature, under the supervision of an ecologist.

7.9.5 Any excavations during the construction phase should be covered overnight or have a ramp installed to prevent small mammals becoming trapped during the construction phase.

Significance of residual effects

7.9.6 If the mitigation measures outlined above are followed, the residual impact to small mammals is not considered to be significant.

8. Cumulative effects

8.1.1 A search of the Barnsley Metropolitan Borough Council planning portal found one relevant planning application:

- Planning application reference 2019/0225 (Approved Subject to Legal agreement), located approximately 0.3km from the proposed development, comprises 30 residential dwellings. The exact timing of this development is unknown; with current amendments still awaiting decisions.

8.1.2 No other relevant planning applications were found within the search of the planning portal (except for very small-scall homeowner applications or applications where works have been completed).

8.1.3 There are no significant residual effects as a result of the development the exception of loss of habitat for terrestrial invertebrates. Other residual effects that are not significant are not expected to act cumulatively with the above development because habitats lost and ecological features present are not consistent across the two sites and are separated by residential and industrial areas.

9. Compensation

9.1.1 In the scenario set out in the BNG report (Thomson Environmental Consultants, 2026e), the assessment has concluded that a net gain in biodiversity cannot be achieved on site and the works will not meet the requirements of the Town and Country Planning Act (TCPA) 1990 (as inserted by Schedule 14 of the Environment Act 2021).

9.1.2 The project requires off-site compensation in the form of 5.515 biodiversity units to achieve 10% net gain. To satisfy the trading summary, this must include high and medium distinctiveness habitat to replace that lost on site including urban – open mosaic habitat on previously developed land. This can be provided in either off-site habitat creation or biodiversity unit purchasing from a habitat bank.

10. Enhancement

10.1.1 An Ecological Enhancement Plan should be authored to included; enhancements for bats including bat boxes in dark zones, bird boxes in retained habitats such as woodland, hibernacula and refugia creation in retained and created habitats suitable for common amphibians and invertebrates previously identified on site.

11. Monitoring

11.1.1 Post-construction monitoring of retained and created habitats would be undertaken to ensure successful establishment and management; this would be specified in the HMMP, as discussed in the BNG report issued by Thomson (Thomson, 2026e). Other features discussed in this report do not require post-construction monitoring.

12. Summary of residual effects

12.1.1 Table 12.1 below provides a summary of the ecological assessment and identifies the residual ecological effects arising from the proposed development.

Table 12.1: Summary of ecological assessment

Ecological feature	Potential unmitigated impact	Mitigation, compensation and enhancement	Residual effect
Habitats			
Habitats within footprint of construction area including buildings, grassland, woodland, sparsely vegetated areas and scrub (including priority habitats)	Loss of habitats including priority habitats.	Replacement of habitats in line with the BNG report.	Positive, not significant if habitats are replaced on or close to the site. Negative effect significant at Local level if priority habitats cannot be replaced on or close to site.
Retained and adjacent habitats including woodland and urban areas	Potential damage/disturbance during construction e.g. physical damage, dust, surface run-off, lighting.	Construction undertaken in accordance with BS 5837:2012. Temporary barriers installed alongside all retained trees and woodland. Adherence to Construction Ecological Management Plan (CEcoMP) and CEMP including restrictions on construction lighting and best practice measures to avoid risk of pollution.	Neutral, not significant.
Important species			
Bats	Loss of available potential roost features.	To compensate for the loss of the bat roost resource, an appropriate number of bat boxes	Negative short-term effect at local level, not significant.

Ecological feature	Potential unmitigated impact	Mitigation, compensation and enhancement	Residual effect
	Loss of commuting and foraging habitat on-site. Effects of air-borne dust created from vehicle movements, breaking ground and/or demolition of buildings on commuting/foraging bats.	will be detailed within an Ecological Enhancement Plan. A CEMP will be produced for the site to mitigate for air-borne dust created by the project associated activities both during and post-construction.	Neutral effect in the medium to long-term, as suitable habitat will be planted post-construction.
Badger	Potential harm to badgers through construction activities. Loss of suitable foraging habitat.	Pre-construction survey to verify that no badger setts would be affected. Best practice working methods would be implemented in order to mitigate the impact of construction on badgers. New and retained habitats would be suitable for badgers.	Neutral, not significant.
Birds	Potential for direct effects on individual birds, their nests and eggs. Damage/loss of suitable nesting and foraging habitat.	Suitable nesting habitat cleared outside of main bird nesting season, or subject to pre-clearance check by suitably qualified ecologist. Details of which to be covered within a PMoW document. Retention of nesting habitat at the north of the site and instillation of bird boxes in retained habitat.	Negative short-term effect at local level, not significant. Neutral effect in the medium to long-term, as suitable habitat will be planted post-construction.
Reptiles	Damage/loss of suitable habitat.	Suitable habitat subject to pre-clearance check by suitably qualified ecologist. Details of	Negligible, as some suitable habitat is retained and new habitat due to be planted.

Ecological feature	Potential unmitigated impact	Mitigation, compensation and enhancement	Residual effect
		which to be covered within a Precautionary Method of Works document.	
Amphibians	Damage/loss of suitable habitat.	Creation of refugia/hibernacula in retained and created habitats.	Negligible, as some suitable habitat is retained and new habitat due to be planted.
Invertebrates	Loss of suitable habitat for over 138 species including five nationally significant species.	Habitat replacement and creations including flowering swards, bare ground, short turf and scrub fringe.	Negative short-term effect at local level, not significant. Neutral effect in the medium to long-term, as suitable habitat will be planted post-construction if habits can be replaced and created in line with recommendations.
Small mammals	Loss of suitable foraging and sheltering habitat during construction.	Removal of scrub carried out under supervision of an ecologist to check for small mammals.	Negative short-term effect at local level, not significant. Neutral effect in the medium to long-term.

13. Conclusions

13.1.1 The proposed development would have no residual negative effects on any designated sites of nature conservation importance, and no effects on the integrity of European designated sites are predicted. Assuming the implementation of all mitigation, compensation and enhancement measures identified in this report, effects on priority habitats, protected and notable species would be either neutral or minor positive in the medium to long-term.

13.1.2 The proposed development would avoid significant ecological harm and has potential to enhance the overall biodiversity interest of the site in accordance with policies concerning the conservation of biodiversity in the National Planning Policy Framework (2026) should all mitigation and enhancement be implemented.

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Appendix 1: Summary of National Legislation and Planning Policy

Table 14.1: Summary of national legislation and policy relating to ecology and biodiversity

Feature	Summary of Legislation/Policy	Relevance to Project
Designated Sites for Nature Conservation		
General	Paragraph 187of the National Planning Policy Framework, 2024 (NPPF) states that *'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)'*.	Relevant to all projects
Special Areas of Conservation[1] (SACs) (international importance)	Special Areas of Conservation (SACs) are protected areas in the UK designated under the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales (including the adjacent territorial sea) and to a limited extent in Scotland (reserved matters) and Northern Ireland (excepted matters). The NPPF (2026) Policy N6 (1a) states that: *A site of international importance, which for the purpose of this policy is a habitats site, should be refused unless:* *i. An appropriate assessment has concluded that the proposal will not adversely affect the integrity of the site (either individually or in combination with other developments), or the proposal can satisfy the derogation tests[2]; and/or*	Not relevant – no sites recorded within zone of influence

[1] SACs and SPAs were formally known as European sites forming part of the Natura 2000 site network. Following the UKs exit from the EU they are now referred to as National Sites and are part of the National Site Network. However, these sites can still be considered to be of international importance for nature conservation. Developments affecting these sites must be considered according to the requirements of the Habitats Regulations.

Feature	Summary of Legislation/Policy	Relevance to Project
	ii. The impact of development on the relevant protected features of the protected site is being addressed through an Environmental Delivery Plan which has been made and the developer has committed to paying the nature restoration levy.	
Special Protection Areas (SPAs) (international importance)	Special Protection Areas (SPAs) are protected areas for birds in the UK classified under the Wildlife & Countryside Act 1981 (as amended) and the Conservation (Natural Habitats, & c.) Regulations 2017 (as amended) in England, Scotland and Wales. The NPPF (2026) Policy N6 (1a) states that: *A site of international importance, which for the purpose of this policy is a habitats site, should be refused unless:* *i. An appropriate assessment has concluded that the proposal will not adversely affect the integrity of the site (either individually or in combination with other developments), or the proposal can satisfy the derogation tests[3]; and/or* *ii. The impact of development on the relevant protected features of the protected site is being addressed through an Environmental Delivery Plan which has been made and the developer has committed to paying the nature restoration levy.*	Not relevant – no sites recorded within zone of influence
Sites of Special Scientific Interest (SSSIs) (national importance)	SSSIs are protected under the Wildlife and Countryside Act 1981 (WCA), Countryside and Rights of Way Act 2000 (CRoW Act) and Natural Environment and Rural Communities Act 2006 (NERC Act).	Not relevant – no sites recorded within zone of influence

Feature	Summary of Legislation/Policy	Relevance to Project
	SSSIs are protected by law and planning guidance. Local Planning Authorities (LPAs) in England must consult Natural England on planning applications that might affect SSSIs. Operations that could damage special interests require consent by Natural England. The NPPF (2026) Policy N6 (1b) states that: *A site of national importance, which for the purpose of this policy is one designated as a Site of Special Scientific Interest, should only be supported if:* *i. There would be no adverse effect (either individually or in combination with other developments) on the site's features of special scientific interest; or* *ii. The benefits of the development in the location proposed clearly outweigh both the likely impact on the features of special scientific interest, and any broader impact on the national network of Sites of Special Scientific Interest; or* *iii. The impact of development on the relevant protected feature of the protected site is being addressed through an Environmental Delivery Plan which has been made and the developer has committed to paying the nature restoration levy.* Natural England's Impact Risk Zones for Sites of Special Scientific Interest (Natural England, 2021) is a GIS tool developed by Natural England to make a rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts. The Impact Risk Zones (IRZs) also cover the interest features and sensitivities of European sites, which are underpinned by the SSSI designation and "Compensation Sites", which have been secured as compensation for impacts on European /Ramsar sites.	

Feature	Summary of Legislation/Policy	Relevance to Project
National Nature Reserves (NNRs) (national importance)	NNRs are a selection of the very best parts of England's SSSI's, protected under the WCA and CRoW Act.	Not relevant – no sites recorded within zone of influence
Local Nature Reserves (LNRs) (local importance)	Local Nature Reserves (LNRs) protected under the National Parks and Access to the Countryside Act 1949. LPAs are required to consult Natural England about all new proposals. An LNR can be given protection against damaging operations. It also has protection against development on and around it. This protection is usually given via the Local Plan, (produced by the planning authority), and often supplemented by local by-laws. Unlike national designations, the level and type of protection afforded an LNR is decided locally and varies from site to site. The NPPF (2026) Policy N6 (1c) states that: *A site of local importance, which for the purpose of this policy is one designated as a Local Nature Reserve or identified as a local wildlife site, local geological site or equivalent in the development plan, should only be supported if:* *i. There would not be a significant adverse effect on the integrity of the site; or* *ii. The benefits of development in the location proposed clearly outweigh the likely impact on the features which make the site valuable for nature conservation.*	LNR recorded within 2km of project
Non-statutory designated sites (local importance)	These sites are not protected under legislation. However, LPAs take account of local sites when formulating local plans and when considering planning applications. The NPPF (2026) Policy N6 (1c) states that:	Not relevant – no sites recorded within zone of influence

Feature	Summary of Legislation/Policy	Relevance to Project
	A site of local importance, which for the purpose of this policy is one designated as a Local Nature Reserve or identified as a local wildlife site, local geological site or equivalent in the development plan, should only be supported if: *i. There would not be a significant adverse effect on the integrity of the site; or* *ii. The benefits of development in the location proposed clearly outweigh the likely impact on the features which make the site valuable for nature conservation.*	
Priority Habitats for Nature Conservation		
Habitats of Principal Importance	Under Section 41 of the NERC Act, the Secretary of State must, as respects England, publish a list of the living organisms and types of habitat which in the Secretary of State's opinion are of principal importance for the purpose of conserving biodiversity. Section 40 of The NERC Act (2006) places a duty on all public bodies, including planning authorities, to have regard for biodiversity in exercising their functions. Planning authorities should have particular regard to the Habitats of Principal Importance (priority habitats) listed under Section 41 of the act which should be treated as a material consideration in the planning process.	Habitats of Principal Importance recorded on site or within 1km of project
Ancient Woodland	Ancient woodland is any area that's been wooded continuously since at least 1600 AD. Ancient woodland as well as ancient and veteran trees, are regarded as an 'irreplaceable habitat'. The NPPF (2026) Policy N6 (2) states that: *'Irrespective of a site's status in nature conservation terms, development proposals which would entail the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or*	Ancient Woodland recorded on site or within 2km of project

Feature	Summary of Legislation/Policy	Relevance to Project
	veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists'.	
Biodiversity in general	Natural Environment and Rural Communities (NERC) Act 2006 states that any *"public authority must, in exercising its functions, have regard … to the purpose of conserving biodiversity" and "conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat".* The NPPF (2026) Policy N2 (2) states that: *'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 the development should be refused'.*	Biodiversity is relevant to most projects
Species and Species Groups		
Invasive non-native species (INNs)	In the UK it is an offence under the Wildlife and Countryside Act 1981 (as amended) to "*plant or otherwise cause to grow in the wild*" any plant species listed in Schedule 9 of the Act.	INNS were recorded on site or within 2km of project
Species of Principal Importance	Under Section 41 of the NERC Act, the Secretary of State must, as respects England, publish a list of the living organisms which in the Secretary of State's opinion are of principal importance for the purpose of conserving biodiversity. Section 40 of The NERC Act (2006) places a duty on all public bodies, including planning authorities, to have regard for biodiversity in exercising their functions. Planning authorities	Species of Principal Importance were recorded within the study area

Feature	Summary of Legislation/Policy	Relevance to Project
	should have particular regard to the Species of Principal Importance (priority species) listed under Section 41 of the act which should be treated as a material consideration in the planning process. The NPPF (2026) Policy N2 (1f) states that: *'To contribute positively to the natural environment, and support nature's recovery, development proposals should: Minimise any adverse impacts on biodiversity and include features which support priority or threatened species such as swifts, bats and hedgehogs. Development proposals should incorporate integrated nest boxes (commonly known as swift bricks) into their construction unless there are compelling technical reasons which prevent their use, or would make them ineffective'.*	
Fish	Special areas of conservation (SACs), sites of special scientific interest (SSSIs) or Ramsar sites have features of special interest for freshwater or migratory fish, such as: • Atlantic salmon (*Salmo salar*) • bullhead (*Cottus gobio*) • lamprey (brook, river and sea) (*Petromyzontiformes*) • spined loach (*Cobitis taenia*) • European eel (*Anguilla anguilla*) Developers must comply with the legal protection of freshwater and migratory fish and their habitats under the Wildlife and Countryside Act 1981, Salmon and Freshwater Fisheries Act 1975 and Eels (England and Wales) Regulations 2009. Many species of fish are listed as species of principal importance under Section 41 of the Natural Environment and Rural Communities Act (2006). Local authorities must have regard for the conservation of Section 41 species as part of their planning decision.	Not recorded by desk study

Feature	Summary of Legislation/Policy	Relevance to Project
Amphibians (common)	Common amphibians are protected under the Wildlife and Countryside Act 1981 (as amended) from activities related to their sale and it is considered best practice to avoid harming or killing them. Common toad is listed as a species of principal importance under Section 41 of the Natural Environment and Rural Communities Act (2006). Local authorities must have regard for the conservation of Section 41 species as part of their planning decision.	Not recorded by desk study
Amphibians (rare)	Rare amphibian species include natterjack toad (*Epidalea calamita*), great crested newt (*Triturus cristatus*) and pool frog ( ). These are listed under The Conservation of Habitats and Species Regulations, 2017 (as amended) makes it an offence to; • deliberately kill, injure, disturb or capture them • deliberately take or destroy their eggs • damage or destroy their breeding sites and resting places - even if GCN are not present • possess, control or transport them (alive or dead) It is also an offence under the Wildlife and Countryside Act 1981 to intentionally or recklessly: • disturb GCN while they occupy a structure or place used for shelter or protection • obstruct access to a place of shelter or protection These species are listed as species of principal importance under Section 41 of the Natural Environment and Rural Communities Act (2006). Local authorities must have regard for the conservation of Section 41 species as part of their planning decision.	Not recorded by desk study
Reptiles (common)	Common reptile species are partially protected under Schedule 5 (Sections 9(1) and 9(5)) of the Wildlife and Countryside Act 1981 (as amended). This legislation protects these animals from:	Common reptiles recorded within the study area

Feature	Summary of Legislation/Policy	Relevance to Project
	• Intentional (or reckless in Scotland) killing and injury (Section 9(1); • Selling, offering for sale, possessing or transporting for the purpose of the sale or publishing advertisements to buy or sell a protected species (Section 9(5). These are species of principal importance under Section 41 of the Natural Environment and Rural Communities Act (2006). Local authorities must have regard for the conservation of Section 41 species as part of their planning decision.	
Reptiles (rare)	Rare reptile species include sand lizard and smooth snake. These are listed under The Conservation of Habitats and Species Regulations, 2017 (as amended). This makes it an offence to; • deliberately kill, injure, disturb or capture them • deliberately take or destroy their eggs • damage or destroy their breeding sites and resting places • possess, control or transport them (alive or dead) it is also an offence under the Wildlife and Countryside Act 1981 to intentionally or recklessly: • disturb them while they occupy a structure or place used for shelter or protection • obstruct access to a place of shelter or protection These are species of principal importance under Section 41 of the Natural Environment and Rural Communities Act (2006). Local authorities must have regard for the conservation of Section 41 species as part of their planning decision.	Not recorded by desk study
Birds	All wild birds are protected under the Wildlife and Countryside Act 1981. It is an offence to: • kill, injure or take wild birds • take, damage or destroy the nests of species that reuse them, such as osprey • take, damage or destroy a nest that's in use or being built	There is potential for birds to be present on site or to be affected off-site.

Feature	Summary of Legislation/Policy	Relevance to Project
	• take or destroy the egg of any wild bird • possess or control any wild bird (alive or dead) • possess or control an egg or any part of an egg of a wild bird Additional protection applies to birds listed in schedule 1 of the Wildlife and Countryside Act 1981. It is an offence to intentionally or recklessly disturb a schedule 1 bird: • on or near a nest containing eggs or young • when it's building a nest • or its dependent young Some wild birds are listed as species of principal importance under Section 41 of the Natural Environment and Rural Communities Act (2006). Local authorities must have regard for the conservation of Section 41 species as part of their planning decision.	
Bats	All bat species are protected under the Conservation of Habitats and Species Regulations 2017 (as amended). It is an offence to: • deliberately kill, injure, disturb or capture them • damage or destroy their breeding sites and resting places (even when bats are not present) • possess, control or transport them (alive or dead) It is also an offence under the Wildlife and Countryside Act 1981 to intentionally or recklessly: • disturb bats while they occupy a structure or place used for shelter or protection • obstruct access to a place of shelter or protection	Bats recorded within the study area

Feature	Summary of Legislation/Policy	Relevance to Project
	Several species of bats are listed as rare and most threatened species under Section 41 of the Natural Environment and Rural Communities Act (2006). Local authorities must have regard for the conservation of Section 41 species as part of their planning decision.	
Badger	Badgers and their setts (tunnels and chambers where they live) are protected by the Protection of Badgers Act 1992. It is an offence to: • take, injure or kill a badger - or attempt these actions • treat a badger cruelly • interfere with a badger sett • possess or control a live badger • mark or ring a badger	Not recorded by desk study
Hazel Dormouse	Hazel dormouse is protected under the Conservation of Habitats and Species Regulations 2017 (as amended). It is an offence to: • deliberately kill, injure, disturb or capture them • damage or destroy their breeding sites and resting places • possess, control, transport (alive or dead) It is also an offence under the Wildlife and Countryside Act 1981 to intentionally or recklessly: • disturb hazel dormice while they occupy a structure or place used for shelter or protection • obstruct access to a place of shelter or protection Hazel dormouse is listed as a species of principal importance under Section 41 of the Natural Environment and Rural Communities Act (2006). Local authorities must have regard for the conservation of Section 41 species as part of their planning decision.	Not recorded by desk study

Feature	Summary of Legislation/Policy	Relevance to Project
Otter	Otters are protected under the Conservation of Habitats and Species Regulations 2017, as amended. It is an offence to: • deliberately kill, injure, disturb or capture them • damage or destroy their breeding sites and resting places - even if otters are not present • possess, control or transport them (alive or dead) It is also an offence under the Wildlife and Countryside Act 1981 to intentionally or recklessly: • disturb otters while they occupy a structure or place used for shelter or protection • obstruct access to a place of shelter or protection Otter is listed as a species of principal importance under Section 41 of the Natural Environment and Rural Communities Act (2006). Local authorities must have regard for the conservation of Section 41 species as part of their planning decision. They are also listed as “Species of Principal Importance” under Section 7 or the Environment (Wales) Act 2016.	Not recorded by desk study
Water vole	Water voles are protected under the Wildlife and Countryside Act 1981. It is an offence to intentionally: • kill, injure or take them • possess or control them (alive or dead) It is also an offence to intentionally or recklessly: • damage or destroy a structure or place used for shelter or protection • disturb them in a place used for shelter or protection • obstruct access to a place used for shelter or protection	Not recorded by desk study

Feature	Summary of Legislation/Policy	Relevance to Project
	Water vole is listed as a species of principal importance under Section 41 of the Natural Environment and Rural Communities Act (2006). Local authorities must have regard for the conservation of Section 41 species as part of their planning decision.	
Other mammals (e.g. rabbit, fox, hedgehog)	Protection under the Wild Mammals (Protection) Act 1996, makes it an offense to inflict any unnecessary suffering, including crushing or asphyxiation of a wild mammal.	Other mammals recorded within the study area
White-Clawed Crayfish	White-clawed crayfish are partly protected under the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to capture this species without a licence and also prohibits trade in this species. This species is listed as a species of principal importance under Section 41 of the Natural Environment and Rural Communities Act (2006). Local authorities must have regard for the conservation of Section 41 species as part of their planning decision.	Not recorded by desk study
Freshwater pearl mussel	Freshwater pearl mussels are protected by the Wildlife and Countryside Act 1981. It is an offence to intentionally: • kill, injure or take them • possess or control them (alive or dead) It is also an offence to intentionally or recklessly: • damage or destroy a structure or place used for shelter or protection • disturb them in a place used for shelter or protection • obstruct access to a place used for shelter or protection	Not recorded by desk study
Invertebrates	Some invertebrates are protected as European protected species (EPS) under The Conservation of Habitats and Species Regulations 2017 as amended, these are:	Invertebrates recorded within the study area

Feature	Summary of Legislation/Policy	Relevance to Project
	• large blue butterflies (eggs, caterpillars, chrysalises and adults) • Fisher's estuarine moths (eggs, caterpillars, chrysalises and adults) • little ramshorn whirlpool snails For these species It is an offence to: • deliberately kill, injure, disturb or capture them • deliberately destroy their eggs • damage or destroy their breeding sites and resting places (even when invertebrates are not present) • possess, control or transport them (alive or dead) For these 3 species, it is also an offence under the Wildlife and Countryside Act (WCA) 1981 to intentionally or recklessly: • disturb them while they occupy a structure or place used for shelter or protection • obstruct access to a place of shelter or protection Many other invertebrate species are protected under schedule 5 of the Wildlife and Countryside Act 1981. For those listed in schedule 5, it is an offence to intentionally: • kill, injure or take them • possess or control them (alive or dead) It is also an offence to intentionally or recklessly: • damage or destroy a structure or place used for shelter or protection	

Feature	Summary of Legislation/Policy	Relevance to Project
	• disturb them in a place used for shelter or protection • obstruct access to a place used for shelter or protection Many invertebrates are listed as rare and most threatened species under Section 41 of the Natural Environment and Rural Communities Act (2006). Local authorities must have regard for the conservation of Section 41 species as part of their planning decision under the 'biodiversity duty'.	
Plant species	Under the Wildlife and Countryside Act 1981, it is an offence to intentionally uproot any wild plant without the landowner's consent. For plants, fungi and lichens listed on schedule 8 of the Wildlife and Countryside Act 1981 it is an offence to intentionally pick, uproot or destroy them, unless it could not be reasonably avoided. That means it was an incidental result of a lawful action. Some plants are listed on schedule 5 of the Conservation of Habitats and Species Regulations 2017. For these species it is an offence to: • deliberately pick, collect, cut, uproot or destroy them • possess, control or transport them (alive or dead) Many plants, fungi and lichens are listed as rare and most threatened species under Section 41 of the Natural Environment and Rural Communities Act (2006). Local authorities must have regard for the conservation of Section 41 species as part of their planning decision.	Not recorded by desk study

Appendix 2: Whole Site Plan

N

SHEFFIELD RD

REFER TO INSET 1 FOR AREA NORTH OF THE CAR PARK

FIELD MAPLE

AS EXISTING WOODLAND

RED LINE BOUNDARY (SEE DRAWING PNS-SLC-XX-DRG-EMF-0001) FOR FULL EXTENTS

NEW BROADLEAVED WOODLAND
30% QUERCUS ROBUR (ENGLISH OAK)
20% BETULA PENDULA (BIRCH)
20% FAGUS SYLVATICA (BEECH)
5% SORBUS AUCUPARIA (ROWAN) UNDERSTOREY
10% CORYLUS AVELLANA (HAZEL)
10% CRATAEGUS MONOGYNA (HAWTHORN)
5% SAMBUCUS NIGRA (ELDERFLOWER)

SuDS

INNER BASE (WET)
10% IRIS PSEUDOACORUS (YELLOW FLAG IRIS)
25% CAREX PENDULA (SEDGE)
15% JUNCUS EFFUSUS (SOFT RUSH)

MARGINAL ZONE
15% LYTHRUM SALICARIA (PURPLE LOOSESTRIFE)
15% SILENE FLOS-CUCULI (RAGGED ROBIN)
10% DESCHAMPSIA CESPITOSA (TUFTED HAIR-GRASS)
10% ALCHEMILLA MOLLIS (LADY'S MANTLE)

MIXED SCRUB (1 PLANT PER SQM)
30% CRATAEGUS MONOGYNA (HAWTHORN)
20% PRUNUS SPINOSA (BLACKTHORN)
15% CORYLUS AVELLANA (HAZEL)
10% SORBUS AUCUPARIA (ROWAN)
10% ACER CAMPESTRE (FIELD MAPLE)
10% SALIX CAPREA (GOAT WILLOW)
5% ULEX EUROPAEUS (GORSE)

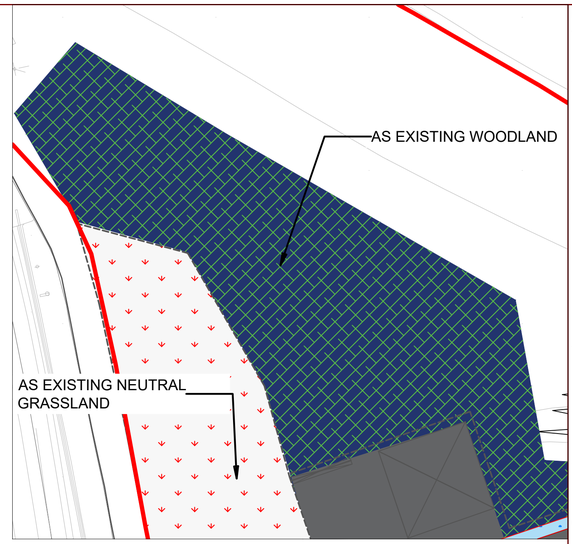
NO ENTRY

NO ENTRY

PLATFORM 1

PLATFORM 2

SCALE BAR 1:200
0 10m 20m 40m



INSET 1

Notes/Legend:

1. ALL DIMENSIONS ARE IN MM UNLESS STATED OTHERWISE.
2. TOPOGRAPHICAL INFORMATION OBTAINED FROM DRAWING 2207206_SKEYE_PENISTONE STATION_3D_FINAL_V2 BY SKEYE (22/07/2026) & P22-01501-MET-EXT-XX-TOP-M2-G-001-2 BY MET GEO ENVIRONMENTAL (07/12/2022)
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KEY

- ASPHALT SURFACE
- ASPHALT FOOTPATH
- SUSTAINABLE DRAINAGE SYSTEM (SUDS) AREA
- MIXED SCRUB
- AS EXISTING WOODLAND
- BROADLEAVED WOODLAND
- NEUTRAL GRASSLAND
- RED LINE BOUNDARY

Status: FOR PLANNING

REV	DATE	DESCRIPTION	DR	CHK	APVD
P01	21/09/2026	CLIENT ISSUE	KM	GZC	GZC

Client: BARNSLEY METROPOLITAN BOROUGH COUNCIL

Project Title: PENISTONE STATION CAR PARK

Drawing Title: PROPOSED CAR PARK LANDSCAPE

Sheet Size: A1 | Scale: 1:200 | Sheet: 1 of 1

Drawing Number: PNS-SLC-XX-DRG-ARC-9001 | Rev: P01

SLC-DOC-026 V0.1

Appendix 3: Preliminary Ecological Appraisal, Preliminary Roost Assessment and Ground Level Tree Assessment

Thomson environmental consultants





Preliminary Ecological Appraisal, Preliminary Roost Assessment and Ground Level Tree Assessment for Bats

Penistone Footbridge and Car Park

For

Barnsley Metropolitan Borough Council

Report Reference.: BAR010-001-002/001/001

March 2026

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Project Number	Report No.
BAR010-001-002	001

Revision No.	Date of Issue	Author	Reviewer	Approver
001	19th March 2026	Jack Crutchley	Elizabeth Redpath	Lauren Hornsby-Riley
002	14th August 2026	Jack Crutchley		

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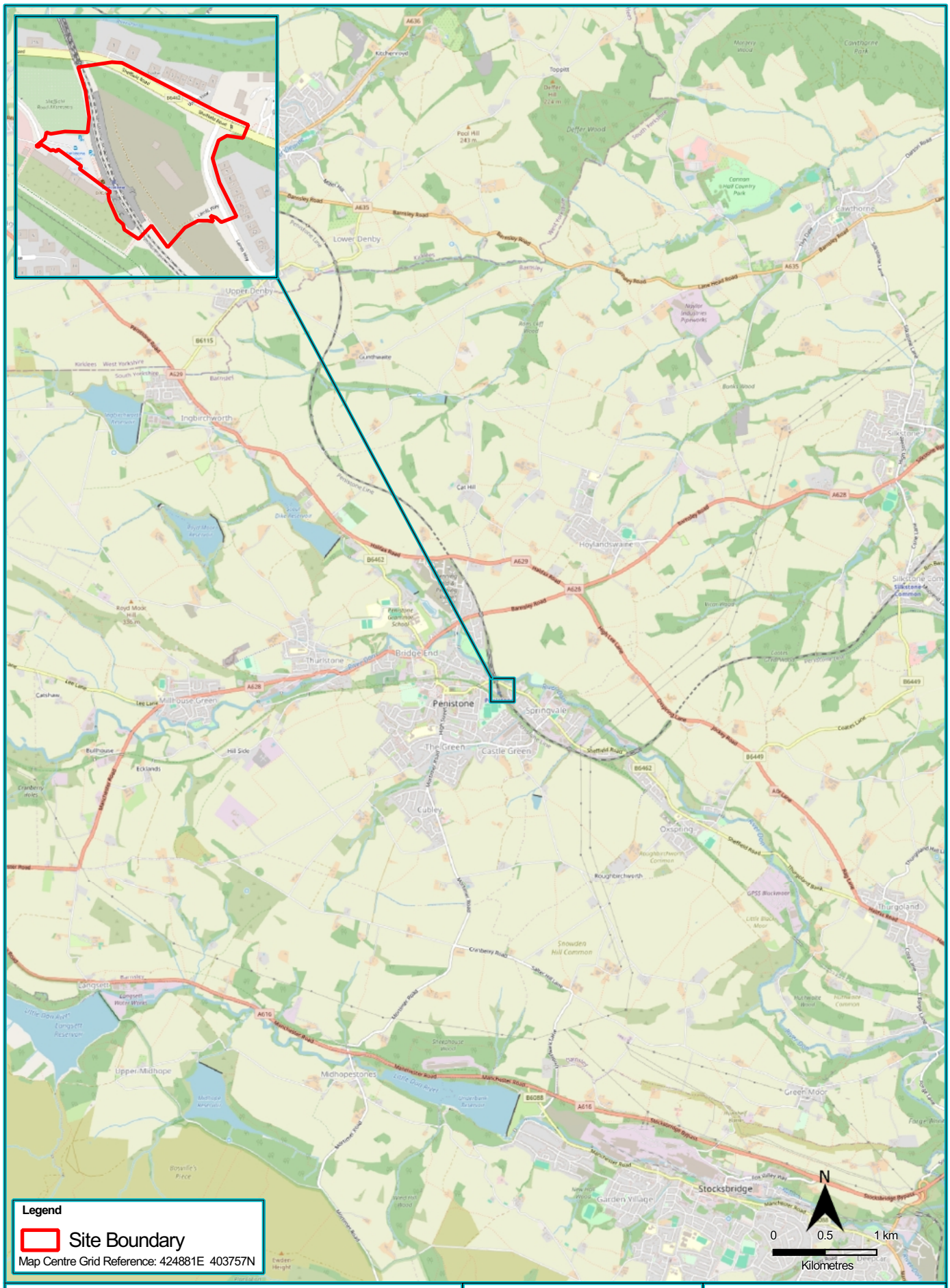
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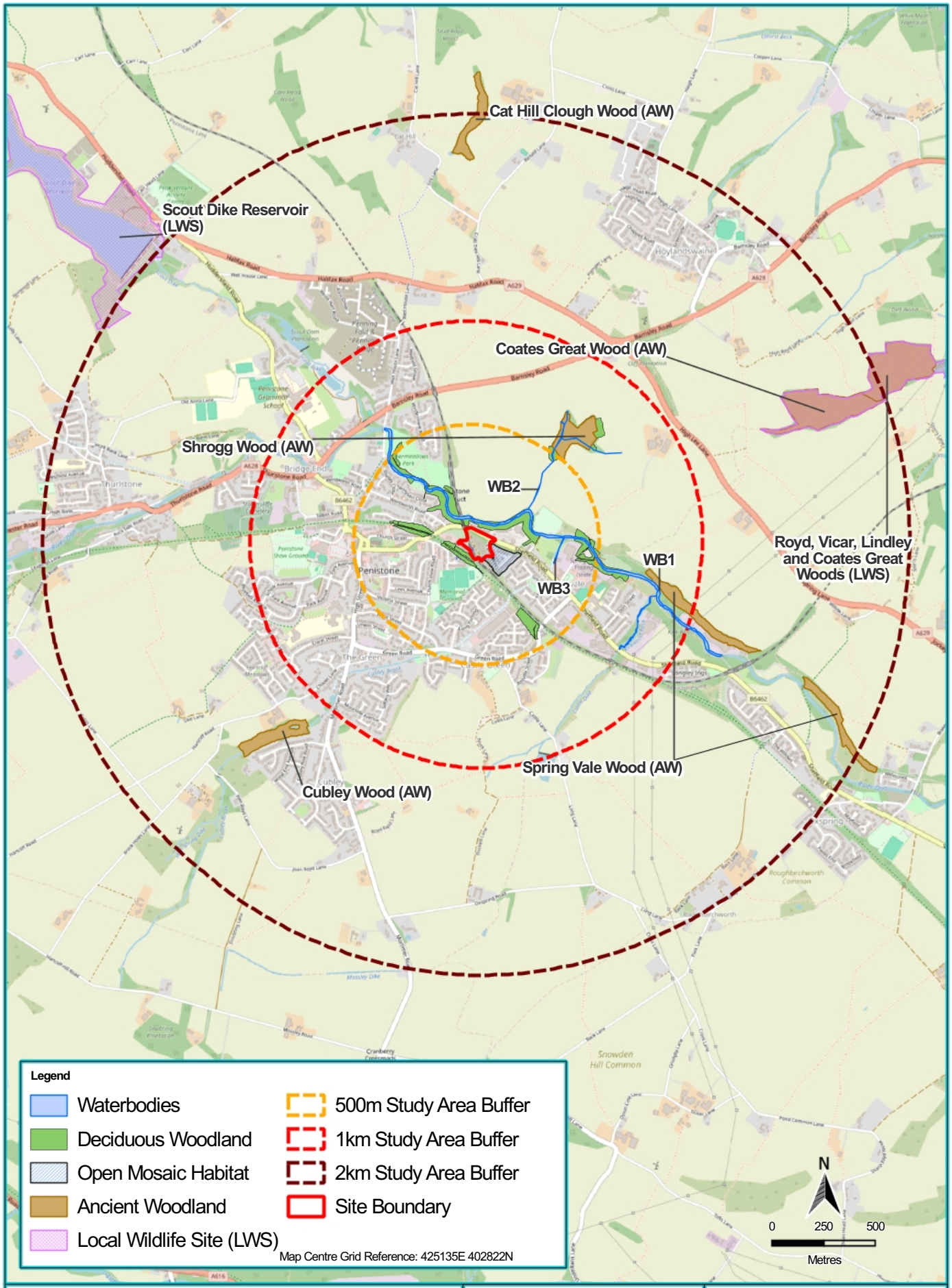


Client: Barnsley Metropolitan Borough Council		Drawing Ref: BAR010-001/409353/2	
Figure Number: 1		Scale at A4: 1:50,000	
Figure Title: Site Location		Drawn: LT	Checked: AS
		Date: 02/03/2026	Date: 02/03/2026

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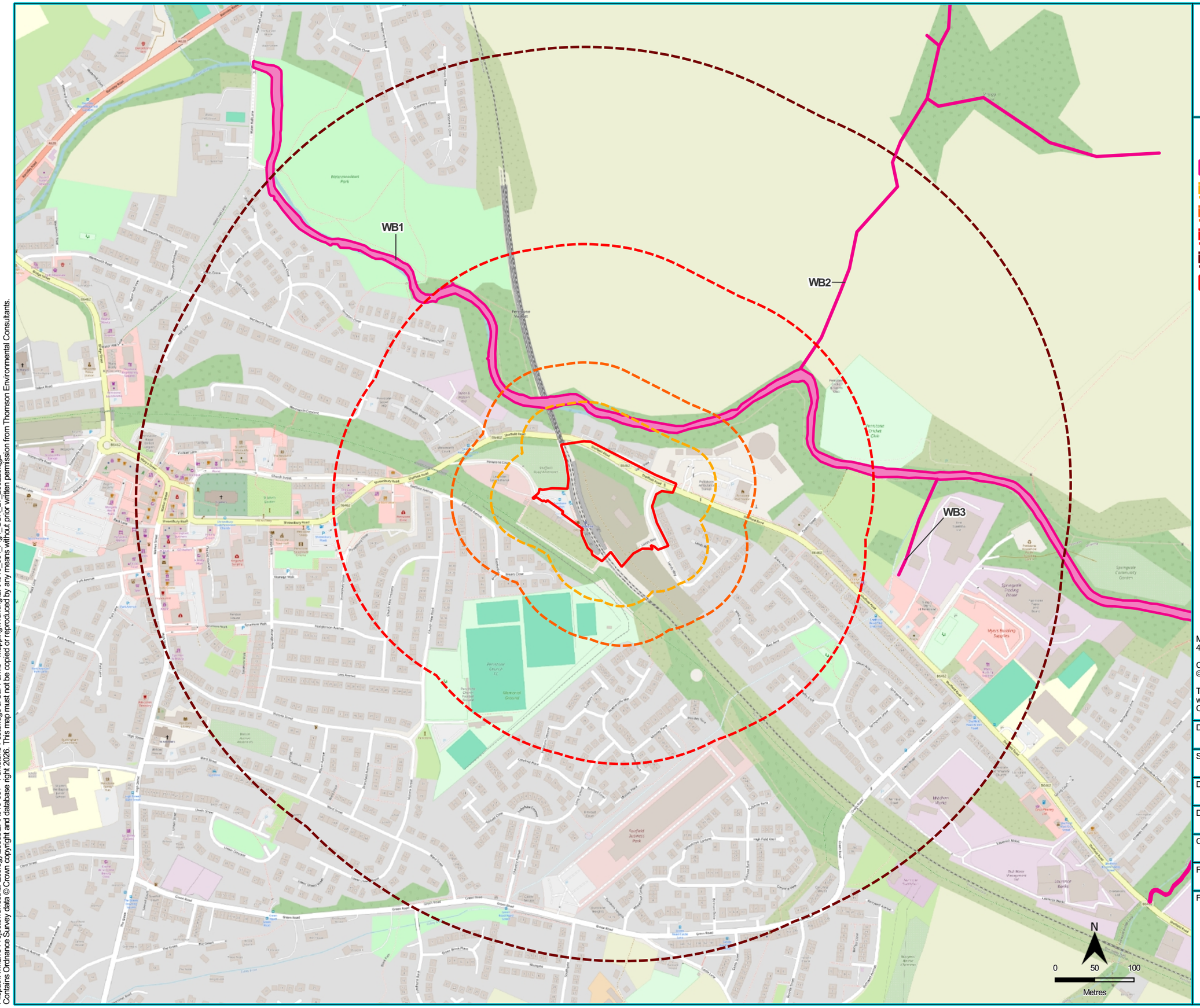
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Figure Number: 2		Scale at A4: 1:25,000	
Figure Title: Site Location, Study Area and Desk Study Results		Drawn: LT	Checked: AS
		Date: 10/03/2026	Date: 10/03/2026

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Legend

HSI Category (Pond Suitability)

- Scoped Out - running water
- 50m Study Area Buffer
- 100m Study Area Buffer
- 250m Study Area Buffer
- 500m Study Area Buffer
- Site Boundary

Map Centre Grid Reference: 425135E 403306N

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Date: 06/03/2026	Date: 06/03/2026
Client	Barnsley Metropolitan Borough Council
Figure Number	4
Figure Title	Great Crested Newt Screening Results

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Legend

- Target Note Point
- Urban Tree
- g3c - Other Neutral Grassland
- h3d - Bramble Scrub
- u1 - Built-up Areas and Gardens
- u1b - Developed Land, Sealed Surface
- u1b5 - Buildings
- u1c - Artificial Unvegetated Unsealed Surface
- u1f - Sparsely Vegetated Urban Land
- w1f7 - Other Lowland Mixed Deciduous Woodland
- w1g - Other Woodland, Broadleaved
- Target Note Area
- Site Boundary

Map Centre Grid Reference: 425141E403308N

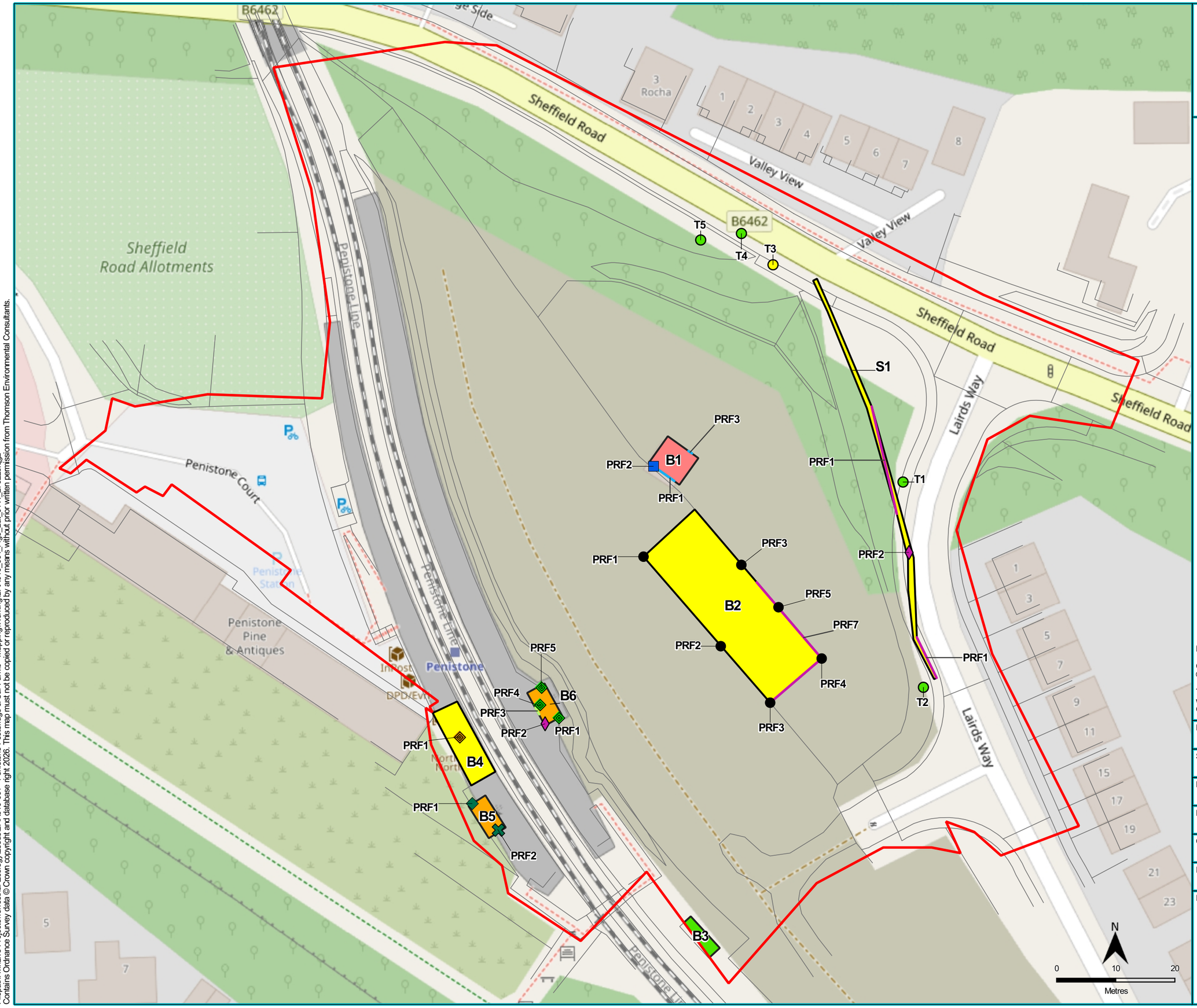
This map has been drawn at a sufficient level of accuracy to fulfil the requirements of a UK Habitat Classification Survey. The level of accuracy depends on both the size of the area involved and the base mapping. Every effort has been made to create a map that is as accurate as possible. However, this map is not intended to represent a scaled landscape survey so should not be used to pin-point accurate engineering work or as a basis for detailed site planning.

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Date: 02/03/2026	Date: 02/03/2026
Client	Barnsley Metropolitan Borough Council
Figure Number	3
Figure Title	UK Habitat Classification Survey Results

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Legend

Overall Suitability (Tree) to Support Roosting Bats

- PRF
- PRF-I

Potential Roost Feature (PRF)

- Hole in Window/Frame/Sill
- Gap(s) Between Ridge Tile
- Gap(s) Between Roof Tile
- Lifted/Raised Roof Tile
- Missing Roof Tile
- Gap(s) Around Beams
- Missing Mortar
- Damaged Brick/Stonework
- Gap(s) in Soffit
- Missing Mortar

Overall Suitability (Whole Building/ Structure) to Support Roosting Bats

- High
- Moderate
- Low
- Negligible
- Site Boundary

Map Centre Grid Reference: 425137E 403308N

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Date: 02/03/2026	Date: 02/03/2026
Client	Barnsley Metropolitan Borough Council
Figure Number	5

Figure Title

Bat Preliminary Roost Assessment and Ground Level Tree Assessments Survey Results

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Photograph 1:
g3c-1, a parcel of Other neutral grassland.



Photograph 2:
g3c-2 (10—Scattered scrub), Other neutral grassland.



Photograph 3:
g3c-3 (10—Scattered scrub), Other neutral grassland.



Photograph 4:
h3d-1, Bramble scrub.



Photograph 5:
h3d-2, Bramble scrub.



Photograph 6:
u1-1, Area of ornamental planting.

Client: Barnsley Metropolitan Borough Council	Drawing Ref: BAR010-001-002/6/1	Thomson environmental consultants
Figure Number: 6a	Drawn: JC / Checked: ER	www.thomsonec.com enquiries@thomsonec.com
Figure Title: Photographs of the Site	Date: 04/03/2026	



Photograph 7:
u1b-2, rail platform.



Photograph 8:
u1b-3, tarmac car park.



Photograph 9:
u1c-1, railway corridor, tracks and ballast.



Photograph 10:
u1f-1 (82—Vacant of derelict land), Sparsely vegetated urban land.



Photograph 11:
u1f-2 Sparsely vegetated urban land.



Photograph 12:
u1f-3, Sparsely vegetated urban land.

Client: Barnsley Metropolitan Borough Council		Drawing Ref: BAR010-001-002/6/1	Thomson environmental consultants
Figure Number: 6b		Drawn: JC / Checked: ER	
Figure Title: Photographs of the Site		Date: 04/03/2026	www.thomsonec.com enquiries@thomsonec.com



Photograph 13:
w1f7-1, Other lowland mixed deciduous woodland.



Photograph 14:
w1g – 1(31) , Other broadleaved woodland (secondary woodland).



Photograph 15:
w1g – 2 (31), Other broadleaved woodland (secondary woodland).



Photograph 16:
w1g – 3 (31), Other broadleaved woodland (secondary woodland).



Photograph 17:
Urban tree, T1.



Photograph 18:
Brick electrical infrastructure building, u1b5-1, B1 on Figure 5. **High bat suitability.**

Client: Barnsley Metropolitan Borough Council	Drawing Ref: BAR010-001-002/6/1	Thomson environmental consultants
Figure Number: 6c	Drawn: JC / Checked: ER	www.thomsonec.com enquiries@thomsonec.com
Figure Title: Photographs of the Site	Date: 04/03/2026	



Photograph 19:
Metal electrical infrastructure building, u1b5-2 on Figure 3, B3 on Figure 5. **Negligible bat suitability**



Photograph 20:
Brick and glass waiting room, u1b5-3 on Figure 3, B6 on Figure 5. **Moderate bat suitability**



Photograph 21: T1 on Figure 5, Willow species 0.3m DBH, with knot holes present at 5m on the south aspect (PRF 1). (**PRF**)



Photograph 22: T2 on Figure 5, Elder 0.2m DBH, with knot holes present at 2m on the southwest aspect (PRF 1). (**PRF**)



Photograph 23: T3 on Figure 5, Willow species 0.7m DBH, with lifting bark present at 2m on the northeast aspect (PRF 1). (**PRF-I**)



Photograph 24: T4 on Figure 5, Willow species 1.2m DBH, with a weld present at 4m on the east aspect (PRF 1). (**PRF**)

Client: Barnsley Metropolitan Borough Council		Drawing Ref: BAR010-001-002/6/1	Thomson environmental consultants
Figure Number: 6d		Drawn: JC / Checked: ER	
Figure Title: Photographs of the Site		Date: 04/03/2026	www.thomsonec.com enquiries@thomsonec.com



Photograph 25: T5 on Figure 5, Willow species 1.2m DBH, with a hollow truck at the base (PRF 1). (**PRF**)



Photograph 26: T5 on Figure 5, (PRF 1).



Photograph 27: Structure 1, (S1 on Figure 5), damaged brickwork and missing mortar present. **Low bat suitability**



Photograph 28: Damaged tiles, Building 5, (B5 on Figure 5). **Moderate bat suitability**



Photograph 29: B4 on Figure 5. **Low bat suitability**



Photograph 30: B2 on Figure 5. **Low bat suitability**

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Figure Number: 6e	Drawn: JC / Checked: ER	www.thomsonec.com enquiries@thomsonec.com
Figure Title: Photographs of the Site	Date: 04/03/2026	

1. Summary

1.1.1 Barnsley Metropolitan Borough Council is preparing a planning proposal for the construction of a new footbridge and car park on an approximately 1.5 ha site in Penistone, South Yorkshire. The site location is shown on Figure 1. The site currently consists of grassland, woodland and urban areas. The project will require the clearance of multiple vegetated habitats and the demolition of buildings.

1.1.2 Thomson Environmental Consultants completed a Preliminary Ecological Appraisal, and as well as a Ground Level Tree Assessment and Preliminary Roost Assessment for bats of the site, including an ecological desk study, habitat survey and assessment of the site's baseline biodiversity value.

1.1.3 Desk study records for statutory designated sites and priority habitats for nature conservation were collated for a 2km study area around the site, and for non-statutory designated sites, protected species and species of conservation concern for a 1km study area. A search was also undertaken for the presence of waterbodies within a 500m study area. The location of designated sites, waterbodies and priority habitats are shown on Figure 2.

1.1.4 A field visit was carried out on 25th February 2026.

1.1.5 The UK Habitat Classification (UKHab) survey recorded the main habitats on site as other neutral grassland, bramble scrub, developed land; sealed surface, vacant or derelict land, lowland mixed deciduous woodland and other woodland; broadleaved (see Figure 3). The lowland mixed deciduous woodland (w1f7-1) is a priority habitat for conservation in England.

1.1.6 The Ground Level Tree Assessment identified five trees on site with potential roost features (PRF), including one tree with potential roost features for individual bats only (PRF-I).

1.1.7 A Preliminary Roost Assessment for bats of the site was undertaken that classified five buildings and one structure as having bat roosting suitability ranging from low to high. One additional building had negligible suitability.

1.1.8 As shown in Table 1.1, baseline biodiversity unit values were calculated for the site using the statutory biodiversity metric.

Table 1.1: BNG baseline results

Unit Type	Baseline Units
Habitat	8.65

1.1.9 Table 1.2 overleaf summarises the main findings, plus recommendations designed to enable compliance of the project with legislation and planning policy in relation to ecological features and biodiversity. Further avoidance, mitigation or compensation measures may be required following any further surveys.

1.1.10 Subject to the completion of further surveys, should more than 18 months elapse between the date of the PEA survey and the commencement of the development, the PEA should be updated to ensure the findings remain reflective of current ecological conditions.

Table 1.2: Summary of results and recommendations

Ecological Feature	Desk and Field Study Summary	Potential Effect on Feature	Recommendations
Non-statutory designated sites	The nearest non-statutory designated site is Royd, Vicar, Lindley and Coates Great Woods LWS, located 1.47km east of the site.	Due to the distance between the development location and any non-statutory designated sites, it is unlikely that there will be any impacts on the LWS or their qualifying features.	Not applicable.
Priority habitats and ancient woodland	There is priority habitat located within the site and immediately adjacent to the site and ancient woodland located within 2km of the site.	Priority habitats within the site could be lost or damaged as a result of the development. Release of pollutants and dust emissions have the potential to have an adverse impact on priority habitats and ancient woodland close to the site.	Priority habitats on the site should be retained where possible or replaced on a like for like basis. A CEMP: Biodiversity should be produced that includes the control of off-site emissions of sediment, dust and chemicals.
Waterbodies within 500m	There are running waterbodies present within 500m of the site.	Release of pollutants, sediment and dust emissions off site have the potential to have an adverse impact on waterbodies.	A CEMP: Biodiversity should be produced that includes the control of off-site emissions of sediment, dust and chemicals.
Common amphibians	Suitable habitat within the site boundary.	Common amphibians, if present on site, could be killed or injured during vegetation clearance and earthworks.	Check of suitable habitat in advance of works and relocation if required.
Great crested newt	No records of great crested newt within the study area, no standing waterbodies present within 250m and suitable terrestrial habitat within the site.	GCN should not pose a constraint to the development.	If any protected species, including GCN, are observed on site during the construction works, works should be halted and an ecologist should be contacted for advice.

Ecological Feature	Desk and Field Study Summary	Potential Effect on Feature	Recommendations
Reptiles	Suitable habitat within the site.	Vegetation clearance and earthworks in suitable habitat areas have the potential to kill or injure reptile species.	Further survey required to determine reptile presence or likely absence and provide appropriate recommendations thereafter.
Birds	Records of Schedule 1 and common bird species within the study area and suitable nesting habitat for common birds within the site.	Vegetation clearance during the breeding bird season (March to August) could have an adverse impact on nesting birds by disturbance or damage to nests.	Clearance of suitable nesting habitat outside of the bird breeding season, or nesting bird checks prior to removal of nesting bird habitat within nesting season. Nesting bird checks to consider Schedule 1 bird nests beyond the site boundary.
Badger	Records of badger within the study area. No suitable habitat within the site for sett creation, although commuting or foraging badgers may use the site.	Hazards created during construction (e.g., open trenches, machinery, stored or leaking fuel and oil) could result in harm to badgers if precautionary measures are not undertaken.	CEMP: Biodiversity to be produced that includes precautionary measures during works to prevent harm to badger. Ecologist to be contacted should any new mammal burrows be identified on site prior to or during the works.
Bats	Records of bat species within the study area and suitable habitat for roosting bats within the site.	If roosting bats are present in trees, buildings and structures and they are impacted by construction activities, bats could be killed, injured or disturbed and their roosts destroyed.	Further survey required to determine likely presence / likely absence of bats in identified buildings, structures and trees. Subject to the completion of further surveys, should more than 12 months elapse between the date of the PRA and GLTA surveys and the commencement of the development, the PRA and GLTA should be updated to ensure the findings remain reflective of current ecological conditions.
Other mammals	Records of other mammal species within the study area and suitable habitat within the site.	Hedgehog, if present on site, could be killed or injured during vegetation clearance and earthworks.	Contractor to check suitable habitat in advance of works and relocation if required. If any mammal burrows (except badger) are discovered on site prior to or during the works and impacts (damage) cannot be avoided, they should be excavated cautiously

Ecological Feature	Desk and Field Study Summary	Potential Effect on Feature	Recommendations
			during a sensitive dig to allow mammals an opportunity escape.
Invasive plant species	Records of one INNS species within the study area returned in the desk study, with confirmed and potential INNS species identified within the site.	The development has the potential to result in the spread of INNS, including wall cotoneaster (*Cotoneaster horizontalis*) and other assumed controlled cotoneasters, which would constitute an offence.	Updated INNS survey in optimal survey period. Once the extent of INNS is established for the site, an Invasive Species Management Plan should be prepared and implemented for the remediation / control and spread prevention of confirmed INNS.

2. Introduction

2.1 Context

2.1.1 This report presents the findings of a Preliminary Ecological Appraisal (PEA) undertaken as an initial step to identify potential ecological constraints relating to the project proposal for the construction of a car park and footbridge on a site near to Penistone station, Barnsley, South Yorkshire.

2.1.2 During the ecological desk study, designated sites and priority habitats[1] for nature conservation are identified within a defined study area of the proposed works and the potential of the project to affect those sites and habitats is discussed. Records for protected species and species of conservation concern[2] are collated to identify potential effects of the project and inform requirements for further surveys if necessary. During the habitat survey undertaken by a suitably qualified ecologist, the habitats present on the site were identified and mapped to determine the baseline biodiversity metric value for the site and the suitability of the site to support protected species and species of conservation concern.

2.1.3 The report has been prepared by Thomson Environmental Consultants Ltd on behalf of Barnsley Metropolitan Borough Council.

2.2 Site Description

2.2.1 The site, approximately 1.5 ha in area, encompasses land near to Penistone Station, S36 6FY (central Grid Reference:425143, 403310 (SE 25142 03309)), and, at the time of survey, consisted of an existing car park and railway station, vacant land, grassland and woodland. The site location is shown on Figure 1.

2.2.2 The area impacted by the development is hereafter referred to as ‘the site’.

2.3 Project Description

2.3.1 Barnsley Metropolitan Borough Council is preparing a planning proposal for the construction of a new footbridge and car park on the site. The project will require the clearance of multiple vegetated habitats and the demolition of buildings.

2.3.2 The proposals are hereafter referred to collectively as ‘the development'.

2.3.3 The planned start and duration of the development is currently unknown.

2.3.4 The project will require planning consent from Barnsley Metropolitan Borough Council.

[1] Priority habitats are habitats listed on the Section 41 list of the Natural Environment and Rural Communities Act 2006 (the NERC Act) as Habitats of Principal Importance in England or listed in local Biodiversity Action Plans.

[2] Species of conservation concern are species identified on published lists as being rare, vulnerable or declining. This includes priority species which are species which are listed on the Section 41 list of the NERC Act as Species of Principal Importance in England or species which are listed in local biodiversity action plans. Protected species are species protected under legislation.

2.4 The Brief and Objectives

2.4.1 Thomson Environmental Consultants Ltd was commissioned by Barnsley Metropolitan Borough Council on 19th January 2026 to undertake a PEA and Ground Level Tree Assessment (GLTA) for the project, including:

- An ecological desk study including identification of statutory and non-statutory designated sites for nature conservation, ancient woodland, priority habitats, and records of important species within an appropriate study area, using data purchased from the Local Biological Record Centre and other published data sources;
- A habitat survey of the site by a suitably qualified ecologist using the UK Habitat Classification methodology (V2).
- The habitat survey to include an assessment of the potential for habitats on site to support protected species and species of conservation concern;
- A condition assessment of each on-site habitat parcel using DEFRA's statutory biodiversity metric methodology in order to collect data to inform Biodiversity Net Gain calculations;
- Ground level inspections of all trees within the site boundary. The aim of the survey will be to identify trees which may be suitable for roosting bats, informing next phase surveys.
- The survey method will be based on Bat Conservation Trust guidelines (4th Edition) (Collins, J (ed), 2023). All trees identified as potentially or confirmed suitable for roosting bats to be recorded as necessary to inform further surveys.
- A combined report supported by appropriate digitised mapping that details the methods and results of the desk study, habitat and GLTA surveys.
- A report to include a calculation of the site's baseline biodiversity units, consideration of any relevant legislation and planning policies, with recommendations for necessary compliance measures and for any further surveys that are required.

2.4.2 During the field survey, buildings were identified within the site that required a Preliminary Roost Assessment (PRA) for bats. In the interests of a thorough appraisal, the PRA was completed during the PEA and GLTA survey visit, and the findings included within this report, with prior agreement.

2.4.3 The objective of the appraisal was to identify constraints and opportunities related to ecology and biodiversity with respect to the proposed development of the site as detailed in the project description.

2.5 Limitations

2.5.1 This report is based on the development boundary and layout shown on '251219 Project Scope & Site Boundary.pdf'. Subsequent changes may result in a requirement to reassess the potential impacts of the development and the requirements for avoidance, mitigation and enhancement.

2.5.2 Some species records (grid references) received from the local environmental records centre were only available at four figure resolution. As such it was not possible to say if they fall within the study area for this project. In the case of doubt, a cautious approach was taken and they were assumed to be within 1km of the site.

2.5.3 The survey was completed on 25th February 2026, a time of year considered to be sub-optimal for botanical survey. The site itself mainly comprised grassland, urban landscaping, and woodland types that could be identified and thus this is deemed a valid habitat survey. However, it is possible that some small or annual plants, including invasives were missed. Therefore where possible non-native invasive plant species could not be fully identified to species level, the precautionary approach was followed, and they were assumed to be non-native invasive species controlled by relevant legislation.

2.5.4 The species data collated during the desk study is mainly derived from records submitted by members of the public and *ad hoc* surveys undertaken by volunteers. Therefore, it should not be taken as a definitive list of the protected species and other species of conservation concern that occur in the local area.

3. Desk Study

3.1 Methods

3.1.1 A study area was defined to cover the site and all land within a 2km buffer area. Records for designated sites, ancient woodland and priority habitats were sought for the full 2km study area. Records for protected species, species of conservation concern and invasive non-native species were sought for a 1km study area. An additional study area with a 500m buffer area was used for the identification of waterbodies. The site location and study areas are shown on Figure 2.

3.1.2 These search areas are deemed to be suitable based on the zone of influence for the development. The zone of influence for a project is defined as the area over which ecological features may be subject to significant effects as a result of the proposed project and associated activities (CIEEM, 2017).

3.1.3 Sources of information are detailed in Table 3.1 as follows:

Table 3.1: Sources of desk study data

Source	Summary of Information Provided
Sheffield Biological Records Centre	Non-statutory designated sites and species records. Requests for information were sent on 20/02/2026. Results were received on 04/03/2026.
The Multi-Agency Geographical Information for the Countryside (MAGIC)	Locations of waterbodies, statutory designated sites, protected species licence returns and priority habitats (including ancient woodland).
Ordnance Survey (OS) mapping	The presence of running (rivers and streams) and standing (lakes, ponds and ditches) waterbodies.

3.1.4 Results were filtered to include only those relevant to the study area and only those recorded in the last ten years. Results are presented in the following section.

3.1.5 Potential ecological constraints identified as a result of the desk study are presented in Section 8.

3.2 Results

3.2.1 The results of the desk study are summarised below and shown on Figure 2.

Designated Sites

3.2.2 There are no statutory designated sites within the study area.

3.2.3 There are two non-statutory designated sites within the study area, the closest of which is Royd, Vicar, Lindley and Coates Great Woods Local Wildlife Site (LWS) 1.47km east of the site. Details of non-statutory designated sites within 2km of the site are given in Table 3.2.

Table 3.2: Designated sites within the study area

Site name and designation	Description	Central Grid Reference	Distance (km) and Orientation to Site
Royd, Vicar, Lindley and Coates Great Woods Local Wildlife Site (LWS)	Ancient woodland, Lowland Mixed Deciduous Woodland	SE 27736 04008	1.47 east
Scout Dike Reservoir Local Wildlife Site (LWS)	Lowland Heathland, Purple Moor Grass and Rush Pasture, River	SE 23239 04919	1.92 north-west

Ancient Woodland Outside Designated Sites

3.2.4 Within the study area seven parcels of ancient woodland were recorded - the closest of which is located 503 m from the site. Locations are shown on Figure 2.

Other Priority Habitats Outside Designated Sites

3.2.5 Two types of priority habitat were identified within the study area. The habitats comprise deciduous woodland and open mosaic habitats. The habitats are summarised in Table 3.3 and the locations are shown on Figure 2.

Table 3.3: Priority habitats within the study area

Priority Habitat Type	Number of Parcels in Buffer	Grid Reference of Nearest Parcel	Distance (km)[3] and Orientation to Site
Deciduous woodland	15	SE 25079 03262	0.00, Adjacent to south-west of site
Open Mosaic Habitats on Previously Developed Land	1	SE 25253 03234	0.00, Adjacent to south-east of site

Waterbodies

3.2.6 Waterbodies recorded within the 500m study area are shown on Figure 2 and summarised in Table 3..

Table 3.4: Waterbodies recorded within the study area

Name	Description	Grid Reference	Distance (m) and Orientation to Site
WB1	River Don	SE 25487 03309	33 north

[3] Of closest parcel to site.

Name	Description	Grid Reference	Distance (m) and Orientation to Site
WB2	Scout Dike	SE 25565 03741	213 north-east
WB3	Cubley Brook	SE 25533 03277	294 east

Protected Species and Species of Conservation Concern

3.2.7 223 records of 27 protected species and species of conservation concern were identified within the study area. Details of the species are given in Table 3.5, grouped and ordered by distance from site.

Table 3.5: Species records derived from the desk study

Common Name	Scientific Name	CHSR[4]	WCA[5]	National Priority Species[6]	Local Priority / BAP Species	Other[7]	No of Records	Year[8]	Grid Reference	Dist. from Site[9] (km)
Bird										
Skylark	*Alauda arvensis*			Y		Red	21	2025	SE252037	0.387
Barn owl	*Tyto alba*		Sch 1		Y		7	2022	SE24540142	0.968
Curlew	*Numenius arquata*			Y		Red	6	2022	SE242018	0.968
Fieldfare	*Turdus pilaris*		Sch 1			Red	11	2021	SE255022	0.968
Grey partridge	*Perdix perdix*			Y		Red	3	2019	SE253018	0.968
House sparrow	*Passer domesticus*			Y		Red	46	2021	SE242020	0.968
Lapwing	*Vanellus vanellus*			Y		Red	16	2019	SE242015	0.968
Linnet	*Linaria cannabina*			Y		Red	14	2020	SE240016	0.968

[4] Conservation of Habitats and Species Regulations 2017, as amended

[5] Wildlife and Countryside Act 1981, as amended

[6] Species of Principal Importance within the relevant country of the United Kingdom.

[7] Other relevant policy and legislation including: BoCC: Birds of Conservation Concern 5: the status of all regularly occurring birds in the United Kingdom, Channel Islands and the Isle of Man (Stanbury et al., 2021) indicated as Red or Amber; A Vascular Plant Red List for England (Stroh et al., 2014) indicated as Near Threatened (NT), Vulnerable (VU), Endangered (EN) or Critically Endangered (CE); and the Protection of Badgers act 1992 indicated as PBA.

[8] Of most recent record.

[9] Of closest record to site.

Common Name	Scientific Name	CHSR[4]	WCA[5]	National Priority Species[6]	Local Priority / BAP Species	Other[7]	No of Records	Year[8]	Grid Reference	Dist. from Site[9] (km)
Osprey	*Pandion haliaetus*		Sch 1			Amber	1	2023	SE235022	0.968
Starling	*Sturnus vulgaris*			Y		Red	19	2019	SE255022	0.968
Bullfinch	*Pyrrhula pyrrhula*			Y		Amber	3	2019	SE2404	1.618
Dunnock	*Prunella modularis*			Y		Amber	10	2020	SE2402	1.618
Greylag goose	*Anser anser*		Sch 1			Amber	1	2018	SE2404	1.618
Herring gull	*Larus argentatus*			Y		Red	2	2017	SE2404	1.618
Merlin	*Falco columbarius*		Sch 1			Red	1	2016	SE2302	1.618
Peregrine	*Falco peregrinus*		Sch 1				1	2016	SE2302	1.618
Red kite	*Milvus milvus*		Sch 1				2	2021	SE2403	1.618
Redwing	*Turdus iliacus*		Sch 1			Amber	3	2019	SE24790444	1.618
Reed bunting	*Emberiza schoeniclus*			Y		Amber	2	2019	SE25380280	1.618
Mammal										
Noctule	*Nyctalus noctula*	Sch 2	Sch 5	Y			5	2024	SE2447203398	0.579
Soprano pipistrelle	*Pipistrellus pygmaeus*	Sch 2	Sch 5	Y			8	2024	SE2447203398	0.579

Common Name	Scientific Name	CHSR[4]	WCA[5]	National Priority Species[6]	Local Priority / BAP Species	Other[7]	No of Records	Year[8]	Grid Reference	Dist. from Site[9] (km)
Badger	*Meles meles*					PBA	17	2025	SE257037	0.669
Brown hare	*Lepus europaeus*			Y			4	2019	SE254018	0.968
Daubenton's	*Myotis daubentonii*	Sch 2	Sch 5				1	2025	SE2602	1.487
Common pipistrelle	*Pipistrellus pipistrellus*	Sch 2	Sch 5				11	2020	SE25380280	1.618
Myotis bat species	*Myotis* sp	Sch 2	Sch 5	Y			7	2020	SE25260325	1.618
Common pipistrelle	*Pipistrellus pipistrellus*	Sch 2	Sch 5				1	2018	SE24540142	1.902

Invasive Non-Native Species

3.2.8 A single record of an invasive non-native species was reported within the study area, as shown in Table 3.6.

Table 3.2: Invasive non-native species

Common Name	Scientific Name	Relevant Legislation[10]	No. of Records	Dist. from Site (km)[11]
Japanese knotweed	*Reynoutria japonica*	WCA Sch 9	1	0.67

[10] Schedule 9 of the Wildlife and Countryside Act 1981, as amended, or Schedule 2 of the Invasive Alien Species (Enforcement and Permitting) Order 2019
[11] Of closest record to site.

4. Habitat Survey

4.1 Methods

4.1.1 A survey area was defined as an area that encompassed the proposed development site and the existing Penistone Railway Station car park. The survey area is shown on Figure 3.

4.1.2 A survey using the UK Habitat Classification system (UKHab) (UKHab Ltd, 2023) was conducted throughout the survey area. This is a nationally recognised habitat classification system that is compatible with the Defra statutory metric for calculating biodiversity net gain values (Defra, 2023a).

4.1.3 The UKHab has five hierarchical levels and includes the identification of priority habitats and Annex I habitats as listed under the European Habitats Directive. The five levels are:

- Level 1 – Biomes/major ecosystems (terrestrial, freshwater and coastal);
- Level 2 – Ecosystem types (i.e. woodland, grassland, heathland and scrub);
- Level 3 – Broad Habitats, based on those of the UK Biodiversity Action Plan (UKBAP);
- Level 4 – Habitats, including priority habitats; and
- Level 5 – Habitats, including Annex I habitats.

4.1.1 During the field survey, the habitats in the survey area were mapped to the highest level possible, usually level four or five and a distinct parcel identifier is added so that two separate parcels of the same habitat type can be clearly distinguished. An example of habitat labelling is as follows:

- g3c – Other neutral grassland (mapped to Level 4);
- g3c5 – Arrhenatherum neutral grassland (mapped to Level 5); and
- g3c5-1 - Arrhenatherum neutral grassland (mapped to Level 5 with parcel identifier).

4.1.2 In addition, non-hierarchical secondary codes were used to provide supplementary information.

4.1.3 Table 4.1 below shows the meta-data used for this survey.

Table 4.1: Habitat survey meta-data

Scope and purpose of the survey	Preliminary Ecological Appraisal (PEA)
Area surveyed	Site boundary shown on Figure 1
Edition of UKHab used	UKHab-Professional (V2)
Minimum Mapping Unit (MMU)	25m^2 for areas, 5m for linear features
Level of UKHab Primary Hierarchy used	Level 5, where possible
List of Secondary Code groups recorded	All secondary codes
Additional attributes recorded	Habitat condition assessment
Map projection and units	1:600
Date of survey	25th February 2026
Organisation and individual undertaking the survey	Thomson Environmental Consultants Katriona Millar BSc (Hons) MSc ACIEEM Ecological Consultant. Katriona Millar holds a

	Level 1 Survey Class Licence with Natural England for surveying GCN (Licence number: 2023-11035-CL08-GCN), and a Level 1 Survey Class Licence with Natural England for surveying Bats (Licence number: 2024-12190-CL17-BAT). Pascale Palethorpe BSc (Hons) MA ACIEEM Ecological Consultant. Pascale Palethorpe holds a Level 1 Survey Class Licence with Natural England for surveying GCN (Licence number: 2024-12219-CL08-GCN).
References for any existing datasets that have been used	LERC, Ordnance Survey (OS) maps and aerial imagery or www.magic.gov.uk

4.1.4 The dominant and readily identified species of higher plant species from each habitat type within the survey area were recorded and their abundance was assessed on the DAFOR scale:

- D Dominant
- A Abundant
- F Frequent
- O Occasional
- R Rare

4.1.5 These scores represent the abundance within the defined area only and do not reflect national or regional abundances. Plant species nomenclature follows Stace (2019).

4.1.6 Target notes were made for any features that were too small to map but were of particular ecological interest.

4.1.7 Incidental records of fauna were also made during the survey and the habitats identified were evaluated for their potential to support protected species and other species of conservation concern, including priority species. However, no specific faunal surveys were undertaken.

4.2 Results

Habitats and Flora

4.2.1 The habitats, as they appeared at the time of the survey, are described in Table 5.2 below and their distribution is shown on Figure 3. A full species list for each habitat is provided in Appendix 1 and the full habitat condition assessment sheets for relevant habitat types are provided in Appendix 2.

Table 4.2: UKHab survey results

UKHab Code / Name	Secondary Codes	Description, Value and Condition	Area (ha)
g3c-1 - Other neutral grassland		A parcel of other neutral grassland located in the northeast of the site with abundant perennial rye-grass (*Lolium perenne*) and occasional species such as cock's-foot (*Dactylis glomerata*), creeping buttercup (*Ranunculus repens*) and meadow buttercup (*Ranunculus acris*). Photograph 1 on Figure 6a. This parcel has a moderate condition score due to the lack of sward height variation and over 5% bare ground presence.	0.02
g3c-2 - Other neutral grassland	10 - Scattered scrub 80 – Open mosaic habitats on previously developed land	A parcel of other neutral grassland with scattered scrub adjacent to rail and some damage from vehicles. With abundant fescue (*Festuca* sp.) and frequent species such as cock's-foot, ribwort plantain (*Plantago lanceolata*) and occasional bramble (*Rubus fruticosus* agg.). Photograph 2 on Figure 6a. This parcel has a good condition score.	0.28
g3c-3 - Other neutral grassland	10 - Scattered scrub	Grassland behind fencing at the southwest of the site. Frequent species include bent (*Agrostis* sp.) with occasional cock's-foot, dandelion (*Taraxacum* agg.) and willow (*Salix* sp.*).* Photograph 3 on Figure 6a. This parcel has a moderate condition, scored down due the lack of sward height variation.	0.01
h3d-1 - Bramble scrub		A parcel of bramble scrub dominated by elm leafed blackberry (*Rubus ulmifolius).* Photograph 4 on Figure 6a.	<0.01
h3d-2 - Bramble scrub		Bramble scrub along edge of grassland and rail platform dominated by bramble with occasional willow and rare butterfly-bush (*Buddleja davidii*). Photograph 5 on Figure 6a.	0.05

UKHab Code / Name	Secondary Codes	Description, Value and Condition	Area (ha)
u1-1 - Built-up areas and gardens		Area of ornamental planting with occasional cherry laurel (*Prunus laurocerasus*). Photograph 6 on Figure 6a.	0.01
u1b-1 - Developed land- sealed surface		Road and edges of residential gardens.	0.26
u1b-2 - Developed land- sealed surface		Hardstanding platform. Photograph 7 on Figure 6b.	0.07
u1b-3 - Developed land- sealed surface		Hardstanding platform and car park. Photograph 8 on Figure 6b.	0.17
u1b5-1 - Buildings		Brick electrical building. Photograph 18 on Figure 6c.	<0.01
u1b5-2 - Buildings		Rail infrastructure building. Photograph 19 on Figure 6d.	<0.01
u1b5-3 - Buildings		Railway infrastructure building. Photograph 20 on Figure 6d.	<0.01
u1c-1 - Artificial unvegetated, unsealed surface		Railway corridor consisting of ballast and tracks. Photograph 9 on Figure 6b.	0.09
u1f-1 - Sparsely vegetated urban land	80 – Open mosaic habitats on previously developed land	Derelict building with hardstanding and small areas of vegetation cover with frequent common chickweed (*Stellaria media*) and occasional hairy bitter-cress (*Cardamine hirsuta*) and willow species. Photograph 10 on Figure 6b. Condition score is moderate due to no variety in vegetation structure.	0.06
u1f-2 - Sparsely vegetated urban land		Gravel area with 20% vegetation cover with occasional bent and black medick (*Medicago lupulina).* Photograph 11 on Figure 6b. Condition score poor due to lack of varied vegetation structure and lack of beneficial species.	0.03

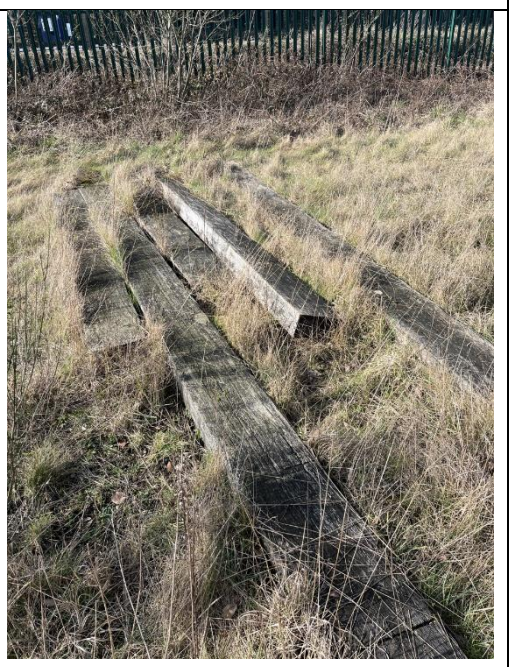
UKHab Code / Name	Secondary Codes	Description, Value and Condition	Area (ha)
u1f-3 - Sparsely vegetated urban land		Sparse vegetation on platform with some recently removed ornamental plants. Frequent nipplewort (*Lapsana communis*) and yorkshire-fog (*Holcus lanatus*) with occasional species such as dove's-foot crane's-bill (*Geranium molle*) and shepherd's-purse (*Capsella bursa-pastoris*). Photograph 12 on Figure 6b. Condition score poor due to lack of varied vegetation structure and lack of beneficial species.	0.01
T1 - Urban Tree		Rowan (*Sorbus aucuparia)*, 20cm at diameter at breast height (DBH). Photograph 17 on Figure 6c. Condition is moderate due to being immature and lack of ecological niches.	0.03
w1f7-1 - Other Lowland mixed deciduous woodland		Semi natural woodland with abundant mature willow species, frequent ash (*Fraxinus excelsior)* and occasional birch (*Betula* sp.*)* this is assessed as priority habitat. Photograph 13 on Figure 6c. Condition score is moderate due to a lack of deadwood and only two age classes of trees.	0.08
w1g-1 - Other broadleaved woodland	31 - Secondary woodland	Secondary woodland, mostly native but young. Some areas with dense scrub understorey. Birch abundant with frequent bramble and willow. Photograph 14 on Figure 6c. Condition score is moderate due to a lack of deadwood, only two age classes of trees, and a Cotoneaster sp (potentially Schedule 9) present.	0.27
w1g-2 - Other broadleaved woodland	31 - Secondary woodland	Small woodland with some areas of hard standing with frequent birch and bramble with occasional butterfly-bush and cock's-foot. Photograph 15 on Figure 6c. Condition score is moderate due to a lack of deadwood, only one age class of trees, and a Cotoneaster sp (potentially Schedule 9) present.	0.07
w1g-3 - Other broadleaved woodland	31 - Secondary woodland	Narrow strip of secondary woodland, mostly native but young. Frequent willow and birch. Photograph 16 on Figure 6c. Condition score is moderate due to a lack of deadwood, only one age class of trees, and no classes of regrowth.	0.02

Fauna

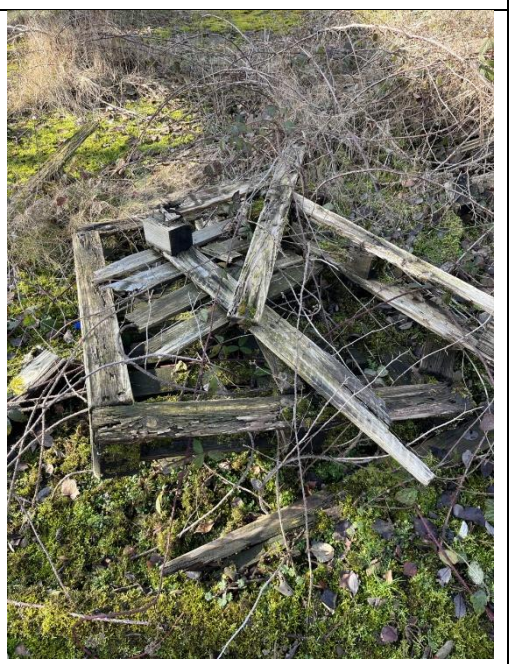
4.2.2 No species of evidence of fauna were recorded within the site during the survey.

Target Notes

Table 4.3: Target notes

Target Note	Description	Grid Reference	Photographs
TN1	Cotoneaster sp. Assumed Schedule 9 species due to sub-optimal survey timing.	SE 25139 03341	
TN2	Discarded wooden beams - potential refugia for reptile, small mammals and amphibians	SE 25114 03341	

Target Note	Description	Grid Reference	Photographs
TN3	Piled bricks and bags of rubble - potential refugia for reptile, small mammals and amphibians	SE 25157 03314	
TN4	Wall cotoneaster (*Cotoneaster horizontalis*) - Sch 9	SE 25189 03285	

Target Note	Description	Grid Reference	Photographs
TN5	Bird nest in elder, currently disused.	SE 25188 03283	
TN6	Broken pallets - potential refugia for reptile, small mammals and amphibians	SE 25164 03286	

Target Note	Description	Grid Reference	Photographs
TN7	Discarded pile of wooden beams - potential refugia for reptile, small mammals and amphibians	SE 25167 03262	
TN8	Pile of wood chippings - potential refugia for reptile, small mammals and amphibians	SE 25151 03254	
TN9	Piled deadwood - potential refugia for reptile, small mammals and amphibians	SE 25122 03337	

Target Note	Description	Grid Reference	Photographs
TN10	Piled deadwood - potential refugia for reptile, small mammals and amphibians	SE 25106 03357	
TN11	Cotoneaster sp. Assumed Schedule 9 species due to sub-optimal survey timing.	SE 25149 03309	No photograph available.

5. The Statutory Biodiversity Metric

5.1 Methods

5.1.1 The statutory biodiversity metric quantifies losses and gains in biodiversity in terms of biodiversity units.

5.1.2 The metric calculates the biodiversity value by multiplying the area or length (hectares or kilometre), distinctiveness (habitat type), condition (quality) and strategic significance (local significance for biodiversity) of each habitat parcel. To calculate the biodiversity units which may be achieved post-development, risk multipliers are also introduced to account for difficulty of habitat creation (delivery/risk factor) and time for created habitats to reach target condition (time to target factor). The calculations were carried out using the statutory biodiversity metric calculation tool for calculating biodiversity net gain values (Defra, 2023a).

5.1.3 The baseline biodiversity unit calculation in this report represents the biodiversity value of the site as it currently stands. The anticipated future biodiversity units for the site, following habitat creation and enhancement, have also been determined. The net change in biodiversity units was then calculated by subtracting the number of baseline biodiversity units from the future number of post-development biodiversity units to get the number of biodiversity units that will be created or lost by the proposed works. If this number is positive, the development has achieved biodiversity net gain. If the number is negative, there is a loss.

5.1.4 Area based habitats, hedgerow habitats and river habitats are considered separately in the tool to account for the differences in their ecological values and functions.

Baseline Formula

5.1.5 The baseline biodiversity value calculation represents the pre-development biodiversity value of the site as it was at the time that the baseline habitat survey was undertaken.

5.1.6 To calculate the baseline biodiversity value, habitat distinctiveness and condition are given numerical 'scores' which are multiplied with hectares or kilometres of habitat. The formula for calculating baseline biodiversity units is as follows:

$$(AxDxQxS) = AHBU$$

Where:

- A = Area (ha) or Length (km)
- D = Distinctiveness
- Q = Condition
- S = Strategic Significance
- AHBU = Area or Length-based Habitat Biodiversity Units

Distinctiveness

5.1.7 Each habitat parcel is assigned a multiplier based on habitat distinctiveness. This includes '*consideration of species richness and rarity; the extent to which the habitat is protected by*

designations; and the degree to which a habitat supports species rarely found in other habitats' (Defra, 2023b).

5.1.8 Habitats such as hard standing and buildings are assumed to have very low distinctiveness and are not included.

Condition

5.1.9 To enable the calculation of BNG units, an assessment of the condition of each habitat was made in the field in accordance with the statutory biodiversity metric condition assessments (Defra, 2023c). These sheets provide a series of condition assessment criteria, specific to each habitat type. Once all applicable criteria have been assessed, a condition score of good, moderate or poor is applied, based on the scoring instructions provided within the condition sheets.

5.1.10 The condition of habitats such as hard standing and buildings is not assessed

Strategic Significance

5.1.11 The location of habitat parcels is factored into the calculation based on whether it has been identified as significant for nature conservation within local plans and strategies.

5.1.12 Following the field survey, the data was used to carry out a biodiversity metric calculation using the Statutory Biodiversity Metric calculation tool for calculating biodiversity net gain values published by DEFRA: https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides

5.2 Results

5.2.1 The baseline habitats recorded on site during the habitat survey are listed in Table 5.1. Multipliers for distinctiveness, condition and strategic significance have been applied, as described in Section 5.1.

Table 5.1: Habitat baseline

Habitat Type	Area (ha)[12]	Distinctiveness	Condition	Strategic Significance	Baseline (habitat units)
g3c-1 Other neutral grassland	0.018	4	2	1	0.15
g3c-2 Other neutral grassland	0.281	4	3	1	3.37
g3c-3 Other neutral grassland	0.007	4	2	1	0.06
h3d-1 Bramble scrub	0.004	4	1	1	0.02
h3d-2 Bramble scrub	0.051	4	1	1	0.20
u1 Introduced shrub	0.008	2	1	1	0.02
u1b Developed land; sealed surface	0.498	0	0	1	0.00
u1b5 Buildings	0.007	0	0	1	0.00
u1c Artificial unvegetated, unsealed surface	0.091	0	0	1	0.00
u1f-1 Open mosaic on previously developed land	0.064	2	2	1	0.77
u1f-2 Vacant or derelict land	0.026	2	1	1	0.05
u1f-3 Vacant or derelict land	0.010	2	1	1	0.02
w1f7 Lowland mixed deciduous woodland	0.085	6	2	1.15	1.17
w1g-1 Lowland mixed deciduous woodland	0.269	4	2	1	2.15
w1g-2 Lowland mixed deciduous woodland	0.066	4	2	1	0.53
w1g-3 Lowland mixed deciduous woodland	0.016	4	2	1	0.13
T1 Urban tree	0.004	4	1	1	0.03
Totals	**1.5**[13]				**8.65**

[12] Where habitat parcels <0.01ha, this metric/report will display the area as 0.00. The metric only shows 2 decimal places, but the habitat has still been quantified.

[13] Total using a rounded value from the Defra statutory metric.

6. Bat Preliminary Roost Assessment

6.1 Method

6.1.1 A survey area was defined that encompassed the site. All data was recorded on the ArcGIS FieldMaps mapping application. The survey area is shown on Figure 5.

6.1.2 The PRA was undertaken on 25th February 2026 by Ecological Consultants Katriona Millar BSc (Hons) MSc ACIEEM and Pascale Palethorpe BSc (Hons) MA ACIEEM. Katriona Millar holds a Level 1 Survey Class Licence with Natural England for surveying bats (Licence number: 2024-12190-CL17-BAT).

6.1.3 A PRA was undertaken on all buildings and structures present within the survey area. This included a search for Potential Roost Features (PRFs) for bats and physical evidence of bat presence.

6.1.4 The suitability of buildings and structures to support roosting bats was assessed in accordance with the descriptions given in Table 6.1.

6.1.5 Evidence of roosting bats searched for included:

- Bat droppings, feeding remains and corpses (with notes made on quantity, freshness and type);
- Dark staining below an access point that may be caused by bat faeces or urine;
- Staining around a hole that may be caused by the natural oils in bat fur;
- Noises made by bats; and
- Presence of individual bats.

6.1.6 Any evidence of bats found was recorded together with a note on the location. If any bat droppings were found, their spread, approximate number and age were recorded.

Table 6.1: Suitability of structures for roosting bats (from: Collins (ed.), 2023)

Suitability	Structures
None	No habitat features on site likely to be used by any roosting bats at any time of the year (*i.e.* a complete absence of crevices/suitable shelter at all ground/underground levels).
Negligible	No obvious habitat features on site likely to be used by roosting bats, however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (*i.e.* unlikely to be suitable for maternity and not a classic cool/stable hibernation site but could be used by individual hibernating bats).
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation).

Suitability	Structures
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.

External Inspection of Buildings

6.1.7 Where possible to determine, the following information was recorded for each building present within the survey area:

- Type (House, flats, offices, barn, church, etc.);
- Presence of roof void;
- Year built (1960 - present, 1914 - 1960, before-1914 or unknown);
- Aspect (orientation of the front of the building using the 8 principal compass points);
- Wall material (brick, block, stone, wood, concrete, metal, sheet materials or other), construction (solid, unfilled cavity or filled cavity) and presence of other materials (rendering, hanging tiles, wooden weather boards, plastic or metal cladding) and their condition;
- Presence and form of roof (absent, pitched (gable end or hipped) or flat), presence of roof void, type of roof covering (tiles, slates, felt or similar, thatched, corrugated sheet GRP, concrete or wood) and condition of roof covering (no, minor, moderate or severe damage/decay/gaps);
- Presence and form of eaves (presence of soffits, fascia boards, barge boards) and condition (no, minor, moderate or severe damage/decay/gaps); and
- Presence and condition of flashing (no, minor, moderate or severe damage/decay/gaps).

6.1.8 The exterior of all buildings was then searched for PRFs and evidence of bats. The search was made from the ground with the aid of binoculars and a high-powered torch. PRFs looked for included:

- Presence of loft voids and wall cavities;
- Gaps around windows, doors and lintels;
- Lifted lead flashing;
- Loose or missing roof, ridge or hanging tiles;
- Gaps between stones or bricks where mortar is absent;
- Other gaps or cracks between various elements of the building structure; and
- Potential access points to an internal cavity such as a cavity wall, loft space, eaves or behind cladding (such as hanging tiles and weather boarding).

6.1.9 The search for bats and evidence of bats focused on the following key areas:

- The ground and walls below potential access points and wall cladding;
- Window recesses, especially window sills; and
- Accessible cracks and crevices.

6.1.10 The locations of the PRFs and any evidence found were recorded. Photographs and/or diagrams of the building were taken as necessary to support the assessment. Each PRF was given a unique identification code.

6.2 Results

6.2.1 A total of six buildings and one structure are present within the survey area. Figure 5 shows the locations of buildings and structures within the site and recorded PRF locations. Photographs of the buildings and structures and PRFs are shown on Figure 6. A summary of PRA results is given in Table 6.2 and descriptions of each building is given below. The full detail for each building is given in Appendix 4.

6.2.2 No evidence of roosting bats was recorded in any of the buildings or structures.

Table 6.2: Summary of preliminary roost assessment results

Building / Structure	Suitability	Internal Inspection Complete?	Evidence of Roosting Bats Present?	For Roost Type?
Building 1 (B1)	High	No	No	Maternity
Building 2 (B2)	Low	No	No	Resting/Day
Building 3 (B3)	Negligible	No	No	N/A
Building 4 (B4)	Low	No	No	Resting/Day
Building 5 (B5)	Moderate	No	No	Resting/Day
Building 6 (B6)	Moderate	No	No	Resting/Day
Structure 1 (S1)	Low	No	No	Resting/Day

Building 1 (B1)

6.2.3 Building 1 (B1) is a disused single storey, brick building with a flat concrete roof (Figure 6c, Photograph 18).

6.2.4 B1 had PRFs present such as a hole in a window frame and damaged brickwork.

6.2.5 B1 was assessed as having high suitability for roosting bats.

Building 2 (B2)

6.2.6 Building 2 (B2) is a dilapidated external structure of a building with no roof. It is a concrete frame with areas of wood, brick and metal construction (Figure 6e, Photograph 30).

6.2.7 B2 had PRFs present such as gaps around concrete beams and missing mortar.

6.2.8 B2 was assessed as having low suitability for roosting bats.

Building 3 (B3)

6.2.9 Building 3 is a well-sealed metal rail infrastructure building (Figure 6d, Photograph 19).

6.2.10 B3 is assessed as having negligible potential to support roosting bats with no PRFs recorded.

Building 4 (B4)

6.2.11 Building 4 is a metal shelter with a slate roof (Figure 6e, Photograph 29).

6.2.12 B4 had PRFs present such as gaps between ridge tiles.

6.2.13 B4 was assessed as having low suitability for roosting bats.

Building 5 (B5)

6.2.14 Building 5 is a railway waiting room of mixed material construction (Figure 6e, Photograph 28).

6.2.15 B5 had PRFs present such as gaps between roof tiles and missing tiles

6.2.16 B5 was assessed as having moderate suitability for roosting bats.

Building 6 (B6)

6.2.17 Building 5 is a railway waiting room of mixed material construction (Figure 6d, Photograph 20).

6.2.18 B5 had PRFs present such as lifted roof tiles, missing mortar and gaps in the soffit

6.2.19 B5 was assessed as having moderate suitability for roosting bats.

Structure 1 (S1)

6.2.20 Structure 1 is a dilapidated retailing wall with areas of missing mortar along the length of the wall. (Figure 6e, Photograph 27).

6.2.21 S1 was assessed as having low suitability for roosting bats.

7. Bat Ground Level Tree Assessment

7.1 Method

7.1.1 A survey area was defined that encompassed the site. All data was recorded on the ArcGIS FieldMaps mapping application. The survey area is shown on Figure 5.

7.1.2 The GLTA was undertaken on 25th February 2026 by Ecological Consultants Katriona Millar BSc (Hons) MSc ACIEEM and Pascale Palethorpe BSc (Hons) MA ACIEEM. Katriona Millar holds a Level 1 Survey Class Licence with Natural England for surveying bats (Licence number: 2024-12190-CL17-BAT).

7.1.3 A GLTA was undertaken on all trees present within the survey area. During the assessment a detailed and systematic inspection of the exterior of the tree was undertaken to look for PRFs that could be used by bats. Close-focussing binoculars, a high-powered torch and endoscopes were used to undertake the assessment.

7.1.4 Features searched for included those in Table 7.1, defined according to Bat Roosts in Trees, (BTHK, 2018):

Table 7.1: PRF types known to be exploited by bats (adapted from Bat Roosts in Trees (BTHK, 2018)):

Disease / Decay Formed PRFs	Damaged Formed PRFs	Association Formed PRFs
Woodpecker holes	Lightning strikes	Fluting
Squirrel holes	Hazard beams	Ivy
Knot holes	Subsidence cracks	
Pruning cuts	Shearing cracks	
Tear outs	Transverse snaps	
Wounds	Welds	
Cankers	Lifting bark	
Compression forks	Desiccation fissures	
Butt rots	Frost cracks	

7.1.5 Information was collected on each tree with one or more PRF recorded, this included: species, tree age, tree condition, diameter at breast height and tree height, plus a photograph of each tree and its location. Each PRF recorded was given a unique identification code.

7.1.6 Details recorded regarding the PRF included a description of the PRF, height of the PRF above the ground, position and aspect.

7.1.7 If individual bats were observed, species-level identification (where possible) was conducted using available reference guides including Bats of Britain and Europe (Dietz *et al*, 2016) and Identifying Bats in Britain and Ireland (Shipman, 2025).

7.1.8 The suitability of potential tree roosting habitat was classified according to the broad categories based on the presence or absence of PRF, as shown in Table 7.2.

Table 7.2: Guidelines for assessing the suitability of trees for bats (Collins (ed.), 2023)

Suitability	Description
None	Either no PRFs in the tree or highly unlikely to be any
FAR	Further Assessment Required to establish if PRFs are present in the tree
PRF	A tree with at least one PRF present

7.1.9 Trees identified as 'none', with no bat roosting potential, were not recorded. Trees identified as FAR or PRF were recorded.

7.1.10 Some PRFs are likely to be invisible from the ground. Therefore, per current guidance, only trees which could be thoroughly visually viewed from the ground with a high level of confidence that PRFs were not present, were classified as having no suitability for roosting bats.

7.1.11 Where a PRF could be assessed from the ground with a reasonable level of confidence, despite being inaccessible for close inspection (e.g. a desiccation fissure assessed using binoculars and a torch), PRF classifications were estimated, with acknowledgement that further 'truthing' surveys by aerial inspection may be required if impacts proposed.

7.1.12 When all PRFs on a single tree could be fully inspected from the ground by torch or endoscope (as required), such trees were assigned a level of suitability (Table 7.3) or downgraded to 'None' if a full inspection of the feature or features determined them as unsuitable.

Table 7.3: Guidelines for categorising the potential suitability of PRFs in trees (Collins (ed.), 2023)

Suitability	Description
PRF-I	PRF is suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats.
PRF-M	PRF is suitable for multiple bats and may therefore be used by a maternity colony.

7.2 Results

7.2.1 A total of four trees were recorded as PRF with one or more PRFs, with locations shown on Figure 5. One tree was confirmed as having PRF-I only from the GLTA. A summary of the survey results is given in Table 7.4, with the full details given in Appendix 5.

Table 7.4: Summary of ground level tree assessment results

Assessment Result	Tree Identification Codes	Total No. of Trees
At least one PRF present (PRF)	T1, T2, T4, T5	4
Potential Roost Feature(s) for individual bats only present (PRF-I)	T3	1

8. Constraints, Opportunities and Recommendations

8.1 Methodology

8.1.1 Known ecological features (designated sites, habitats and species) and ecological features with the potential to be present (protected species and species of conservation concern) are considered in relation to the relevant legislation and national and local planning policy (see Appendix 3). Potential opportunities for biodiversity enhancement are also considered at this stage, in accordance with relevant national and local policy. Recommendations are provided to enable compliance with the relevant legislation and policy.

8.2 General Recommendations

8.2.1 Constraints and opportunities have been assessed in relation to the project description set out in Section 2.3 and any recommendations provided relate to this description only. If the proposals change then re-assessment of constraints and opportunities will be required and recommendations will require revision.

8.2.2 It is recommended that, to safeguard ecological features during the construction phase, a Construction Ecological Management Plan (CEMP): Biodiversity (or equivalent) is produced. This document will outline all the recommended actions to minimise impacts to habitats and species during construction.

8.2.3 Subject to the completion of further surveys, should more than 18 months elapse between the date of the PEA survey and the commencement of the development, the PEA should be updated to ensure the findings remain reflective of current ecological conditions.

8.3 Designated Sites

8.3.1 It is considered reasonably unlikely that the development will have a direct effect on any of the designated sites identified during the desk study. This is due to their considerable distance from the site and the absence of pathways for damage.

8.4 Ancient Woodland

8.4.1 It is considered unlikely that the development will have an impact on any of the ancient woodland parcels identified during the desk study. This is due to the distance from the site and the absence of pathways for damage.

8.5 Priority Habitats

8.5.1 Priority habitats were identified adjacent to the site during the desk study and on the site during field survey; these include lowland mixed deciduous woodland (w1f7-1 of Figure 3).

8.5.2 In the absence of best practice controls, the development could lead to physical damage and pollution to the on-site priority woodland and adjacent priority habitat woodland and open

mosaic on previously developed land and have a negative impact on priority habitats beyond the site boundaries.

8.5.3 It is recommended that loss of or damage to the on-site priority habitat woodland is avoided where possible. If loss of priority habitat is unavoidable it is recommended that the loss is compensated by habitat creation, either on a like for like basis or by a combination of habitat creation and enhancement to ensure there is no net loss in biodiversity value as a result of the development, as measured by biodiversity metrics.

8.5.4 On site and off site priority habitats should be protected by best practice measures, outlined in a CEMP, This includes prevention of emissions of sediment, dust and chemicals.

8.6 Waterbodies

8.6.1 Sediment run-off, air-borne dust and fuel/oil leakages from the works site have the potential to enter the River Don (WB1 on Figure 2) given its proximity to the site.

8.6.2 It is recommended that control measures, outlined in a CEMP, are put in place to prevent pollution impacts to WB1.

8.7 Protected Species and Species of Conservation Concern

Common Amphibians

8.7.1 The desk study identified the presence of waterbodies within the 500m search area that could provide suitable breeding sites for amphibians and suitable terrestrial resting habitat for common frog, including scrub, woodland and grassland, was recorded to be present on the site.

8.7.2 Suitable sheltering habitat for common amphibians, including TN2, TN3, TN6, TN7, TN8, TN9 and TN10 should be dismantled cautiously by hand.

8.7.3 Should common amphibians be discovered on site at any time during their active period (March to October inclusive), they should be allowed to move away of their own volition or if in danger moved carefully with gloved hands to a sheltered area of dense vegetation. Should common amphibians be discovered on site outside of the active season an ecologist should be contacted for advice on how to proceed.

Great Crested Newt

8.7.4 No records for great crested newt were returned within the desk study.

8.7.5 A search on magic.gov.uk identified no records of granted European Protected Species Licences (EPSLs) for great crested newt within 1km of the site.

8.7.6 The desk study identified the presence of no potential GCN breeding sites (standing waterbodies) within 250m of the site.

8.7.7 GCN are therefore considered reasonably unlikely to pose a constraint to the development.

Reptiles

8.7.8 Suitable habitat for reptiles, including scrub, grassland and urban areas were recorded on the site.

8.7.9 All native reptile species are protected from killing and injury under Schedule 5 of the Wildlife and Countryside Act 1981, as amended, and are listed as Species of Principal Importance (SPI) in Section 41 of the NERC Act 2006, as summarised in Appendix 3.

8.7.10 Removal of habitat suitable for supporting reptiles could result in the killing or injury of reptiles, which would be an offence under the Wildlife and Countryside Act 1981, as amended.

8.7.11 Further survey of the site for reptiles is recommended to determine whether avoidance and / or mitigation measures are required for the development to proceed lawfully. Further survey should include a detailed habitat suitability assessment and a presence / likely absence survey to determine the species present and their status on the site.

Birds

8.7.12 Records of bird species were returned within the desk study, including records of Schedule 1 birds such as barn owl (*Tyto alba*) and fieldfare (*Turdus pilaris*). Evidence was observed during the habitat survey of nesting activity on site (TN5).

8.7.13 There is suitable habitat including woodland and scrub present for common nesting birds however, the site does not support suitable nesting habitat for Schedule 1 bird species.

8.7.14 Suitable habitat for nesting birds should be retained where possible. If suitable nesting habitat is required to be removed, it should be done so outside of the breeding bird season, i.e. removed between September and February, inclusive.

8.7.15 If suitable nesting habitat is scheduled for removal during the bird breeding season it should be checked first by a suitably experienced ecologist for the presence of nesting birds and if nesting birds are found to be present the works within an appropriate buffer of the nest should be delayed until the nest is no longer active. This should include consideration of Schedule 1 species that could be nesting outside of the site boundary, if they could be disturbed.

Badger

8.7.16 While records of badger (*Meles meles*) were identified in the desk study, no signs or suitable habitat for sett creation was recorded on site. The woodland and grasslands on site are suitable for foraging badger, and the site has good connectivity to suitable habitat in the surrounding landscape, and therefore badger may be present in the area.

8.7.17 To prevent harm to badgers, or other mammal species, that may visit the works area during the construction phase the following precautions, written up in a CEMP: Biodiversity or equivalent, are recommended:

- Secure storage of materials and chemicals within a designated area;
- Excavations should be covered at night, or a suitable escape ramp should be provided to prevent animals becoming trapped; and

- Task lighting should be purposefully directed away from retained habitats and focussed on the work area to reduce potential impacts or disturbance to badger.

8.7.18 Should evidence of badger be encountered during the works, an ecologist should be contacted for advice.

Bats

8.7.19 Records of bat species were returned within the desk study, including records of noctule (*Nyctalus noctula*) and soprano pipistrelle (*Pipistrellus pygmaeus*).

8.7.20 A search on magic.gov.uk identified two records of granted European Protected Species Licences (EPSLs) for bat species within 1km of the site. Both 0.95km northwest of the site for the destruction of a resting place or breeding place for common pipistrelle (*Pipistrellus pipistrellus)* (Licence numbers EPSM2009-1299 and EPSM2011-2745).

8.7.21 There are trees, buildings and a structure on the site with the potential to support roosting bats. (see Figure 5). As these features will be impacted by the development through the demolition of buildings and structures that have potential to support bats, further survey is required to establish presence / likely absence of roosting bats and provide suitable recommendations thereafter.

8.7.22 The legal protection afforded to bats is summarised in Appendix 3. Killing or injury of bats would be an offence, as well as damage or destruction of a roosting site. Disturbance of roosting bats is also an offence.

8.7.23 Building B1 is assessed as having high bat roosting potential, and should be subject to three dusk emergence surveys undertaken between May and September, with at least two visits between May and August, spaced at least three weeks apart.

8.7.24 Buildings B5 and B6 are assessed as having moderate bat roosting potential and should be subject to two dusk emergence surveys undertaken between May and September, with at least one visit between May and August, spaced at least three weeks apart. An additional emergence survey should be undertaken if an internal inspection of the building is not possible prior to the first emergence survey.

8.7.25 Buildings B2 and B4, and Structure S1 are assessed as having low bat roosting potential, and should be subject to one dusk emergence survey undertaken between May and August. An additional emergence survey should be undertaken if an internal inspection of the building is not possible prior to the first emergence survey.

8.7.26 Impacts to the trees identified as having roosting potential should be avoided. Where this is not possible, those recorded as PRF (T1, T2, T4 and T5) should be subject to three emergence survey visits, two of which should be undertaken between May and August.

8.7.27 Tree T3, confirmed with PRF-I does not require emergence survey visits, and should it be targeted for removal this would need to occur as a soft felling in the presence of a suitably experienced ecologist.

8.7.28 The buildings and trees with no or negligible suitability for roosting bats do not require further survey.

8.7.29 Subject to the completion of further surveys, should more than 12 months elapse between the date of the PRA and GLTA surveys and the commencement of the development, the PRA and GLTA should be updated to ensure the findings remain reflective of current ecological conditions.

Other Mammal Species

8.7.30 Records of one other mammal species was returned within the desk study, brown hare (*Lepus europaeus*). Suitable habitat for brown hare, rabbit (*Oryctolagus cuniculus*) and hedgehog (*Erinaceus europaeus*), including woodland and scrub, was recorded on site.

8.7.31 It is recommended that any habitat suitable such as scrub for sheltering hedgehog, that is subject to clearance, should be checked prior to works. Suitable sheltering habitat including TN2, TN3, TN6, TN7, TN8, TN9 and TN10 should be dismantled cautiously by hand.

8.7.32 Should hedgehogs be discovered on site, they should be allowed to move away of their own volition or if in danger moved carefully with gloved hands to a sheltered area (e.g. dense scrub).

8.8 Invasive Plant Species

8.8.1 The desk study found records for the presence of INNS (Invasive Non-Native Species) within the study area, including records of Japanese knotweed (*Reynoutria japonica*).

8.8.2 Multiple individual cotoneaster plants were recorded on site during the habitat survey (TN1, TN4 and TN11 on Figure 3). Where species identification was not possible due to survey being conducted in sub-optimal botanical season, it has been assumed the cotoneaster is a species listed on Schedule 9 of the Wildlife and Countryside Act, 1981 and is therefore considered an INNS.

8.8.3 The development has the potential to result in the spread of INNS, including wall cotoneaster (*Cotoneaster horizontalis*) (TN4) and other assumed Schedule 9 cotoneasters, which would constitute an offence.

8.8.4 An INNS survey should be conducted in the optimal period for botanical survey, mid-April to September, to confirm the species of TN1 and TN11, and to establish the presence of any additional INNS on site.

8.8.5 Once the extent of INNS is established for the site, an Invasive Species Management Plan should be prepared and implemented for the remediation / control and spread prevention of confirmed INNS.

8.9 Biodiversity Net Gain

8.9.1 A BNG assessment will be required to determine whether the proposed developed will achieve 10% biodiversity net gain.

8.9.2 As per the Environment Act 2021, a Habitat Management and Monitoring Plan (HMMP) will also be required, outlining provisions for habitat creation, management and monitoring over a 30-year period.

8.10 Additional Ecological Enhancement

8.10.1 An Ecological Enhancement Plan (EEP) is recommended to ensure the development maximises its potential benefits for biodiversity post-construction. This document would include recommendations such as:

- Bird boxes;
- Bat boxes;
- The lighting regime to be as sensitive as possible to minimise light spill onto semi-natural habitats; and
- Bug hotels, compost heaps and other refugia to be created within a variety of locations across the site. These could be created from arisings from on-site vegetation management.

9. Conclusion

9.1.1 The appraisal identified ecological constraints to the development, including the potential for killing and injury of protected species during site works and potential for impacts to priority habitats. Recommendations have been provided for further surveys, avoidance measures and mitigation to enable the proposed project to comply with relevant legislation relating to protected species, designated sites and biodiversity policy.

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Appendix 1: Plant Species and Abundance

g3c-1 - Other neutral grassland

Common name	Scientific name	Abundance
Perennial Rye-grass	*Lolium perenne*	Abundant
Cock's-foot	*Dactylis glomerata*	Occasional
Creeping Buttercup	*Ranunculus repens*	Occasional
Daisy	*Bellis perennis*	Occasional
Dandelion	*Taraxacum* agg.	Occasional
Meadow Buttercup	*Ranunculus acris*	Occasional
Thistle	*Cirsium* sp.	Occasional
Yarrow	*Achillea millefolium*	Occasional
Common Nettle	*Urtica dioica*	Rare
Fescue	*Festuca* sp.	Rare

g3c-2 (10) - Other neutral grassland (Scattered scrub)

Common name	Scientific name	Abundance
Fescue	*Festuca* sp.	Abundant
Bent	*Agrostis* sp.	Frequent
Cock's-foot	*Dactylis glomerata*	Frequent
Ribwort Plantain	*Plantago lanceolata*	Frequent
Bramble	*Rubus fruticosus* agg.	Occasional
Broom	*Genista* sp.	Occasional
Bush Vetch	*Vicia sepium*	Occasional
Common Ragwort	*Jacobaea vulgaris*	Occasional
Crested Dog's-tail	*Cynosurus cristatus*	Occasional
Dandelion	*Taraxacum* agg.	Occasional
Dock	*Rumex* sp.	Occasional

Common name	Scientific name	Abundance
Dove's-foot Crane's-bill	*Geranium molle*	Occasional
Greater Plantain	*Plantago major*	Occasional
Rose	*Rosa* sp.	Occasional
White Clover	*Trifolium repens*	Occasional
Yorkshire-fog	*Holcus lanatus*	Occasional
Birch	*Betula* sp.	Rare
Common Knapweed	*Centaurea nigra*	Rare

g3c-3 (10) - Other neutral grassland (Scattered scrub)

Common name	Scientific name	Abundance
Bent	*Agrostis* sp.	Frequent
Cock's-foot	*Dactylis glomerata*	Occasional
Dandelion	*Taraxacum* agg.	Occasional
Dock	*Rumex* sp.	Occasional
Fescue	*Festuca* sp.	Occasional
Willow	*Salix* sp.	Occasional
Willowherb	*Epilobium* sp.	Rare

h3d-1 - Bramble scrub

Common name	Scientific name	Abundance
Elm leafed blackberry	*Rubus ulmifolius*	Dominant

h3d-2 - Bramble scrub

Common name	Scientific name	Abundance
Bramble	*Rubus fruticosus* agg.	Dominant
Common Nettle	*Urtica dioica*	Occasional
Willow	*Salix* sp.	Occasional
Butterfly-bush	*Buddleja davidii*	Rare

Common name	Scientific name	Abundance
Common Knapweed	*Centaurea nigra*	Rare
Rose	*Rosa* sp.	Rare

u1-1 - Built-up areas and gardens

Common name	Scientific name	Abundance
Cherry Laurel	*Prunus laurocerasus*	Occasional

u1f-1 (82) - Sparsely vegetated urban land (Vacant or derelict land)

Common name	Scientific name	Abundance
Common Chickweed	*Stellaria media*	Frequent
Fescue	*Festuca* sp.	Occasional
Hairy Bitter-cress	*Cardamine hirsuta*	Occasional
Willow	*Salix* sp.	Occasional
Bramble	*Rubus fruticosus* agg.	Rare
Cock's-foot	*Dactylis glomerata*	Rare
Cow Parsley	*Anthriscus sylvestris*	Rare
Dove's-foot Crane's-bill	*Geranium molle*	Rare
Willowherb	*Epilobium* sp.	Rare
Yorkshire-fog	*Holcus lanatus*	Rare

u1f-2 - Sparsely vegetated urban land

Common name	Scientific name	Abundance
Bent	*Agrostis* sp.	Occasional
Black Medick	*Medicago lupulina*	Occasional
Cock's-foot	*Dactylis glomerata*	Occasional
Dandelion	*Taraxacum* agg.	Occasional
Ribwort Plantain	*Plantago lanceolata*	Occasional
Greater Plantain	*Plantago major*	Rare

u1f-3 - Sparsely vegetated urban land

Common name	Scientific name	Abundance
Dandelion	*Taraxacum* agg.	Frequent
Nipplewort	*Lapsana communis*	Frequent
Yorkshire-fog	*Holcus lanatus*	Frequent
Dove's-foot Crane's-bill	*Geranium molle*	Occasional
Fescue	*Festuca* sp.	Occasional
Forget-me-not	*Myosotis* sp.	Occasional
Shepherd's-purse	*Capsella bursa-pastoris*	Occasional
Cleavers	*Galium aparine*	Rare
Common Nettle	*Urtica dioica*	Rare
Cotoneaster franchetii	*Cotoneaster franchetii*	Rare

w1f7-1 - Other Lowland mixed deciduous woodland

Common name	Scientific name	Abundance
Willow	*Salix* sp.	Abundant
Ash	*Fraxinus excelsior*	Frequent
Bramble	*Rubus fruticosus* agg.	Frequent
Birch	*Betula* sp.	Occasional
Holly	*Ilex aquifolium*	Occasional
Rose	*Rosa* sp.	Occasional
Wild Strawberry	*Fragaria vesca*	Occasional
Beech	*Fagus sylvatica*	Rare
Cotoneaster	*Cotoneaster* sp.	Rare
Sycamore	*Acer pseudoplatanus*	Rare

w1g-1 (31) - Other broadleaved woodland (Secondary woodland)

Common name	Scientific name	Abundance
Birch	*Betula* sp.	Abundant
Bramble	*Rubus fruticosus* agg.	Frequent
Willow	*Salix* sp.	Frequent
Broom	*Genista* sp.	Occasional
Butterfly-bush	*Buddleja davidii*	Occasional
Cock's-foot	*Dactylis glomerata*	Occasional
Vetch	*Vicia* sp	Occasional
Wild Strawberry	*Fragaria vesca*	Occasional
Ash	*Fraxinus excelsior*	Rare
Cotoneaster	*Cotoneaster* sp.	Rare
Elder	*Sambucus nigra*	Rare
Oak	*Quercus* sp.	Rare

w1g-2 (31) - Other broadleaved woodland (Secondary woodland)

Common name	Scientific name	Abundance
Bramble	*Rubus fruticosus* agg.	Frequent
Rose	*Rosa* sp.	Frequent
Willow	*Salix* sp.	Frequent
Butterfly-bush	*Buddleja davidii*	Occasional
Cock's-foot	*Dactylis glomerata*	Occasional
Hawthorn	*Crataegus monogyna*	Occasional
Bracken	*Pteridium aquilinum*	Rare
Elder	*Sambucus nigra*	Rare
Oak	*Quercus* sp.	Rare
Rose sp.	*Rosa* spp	Rare

w1g-3 (31) - Other broadleaved woodland (Secondary woodland)

Common name	Scientific name	Abundance
Birch	*Betula* sp.	Frequent
Willow	*Salix* sp.	Frequent
Broom	*Genista* sp.	Occasional
Willow-leaved Cotoneaster	*Cotoneaster salicifolius*	Rare

Appendix 2: Biodiversity Metric Condition Assessment Sheets

Condition Sheets: GRASSLAND with moderate to high distinctiveness

Parcel Reference			g3c-1	g3c-2	g3c-3
Condition Assessment Criteria			**Criterion Passed (Yes or No)**		
A	The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type (and relative to Footnote 3 suboptimal species which may be listed in the UKHab description).[1] **Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.**		Yes	Yes	Yes
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.		No - lack of sward height variation	Yes	No - lack of sward height variation
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens[2].		No - <1%	Yes	Yes
D	Cover of bracken *Pteridium aquilinum* is less than 20% and cover of scrub (including bramble *Rubus fruticosus* agg.) is less than 5%.		Yes	No - scrub >5%	Yes
E	Combined cover of species indicative of suboptimal condition[3] and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species[4] (as listed on Schedule 9 of WCA[5]) are present, this criterion is automatically failed.		Yes	Yes	Yes
Additional Criterion – must be assessed for all non-acid grassland types					
F	There are 10 or more vascular plant species per m^2 present, including forbs that are characteristic of the habitat type (species referenced in Footnote 3 and 5 cannot contribute towards this count). **Note - this criterion is essential for achieving Good condition for non-acid grassland types only.**		No	Yes	No
Number of criteria passed			3	5	4
Condition Assessment Result		**Condition Assessment Score**	**Score Achieved ✓**		
Acid grassland types (Result out of 5 criteria)					
Passes 5 criteria		Good (3)			
Passes 3 or 4 criteria		Moderate (2)			
Passes 2 or fewer criteria		Poor (1)			
Non-acid grassland types (Result out of 6 criteria)					

Passes 5 or 6 criteria, including essential criterion A and additional criterion F.	Good (3)		✓	
Passes 3 to 5 criteria, including essential criterion A.	Moderate (2)	✓		✓
Passes 2 or fewer criteria; OR Passes 3 or 4 criteria excluding criterion A and F.	Poor (1)			

Notes

Footnote 1 - Professional judgement should be used alongside the UKHab description.

Footnote 2 - For example, this could include small, scattered areas of bare ground allowing for plant colonisation, or localised patches not exceeding 5% cover.

Footnote 3 - Species indicative of suboptimal condition for this habitat type include: creeping thistle *Cirsium arvense*, spear thistle *Cirsium vulgare*, curled dock *Rumex crispus*, broad-leaved dock *Rumex obtusifolius*, common nettle *Urtica dioica*, creeping buttercup *Ranunculus repens*, greater plantain *Plantago major*, white clover *Trifolium repens* and cow parsley *Anthriscus sylvestris*. There may be additional relevant species local to the region and or site.

Footnote 4 - Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, by applying professional judgement.

Footnote 5 - Wildlife and Countryside Act 1981 (as amended).

Condition Sheets: URBAN

		Parcel Reference	u1f-1	u1f-2	u1f-3
	Condition Assessment Criteria		Criterion Passed (Yes or No)		
A	Vegetation structure is varied, providing opportunities for vertebrates and invertebrates to live, eat and breed. A single structural habitat component or vegetation type does not account for more than 80% of the total habitat area.		No - >80%	No- >80%	No
B	The habitat parcel contains different plant species that are beneficial for wildlife, for example flowering species providing nectar sources for a range of invertebrates at different times of year.		Yes	No – lack of beneficial species identified	No
C	Invasive non-native plant species (listed on Schedule 9 of WCA[1]) and others which are to the detriment of native wildlife (using professional judgement)[2] cover less than 5% of the total vegetated area[3]. **Note – to achieve Good condition, this criterion must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).**		Yes	Yes	Yes
Additional Criterion - must be assessed for **Open mosaic habitat on previously developed land** only					
D	The parcel shows spatial variation and forms a mosaic of bare substrate PLUS: - At least four early successional communities (a) to (i); Communities: (a) annuals; (b) mosses/liverworts; (c) lichens; (d) ruderals; I inundation species; (f) open grassland; (g) flower-rich grassland; (h) heathland, (i) pools.				
Additional Criterion - must be assessed for **Bioswale and SuDS habitat types** only					
E1	Plant species are mostly native. If non-native species are present, they should not be detrimental to the habitat or native wildlife[4].				
E2	The vegetation is comprised of plant species suited to wetland or riparian situations.				
Additional Criterion - must be assessed for **Intensive green roofs** only					
F	There are 10 or more vascular plant species per m^2 present, including forbs that are characteristic of the habitat type (species referenced in Footnote 3 and 5 cannot contribute towards this count). **Note – this criterion is essential for achieving Good condition for non-acid grassland types only.**				
Additional Criterion - must be assessed for **Intensive green roofs** only					
G	The roof has a varied depth of 80 – 150 mm; at least 50% is at 150 mm and is planted and seeded with wildflowers and sedums or is pre-prepared with sedums and wildflowers. **Note – to achieve Good condition some additional habitat, such as sand piles, stones, logs etc. are present.**				
		Number of criteria passed	2	1	1
Condition Assessment Result		Condition Assessment Score	Score Achieved ✓		

Results for habitats requiring assessment of 3 core criteria only **(all listed urban habitats except Open mosaic habitat on previously developed land, Bioswale, SuDS and Green roofs):**				
Passes all 3 core criteria; AND Meets the requirements for Good condition within criterion C.	Good (3)			
Passes 2 of 3 core criteria; OR Passes 3 of 3 core criteria but does not meet the requirements for Good condition within criterion C.	Moderate (2)	✓		
Passes 0 or 1 of 3 core criteria.	Poor (1)		✓	✓
Results for **Green roofs and Open mosaic habitat on previously developed land** (requiring assessment of **4 criteria** only - core criteria plus additional criterion specified for habitat type):				
Passes all 3 core criteria; AND Meets the requirements for Good condition within criterion C; AND Passes additional criterion relevant to specific habitat type (D, F or G).	Good (3)			
Passes 2 or 3 of 4 criteria; OR Passes 4 of 4 criteria but does not meet the requirements for Good condition within criterion C.	Moderate (2)			
Passes 0 or 1 of 4 criteria.	Poor (1)			
Results for **Bioswale or SuDS** (requiring assessment of **5 criteria** - core criteria plus additional criteria specified for habitat type):				
Passes all 3 core criteria; AND Meets the requirements for Good condition within criterion C; AND Passes all additional criteria relevant to specific habitat type (Group E)	Good (3)			
Passes 3 or 4 of 5 criteria; OR Passes 5 of 5 criteria but does not meet the requirements for Good condition within criterion C.	Moderate (2)			
Passes 2 or fewer of 5 criteria.	Poor (1)			
Notes				
Footnote 1 - Wildlife and Countryside Act 1981 (as amended). **Footnote 2** - Sources of information about detrimental non-native species can be found on the GB Non-native Species Secretariat (GBNNSS) website: Home » NNSS (nonnativespecies.org) and Natural England Access to Evidence page should also be checked for up-to-date information: Horizon-scanning for invasive non-native plants in Great Britain - NECR053 (naturalengland.org.uk) For criterion C – For green roof habitat types only – buddleia Buddleja davidii should be assessed alongside Schedule 9 species. This species impairs the health of the local ecosystem and reduces the biodiversity potential of the roof. It is also a sign that a roof has not been planted and seeded correctly in subsequent years. **Footnote 3** - Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat,using professional judgement. **Footnote 4** - Use professional judgement. Sources of information about non-native species that are not detrimental to native wildlife can be found on the GBNNSS website: Alternative plants » NNSS (nonnativespecies.org)				

Condition Sheets: INDIVIDUAL TREES

	Parcel Reference	T1		
Condition Assessment Criteria		**Criterion Passed (Yes or No)**		
A	The tree is a native species (or at least 70% within the block are native species).	Yes		
B	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	Yes		
C	The tree is mature (or more than 50% within the block are mature)[1].	No - tree immature		
D	There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	No - evidence of management around base of tree		
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	No - no ecological niches present		
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Yes		
	Number of criteria passed			

Condition Assessment Result	**Condition Assessment Score**	**Score Achieved ✓**		
Result out of 6 criteria				
Passes 5 or 6 criteria	Good (3)			
Passes 3 or 4 criteria	Moderate (2)	✓		
Passes 2 or fewer criteria	Poor (1)			

Notes

Footnote 1 - See gov.uk standing advice on ancient and veteran trees. Available from:
Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk)
Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk)

Condition Sheets: WOODLAND

		Parcel Reference	w1g-1	w1g-2	w1g-3
Condition Assessment Criteria					
Indicator		**Good (3 points)**	**Moderate (2 points)**	**Poor (1 point)**	**Score per criterion**		
A	Age distribution of trees	Three age-classes[1] present.	Two age-classes[1] present.	One age-class[1] present.	2	1	1
B	Wild, domestic and feral herbivore damage	No significant browsing damage evident in woodland[2].	Evidence of significant browsing pressure is present in less than 40% of whole woodland[2].	Evidence of significant browsing pressure is present in 40% or more of whole woodland[2].	3	2	3
C	Invasive plant species	No invasive species[3] present in woodland.	Rhododendron *Rhododendron ponticum* or cherry laurel *Prunus laurocerasus* not present, and other invasive species[3] <10% cover.	Rhododendron or cherry laurel present, or other invasive species[3] ≥10% cover.	2 (Cotoneaster sp present)	2 (Cotoneaster sp present)	3
D	Number of native tree species	Five or more native tree or shrub species[4] found across woodland parcel.	Three to four native tree or shrub species[4] found across woodland parcel.	Two or less native tree or shrub species[4] across woodland parcel.	3 (5+ species)	3 (5+ species)	1
E	Cover of native tree and shrub species	>80% of canopy trees and >80% of understory shrubs are native[5].	50 - 80% of canopy trees and 50 - 80% of understory shrubs are native[5].	<50% of canopy trees and <50% of understory shrubs are native[5].	3	3	3
F	Open space within woodland	10 - 20% of woodland has areas of temporary open space[6]. Unless woodland is <10ha, in which case 0 - 20% temporary open space is permitted[7].	21 - 40% of woodland has areas of temporary open space[6].	<10% or >40% of woodland has areas of temporary open space[6]. But if woodland <10ha has <10% temporary open space, please see Good category[7].	3	3	3
G	Woodland regeneration	All three classes present in woodland[8]; trees 4 - 7 cm Diameter at Breast Height (DBH), saplings and seedlings or advanced coppice regrowth.	One or two classes only present in woodland[8].	No classes or coppice regrowth present in woodland[8].	2	2	1
H	Tree health	Tree mortality 10% or less, no pests or diseases and no crown dieback[9].	11% to 25% tree mortality and or crown dieback or low-risk pest or disease present[9].	Greater than 25% tree mortality and or any high-risk pest or disease present[9].	3	3	3

I	Vegetation and ground flora	Recognisable NVC plant community[10] at ground layer present, strongly characterised by ancient woodland flora specialists.	Recognisable woodland NVC plant community[10] at ground layer present.	No recognisable woodland NVC plant community[10] at ground layer present.	2	2	2
J	Woodland vertical structure	Three or more storeys across all survey plots, or a complex woodland[11].	Two storeys across all survey plots[11].	One or less storey across all survey plots[11].	2	2	1
K	Veteran trees	Two or more veteran trees[12] per hectare.	One veteran tree[12] per hectare.	No veteran trees[12] present in woodland.	1	1	1
L	Amount of deadwood	50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, branch stubs and stumps, or an abundance of small cavities[13].	Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities[13].	Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities[13].	2	1	1
M	Woodland disturbance	No nutrient enrichment or damaged ground evident[14].	Less than 1 hectare in total of nutrient enrichment across woodland area, and or less than 20% of woodland area has damaged ground[14].	1 hectare or more of nutrient enrichment, and or 20% or more of woodland area has damaged ground[14].	2	1	3
				Total Score (out of a possible 39)	30	26	27
				Condition Assessment Result	Score Achieved ✓		
				Total Score >32 (33 to 39) = Good Condition			
				Total Score 26 to 32 = Moderate Condition	✓	✓	✓
				Total Score <26 (13 to 25) = Poor Condition			

Notes

Footnotes below refer to the EWBG woodland condition assessment details: EWBG (No date). *Assessing your Woodland's Condition* [online]. Available from: Woodland Wildlife Toolkit (sylva.org.uk)

The woodland condition assessment survey methodology is outlined in the EWBG toolkit. However, the criteria on this sheet are those specific to the Statutory Biodiversity Metric and must be used when assessing woodland condition.

Footnote 1 - See EWBG method INDICATOR 1 for more information. If tree species is not a birch *Betula* sp., cherry *Prunus* sp. or *Sorbus* sp.: 0 - 20 years (Young); 21 - 150 years (Intermediate); and >150 years (Old). For birch, cherry or *Sorbus* species; 0 - 20 years = Young; 21 - 60 years =Intermediate; >60 years = Old. A recognisable age-class should be a consistent recognisable layer across the woodland or stand being assessed. Presence of a few saplings would not indicate that the woodland has an 'age-class' of young trees.

Footnote 2 - See EWBG method INDICATOR 2 for more information. Browsing pressure is considered to be significant where >20% of vegetation visible within each survey plot shows damage from any type of browsing pressure listed.

Footnote 3 - See EWBG method INDICATOR 3 for more information. Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly.

Check for the presence of all plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), particularly the following invasive non-native species: American skunk cabbage *Lysichiton americanus*; Himalayan balsam *Impatiens glandulifera*; Japanese knotweed *Reynoutria japonica*; cherry laurel *Prunus laurocerasus*; shallon *Gaultheria shallon*; snowberry *Symphoricarpos albus*; variegated yellow archangel *Lamiastrum galeobdolon subsp. argentatum*; rhododendron *Rhododendron ponticum*; and tree-of-heaven *Alianthus altissima*.

Footnote 4 - See EWBG method INDICATOR 4 and Table 2 for more information. The number of different native tree or shrub species including young trees and shrubs. A list of commonly found native tree and shrub species is provided in Table 2. Not all species listed are native to all parts of the UK. Note a list of commonly found non-native tree species are also included and should be recorded if present.

Footnote 5 - See EWBG method INDICATOR 5 and for more information. The abundance of native tree species in upper (>5 m) and understorey (up to 5 m) layers including young trees and shrubs.

Footnote 6 - See EWBG method INDICATOR 6 for more information. Open space within woodland in this context is temporary open space in which trees can be expected to regenerate (for example, glades, rides, footpaths, areas of clear-fell). This differs from permanent open space where tree regeneration is not possible or desirable (for example, tarmac, buildings, rivers). Area is at least 10 m wide with less than 20% covered by shrubs or trees.

Footnote 7 - Given the increased ratio of edge habitat to woodland where the woodland is <10ha.

Footnote 8 - See EWBG method INDICATOR 8 for more information. This indicator measures regeneration potential of the woodland by considering three classes: seedlings; saplings; and young trees of 4-7 cm DBH. All three classes would fall in the 'young' category of the 'age distribution of trees' indicator, but the regeneration indicator gathers additional information by considering regeneration potential - if seedlings, saplings and young trees are all present that means natural regeneration processes are happening.

Footnote 9 - See EWBG method INDICATOR 9 for more information and Table 3 for a list of diseases and pests and their risk level.

Footnote 10 - See EWBG method INDICATOR 10 directing to NVC key for more information. The 'UKHab to NVC translation table' in the UK Habitat Classification resources may also be useful to assess this.

Footnote 11 - This criterion looks at structural diversity and is useful to understand in conjunction with the age of trees in a woodland. Vertical structure is defined as the number of canopy storeys present. Possible storey values are: 1) Upper; 2) Complex: recorded when the stand is composed of multiple tree heights that cannot easily be stratified into broad height bands (such as upper, middle or lower); 3) Middle; 4) Lower; and 5) Shrub layer. There might be no storeys where the woodland has been felled. See EWBG INDICATOR 11 for more information.

Footnote 12 - See EWBG method INDICATOR 12 for more information. See gov.uk standing advice on ancient and veteran trees. Available from:

Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk)

Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk)

EWBG INDICATOR 12 is the relevant indicator.

Footnote 13 - See EWBG method INDICATOR 13 for more information. This includes logs, large dead branches on the forest floor and stumps (<1 m tall) >20 cm diameter at narrowest point and >50 cm long. Also includes standing dead trees (>1 m tall) and also deadwood on standing live trees. Diameter is measured at the narrowest point on the stem. Minimum diameter of 20 cm.

Footnote 14 - See EWBG method INDICATOR 15 for more information. Examples of disturbance are: significant nutrient enrichment; soil compaction from trampling, machinery, animal poaching or litter.

Condition Sheets: WOODLAND

				Parcel Reference	w1f7-1		
Condition Assessment Criteria							
Indicator		**Good (3 points)**	**Moderate (2 points)**	**Poor (1 point)**	**Score per criterion**		
A	Age distribution of trees	Three age-classes[1] present.	Two age-classes[1] present.	One age-class[1] present.	2		
B	Wild, domestic and feral herbivore damage	No significant browsing damage evident in woodland[2].	Evidence of significant browsing pressure is present in less than 40% of whole woodland[2].	Evidence of significant browsing pressure is present in 40% or more of whole woodland[2].	3		
C	Invasive plant species	No invasive species[3] present in woodland.	Rhododendron *Rhododendron ponticum* or cherry laurel *Prunus laurocerasus* not present, and other invasive species[3] <10% cover.	Rhododendron or cherry laurel present, or other invasive species[3] ≥10% cover.	3		
D	Number of native tree species	Five or more native tree or shrub species[4] found across woodland parcel.	Three to four native tree or shrub species[4] found across woodland parcel.	Two or less native tree or shrub species[4] across woodland parcel.	3		
E	Cover of native tree and shrub species	>80% of canopy trees and >80% of understory shrubs are native[5].	50 - 80% of canopy trees and 50 - 80% of understory shrubs are native[5].	<50% of canopy trees and <50% of understory shrubs are native[5].	3		
F	Open space within woodland	10 - 20% of woodland has areas of temporary open space[6]. Unless woodland is <10ha, in which case 0 - 20% temporary open space is permitted[7].	21 - 40% of woodland has areas of temporary open space[6].	<10% or >40% of woodland has areas of temporary open space[6]. But if woodland <10ha has <10% temporary open space, please see Good category[7].	3		
G	Woodland regeneration	All three classes present in woodland[8]; trees 4 - 7 cm Diameter at Breast Height (DBH), saplings and seedlings or advanced coppice regrowth.	One or two classes only present in woodland[8].	No classes or coppice regrowth present in woodland[8].	2		
H	Tree health	Tree mortality 10% or less, no pests or diseases and no crown dieback[9].	11% to 25% tree mortality and or crown dieback or low-risk pest or disease present[9].	Greater than 25% tree mortality and or any high-risk pest or disease present[9].	3		

I	Vegetation and ground flora	Recognisable NVC plant community[10] at ground layer present, strongly characterised by ancient woodland flora specialists.	Recognisable woodland NVC plant community[10] at ground layer present.	No recognisable woodland NVC plant community[10] at ground layer present.	2		
J	Woodland vertical structure	Three or more storeys across all survey plots, or a complex woodland[11].	Two storeys across all survey plots[11].	One or less storey across all survey plots[11].	3		
K	Veteran trees	Two or more veteran trees[12] per hectare.	One veteran tree[12] per hectare.	No veteran trees[12] present in woodland.	1		
L	Amount of deadwood	50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, branch stubs and stumps, or an abundance of small cavities[13].	Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities[13].	Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities[13].	1		
M	Woodland disturbance	No nutrient enrichment or damaged ground evident[14].	Less than 1 hectare in total of nutrient enrichment across woodland area, and or less than 20% of woodland area has damaged ground[14].	1 hectare or more of nutrient enrichment, and or 20% or more of woodland area has damaged ground[14].	2		
				Total Score (out of a possible 39)	31		
				Condition Assessment Result	Score Achieved ✓		
				Total Score >32 (33 to 39) = Good Condition			
				Total Score 26 to 32 = Moderate Condition	✓		
				Total Score <26 (13 to 25) = Poor Condition			

Notes

Footnotes below refer to the EWBG woodland condition assessment details: EWBG (No date). *Assessing your Woodland's Condition* [online]. Available from: Woodland Wildlife Toolkit (sylva.org.uk)

The woodland condition assessment survey methodology is outlined in the EWBG toolkit. However, the criteria on this sheet are those specific to the Statutory Biodiversity Metric and must be used when assessing woodland condition.

Footnote 1 - See EWBG method INDICATOR 1 for more information. If tree species is not a birch *Betula* sp., cherry *Prunus* sp. or *Sorbus* sp.: 0 - 20 years (Young); 21 - 150 years (Intermediate); and >150 years (Old). For birch, cherry or *Sorbus* species; 0 - 20 years = Young; 21 - 60 years =Intermediate; >60 years = Old. A recognisable age-class should be a consistent recognisable layer across the woodland or stand being assessed. Presence of a few saplings would not indicate that the woodland has an 'age-class' of young trees.

Footnote 2 - See EWBG method INDICATOR 2 for more information. Browsing pressure is considered to be significant where >20% of vegetation visible within each survey plot shows damage from any type of browsing pressure listed.

Footnote 3 - See EWBG method INDICATOR 3 for more information. Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly.

Check for the presence of all plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), particularly the following invasive non-native species: American skunk cabbage *Lysichiton americanus*; Himalayan balsam *Impatiens glandulifera*; Japanese knotweed *Reynoutria japonica*; cherry laurel *Prunus laurocerasus*; shallon *Gaultheria shallon*; snowberry *Symphoricarpos albus*; variegated yellow archangel *Lamiastrum galeobdolon subsp. argentatum*; rhododendron *Rhododendron ponticum*; and tree-of-heaven *Alianthus altissima*.

Footnote 4 - See EWBG method INDICATOR 4 and Table 2 for more information. The number of different native tree or shrub species including young trees and shrubs. A list of commonly found native tree and shrub species is provided in Table 2. Not all species listed are native to all parts of the UK. Note a list of commonly found non-native tree species are also included and should be recorded if present.

Footnote 5 - See EWBG method INDICATOR 5 and for more information. The abundance of native tree species in upper (>5 m) and understorey (up to 5 m) layers including young trees and shrubs.

Footnote 6 - See EWBG method INDICATOR 6 for more information. Open space within woodland in this context is temporary open space in which trees can be expected to regenerate (for example, glades, rides, footpaths, areas of clear-fell). This differs from permanent open space where tree regeneration is not possible or desirable (for example, tarmac, buildings, rivers). Area is at least 10 m wide with less than 20% covered by shrubs or trees.

Footnote 7 - Given the increased ratio of edge habitat to woodland where the woodland is <10ha.

Footnote 8 - See EWBG method INDICATOR 8 for more information. This indicator measures regeneration potential of the woodland by considering three classes: seedlings; saplings; and young trees of 4-7 cm DBH. All three classes would fall in the 'young' category of the 'age distribution of trees' indicator, but the regeneration indicator gathers additional information by considering regeneration potential - if seedlings, saplings and young trees are all present that means natural regeneration processes are happening.

Footnote 9 - See EWBG method INDICATOR 9 for more information and Table 3 for a list of diseases and pests and their risk level.

Footnote 10 - See EWBG method INDICATOR 10 directing to NVC key for more information. The 'UKHab to NVC translation table' in the UK Habitat Classification resources may also be useful to assess this.

Footnote 11 - This criterion looks at structural diversity and is useful to understand in conjunction with the age of trees in a woodland. Vertical structure is defined as the number of canopy storeys present. Possible storey values are: 1) Upper; 2) Complex: recorded when the stand is composed of multiple tree heights that cannot easily be stratified into broad height bands (such as upper, middle or lower); 3) Middle; 4) Lower; and 5) Shrub layer. There might be no storeys where the woodland has been felled. See EWBG INDICATOR 11 for more information.

Footnote 12 - See EWBG method INDICATOR 12 for more information. See gov.uk standing advice on ancient and veteran trees. Available from:

Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk)

Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk)

EWBG INDICATOR 12 is the relevant indicator.

Footnote 13 - See EWBG method INDICATOR 13 for more information. This includes logs, large dead branches on the forest floor and stumps (<1 m tall) >20 cm diameter at narrowest point and >50 cm long. Also includes standing dead trees (>1 m tall) and also deadwood on standing live trees. Diameter is measured at the narrowest point on the stem. Minimum diameter of 20 cm.

Footnote 14 - See EWBG method INDICATOR 15 for more information. Examples of disturbance are: significant nutrient enrichment; soil compaction from trampling, machinery, animal poaching or litter.

Appendix 3: Planning Policy and Legislation

Designated Sites

Designated sites for nature conservation are protected under UK legislation. Sites can be classified according to their levels of conservation importance. Sites may be considered of international, national or local conservation importance. Internationally important sites receive the highest level of protection.

Statutory designated sites of international importance include Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites[14].

SACs are protected areas in the UK designated under the Conservation of Habitats and Species Regulations 2017 (as amended) (Habitats Regulations) in England and Wales (including the adjacent territorial sea) and to a limited extent in Scotland (reserved matters) and Northern Ireland (excepted matters).

SPAs are protected areas for birds in the UK classified under the Habitats Regulations in England, Scotland and Wales.

Paragraph 194 of the National Planning Policy Framework (NPPF) (Department for Levelling Up, Housing & Communities, 2024) states that "*The following should be given the same protection as habitats sites[15]:*

> *a) potential Special Protection Areas and possible Special Areas of Conservation;*
> *b) listed or proposed Ramsar sites; and*
> *c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites."*

Statutory designated sites of national importance include Sites of Special Scientific Interest (SSSIs) which are protected under the Wildlife and Countryside Act 1981 (as amended) (WCA), Countryside and Rights of Way Act 2000 (CRoW Act) and Natural Environment and Rural Communities Act 2006 (NERC Act). National Nature Reserves (NNRs) are a selection of the very best parts of England's SSSIs, protected under the WCA and CRoW Act.

SSSIs are protected by law and planning guidance. Local Planning Authorities in England must consult Natural England on planning applications that might affect SSSIs. Operations that could damage special interests require consent by Natural England. Under the WCA it an offence to damage, disturb or destroy land within a SSSI or disturb wildlife in a SSSI.

Paragraph 193 of the NPPF states that "*When determining planning applications, local planning authorities should apply the following principles: (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*

[14] SACs and SPAs were formally known as European sites forming part of the Natura 2000 site network. Following the UK's exit from the EU they are now referred to as National Sites and are part of the National Site Network. However, these sites can still be considered to be of international importance for nature conservation. Developments affecting these sites must be considered according to the requirements of the Conservation of Habitats and Species Regulations 2017 (as amended).

[15] Any site which would be included within the definition at regulation 8 of the Conservation of Habitats and Species Regulations 2017 (as amended) for the purpose of those regulations, including candidate Special Areas of Conservation, Sites of Community Importance, Special Areas of Conservation, Special Protection Areas and any relevant Marine Sites.

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".

Natural England's Impact Risk Zones (IRZs) for SSSIs (Natural England, 2024) is a GIS tool developed by Natural England to make a rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts. The IRZs also cover the interest features and sensitivities of European sites, which are underpinned by the SSSI designation and 'Compensation Sites', which have been secured as compensation for impacts on National Sites. Development proposals situated within IRZs may require consultation between the Local Planning Authority and Natural England to discuss the potential impacts of a proposal upon the designated site.

National Parks, the Broads and Areas of Outstanding Natural Beauty are also of national importance. Paragraph 189 of the NPPF states that: *"Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas and should be given great weight in National Parks and the Broads. The scale and extent of development within all these designated areas should be limited, while development within their setting should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas".*

Local Nature Reserves (LNRs) are statutory designated sites of local importance that receive protection under the National Parks and Access to the Countryside Act 1949. Local Planning Authorities are required to consult Natural England about all new proposals. An LNR can be given protection against damaging operations. It also has protection against development on and around it. This protection is usually given via the Local Plan[16], produced by the Local Planning Authority, and often supplemented by local by-laws. Unlike national designations, the level and type of protection afforded an LNR is decided locally and varies from site to site.

Non-statutory designated sites, such as Sites of Nature Conservation Interest (SNCI), Sites of Interest to Nature Conservation (SINC) and Local Wildlife Sites (LWSs) are of local importance. These sites are not protected under legislation. However, local authorities take account of local sites when formulating local plans and when considering planning applications.

The importance of sites of biodiversity value, considered to be synonymous to 'designated sites' is also recognised in Paragraph 187 of NPPF which states that *"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)".'*

Policy BIO1 of the Barnsley Local Plan states that; "*Development will be expected to conserve and enhance the biodiversity and geological features of the borough by:*

- *Protecting and improving habitats, species, sites of ecological value and sites of geological value with particular regard to designated wildlife and geological sites of international, national and local significance, ancient woodland and species and habitats of principal*

[16] A plan for the future development of a local area, drawn up by the local planning authority in consultation with the community. In law this is described as the development plan documents adopted under the Planning and Compulsory Purchase Act 2004. A local plan can consist of either strategic or non-strategic policies, or a combination of the two.

importance identified via Section 41 of the Natural Environment & Rural Communities Act 2006 (for list of the species and habitats of principal importance) and in the Barnsley Biodiversity Action Plan.

- *Maximising biodiversity and geodiversity opportunities in and around new developments.*
- *Conserving and enhancing the form, local character and distinctiveness of the boroughs natural assets such as the river corridors of the Don, the Dearne and Dove as natural floodplains and important strategic wildlife corridors.*
- *Proposals will be expected to have followed the national mitigation hierarchy (avoid, mitigate, compensate) which is used to evaluate the impacts of a development on biodiversity interest.*
- *Protecting ancient and veteran trees where identified.*
- *Encouraging provision of biodiversity enhancements.*
- *Development which may harm a biodiversity or geological feature or habitat, including ancient woodland and aged or veteran trees found outside ancient woodland, will not be permitted unless effective mitigation and/or compensatory measures can be ensured*.".

Priority Habitats

In this report priority habitats for nature conservation include:

- Habitats of Principal Importance listed under Section 41 of the NERC Act;
- Habitats listed under Local Biodiversity Action Plans (LBAPs); and
- Ancient woodland.

Habitats of Principal Importance are listed under the NERC Act. Under Section 41, the Secretary of State must publish a list of the types of habitat which in their opinion are of principal importance for the purpose of conserving biodiversity.

Section 40 of the Act places a duty on all public bodies, including planning authorities, to have regard for biodiversity in exercising their functions. Planning authorities should have particular regard to the Habitats of Principal Importance (henceforth referred to as priority habitats) listed under Section 41 of the Act which should be treated as a material consideration in the planning process.

Paragraph 192 of the NPPF states that to protect and enhance biodiversity and geodiversity, plans should *"promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity".* The NPPF defines 'priority habitats and species' as *"Species and Habitats of Principal Importance included in the England Biodiversity List published by the Secretary of State under Section 41 of the Natural Environment and Rural Communities Act 2006".*

Some habitats are described as 'irreplaceable habitat'. The NPPF describes these as habitats which would be technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed, taking into account their age, uniqueness, species diversity or rarity. They include ancient woodland, ancient and veteran trees[17], blanket bog, limestone pavement, sand dunes, salt marsh and lowland fen.

Ancient woodland is any area that has been wooded continuously since at least 1600AD[18]. Paragraph 193(c) of the NPPF states that *"When determining planning applications, local planning authorities should apply the following principles: c) development resulting in the loss or deterioration of*

[17] https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions
[18] Ancient woodland includes 'ancient semi-natural woodland' (ASNW) and 'plantations on ancient woodland sites' (PAWS).

irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists…"

Protected Species

Rare and declining plant and animal species in the UK are generally protected under national legislation.

Species protected under the Habitats Regulations[19] receive the highest level of protection in the UK. These species can be considered to be of international importance because they are rare or declining in Europe as well as in the UK. These species are not only protected from killing and injury, but their breeding sites and resting places are also protected. These species include:

- Great crested newt (*Triturus cristatus*), natterjack toad (*Epidalea calamita*) and pool frog (*Pelophylax lessonae*);
- Sand lizard (*Lacerta agilis*) and smooth snake (*Coronella austriaca*);
- All bat species;
- Hazel dormouse (Muscardinus avellanarius) and otter (Lutra lutra);
- Large blue butterfly (*Phengaris arion*) (eggs, caterpillars, chrysalises and adults);
- Fisher's estuarine moth (*Gortyna borelii*) (eggs, caterpillars, chrysalises and adults); and
- Little ramshorn whirlpool snail (*Anisus vorticulus*)

For the species listed above, the Habitats Regulations make it an offence to:

- Deliberately kill, injure, disturb or capture them;
- Deliberately take or destroy their eggs;
- Damage or destroy their breeding sites and resting places[20]; and
- Possess, control or transport them (alive or dead).

The WCA also offers protections. In addition to the species listed above, which also receive some protection under the WCA (Section 9 (1)), protection under this legislation is given to prevent intentional (or reckless in Scotland) killing and injury[21] of:

- Common lizard (*Zootoca vivipara*), slow worm (*Anguis fragilis*), adder (*Vipera berus*) and grass snake (*Natrix helvetica*);
- All wild birds; and
- Water vole (*Arvicola amphibius*).

The WCA also provides additional protection for some species also protected under the Habitats Regulations. These species include GCN, sand lizard, smooth snake, bats, dormouse, otter, large blue butterfly, Fisher's estuarine moth and little ramshorn whirlpool snail whereby it is also an offence under the WCA to intentionally or recklessly:

- Disturb while they occupy a structure or place used for shelter or protection; and
- Obstruct access to a place of shelter or protection.

[19] These species are often referred to as European Protected Species (EPS) because the requirement to protect them under national legislation originally derived from the fact that these species are listed under the European Habitats Directive.
[20] This applies even if the species is not present at the time when the damage or destruction occurs.
[21] The WCA also protects many species from activities related to their sale, including: selling, offering for sale, possessing or transporting for the purpose of the sale or publishing advertisements to buy or sell a protected species (WCA Section 9 (5)).

In the case of birds, as well as birds being protected from killing or injury, it is also an offence to take, damage or destroy a nest that is in use or being built, and to take or destroy eggs. Additional protection applies to specific birds listed in Schedule 1 of the WCA, meaning it is also an offence to intentionally or recklessly disturb these species when: on, or near a nest containing eggs or young; when it is building a nest; or when the nest is active with dependent young.

Water vole, freshwater pearl mussel (*Margaritifera margaritifera*) and invertebrate species are also protected under Schedule 5 of the WCA, making it an offence to intentionally: kill, injure or take them; and possess or control them (alive or dead). It is also an offence to intentionally or recklessly: damage or destroy a structure or place used for shelter or protection; disturb them in a place used for shelter or protection; or obstruct access to a place used for shelter or protection.

White-clawed crayfish (*Austropotamobius pallipes*) are partly protected under the WCA, which makes it an offence to capture this species without a licence and also prohibits trade in this species.

Freshwater and migratory fish and their habitats receive protection under the WCA and under the Salmon and Freshwater Fisheries Act 1975 and Eels (England and Wales) Regulations 2009. These species include Atlantic salmon (*Salmo salar*), bullhead (*Cottus gobio*), lamprey (brook, river and sea) (*Petromyzontiformes*), spined loach (*Cobitis taenia*) and European eel (*Anguilla anguilla*).

Badger (*Meles meles*) receives protection under the Protection of Badgers Act 1992. Whereby it would be an offence to: take, injure or kill a badger - or attempt these actions; treat a badger cruelly; interfere with a badger sett; possess or control a live badger; or mark or ring a badger.

Other mammal species including rabbit (*Oryctolagus cuniculus*), fox (*Vulpes vulpes*) and hedgehog (*Erinaceus europaeus*) are protected under the Wild Mammals (Protection) Act 1996, which makes it an offence to inflict any unnecessary suffering, including crushing or asphyxiation of a wild mammal.

Under the WCA, it is an offence to intentionally uproot any wild plant without the landowner's consent. For the majority of plants, fungi and lichen listed on Schedule 8 of the WCA it is an offence to intentionally pick, uproot or destroy them, unless it could not be reasonably avoided (i.e. it was an incidental result of a lawful action).

Some plants are listed on Schedule 5 of the Habitats Regulations. For these species it is an offence to: deliberately pick, collect, cut, uproot or destroy them; or possess, control or transport them (alive or dead).

Species of Conservation Concern

Other rare or declining species may not receive strict legal protection but may be recognised on published lists as species of conservation concern that should be protected as a matter of best practice.

Under Section 41 of the NERC Act, the Secretary of State must publish a list of the living organisms which in the Secretary of State's opinion are Species of Principal Importance for the purpose of conserving biodiversity. Planning authorities are required to have particular regard to these species and treat them as a material consideration in the planning process. Consideration of species of conservation concern during development projects is a requirement of the NERC Act which states that any *"public authority must, in exercising its functions, have regard… to the purpose of conserving biodiversity'* and '*conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat".*

Species of Principal Importance or species listed on Local Biodiversity Action Plans (LBAPs) are henceforth referred to as 'priority species'.

Most protected species are also listed as Species of Principal Importance, including:

- Species of amphibian not protected from killing and injury under the WCA but listed as species of principal importance including common toad (*Bufo bufo*);
- All native reptile species in England;
- Otter, water vole, hazel dormouse and several species of bat;
- Many invertebrates, including white-clawed crayfish; and
- Many species of fish, bird, plant, fungi and lichen.

Amber/Red List species are also considered as species of conservation concern, most notably:

- Rare or declining bird species listed as Red or Amber in Birds of Conservation Concern (BOCC) (Stanbury *et al.*, 2021); and
- Rare or declining plant species listed as Near Threatened (NT), Vulnerable (VU), Endangered (EN) or Critically Endangered (CR) under A Vascular Plant Red List for England (Stroh *et al.*, 2014).

Invasive Non-Native Plant Species

Invasive non-native plants are those listed as species of special concern because they have the potential to cause severe problems for native UK plants and the environment.

The relevant legislation on invasive plant species is:

- Schedule 9 of the WCA; and
- Schedule 2 of the Invasive Alien Species (Enforcement and Permitting) Order 2019, which gives effect to EU regulations on the prevention and management of the spread of invasive alien species.

Both make it an offence to *"plant or otherwise cause to grow in the wild"* any plant species listed.

Appendix 4: Preliminary Roost Assessment Results

Table 1: Building 1 (B1) detailed Preliminary Roost Assessment Results

Building:	Building 1 (B1) (Photograph 18 on Figure 6c)
Attribute	Description
Type	Electrical infrastructure building
Age	1960-Present
Construction	Brick walled, concrete roof
Condition	Good
Setting	Woodland
Distance from woodland or waterbody	In woodland, >100m to waterbody
Level of disturbance/lighting	Low
PRFs Recorded	
Attribute	Description
PRF 01 – Damaged brickwork	Damaged brickwork at 2m on northern aspect.
PRF 02 – Hole in window frame	10cm x 5cm gap between mesh and metal window frame.
PRF 03 – Damaged brickwork	Damaged brickwork at 2m on southern aspect.
Evidence of bats?	No
Overall suitability as roosting habitat	High
Potential roost types	Maternity

Table 2: Building 2 (B2) detailed Preliminary Roost Assessment Results

Building:	Building 2 (B2) (Photograph 30 on Figure 6e)
Attribute	Description
Type	Unknown
Age	1960-Present
Construction	Concrete and brick frame of building
Condition	Poor, degraded
Setting	Urban
Distance from woodland or waterbody	< 100 m from woodland and > 100 m from waterbodies.
Level of disturbance/lighting	Low
Suitability for Bats	
Evidence of bats?	None
Overall suitability as roosting habitat	Low
Potential roost types	Resting/Day

Table 3: Building 3 (B3) detailed Preliminary Roost Assessment Results

Building:	Building 3 (B3) (Photograph 19 on Figure 6d)
Attribute	**Description**
Type	Electrical infrastructure building
Age	1960-Present
Construction	Metal construction electrical infrastructure building.
Condition	Good, well-sealed
Setting	Urban
Distance from woodland or waterbody	< 100 m from woodland and > 100 m from waterbodies.
Level of disturbance/lighting	High
Suitability for Bats	
Evidence of bats?	None
Overall suitability as roosting habitat	Negligible
Potential roost types	N/A

Table 4: Building 4 (B4) detailed Preliminary Roost Assessment Results

Building:	Building 4 (B4) (Photograph 29 on Figure 6e)
Attribute	Description
Type	Other
Age	1960-Present
Construction	Open sided, slate roofed.
Condition	Minor damage/decay
Setting	Urban
Distance from woodland or waterbody	< 100 m from woodland and > 100 m from waterbodies.
Level of disturbance/lighting	High
PRFs Recorded	
Attribute	**Description**
PRF 01 – Gaps between ridge tiles	Gap under and between ridge tiles.
Evidence of bats?	No
Overall suitability as roosting habitat	Low
Potential roost types	Resting/Day

Table 5: Building 5 (B5) detailed Preliminary Roost Assessment Results

Building:	Building 5 (B5) (Photograph 28 on Figure 6e)
Attribute	**Description**
Type	Public building
Age	1960-Present
Construction	Brick railway waiting room building, tile roofed.
Condition	Moderate damage/decay
Setting	Urban
Distance from woodland or waterbody	< 100 m from woodland and > 100 m from waterbodies.
Level of disturbance/lighting	High
PRFs Recorded	
Attribute	**Description**
PRF 01 – Missing roof tile	Missing roof tile on northern aspect of the building
PRF 02 – Gaps between roof tiles	Gaps between roof tiles on southern aspect of the building
Evidence of bats?	No
Overall suitability as roosting habitat	Moderate
Potential roost types	Resting/Day

Table 6: Building 6 (B6) detailed Preliminary Roost Assessment Results

Building:	Building 6 (B6) (Photograph 20 on Figure 6d)
Attribute	**Description**
Type	Public building
Age	1960-Present
Construction	Brick railway waiting room building, tile roofed.
Condition	Moderate damage/decay
Setting	Urban
Distance from woodland or waterbody	< 100 m from woodland and > 100 m from waterbodies.
Level of disturbance/lighting	High
PRFs Recorded	
Attribute	**Description**
PRF 01 – Raised roof tile	Raised and missing roof tile out south-east aspect.
PRF 02 – Missing mortar	Missing mortar on end ridge tile on south east aspect.
PRF 03 – Gaps in soffit	Lifted soffit covering leading to cavity on south-west aspect.
PRF 04 – Raised roof tile	Raised and damaged roof tiles on south-west aspect.
PRF 05 – Raised roof tile	Raised and missing roof tiles on north aspect.
Evidence of bats?	No
Overall suitability as roosting habitat	Moderate
Potential roost types	Resting/Day

Table 7: Structure 1 (S1) detailed Preliminary Roost Assessment Results

Structure:	Structure 1 (S1) (Photograph 27 on Figure 6e)
Attribute	**Description**
Type	Wall
Age	Unknown
Construction	Stone retaining wall
Condition	Moderate damage/decay
Setting	Urban
Distance from woodland or waterbody	< 100 m from woodland and > 100 m from waterbodies.
Level of disturbance/lighting	High
PRFs Recorded	
Attribute	**Description**
PRF 01 – Missing mortar	Missing mortar on east aspect.
PRF 02 – Missing mortar	Missing mortar on east aspect.
Evidence of bats?	No
Overall suitability as roosting habitat	Low
Potential roost types	Resting/Day

Appendix 5: Ground Level Tree Assessment Results

Table 1: Ground level tree assessment results summary

Tree I.D.	Tree Species	Life Stage -Condition DBH - Height	Type of PRF	Main Habitat	Setting	Level of Disturbance	Overall Suitability
T1	Willow *Salix* sp.	Semi-Mature – Good 0.3m – 12.0m	Knot hole, 5m Southern aspect. (Photograph 21 on Figure 6d)	Woodland	Urban	Low	PRF
T2	Elder *Sambucus nigra*	Mature – Poor 0.2m - 4m	Knot hole, 2m Southwestern aspect. (Photograph 22 on Figure 6d)	Woodland	Urban	Low	PRF
T3	Willow *Salix* sp.	Mature – Good 0.7m – 14m	Lifting bark, 2m Northeastern aspect (Photograph 23 on Figure 6d)	Woodland	Urban	Low	PRF-I
T4	Willow *Salix* sp	Mature – Good 1.2m – 12m	Weld, 4m East aspect (Photograph 24 on Figure 6d)	Woodland	Urban	Low	PRF
T5	Willow *Salix* sp.	Mature – Good 1.2m – 12m	Hollow trunk (Photograph 25 and 26 on Figure 6e)	Woodland	Urban	Low	PRF

Appendix 4: Reptile Survey

Survey Type:	Reptile Survey	**Report Ref.:**	BAR010-004-001/001/001	
Site Name:	Penistone Railway Station	**Client Name:**	Barnsley Metropolitan Borough Council	
Date of issue	**Author**	**Reviewer**		**Approver**
	Tom Nelson	Jack Crutchley		Leanne Wall

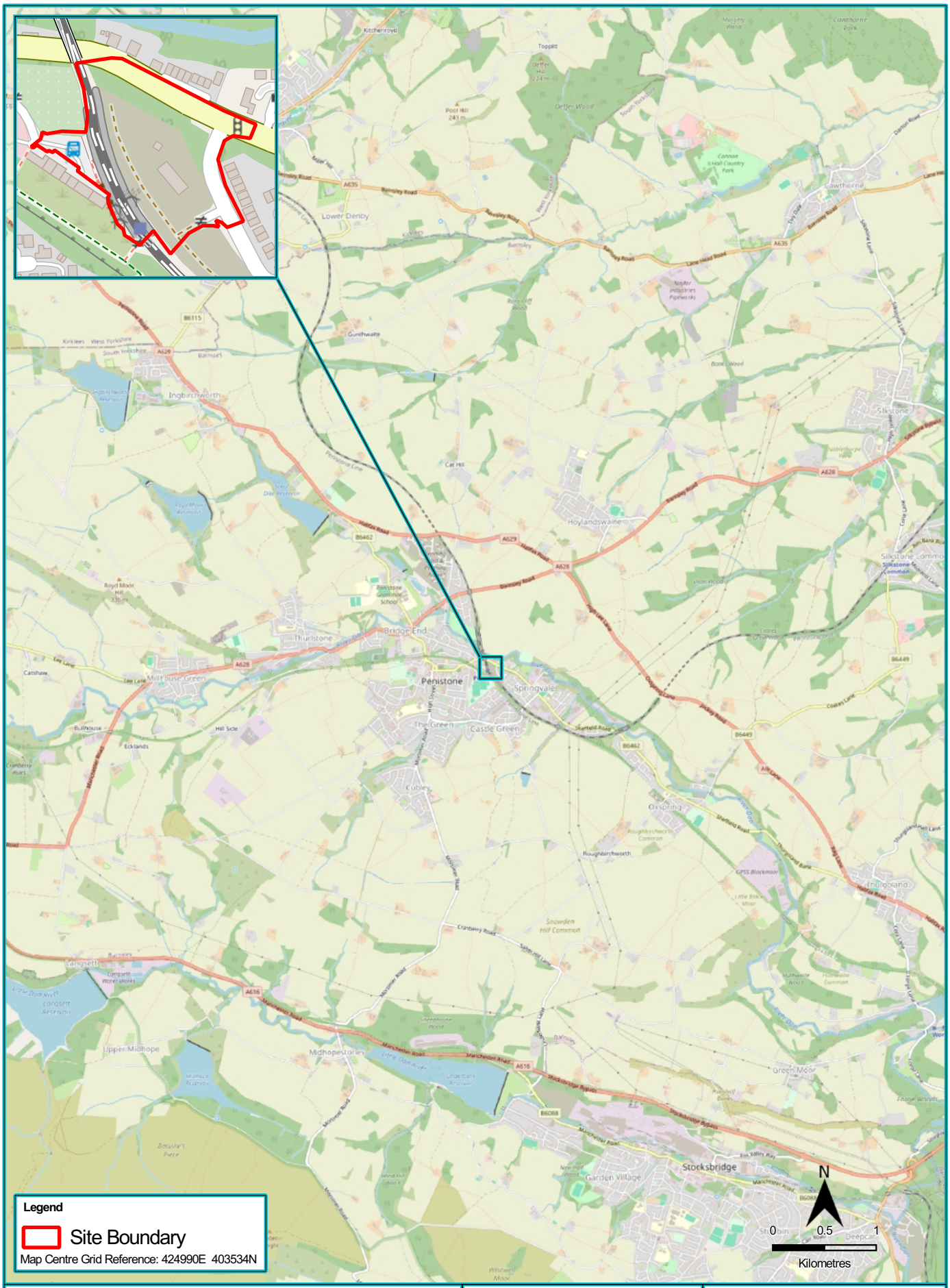
Introduction	
Project Description	Barnsley Metropolitan Borough Council is preparing a planning proposal for the construction of a new footbridge and car park on the site, as outlined in '251219 Penistone Scope and Boundary.pdf'. The project will require the clearance of multiple vegetated habitats and the demolition of buildings. The site boundary is shown on Figure 1.
Ecology Background	A preliminary ecological appraisal undertaken in February 2026 found suitable habitat for reptiles on site, including scrub, grassland and urban areas. (Thomson Environmental Consultants, 2026). A desk study carried out on the site returned no records of reptiles within 1km
Objective	To determine the presence or likely absence of reptiles on the proposed development site.
Rationale	All native reptile species are protected from killing and injury under Schedule 5 of the Wildlife and Countryside Act 1981, as amended, and are listed as Species of Principle Importance (SPI) in Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.
Methods Full survey methods are provided in the document: Ecological Field Surveys Standard Methods (Thomson Environmental Consultants, 2025)	
Survey area	The survey area comprised all land within the site boundary (see Figure 1).
Presence/likely absence survey	The site was searched for the presence of reptiles by a suitably experienced ecologist, including observation for basking reptiles and the checking of artificial survey refugia (500 x 500mm cuts of roofing felt or tin), the location of which are shown in Figure 2. The site was visited on seven separate survey visits on days suitable for the observation of reptiles.
Population size class estimate	In the event that reptiles were identified on site, a population size class estimate (small, medium or large) would be made for each species of reptile recorded, based on the results of the presence/likely absence survey.
Survey dates and surveyors	

Table 1: Survey dates and weather conditions

Action	Date	Weather Conditions	Surveyor(s)
Deployment of reptile survey refugia	05/05/2026	9°C, light wind, sunny with moderate cloud cover	Pascale Palethorpe - Ecological Consultant
Presence/Absence Visit 1	12/05/2026	13°C, light wind, sunny	Dylan Philpot - Assistant Ecologist
Presence/Absence Visit 2	21/05/2026	19°C, calm, patchy cloud	Leanne Wall - Principal Ecological Consultant
Presence/Absence Visit 3	28/05/2026	18°C, light wind, sunny with moderate cloud cover	Tom Nelson - Assistant Ecologist
Presence/Absence Visit 4	01/06/2026	16°, light wind, high cloud cover	Shannon Long - Assistant Ecologist

Presence/Absence Visit 5	16/06/2026	17°C, calm, patchy cloud	Jack Crutchley - Senior Ecological Consultant
Presence/Absence Visit 6	30/06/2026	17°C, calm, sunny	Jack Crutchley - Senior Ecological Consultant
Presence/Absence Visit 7 and collection of survey refugia	03/07/2026	17°C, calm, sunny with moderate cloud cover	Dylan Philpot - Assistant Ecologist

Results	
Presence/likely absence survey	No reptiles were recorded to be present on the site during any of the visits. Therefore, reptiles are likely absent from the Site.
Limitations	
The final visit was carried out in July, a month often seen as sub-optimal in the south of England, however the survey date was chosen due to the suitable weather forecast.	
Recommendations	
If any reptiles are identified on Site during the works then the works should cease and an ecologist be contacted for advice.	
Attachments	
Figure 1 and 2.	
References	
Thomson Environmental Consultants, 2026 – Preliminary Ecological Appraisal	
Thomson Environmental Consultants, 2025 - Ecological Field Surveys Standard Methods	
Wildlife and Countryside Act 1981	
Natural Environment and Rural Communities (NERC) Act 2006	



Client: Barnsley Council		Drawing Ref: BAR010-004/410119/1	
Figure Number: 1		Scale at A4: 1:50,000	
Figure Title: Site Location		Drawn: JTW	Checked: AS
		Date: 16/07/2026	Date: 16/07/2026

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Filepath: M:\Live Projects\Terrestrial Ecology\Leeds\BAR010-004 Penistone - Further Surveys\6 - Mapping\Working\BAR010_004_Fig1_SiteLocation_JTW_160726.qgz
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Legend

- Reptile Refugia Location
- Site Boundary

Map Centre Grid Reference: 425150E 403312N

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Drawing Ref	BAR010-044/409779/1
Scale at A3	1:1,000
Drawn: AS	Checked: JB
Date: 18/05/2026	Date: 18/05/2026
Client	Barnsley Council
Figure Number	2
Figure Title	Reptile Mat Locations

Appendix 5: Bat Emergence Survey

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Bat Emergence Survey

Penistone Footbridge and Car Park

For

Barnsley Metropolitan Borough Council

Report Reference: BAR010-004-001/002/001

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Wales & South West
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Project Number	Report No.
BAR010-004-001	002

Revision No.	Date of Issue	Author	Reviewer	Approver
001	25/08/2026	Raeece Ali	Elizabeth Redpath	Laurie Wildwood

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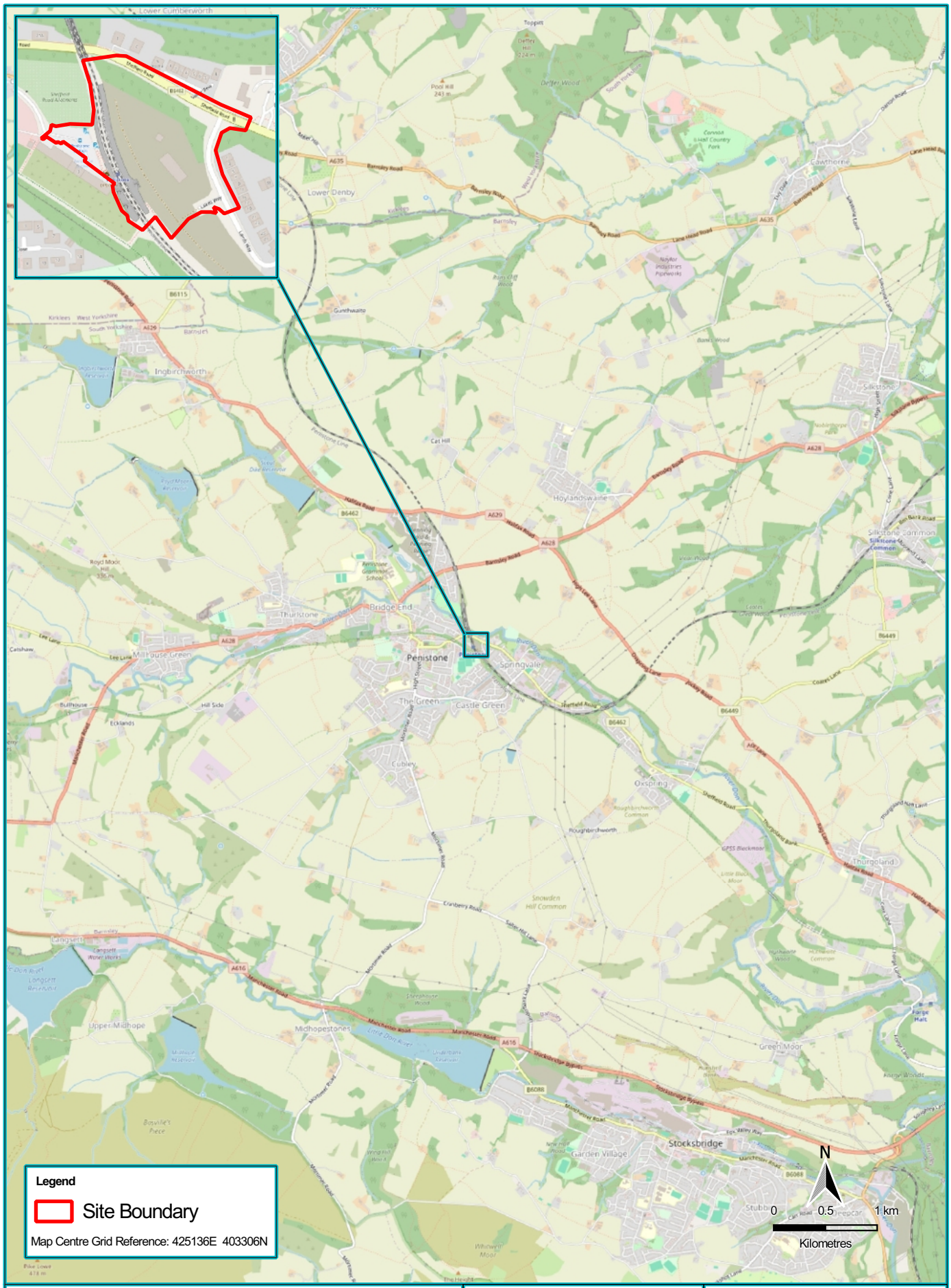
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Figure 1: Site Location

Figure 2: Bat Emergence Survey Results and Surveyor Locations

Figure 3: Darkest Point Screenshots

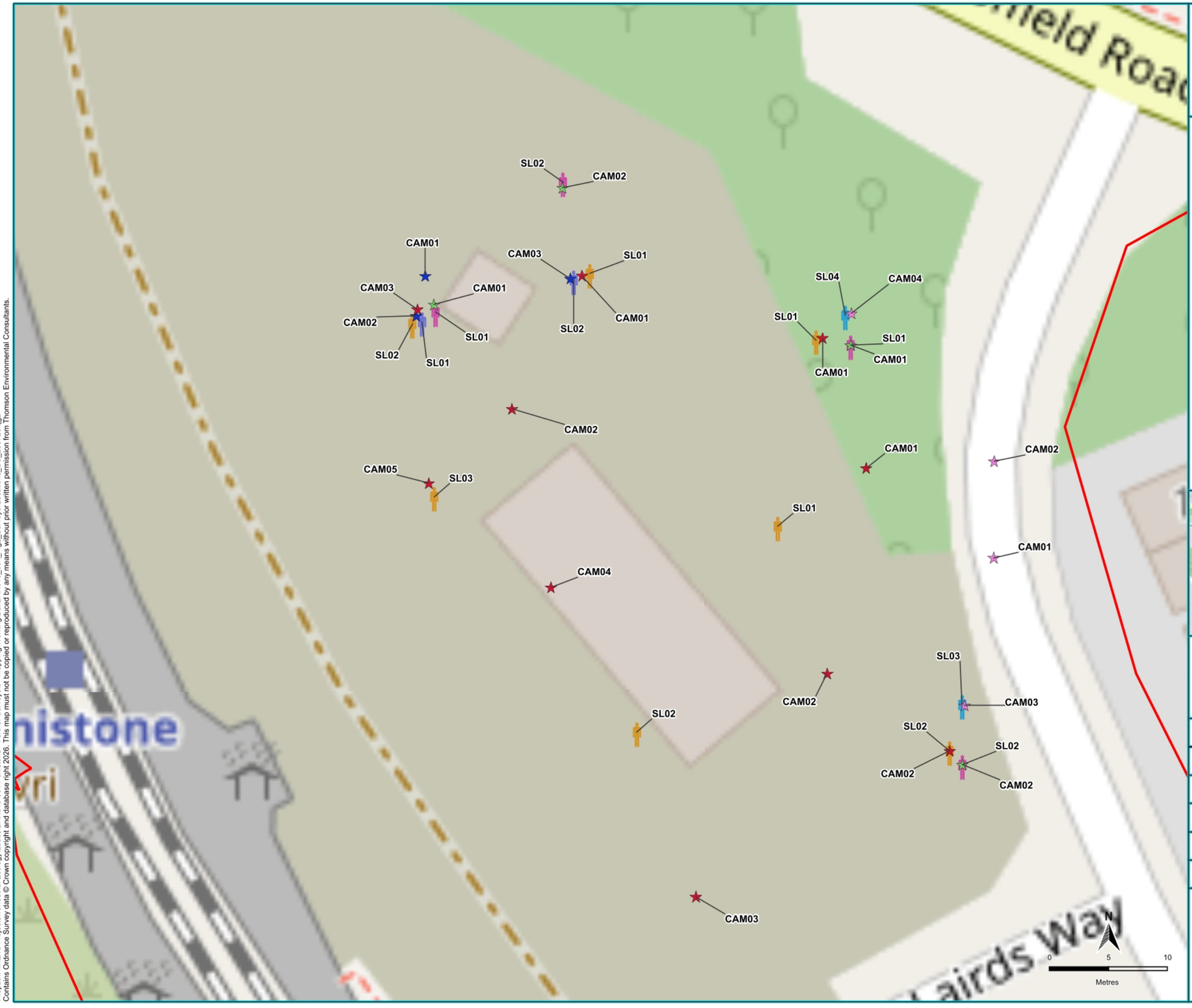


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Legend

Camera Location

- Visit 1
- Visit 2
- Visit 3
- Visit 5

Surveyor Location

- Visit 1
- Visit 2
- Visit 3
- Visit 5
- Site Boundary



Map Centre Grid Reference: 425158E 403297N

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Date: 28/07/2026	Date: 28/07/2026
Client	Barnsley Meteropolitan Borough Council
Figure Number	2

Figure Title

Surveyor and Night Vision Aid (NVA) Locations

Filepath: M:\Live Projects\Terrestrial Ecology\Leeds\BAR010-004 Penistone - Further Surveys\6 - Mapping\Working\Bat\BAR010_004_Fig2_SurveyorLocations_SC_280726.qgz
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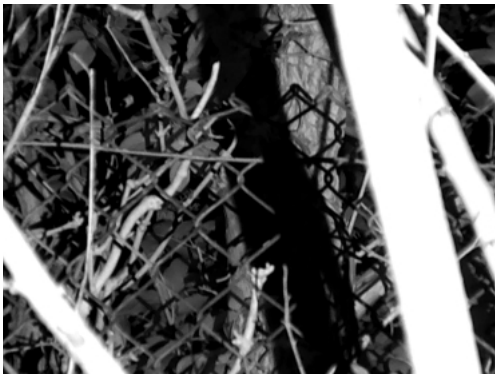
Photograph 1:
B1. CAM01a Nightfox 07248. 01/06/2026



Photograph 2:
B1. CAM02a. Nightfox 07247. 01/06/2026



Photograph 3:
B1. CAM03a. Nightfox 07245. 01/06/2026



Photograph 4:
T2. CAM02b Nightfox 07245. 02/06/2026



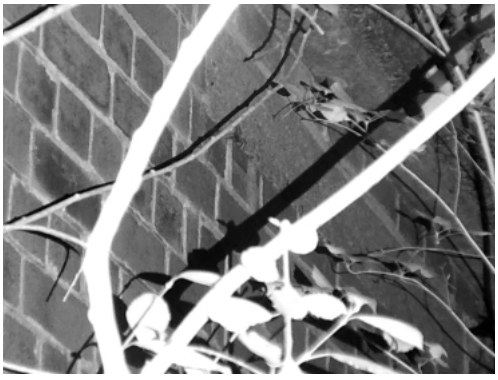
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T1.CAM01b Nightfox 07247. 02/06/2026



Photograph 6:
B1. CAM01c Nighfox 00299. 22/06/2026



Photograph 7:
B1. CAM02c Nightfox 07245. 22/06/2026



Photograph 8:
B1. CAM03c Nightfox 07247. 22/06/2026

Client: Barnsley Metropolitan Borough Council		Drawing Ref: BAR010-004-001/002/001	Thomson environmental consultants
Figure Number: 3a		Drawn: KW / Checked: JC	
Figure Title: Darkest Point Screenshots		Date: 17/08/2026	www.thomsonec.com enquiries@thomsonec.com



Photograph 9:
B2. CAM05d Nightfox 00299. 23/06/2026



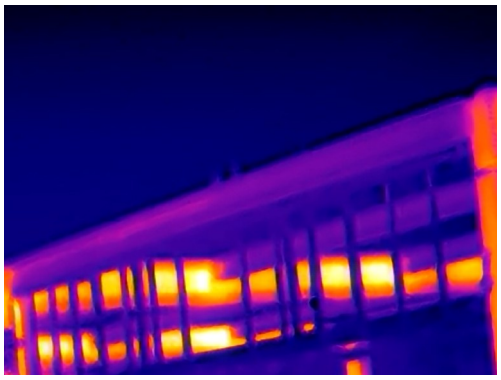
Photograph 10:
B2. CAM02d Nightfox 07245. 223/06/2026



Photograph 11:
B2. CAM04d Nightfox 07247. 23/06/2026



Photograph 12:
B2 CAM01d Nightfox 07248. 23/06/2026



Photograph 13:
B2. CAM03d ThermalMaster. 23/06/2026



Photograph 14:
T1.CAM04e Nightfox 00299. 24/06/2026



Photograph 15:
T2. CAM03e Nightfox 07245. 24/06/2026



Photograph 16:
S1. CAM01e Nightfox 07247. 24/06/2026

Client: Barnsley Metropolitan Borough Council	Drawing Ref: BAR010-004-001/002/001	Thomson environmental consultants
Figure Number: 3b	Drawn: KW / Checked: JC	www.thomsonec.com enquiries@thomsonec.com
Figure Title: Darkest Point Screenshots	Date: 17/08/2026	



Photograph 19:
S1. CAM02e Nightfox 07248. 24/06/2026



Photograph 20:
B1 CAM01f .Nightfox 07247. 13/07/26



Photograph 21:
B1. CAM02f Nightfox 05918. 130726



Photograph 22:
T1. CAM01g Nightiofx 00301. 14/07/26



Photograph 23:
T2. CAM02g Nightfox 07245. 14/07/26

Client: Barnsley Metropolitan Borough Council		Drawing Ref: BAR010-004-001/002/001	Thomson environmental consultants
Figure Number: 3c		Drawn: KW	Checked: JC
Figure Title: Darkest Point Screenshots		Date: 17/08/2026	www.thomsonec.com enquiries@thomsonec.com

1. Introduction

1.1 Development Background

1.1.1 Barnsley Metropolitan Borough Council is preparing a planning proposal for the construction of a new footbridge and car park on an approximately 1.5 ha area, encompassing land near to Penistone Station, S36 6FY (central Grid Reference: (SE 25142 03309). The project will require the clearance of multiple vegetated habitats and the demolition of buildings. The site location is shown on Figure 1.

1.1.2 The proposals described above are hereafter referred to collectively as 'the development'.

1.1.3 The area in which the development is due to take place is hereafter referred to as 'the Site'.

1.2 Ecology Background

1.2.1 A Preliminary Ecological Appraisal (PEA), Preliminary Roost Assessment (PRA) and Ground Level Tree Assessment (GLTA) have been completed (Thomson Environmental Consultants, 2026).

1.2.2 Records of bats within 2km of the development site were obtained from Barnsley Biological Records Centre (BBRC) on 7th April 2026 and the Multi-Agency Geographical Information for the Countryside (MAGIC). Records of designated sites for bats within 2km of the development site also obtained from MAGIC.

1.2.3 The surveys identified two structures (S1 and S2), one building (B1) and two trees (T1, T2) as requiring further survey.

1.2.4 T1 and T2 were not safe/possible to access for direct inspections of PRFs. In lieu of direct inspection surveys, trees assessed as PRF must undergo three emergence surveys between May – September, with at least two between May – August.

1.2.5 Buildings B4, B5 and B6 and Trees T3, T4 and T5 were not scoped in for further survey as these features are being retained based on the Site boundary and layout shown on '251219 Project Scope & Site Boundary.pdf'. Furthermore, due to their distance from the site and the absence of pathways for damage, these features are not considered likely to be affected by the development.

1.2.6 A summary of the biology, conservation status and legal protection of bats is given in Appendix 1.

1.3 The Brief and Objectives

1.3.1 Thomson Environmental Consultants Ltd was commissioned by Barnsley Metropolitan Borough Council on 22nd April 2026 to undertake emergence surveys for the project. The brief includes:

- Conducting emergence surveys of two structures (S1 and S2), one building (B1) and two trees (T1 and T2). The survey method will be based on Bat Conservation Trust guidelines (4th Edition) (Collins, J (ed), 2023).
- Issuing a report detailing the methodology, findings and further recommendations, if required, following the survey.

1.4 Limitations

1.4.1 This report is based on the Site boundary and layout shown on '251219 Project Scope & Site Boundary.pdf'. Subsequent changes may result in a requirement to reassess the impacts of the development and the requirements for avoidance, mitigation and enhancement.

1.4.2 During the first emergence survey on the 1st June 2026, the survey was ended early (finishing at 22:40 instead off 23:25) due to heavy rain. This was not considered a significant limitation, given the average emergence time of the species recorded on site, with the latest mean emergence time of 35 minutes after sunset for soprano pipistrelle (Bat Conservation Trust best practice guidelines (4th Edition) (Collins, J (ed), 2023).

1.4.3 Due to human error, only 20 days passed between Visit 2 and Visit 3 of trees T1 and T2 instead of the recommended minimum of 21 days (Bat Conservation Trust best practice guidelines (4th Edition) (Collins, J (ed), 2023). This is not considered a significant limitation as it was only one day early, the survey was still in the peak maternity period, and weather conditions were optimal.

2. Methodology

2.1 Emergence Surveys

2.1.1 Emergence surveys were carried out to ascertain the presence or likely absence of roosting bats within S1, S2, B1, T1 and T2.

2.1.2 Surveys were designed by Senior Ecological Consultant Jack Crutchley MSc BSc (Hons) ACIEEM. Natural England Level 1 Bat Licence holder. Teams were led by;

- Jack Crutchley;
- Senior Ecological Consultant Elizabeth Redpath MSc BSc (Hons) MCIEEM. Natural England Level 1 Bat Licence holder; and
- Ecological Consultant Pascale Palethorpe BSc (Hons).

2.1.3 Survey assistants were;

- Assistant Ecologist Shannon Long BSc (Hons)
- Assistant Ecologist Olena Shynder

2.1.4 The emergence survey began 15 minutes before sunset and ended 120 minutes after sunset, following good practice guidance (Collins ed., 2023).

2.1.5 Weather conditions including the air temperature, windspeed and precipitation were recorded by the lead surveyor at the start and end of the survey, making use of temperature weather apps on site. Any limitations that could affect bat behavior were recorded.

2.1.6 Table 3.2 outlines the weather conditions recorded during all the survey visits. The suitability of the weather conditions for survey overall on each visit was determined on a case-by-case basis by taking all the parameters together.

Table 2.1: Recorded weather conditions during survey visits

Date	Surveyed Structure/ Tree	Sunset Time	Start Time	End Time	Temp. (°C)	Wind speed (Beaufort)	Precipitation
01/06/2026	B1 (Visit 1)	21:25	21:10	22:40	17	1	Showers followed by heavy rain
02/06/2026	T1 & T2 (Visit 1)	21:26	21:11	23:26	14	1	Dry
22/06/2026	B1 (Visit 2)	21:39	21:24	23:39	20	1	Dry
23/06/2026	S2 (Visit 1)	21:39	21:24	23:39	24	1	Dry

24/06/2026	S1 (Visit 1), T1 & T2 (Visit 2)	21:39	21:24	23:39	25	1	Dry
13/07/2026	B1 (Visit 3)	21:29	21:14	23:29	17	1	Dry
14/07/2026	T1 & T2 (Visit 3)	21:28	21:13	23:28	20	1	Dry

2.1.7 A total of three Night Vision Aids (NVAs) were used to survey B1 on visits one and two, and two NVAs during visit three. This was due to foliage blocking one aspect of the building on Visit 3, making the feature unsuitable due to a lack of a drop zone from roosting bats. A total of five NVAs were used to survey S2. A total of two NVAs were used to survey S1. A total of one NVA was used to survey T1. One NVA was used to survey T2 on all visits.

2.1.8 Location of NVAs are shown on Figure 2 and type and model for each NVA location is shown in table 3.3 below. As indicated in good practice guidance (Collins ed., 2023), all PRFs identified during the PRA were surveyed using NVAs. This reduced uncertainty caused by dark conditions and enables review of footage for detailed re-assessment of bat activity post survey. NVA type (thermal imagery (TI) or Infrared (IR)) and location was determined by the PRF data gathered during the PRA and PRF inspection surveys. IR cameras were paired with an external IR light source when required by the model.

Table 2.2: Specification, supporting equipment, map reference and surveyed building of each NVA used during the survey

NVA type	NVA model	Additional equipment	Map reference	Building
IR	Nightfox Whisker	None	Cam01a (V1)	B1
IR	Nightfox Whisker	None	Cam02a (V1)	B1
IR	Nightfox Whisker	None	Cam03a (V1)	B1
IR	Nightfox Whisker	None	Cam01b (V1)	T1
IR	Nightfox Whisker	None	Cam02b (V1)	T2
IR	Nightfox Whisker	None	Cam01c (V2)	B1
IR	Nightfox Whisker	None	Cam02c (V2)	B1
IR	Nightfox Whisker	None	Cam03c (V2)	B1
IR	Nightfox Whisker	None	Cam01d (V1)	S2
IR	Nightfox Whisker	None	Cam02d (V1)	S2
TI	Thermal Master	None	Cam03d (V1)	S2
IR	Nightfox Whisker	None	Cam04d (V1)	S2
IR	Nightfox Whisker	None	Cam05d (V1)	S2
IR	Nightfox Whisker	None	Cam01e (V1)	S1
IR	Nightfox Whisker	None	Cam02e (V1)	S1
IR	Nightfox Whisker	None	Cam03e (V2)	T2
IR	Nightfox Whisker	None	Cam04e (V2)	T1

IR	Nightfox Whisker	None	Cam01f (V3)	B1
IR	Nightfox Whisker	None	Cam02f (V3)	B1
IR	Nightfox Whisker	None	Cam01g (V3)	T1
IR	Nightfox Whisker	None	Cam02g (V3)	T2

2.1.9 During the emergence surveys, access points/PRFs were watched and recorded continuously by the surveyors and NVAs. Sufficient surveyor numbers and positions were used to allow recording of peripheral bat activity and ensured that NVAs functioned properly throughout the survey, including recording, and adjusting infra-red illuminators where necessary. Walkie-talkies were used to maintain contact between surveyors, facilitating cross-referencing of bat activity to enable interpretation.

2.1.10 Recordings of bat echolocations were made using Batlogger M detectors at each surveyor and NVA location and any bats seen to emerge from PRFs were noted, along with the flight direction. Species were identified in the field where possible, however, recordings were retained for later analysis if necessary to identify the species more accurately (Russ, 2021; Middleton et al, 2022). NVAs were monitored during the survey particularly after light levels had decreased below visible levels, to record any roost activity later into the survey not otherwise visible by eye.

2.2 Data Analysis

2.2.1 Bat call analysis was carried out by Jack Crutchley using BatExplorer by Elekon.

2.2.2 All NVA footage was reviewed post-survey to check for roost activity not noted during the survey.

2.2.3 Screenshots of the darkest period of the survey were taken as evidence of suitable visibility of the roost feature(s) throughout the survey (see Appendix 2).

3. Results

3.1 Dusk Emergence Surveys

Buildings and Structures

3.1.1 No bats were observed emerging from any of the PRFs on B1, S1 and S2.

Trees

3.1.2 No bats were observed emerging from any of the PRFS on T1 and T2.

3.2 Incidental activity

3.2.1 General bat activity of at least three species including common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*) and noctule (*Nyctalus noctula*). Activity recorded throughout the surveys included foraging and commuting.

4. Legal and Planning Policy Considerations

4.1.1 This section presents the legislation requirements and policy considerations known to be relevant based on the results of dusk emergence surveys for the site.

4.1.2 As set out in Appendix 1, all British bats receive comprehensive protection under the Conservation of Habitats and Species Regulations, 2017 (as amended) and the WCA 1981 (as amended).

4.1.3 As no bats were observed as emerging from the surveyed building (B1), structures (S1 and S2) and trees (T1 and T2) on site, roosting bats are considered likely absent from these features.

5. Recommendations

5.1 Mitigation

Roosting Bats

5.1.1 No bats were found during the survey visits; however, bats are mobile and frequently change roosting sites and therefore could begin roosting within the features identified within the trees and buildings at any time. It is recommended that contractors receive a toolbox talk for bats as part of site induction. If in the unlikely event a bat is found during works, works should cease immediately and a suitably experienced ecologist contacted.

5.1.2 The felling of T1 and T2 should be carried out under ecological supervision, to confirm likely absence of bats (Reason & Wray, 2023).

5.1.3 If more than 12 months have passed since the last survey, before works are undertaken that could impact these features, a full updated survey of all buildings, structures and trees within the development is recommended.

Commuting and Foraging Bats

5.1.4 During construction, all works should ideally be conducted during daylight hours. If works need to be conducted after dark or during night hours, all lighting should be hooded and directional to avoid glare. This can be achieved by adopting from best practice guidelines such as lights should be directed below a 70° angle to create a large volume of darker space above and ensuring there is no vertical light spill (ILP,2023).

5.1.5 A permanent lighting strategy is recommended to prevent the proposed development from having adverse impacts to surrounding habitat suitable for bat foraging and commuting, such as woodland and grassland.

5.1.6 The works will result in permanent loss of commuting/foraging habitat. Therefore it is recommended that we consider this loss within the planting scheme to compensate for this loss of habitat.

5.2 Compensation

5.2.1 Although no roosting bats were observed emerging from the buildings, structure and trees and are considered likely absent from these features, PRFs are being lost during the demolition and clearance that could be utilised in the future. Therefore, best practice compensatory measures are recommended (Reason & Wray, 2023) including the incorporation of bat roost features into the design of the development, such as:

- Installing Ibstock Enclosed Bat Box ‘C’ or Bat Box ‘B’, or the Vivara Pro Build-in WoodStone bat box models onto new buildings to provide roosting opportunities for pipistrelle species that require no maintenance; and
- temporary bat boxes onto mature trees on the site to provide replacement roosts during the construction of new buildings;

6. Conclusion

6.1.1 As no emergences were recorded during any of the surveys, it is considered likely that roosting bats are absent from the Site.

6.1.2 Provided the recommended mitigation measures are followed, bats should not pose a constraint to the development and no further surveys are required. However, if more than 12 months pass since the last survey for buildings/structures and trees before works are undertaken that could impact bat roosts, a full updated survey of all buildings, structures and trees within the development is recommended to confirm whether suitability has changed and/or if bats are now using these features.

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Appendix 1 - British Bats

Introduction

A summary of the biology of British bats and the legislation and policy that protects them is provided below.

Biology

There are 18 British species of bats, belonging to two families; the horseshoe bats (Rhinolophidae) and vesper bats (Vespertilionidae). Of the 18 species, two species are horseshoe bats and belong to the genus Rhinolophus, The remaining 16 species are vesper bats and are sub-divided between six genera; Myotis, Cnephaeus, Nyctalus, Pipistrellus, Plecotus and Barbastella. Whilst there are many differences in the biology of the different species, all share certain characteristics and these are described below.

Roosting

Bat species utilise roost sites of varying character; some preferring tree roosts whilst others are thought to be almost entirely dependent on built structures. Most bats will have a number of available roosting sites within their range, which they move between throughout the year. They are generally faithful to their roosts and a colony of bats may use the same roost site(s) year after year.

Bats hibernate during the winter and will often gather to hibernate communally, remaining in the same hibernation roost from November to February/March. Hibernation roost sites typically have a constant low temperature and high humidity levels. Sites include caves, mines, thick walled buildings and hollow trees. With the arrival of spring, the ambient temperature and day length increase and bats begin to leave their hibernation roosts, either moving immediately to summer roost sites or occasionally, to a transitional roost.

By June, breeding females will begin to congregate in maternity roost sites where they will give birth to and nurture their young. Male bats are also occasionally found roosting in maternity roosts but during this period they mostly roost alone. Maternity roost sites include hollowed out trees, buildings and bridges. Male bats may use similar sites but also cracks and crevices in trees, under loose tiles or even amongst dense ivy growth during the summer period. Similar sites may be used by bats for brief periods during the night when they are resting or feeding on recently caught prey. In autumn, male bats establish mating roosts and are visited by females. A variety of roost sites may be used until the bats return to their hibernation roosts.

Foraging

All British bat species feed on invertebrates, with flies, beetles, moths and other insects making up much of their diet. Areas with an abundance of insect prey, such as woodlands, scrub, wetlands, river corridors and flower rich grasslands are therefore favoured foraging sites for bats. Habitats such as intensively farmed arable land, and amenity grassland support a much lower invertebrate abundance and are therefore less favoured foraging habitats for bats

Commuting

Bats favour roost sites in close proximity to suitable foraging habitat, however, given variation in prey availability, land-use change, and competition with other bats, for at least part of the year bats must commute between their roosts and foraging habitat.

Commuting routes tend to follow linear features in the landscape such as hedgerows, woodland edges, rivers and other watercourses, particularly when crossing areas of less favourable habitat. The distance that bats commute between roost sites and foraging areas is dependent on local geography and also the species of bat. Some species will travel up to 18km, though shorter distances are more typical.

Site Designation

All bat roosts in the UK receive protection under the following legislation:

Conservation of Habitats and Species Regulations 2017 as amended (which replaces the Conservation (Habitats &c) Regulations 1994 as amended)

Wildlife and Countryside Act 1981, as amended;

The Countryside and Rights of Way Act 2000 (which amends the Wildlife and Countryside Act); and

Natural Environment and Rural Communities Act 2006 (which amends the Wildlife and Countryside Act).

This is described in more detail under 'Species Protection' below. In addition, the most important sites for certain bat species in the UK receive further statutory protection through designation of Special Areas of Conservation (SACs) and/or Sites of Special Scientific Interest (SSSIs).

Four UK bat species, the greater and lesser horseshoe, barbastelle and Bechstein's bats, are included on Annex II of the European Community Directive of the Conservation of Natural Habitats and of Wild Fauna and Flora, referred to as the Habitats Directive. The Habitats Directive was transposed into UK law by the Conservation of Habitats and Species Regulations 2017 as amended. The Habitat Regulations, amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, now form stand-alone legislation for England and Wales, independent of the Directive. This legislation requires that areas are designated as SACs to protect populations of these four bat species. These sites for part of the National site network and are considered to be of international importance for the bat populations they support.

Sites designated under the Wildlife and Countryside Act 1981 (WCA) are known as SSSIs. SSSIs received further protection under the Countryside and Rights of Way Act 2000 (CRoW) and the Natural Environment and Rural Communities (NERC) Act 2006.

Some SSSIs are designated for the population(s) of bats that they support. The criteria for selecting SSSIs on the basis of their bat populations are provided in Guidelines for the Selection of Biological SSSIs (NCC, 1989):

Greater horseshoe bat – all main breeding roosts and all winter roosts with 50 or more adult bats;

Lesser horseshoe bat - all main breeding roosts containing 100 or more adult bats and all winter roosts containing 50 or more bats;

Barbastelle, Bechstein's and grey long-eared bats – any traditional breeding roosts;

Natterer's, Daubenton's, whiskered, Brandt's, serotine, noctule and Leisler's bats – only exceptionally large breeding roosts or those with a long history of use; and

Mixed Roost sites – all hibernacula containing four or more species and more than 50 individuals or three species and 100 or more individuals or two species and 150 or more individuals, though these criteria may be lower in some parts of the UK.

Sites that qualify as SSSIs for the bat populations they support are considered to be of at least national importance.

Sites designated for nature conservation at the county level may also include bat populations as part of the site qualifying criteria, although the criteria used may vary from county to county. Such sites are protected through the planning system and there is generally a presumption against development that affects such sites in local authority development plans.

Planning Policy

The National Planning Policy Framework (NPPF) 2019, gives further direction with respect to biodiversity conservation and land use change / development. The NPPF encourages local planning authorities to identify, conserve and restore, ecological networks, which should benefit bats, and it also states that planning permission should be refused if significant harm to biodiversity cannot be avoided, mitigated or compensated. In addition, the Government Circular 06/05, which relates to biodiversity conservation, states that all protected species, such as bats, are a material consideration for the planning authority when considering proposed developments.

Species Protection

Legislation

All bat species are protected by the Conservation of Habitats and Species Regulations 2017 as amended. The Regulations make it an offence, with very few exceptions, to:

- Deliberately capture, injure or kill a bat;
- Deliberately disturb a bat in such a way as to be likely:
    i. to impair its ability to survive, to breed or reproduce, or to rear or nurture its young; or:

ii. to impair its ability to hibernate or migrate; or

iii. to affect significantly the local distribution or abundance of the species to which they belong.

- Damage or destroy a breeding site or resting place of a bat; or
- Keep, transport, sell or exchange, or offer for sale or exchange, any live or dead bat, or any part of, or anything derived from a bat.

In addition to the protection given to bats under the Conservation of Habitats and Species Regulations 2017 as amended already described, bats are also partially protected in England under the Wildlife and Countryside Act 1981 (as amended), which adds the following offences (with certain exceptions):

- Disturbance while it is occupying a structure or place which it uses for shelter or protection; or
- Obstructing access to any structure or place used for shelter or protection.

A roost is any structure or place used by bats for shelter or protection. As bats tend to re-use the same roosts year after year, the roost is protected whether bats are present or not, at the time.

In this context of the legislation, 'damage' would include such operations as treatment of wood with toxic preservatives or use of rodenticides near roosting bats while 'disturbance' includes any work in or affecting a bat roost.

If proposed actions, such as redevelopment of an existing building may lead to an offence under the above legislation, appropriate mitigation which seeks to avoid these impacts should be devised and implemented under licence from Natural England to allow the activity to proceed legally.

In addition to the above legislation, all bats are protected under the Bonn Convention, within which the Agreement on the Conservation of Bats in Europe (1991) or EUROBAT, establishes a mechanism for international collaboration to conserve bats and their habitats, including foraging habitats. All European bat species are covered under Appendix II of the Conservation of Migratory Species of Wild Animals (CMS).

The Hedgerow Regulations 1997 provide for the conservation of 'important' hedgerows and their constituent trees. The presence of a protected species such as bats is included in the assessment of whether a hedgerow is considered 'important' and applications to remove such hedgerows must be made to the planning authority.

UK Post-2010 Biodiversity Framework and Species of Principal Importance

Published by the Joint Nature Conservation Committee (JNCC) and the Department for Environment, Food and Rural Affairs (Defra) in July 2012, the UK Post-2010 Biodiversity Framework identifies UK-scale activities and priority works that are required to deliver the EU

Biodiversity Strategy. Following a process of devolution, the framework is underpinned by country level strategies which are now largely responsible for continuing the work carried out under the former UK Biodiversity Action Plans (UK BAP). JNCC guidance dictates that UK BAP background information on priority species and habitats still remains relevant and it now forms the basis of country specific priority lists, which for England, are specified under Section 41 of the Natural Environment and Rural Communities Act 2006 (the NERC Act). Targets for England's biodiversity strategy 'Biodiversity 2020': A strategy for England's wildlife and ecosystem services, are informed by this list.

Seven species of bats (barbastelle, Bechstein's, greater and lesser horseshoe, brown long-eared, noctule and soprano pipistrelle) have been adopted as Species of Principal Importance for the Conservation of Biodiversity in England. This places a duty on all government departments to have regard for the conservation of these species and on the Secretary of State to further, or promote others to further, the conservation of these species. Furthermore, the NPPF states that local planning authorities should promote the protection and recovery of priority species populations linked to national and local targets, which presumably means those listed under the Section 41 of the NERC Act, the former UK BAP and on Local or Regional priorities species lists.

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Appendix 6: Invertebrate Survey

Land at Penistone
An Invertebrate Assessment

Final Report



A report for:
Thomson Environmental Consultants

23 September 2026



By:
Conops Entomology Ltd

Report Number: 26.44

ConopsEntomologyLtd
Invertebrate survey, research and conservation advice



Land at Penistone
An Invertebrate Assessment

Final Report

Report Number: 26.44

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1 Introduction

1.1 Conops Entomology Ltd was commissioned in June 2026 by Thomson Environmental Consultants to undertake a survey of areas of land at Penistone, prior to possible development.

1.2 The scope of this survey is to undertake an invertebrate assessment for a proposed impact on the areas of post-industrial and off Lairds Way, Penistone (referred to hereafter as 'the site'). The assessment appraised the key habitats and/or features of the site through the recording of invertebrates. The data are used to assess the value to invertebrates of those habitats or features in order to evaluate the site for its importance as an invertebrate resource. From the collection of data and subsequent assessment and valuation, suitable recommendations could then be put forward in the event that some or all of those features or key habitats may be impacted by a proposed development.

- The site is located at OS grid reference SE 25150 03275.

Methods and timings

1.3 The methods used for the assessment are those recommended in the Natural England guidance document *Surveying Terrestrial and Freshwater Invertebrates for Conservation Evaluation* (Drake *et al.*, 2007). In some instances, a bespoke method has been created for the site assessment but still retains the overall approach to assessing features and habitats for conservation assessment. The bespoke method relates to the extent of the free-ranging sampling.

- **Sweep netting**

1.4 This method provides the main proportion of the survey element and is the most efficient method for cataloguing a site's invertebrate resource. Sweep netting involves the use of a long-handled sweep net being swept over vegetation such as stands of grasses or flowers, or along scrub fringes in order to gather invertebrate material.

- **Spot sampling**

1.5 Spot sampling is employed to collect large, conspicuous invertebrates such as bees and wasps from flowering plants, and to supplement the sweep samples. Spot sampling is often the most effective method for recording species from high-fidelity niches.

- **Beating**

1.6 Scrub and woodland edge were beaten using a beating tray, and the dislodged insects collected for later examination.

- **Pitfall traps**

1.7 Three sets of pitfall traps (five traps in each set) were set across the site. The traps were maintained during each visit to the site.

- **Pan traps**

1.8 A series of water-filled pan traps were used to recorded pollinators. These are brightly coloured pans that attract flying pollinators. These are maintained during each visit to the site.

Survey timing

1.9 The site was visited on three occasions:

Visit dates
16 July 2026 – sunny, 18–25°C;
03 August 2026 – sunny, 16°–21°C; and
03 September 2026 – sun and cloud, 17–19°C.

Results analysis

1.10 Tables 1 and 2 provide a breakdown of the number of species recorded during the surveys and information on scarce species.

1.11 Tables 3 and 4 have been generated using the Pantheon software package. Pantheon is an analytical tool developed by Natural England and the Centre for Ecology & Hydrology to assist invertebrate nature conservation in England. Site data in the form of species lists can be imported into Pantheon, which then analyses the species within the lists, assigning them to habitats and resources. Pantheon also consigns the most up-to-date national status to the species where it is available.

1.12 Pantheon is also capable of other outputs such as Specific Assemblage Types (SATs) (see Table 4).

1.13 A SAT is characterized by stenotopic species (those that can withstand only a narrow range of environmental conditions). SATs are therefore more tightly defined than 'habitats' or 'resources' and sit within a parent habitat or Broad Assemblage Type (BAT). More than one SAT can sit within a parent BAT.

Example:

BAT: **F**2 – grassland and scrub matrix

SAT: **F**211 – herb-rich dense sward

F212 – dense scrub

1.14 The information obtained from Pantheon can then be used to assign quality to sites and their features, assist in management decisions, and facilitate requirement for further surveys, where required and appropriate.

1.15 Pantheon was first made publicly accessible in April 2018 and is the primary analytical tool used by entomologists in site evaluation. It is also the tool recognized and preferred by Natural England. For more information on this new resource, see http://www.brc.ac.uk/pantheon/.

1.16 Not all species of importance are expressed in Tables 1 and 2, as they do not form part of the Pantheon analysis, and/or their specific requirements are not yet fully understood.

2 Results summary

2.1 A total of 137 species from the sampled groups were recorded during the surveys.

2.2 A total of four species recorded have a national status. This total does not include research-only moths

2.3 The full list of species recorded for the site is provided in Appendix II.

Table 1 Species breakdown

Site	Total no. of species recorded	Total no. of species of importance*	Species of importance (%)
Site	137	4	2.9

*Note: some species do not warrant nationally significant status.

Table 2 Species of importance

Scientific name	Vernacular name	National/local status	Habitat preferences and species notes
Bembecia ichneumoniformis	Six-belted clearwing moth	Notable b	Open and patchy swards with bird's-foot trefoils (*Lotus* spp.)
Liorhyssus hyalinus	A true bug	Nationally Scarce	On open sites, including brownfield. Feeds on stork's-bill (*Erodium cicutarium*) and composites (Asteraceae).
Philanthus triangulum	Bee wolf	Red Data Book 2*	Sandy ground and flowery swards. No longer scarce or threatened and will be downgraded/lose its nationally significant status in the upcoming status review of bees, wasps, and ants (in prep.).
Pseudomalus violaceus	A rubytail wasp	Nationally Scarce	A cleptoparasite on various aerial-nesting wasps such as *Pemphredon* spp. Associated with varied scrub fringes with deadwood.

*Accepted as being more common than this status suggests; likely to be downgraded.

Table 3 Resource-usage table (taken from Webb *et al.*, 2017[1])

Broad biotope	Habitat	No. of species	Species with conservation status	Conservation species
open habitats	tall sward & scrub	70	–	–
open habitats	short sward & bare ground	27	1	*Philanthus triangulum**
tree-associated	decaying wood	7	1	*Pseudomalus violaceus*
tree-associated	arboreal	6	–	–
tree-associated	shaded woodland floor	5	–	–
wetland	marshland	2	–	–
wetland	acid & sedge peats	2	–	–
wetland	running water	1	–	–

*Accepted as being more common than this status suggests; likely to be downgraded.

Table 4 SAT table (taken from Webb *et al.*, 2017)

Broad biotope	SAT	SAT code	No. of species	No. of species with conservation status (excluding research-only moths)	Conservation status	Reported condition
open habitats	rich flower resource	F002	13	–	–	Unfavourable (13 species, 15 required)
open habitats	scrub edge	F001	9	–	–	Unfavourable (9 species, 11 required)
tree-associated	bark & sapwood decay	A212	7	–	–	Unfavourable (7 species, 19 required)
open habitats	bare sand & chalk	F111	3	–	–	Unfavourable (3 species, 19 required)

[1] Webb, J., Heaver, D., Lott, D., Dean, H.J., van Breda, J., Curson, J., Harvey, M.C., Gurney, M., Roy, D.B., van Breda, A., Drake, M., Alexander, K.N.A. and Foster, G. (2017). *Pantheon – Database Version 3.7.6* [online]. Available at: http://www.brc.ac.uk [Accessed on 16 August 2026].

Broad biotope	SAT	SAT code	No. of species	No. of species with conservation status (excluding research-only moths)	Conservation status	Reported condition
open habitats	scrub-heath & moorland	F003	3	–	–	Unfavourable (3 species, 9 required)
open habitats	open short sward	F112	2	–	–	Unfavourable (2 species, 13 required)

3 Discussion

Limitations

3.1 2026 experienced a significant and protracted dry and hot period of weather stretching from early to late summer. This followed on from a wet spring. The low summer rainfall and high temperatures have resulted in a range of difficulties for invertebrates, including lack of water, reduced nectar provision, curtailed flowering periods and shorter flight periods (owing to 'good' weather enabling rapid completion of their adult life period).

3.2 Results therefore are on average slightly lower than expected for the site, but the key assemblages are still expressed in the output tables, and the lists of scarce and fidelity species considered reflective of the overall value of the site. It is therefore still possible to analyse and discuss the site with some accuracy by using the data in the output tables and the experience of the invertebrate ecologist.

3.3 The site was sampled during the late summer months (July to September) resulting in a partial dataset being obtained and from which to analyse the site and its value to invertebrates. However, it is considered that a reliable view of the site can be gained from the data and also the site visits from which information including habitat, botany, and habitat structure could be assessed.

Habitats

3.4 The resource-usage analysis (Table 3) is dominated by the open habitats biotope, with the 'tall sward and scrub' habitat being the most species-rich with 70 species recorded, although none of these have a nationally significant conservation status. The tall sward and scrub matrix dominates the site, especially around its periphery.

3.5 The centre of the site is dominated by the 'short sward and bare ground', which supports 27 species. The resource-usage table notes one species with a conservation status, the beewolf (*Philanthus triangulum*), though this species is now more common than its published status suggests and is not considered a conservation priority.

3.6 The tree-associated biotope is represented by decaying wood, with seven species, arboreal habitats, with six species, and shaded woodland floor, with five species. Decaying wood includes the nationally scarce rubytail wasp (*Pseudomalus violaceus*). Although this component is smaller than the open-habitat assemblage, its inclusion of a species of conservation interest gives it particular relevance to the assessment and highlights the complexity of the scrub fringe on the site.

3.7 Wetland associations are weakly represented, with two species associated with marshland, two with acid and sedge peats, and one with running water. As there are no waterbodies or wetland habitats on the site, these have been highlighted by generalists of a wide range of habitat types, and vagrants, so are not deemed important to the site and not discussed further in the report.

SATs

3.8 All highlighted SATs are noted as being in unfavourable condition. The 'rich flower resource' (SAT code: F002) and 'scrub edge' (SAT code: 001) are the best represented and each SAT is just two species below their respective favourable-condition thresholds. It is suggested that these two SATs would have been in favourable condition had further surveys been undertaken in spring. The remaining SATs fall further below their thresholds and would be unlikely to score significantly high enough to reach favourable status, even with further survey effort in spring.

3.9 The most species-rich SAT is the F002 rich flower resource, with 13 species of fidelity against a threshold of 15. Although the threshold for favourable condition is not met in this survey, it is considered likely to have been in favourable condition had further surveys been undertaken in spring.

3.10 The F001 scrub edge SAT supports nine species of fidelity against a threshold of 11. Similar to the F002 SAT, it is likely to be in favourable condition had further surveys been undertaken in spring. The feature is well represented on the site and most evident along its southerly boundary where it is varied and includes areas of deadwood.

3.11 The tree-associated A212 bark and sapwood decay SAT supports seven species of fidelity against a threshold of 19. The assemblage is moderately strong but not thought to be of favourable condition. It is elevated in its status by being closely approximated to the scrub fringe and also flowery swards. The Nationally Scarce rubytail wasp (*Pseudomalus violaceus*) is associated with this SAT.

3.12 There are other SATs associated with the site, but these are only weakly represented. The F111 bare sand and chalk SAT supports three species of fidelity against a threshold of 19, while F003 scrub-heath and moorland also support three species, against a threshold of nine. The F112 open short sward SAT is represented by two species against a threshold of 13.

Species

3.13 The survey recorded 137 species, including four identified as having national conservation status, excluding research-only moths. These represent approximately 2.9% of the total recorded assemblage.

3.14 The rubytail wasp (*Pseudomalus violaceus*) is the most significant, as it appears to be very scarce in the north of England. It is associated with 'decaying wood' in the resource-usage analysis. It can also be associated with pithy-stemmed plants in which its host sometimes nest.

3.15 The true bug (*Liorhyssus hyalinus*) is associated with open sites, including brownfield, and feeds on common stork's-bill (*Erodium cicutarium*) and plants in the daisy family (Asteraceae). Its ecology is consistent with the predominance of open and patchy swards on the site and an abundance of its host plants.

3.16 The beewolf (*Philanthus triangulum*), although a good indicator of open and patchy sward sites, is now quite common, and its status requires a downward revision.

3.17 Overall, the species diversity is consistent with the habitats and features present on the site.

4 Site assessment summary

4.1 The invertebrate survey recorded 137 species, including four nationally significant species, equivalent to approximately 2.9% of the total. The assemblage is dominated by open habitats, particularly tall sward and scrub, especially scrub fringes, and short sward and bare ground. Tree-associated resources support a smaller component, represented by deadwood that supports the nationally scarce rubytail wasp (*Pseudomalus violaceus*), the most significant species recorded at the site during the surveys.

4.2 None of the six SATs attains favourable condition based on the surveys, but both the rich flower resource and scrub edge are considered to be in favourable status, while bark and sapwood decay, bare sand and chalk, scrub-heath and moorland, and open short sward are less strongly expressed but still serve to highlight the mosaic character of the site; this is the most important aspect of the site, as a small but functioning mosaic site that supports common and local species and where features are elevated, primarily the flowery patches and scrub fringes with deadwood, a more rich and niche fauna.

5 Site evaluation

5.1 The site comprises, or is thought to comprise, a moderate-diversity invertebrate fauna that supports scarce invertebrates associated with mosaic habitats, primarily patchy bare ground, short turf, and scrub fringes, complemented by deadwood and tall, flower-abundant swards

5.2 The valuation of the site takes into consideration the range of species recorded and those likely to be present, the overall assemblages, and the importance of the habitats to the species. It also considers the context of the year's weather, the site, and/or its species in relation to the local area and further afield.

5.3 From considering the above summary information and data collected from the surveys, it is suggested that any impact on the site's key features and species should be considered to be of at least **District (low) importance**.

5.4 The site is not considered to be of a lower valuation, as it supports four species of conservation value, although as acknowledged in the report, two of these are likely to lose their status, owing to range expansions. Given that the site was not surveyed until July (2026), it is likely that more conservation priority species might be recorded, though not thought sufficient to elevate the site to County (medium) importance.

6 Recommendations

Flowering swards

6.1 As the site is noted for its rich flower resource, it will be important to provide as rich a flowering resource as possible for the site's invertebrates. Flowering areas should be sown/planted with an appropriate mix of flowering plants. This mix should benefit the pollen- and nectar-foraging invertebrates, and therefore include the following:

- common bird's-foot trefoil (*Lotus corniculatus*);
- common knapweed (*Centaurea nigra*);
- hawkbits (*Leontodon* spp.);
- hawkweeds (*Hieracium* spp.);
- weld (*Reseda luteola*);
- labiates (Lamiaceae);
- meadow vetchling (*Lathyrus pratensis*);
- other trefoils (Fabaceae);
- other vetches (*Vicia* spp.);
- ox-eye daisy (*Leucanthemum vulgare*); and
- red clover (*Trifolium pratense*).

6.2 The flowering swards should have a very high density of flowers. Most standard mixes do not have a high enough proportion of flowering plants that are suitable for invertebrate mitigation, so a bespoke mix or additional ordering of supplementary flower seed or plugs is advised. On-site or locally sourced resources can also be used and are recommended.

Open, patchy bare ground and short turf

6.1 The presence of a sparse, flowery sward with patches of bare ground is an important component of the site.

6.2 To replicate it, low-fertility substrates should be used. The material should not be over-worked but should be allowed to settle naturally to enable microtopographical features to develop (other than the compacted areas, which will require some firming down).

6.3 Bare ground should comprise 30–40% of the overall short sward-bare ground habitat mosaic.

6.4 A mosaic of fine-leaved grasses and a range of flowering plants are required to fulfil the requirements of the open flowery mosaics. It is likely that a 'one-stop' commercially sourced seed mixture may not be suitable, but a bespoke mix will be required.

Scrub fringe

6.5 Scrub is an important interface with open flowery habitats.

6.6 It is also important for spring blossom.

6.7 Scrub, or any trees, should not shade out important areas of flowery areas, though some shading is beneficial around the periphery to provide respite from high temperatures. Where scrub is needed to produce an interface, it should be positioned on the northern side of the mosaic.

6.8 Where additional scrub planting is required, only use native and longstanding naturalized species. The following species provide a continuity of flowers from early spring to summer:

- apples (*Malus domestica* agg.);
- blackthorn (*Prunus spinosa*);
- cherry plum (*Prunus cerasifera*);

- field maple (*Acer campestre*);
- hawthorn (*Crataegus monogyna*);
- gorse (*Ulex europaeus*);
- broom (*Cytisus scoparius*);
- plums (*Prunus domestica* agg.); and
- willows (*Salix* spp.).

6.9 Linear stretches of mixed native species and longstanding naturalized scrub close to flowery swards and open, patchy bare ground habitat are advised.

6.10 Deadwood should be included along the scrub fringes as standing deadwood posts. These should be at least 20 cm in diameter and at least 2 m high (above ground level) and inserted at the interface of the scrub and open habitats in full or partial sun. They can be optimized by having at least 100 holes drilled into the southerly aspect face. Each hole should be at least 10 cm deep and should range in diameter from 2 mm to 8/9 mm. A similar proportion of holes diameters should be provided.

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8 Appendix

Appendix I: Red Data Book definitions
Appendix II: Survey results

Appendix I: Red Data Book definitions

Red Data Book category 1 (RDB 1) – Endangered
Species that are known or believed to occur as only a single population within one 10-km square of the National Grid.

Red Data Book category 2 (RDB 2) – Vulnerable
Species declining throughout their range or in vulnerable habitats.

Red Data Book category 3 (RDB 3) – Rare
Species that are estimated to exist in only 15 or fewer post-1970 10-km squares. This criterion may be relaxed where populations are likely to exist in over 15 10-km squares but occupy small areas of especially vulnerable habitat.

Nationally Notable (Scarce) category A (NS A) – Notable A
Taxa that do not fall within the RDB category but that are nonetheless uncommon in Great Britain and thought to occur in 30 or fewer 10-km squares of the National Grid or, for less well-recorded groups, between eight and 20 vice counties.

Nationally Notable (Scarce) category B (NS B) – Notable B
Taxa that do not fall within the RDB category but that are nonetheless uncommon in Great Britain and thought to occur in 31–100 10-km squares of the National Grid or, for less well-recorded groups, between eight and 20 vice counties.

Nationally Notable (Scarce) (N) – Notable
Species that are estimated to occur within the range of 16–100 10-km squares. The subdividing of this category into Notable A and Notable B has not been attempted for many species in this part of the review.

IUCN categories
EXTINCT (EX)
A taxon is Extinct when there is no reasonable doubt that the last individual has died. A taxon is presumed Extinct when exhaustive surveys in known and/or expected habitat, at appropriate times (diurnal, seasonal, annual), throughout its historic range, have failed to record an individual. Surveys should be over a time frame appropriate to the taxon's life cycle and life form.
CRITICALLY ENDANGERED (CR)
A taxon is Critically Endangered when the best available evidence indicates that it meets any of the criteria A to E for Critically Endangered, and it is therefore considered to be facing an extremely high risk of extinction in the wild.
ENDANGERED (EN)
A taxon is Endangered when the best available evidence indicates that it meets any of the criteria A to E for Endangered, and it is therefore considered to be facing a very high risk of extinction in the wild.
VULNERABLE (VU)
A taxon is Vulnerable when the best available evidence indicates that it meets any of the criteria A to E for Vulnerable, and it is therefore considered to be facing a high risk of extinction in the wild.
NEAR THREATENED (NT)
A taxon is Near Threatened when it has been evaluated against the criteria but does not

qualify for Critically Endangered, Endangered, or Vulnerable now, but is close to qualifying for or is likely to qualify for a threatened category in the near future.
LEAST CONCERN (LC)
A taxon is Least Concern when it has been evaluated against the criteria and does not qualify for Critically Endangered, Endangered, Vulnerable, or Near Threatened. Widespread and abundant taxa are included in this category.
DATA DEFICIENT
A taxon is Data Deficient (DD) when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status. A taxon in this category may be well studied, and its biology well known, but appropriate data on abundance and/or distribution are lacking. DD is therefore not a category of threat.

GB Rarity Status categories and criteria
Broadly speaking, the Nationally Rare category is equivalent to the Red Data Book, namely: Endangered (RDB1), Vulnerable (RDB2), Rare (RDB3), Insufficiently Known (RDBK), and Extinct, which will not be used in this report.

The Nationally Scarce category is directly equivalent to the combined Nationally Notable A (Na) and Nationally Notable B (Nb) categories used in the assessment of various taxonomic groups, e.g. by Hyman and Parsons (1992) in assessing the status of beetles, but never used in a published format to assess these three families.

Nationally Rare Native species recorded from 15 or fewer hectads of the Ordnance Survey National Grid in Great Britain since 31 December 1989 and where there is reasonable confidence that exhaustive recording would not find them in more than 15 hectads. This category includes species that are probably extinct.

Nationally Scarce Native species that are not regarded as Nationally Rare AND have not been recorded from more than 100 hectads of the Ordnance Survey National Grid in Great Britain since 31 December 1989 and where there is reasonable confidence that exhaustive recording would not find them in more than 100 hectads.

Section 7 list of the Environment (Wales) Act 2016 is the statutory list of priority species and habitats, those considered of principal importance for maintaining and enhancing biodiversity in Wales. It replaced the Section 42 list under the Natural Environment and Rural Communities (NERC) Act 2006. Importantly, the current list was substantially revised in March 2026.

Appendix II: Survey results

Only species with a national status have been annotated. All others are common or local species.

Species	**IUCN status**	**Legacy UK status**
Aelia acuminata		
Aglais io		
Amara plebeja		
Andrena minutula		
Andrion regensteinense		
Anthocoris nemorum		
Apis mellifera		
Araneus diadematus		
Araneus quadratus		
Bembecia ichneumoniformis		Notable b
Berytinus signoreti		
Betulapion simile		
Bombus lapidarius		
Bombus pratorum		
Bombus terrestris		
Brachypera zoilus		
Byrrhus pilula		
Calathus fuscipes		
Calliopum aeneum		
Calvia quattuordecimguttata		
Carabus violaceus		
Cassida rubiginosa		
Chaetostomella cylindrica		
Chorisops tibialis		
Chorthippus brunneus		
Cistogaster globosa		Red Data Book 1*
Cixius nervosus		
Coccinella septempunctata		
Colias croceus		
Coreus marginatus		
Coriomeris denticulatus		
Corizus hyoscyami		
Cryptophagus scutellatus		

Deraeocoris ruber		
Dolichopus griseipennis		
Dolichovespula sylvestris		
Dolycoris baccarum		
Drassodes cupreus		
Drymus brunneus		
Ectemnius lituratus		
Enoplognatha ovata		
Episyrphus balteatus		
Eristalis arbustorum		
Eristalis tenax		
Eupeodes latifasciatus		
Eurydema oleracea		
Formica lemani		
Harpalus rubripes		
Heliophanus flavipes		
Himacerus major		
Himacerus mirmicoides		
Hippodamia variegata		
Hylaeus communis		
Hylaeus hyalinatus		
Kleidocerys resedae		
Lagria hirta		
Lasioglossum albipes		
Lasioglossum leucopus		
Lasioglossum morio		
Lasius platythorax		
Leptogaster cylindrica		
Leptothorax acervorum		
Liocoris tripustulatus		
Liorhyssus hyalinus		Nationally Scarce
Longitarsus jacobaeae		
Lucilia sericata		
Lycaena phlaeas		
Megachile centuncularis		
Megachile ligniseca		
Megalonotus chiragra		

Melanostoma mellinum		
Myrmica scabrinodis		
Myrmus miriformis		
Nabis limbatus		
Neoascia podagrica		
Notiophilus palustris		
Notiophilus substriatus		
Nysius ericae		
Ocypus aeneocephalus		
Ocypus olens		
Oedemera lurida		
Omocestus viridulus		
Oncotylus viridiflavus		
Osmia leaiana		
Palomena prasina		
Paradromius linearis		
Phasia obesa		
Philaenus spumarius		
Philanthus triangulum		Red Data Book 2*
Phytocoris varipes		
Picromerus bidens		
Pieris brassicae		
Piezodorus lituratus		
Pinalitus cervinus		
Pisaura mirabilis		
Plagiognathus arbustorum		
Plagiognathus chrysanthemi		
Platycheirus albimanus		
Platydracus stercorarius		
Poecilobothrus nobilitatus		
Polygonia c-album		
Polyommatus icarus		
Protapion fulvipes		
Pseudomalus violaceus		Notable b
Psyllobora vigintiduopunctata		
Pterostichus madidus		
Pyronia tithonus		

Quedius levicollis		
Rhagonycha fulva		
Rhopalum coarctatum		
Rhopalus subrufus		
Sargus iridatus		
Scathophaga stercoraria		
Sitona lineatus		
Sphaerophoria scripta		
Sphecodes gibbus		
Sphenella marginata		
Stenodema calcarata		
Stenodema laevigata		
Stenus impressus		
Stictopleurus punctatonervosus		
Stygnocoris sabulosus		
Symmorphus bifasciatus		
Syritta pipiens		
Syrphus ribesii		
Tasgius morsitans		
Thymelicus sylvestris		
Trichosirocalus troglodytes		
Tytthaspis sedecimpunctata		
Urophora quadrifasciata		
Vanessa atalanta		
Vespula germanica		
Volucella inanis		
Volucella pellucens		
Xantholinus elegans		
Zelotes latreillei		
Zygiella x-notata		

*Widely accepted as being much more common than this status suggests; likely to be downgraded.

Appendix 7: Biodiversity Net Gain Report

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Biodiversity Net Gain Report

Penistone Car Park

For

Barnsley Metropolitan Borough Council

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BAR010-001-003	001

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001	April 2026	Katriona Millar	Callum Salter	Leanne Wall
002	19/08/2026	Jack Crutchley	Callum Salter – Minor changes only	
003	28/09/2026	Jack Crutchley	Lauren Hornsby-Riley – Minor changes only	

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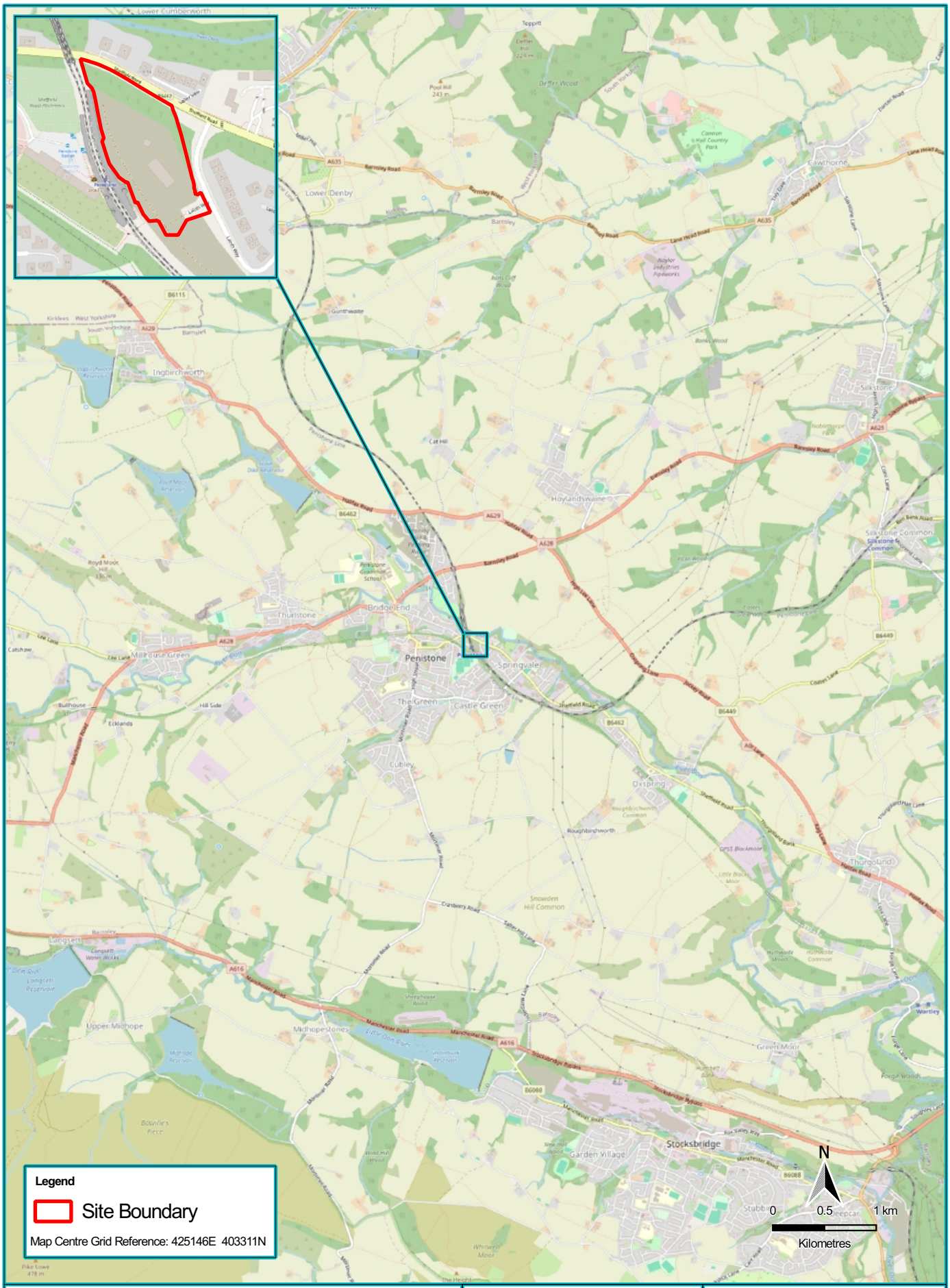
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Client: Barnsley Metropolitan Borough Council		Drawing Ref: BAR010-005/410610/1	
Figure Number: 1		Scale at A4: 1:50,000	
Figure Title: Site Location		Drawn: KC	Checked: AS
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Legend

- g3c - Other Neutral Grassland
- h3d - Bramble Scrub
- u1 - Built-up Areas and Gardens
- u1b - Developed Land, Sealed Surface
- u1b5 - Buildings
- u1f - Sparsely Vegetated Urban Land
- w1f7 - Other Lowland Mixed Deciduous Woodland
- w1g - Other Woodland, Broadleaved
- Site Boundary

Map Centre Grid Reference: 425141E 403307N

This map has been drawn at a sufficient level of accuracy to fulfil the requirements of a UK Habitat Classification Survey. The level of accuracy depends on both the size of the area involved and the base mapping. Every effort has been made to create a map that is as accurate as possible. However, this map is not intended to represent a scaled landscape survey so should not be used to pin-point accurate engineering work or as a basis for detailed site planning.

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Client	Barnsley Metropolitan Borough Council
Figure Number	2

Figure Title

UK Habitat Classification Survey Results



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Legend

- g3c - Other Neutral Grassland
- h3d - Bramble Scrub
- u1 - Built-up Areas and Gardens
- u1b - Developed Land, Sealed Surface
- u1f - Sparsely Vegetated Urban Land
- w1f7 - Other Lowland Mixed Deciduous Woodland
- w1g - Other Woodland, Broadleaved
- Site Boundary

Map Centre Grid Reference: 425146E 403311N

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Date: 29/09/2026	Date: 29/09/2026
Client	Barnsley Metropolitan Borough Council
Figure Number	3

Figure Title

Post-development Plan of Retained Habitats

Filepath: M:\Live Projects\Terrestrial Ecology\Leeds\BAR010-005-001 Penistone BNG update\6 - Mapping\Working\BAR010_005_Fig3_PostDev_Retained_KC_280926.qgz
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Legend

- Proposed Tree
- g3 - Neutral Grassland
- h3h - Mixed Scrub
- u1 - Built-up Areas and Gardens
- u1b - Developed Land, Sealed Surface
- u1c - Artificial Unvegetated Unsealed Surface (Sustainable Drainage Systems)
- w1g - Other Woodland, Broadleaved
- Site Boundary

Map Centre Grid Reference: 425146E 403311N

This map has been drawn at a sufficient level of accuracy to fulfil the requirements of a Biodiversity Net Gain Assessment. The level of accuracy depends on both the size of the area involved and the base mapping. Every effort has been made to create a map that is as accurate as possible. However, this map is not intended to represent a scaled landscape survey so should not be used to pin-point accurate engineering work or as a basis for detailed site planning.

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Drawing Ref	BAR010-005/410613/1
Scale at A3	1:600
Drawn: KC	Checked: AS
Date: 29/09/2026	Date: 29/09/2026
Client	Barnsley Metropolitan Borough Council
Figure Number	4

Figure Title

Post-development Plan of Created Habitats

Filepath: M:\Live Projects\Terrestrial Ecology\Leeds\BAR010-005-001 Penistone BNG update\6 - Mapping\Working\BAR010_005_Fig4_PostDev_Created_KC_280926.qgz
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1. Summary

1.1.1 Thomson Environmental Consultants has assessed the biodiversity net gain (BNG) value for the construction of a new car park at land adjacent to Penistone Railway Station.

1.1.2 A habitat survey and condition assessment were undertaken to determine the baseline biodiversity value of the site pre-development. The UK Habitat Classification (UKHab) survey results are provided in the Preliminary Ecological Appraisal (PEA) (Thomson Environmental Consultants, 2026) and the results map is provided in Figure 2. The original 1.5 ha site was assessed as having a baseline biodiversity value of 8.65 habitat units. However, the site boundary has since been reduced in size to 0.81ha, with the updated site area having a baseline biodiversity value of 7.55 habitat units.

1.1.3 The post-development plan for the site is shown in Figures 3 and 4. This scenario delivers 2.79 habitat units, resulting in a net change of -4.77 (-63.13%) in habitat units.

1.1.4 The assessment has concluded that a net gain in biodiversity cannot be achieved within the site boundary to meet the requirements of the Town and Country Planning Act (TCPA) 1990 (as inserted by Schedule 14 of the Environment Act 2021). To meet these requirements, the project requires off-site compensation in the form of 5.515 biodiversity units, to achieve a total 8.31 habitat units and 10% net gain. To satisfy the trading summaries, this must include high and medium distinctiveness habitats to replace those which will be lost on site; baseline high distinctiveness habitat to be lost comprises urban – open mosaic habitat on previously developed land, with areas of medium distinctiveness habitats to be lost including neutral grassland and broadleaved woodland.

1.1.5 Details of how the mandatory 10% BNG requirement will be achieved must be provided in a Biodiversity Gain Plan (BGP), which will be imposed as a pre-commencement planning condition by the Local Planning Authority (LPA), should the planning application be approved.

2. Introduction

2.1 Context

2.1.1 Biodiversity net gain (BNG) is a way to contribute to the recovery of nature while developing land, aiming to leave habitats in a better state than before. The purpose of the assessment is to quantify the biodiversity losses and gains arising from the proposed development, with the overall aim of achieving >10% net gain as required under Schedule 7A of the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2021) and the Barnsley Local Plan (Barnsley Metropolitan Borough Council, 2024).

2.2 Project Description

2.2.1 The project involves the construction of a car park at Penistone Station, S36 6FY (central grid reference: 425143, 403310 (SE 25142 03309)), as shown on Figure 1. This includes the clearance of multiple vegetated habitats and the demolition of buildings. The area in question is hereafter referred to as 'the site' and the development proposals are hereafter referred to as 'the development', which are shown on Figures 3 and 4 and in Appendix 4.

2.3 Ecology Background

2.3.1 A Preliminary Ecological Appraisal (PEA) of the site was completed in February 2026 (Thomson Environmental Consultants, 2026). This included an ecological desk study, a habitat survey and an assessment of the baseline biodiversity value. The baseline biodiversity value for the site was calculated to be 8.65 for habitat units. However, the site boundary has since been updated and reduced in size, with the updated site having a baseline biodiversity value of 6.55 habitat units. It is the reduced site area discussed in this report.

2.4 Site Description

2.4.1 At the time of the latest survey the site consisted of other neutral grassland, bramble scrub, developed land; sealed surface, vacant or derelict land, lowland mixed deciduous woodland and other woodland; broadleaved.

2.5 The Brief and Objectives

2.5.1 Barnsley Metropolitan Borough Council commissioned Thomson Environmental Consultants on 23rd September 2026 to produce:

- A report providing the results of the habitat survey and baseline biodiversity value assessment. The report will also include post development Biodiversity Net Gain calculations targeting 10% a net gain either met on the site or through off-site provision.

2.6 Limitations

2.6.1 The PEA habitat survey was undertaken during February 2026, a sub-optimal time period for botanical surveys. However, follow up condition assessments of the habitats were undertaken in June 2026 to confirm or modify condition assessments during the optimal survey period (Thomson Environmental Consultants, 2026).

2.6.2 This report and post-development scenario are based on the boundary and habitats shown on the masterplan PNS-SLC-XX-DRG-ARC-9001 - 'Proposed car park landscape' provided by Barnsley Metropolitan Borough Council on 21st September 2026, which is visualised in Appendix 4. Subsequent changes to this layout will result in a requirement to reassess the biodiversity metric calculations for the site.

3. Methodology

3.1 Background

3.1.1 The calculations were carried out using the statutory biodiversity metric calculation tool (Defra, 2025a).

3.1.2 The metric calculation tool determines the net change in BNG units by subtracting the baseline biodiversity value score from the post-development biodiversity value. If this number is positive, the development has achieved a biodiversity net gain. If the number is negative, there is a net loss.

3.1.3 Area based habitats, hedgerows and rivers/streams are considered separately to account for the differences in their ecological values and functions.

3.1.4 Relevant legislation and planning policy considerations are provided in Appendix 2: Legislation and Planning Policy Considerations.

3.1.5 This assessment also follows the Chartered Institute for Ecology and Environmental Management's (CIEEM's) Good Practice Principles for Biodiversity Net Gain.

3.2 Baseline Formula

3.2.1 The baseline biodiversity value calculation represents the pre-development biodiversity value of the site as it was at the time that the baseline habitat survey was undertaken.

3.2.2 To calculate the baseline biodiversity value, habitat distinctiveness and condition are given numerical 'scores' which are multiplied with hectares or kilometres of habitat. The formula for calculating baseline biodiversity units is as follows:

$$(AxDxQxS) = AHBU$$

Where:

- A = Area (ha) or length (km)
- D = Distinctiveness
- Q = Condition
- S = Strategic significance
- AHBU = Area or length-based habitat biodiversity units

Distinctiveness

3.2.3 Each habitat parcel is assigned a multiplier based on habitat distinctiveness. This includes '*consideration of species richness and rarity; the extent to which the habitat is protected by designations; and the degree to which a habitat supports species rarely found in other habitats'* (Defra, 2025b).

3.2.4 Habitats such as hard standing and buildings are assumed to have very low distinctiveness and are not included.

Condition

3.2.5 To enable the calculation of BNG units, an assessment of the condition of each habitat was made in the field in accordance with the statutory biodiversity metric condition assessments (Defra, 2025c). These sheets provide a series of condition assessment criteria, specific to each habitat type. Once all applicable criteria have been assessed, a condition score of good, moderate or poor is applied, based on the scoring instructions provided within the condition sheets.

3.2.6 The condition of habitats such as hard standing and buildings is not assessed.

Strategic Significance

3.2.7 The location of habitat parcels is factored into the calculation based on whether it has been identified as significant for nature conservation within local plans and strategies.

3.3 Post-development Formula

Habitat Creation

3.3.1 The first formula covers habitat creation:

$$\big((AxDxQxS)x(RxT)x(S)\big) = AHBU$$

Where:

- A = Area (ha) or length (km)
- D = Distinctiveness
- Q = Condition
- R = Difficulty/risk factor
- T = Time to target factor
- S = Strategic significance
- AHBU = Area or length-based habitat biodiversity units

Habitat Retention and Enhancement

3.3.2 The second formula is used to calculate habitat retention and enhancement. This is where a habitat is retained but the condition is improved. This is calculated as follows:

$$\Big(\big((APxDPxQP) - (ABxDBxQB)\big)x(RxT)\Big) + (ABxDBxQB)x(S) = AHBU$$

3.3.3 If some habitat is retained, but the condition remains the same, then the following formula applies:

$$(APxDPxQP) - (ABxDBxQB)$$

In both cases:

- A = Area (ha) or length (km)
- D = Distinctiveness
- Q = Condition
- R = Difficulty/risk factor

- T = Time to target factor
- S = Strategic significance
- P = Post-development
- B = Baseline
- AHBU = Area or length-based habitat biodiversity units

3.3.4 Distinctiveness, condition and strategic significance are all scored as for the baseline calculations.

Difficulty / Risk Factor

3.3.5 The risk associated with the creation or enhancement of a given habitat is assigned a difficulty multiplier to account for the uncertainty and risk of failure inherent in any action to create new habitat due to the unique physical and ecological features of every site.

Time to Target Factor

3.3.6 The time scale of the creation/enhancement of habitats is assigned a temporal risk multiplier (0-30years+) to compensate for the fact that there will not be an instant change in habitats or conditions and there may be a biodiversity deficit until the habitat has matured.

Trading Rules

3.3.7 The trading rules are in place to ensure habitat creation and enhancement compensate for specific habitat losses. They are only a requirement up to no net loss. Table 3.1 below details the trading rules.

Table 3.1: Biodiversity net gain trading rules

Baseline Habitat Distinctiveness	Area	Hedgerow	Watercourse
Very High	Priority should be given to replacing losses with area habitat units of the same habitat type	Losses must be replaced with hedgerow units of the same habitat type	Priority should be given to replacing losses with watercourse units of the same habitat type
High	Losses must be replaced with area habitat units of the same habitat type	Losses must be replaced with hedgerow units of the same habitat type or of a higher band	Losses must be replaced with watercourse units of the same habitat type
Medium	Losses must be replaced by area habitat units of either medium band habitats within the same broad habitat type or, any habitat from a higher	Losses must be replaced with hedgerow units of the same or of a higher band	Losses must be replaced with watercourse units of the same habitat type

Baseline Habitat Distinctiveness	Area	Hedgerow	Watercourse
	band from any broad habitat type		
Low	Losses must be replaced with area habitat units of the same or higher band	Losses must be replaced with hedgerow units of the same or of a higher band	Losses must be replaced with watercourse units of a higher band
Very Low	Not applicable	Losses must be replaced with hedgerow units of the same or of a higher band	Not applicable

4. Biodiversity Net Gain Assessment

4.1 Habitat baseline (including retention and enhancement)

4.1.1 The baseline habitats recorded on site are listed in Table 4.1 and shown in Figure 2.

4.1.2 Multipliers for distinctiveness, condition and strategic significance have been applied as described in Section 3. The full habitat descriptions, species lists and condition assessments are provided in the PEA (Thomson Environmental Consultants, 2026).

4.1.3 In the proposed development landscape plan (see Appendix 4 and Figures 3 and 4), there is limited retention of habitats:

- 0.018ha of the g3c Other neutral grassland will be retained.
- 0.01ha of the h3d Bramble scrub with be retained.
- 0.019ha of u1b Developed land, sealed surface will be retained.
- 0.009ha of u1f Sparsely vegetated urban land will be retained.
- All of the w1f7 Lowland mixed deciduous woodland (0.067ha), will be retained.
- 0.174 of the w1g Other woodland, broadleaved will be retained.

Table 4.1: Habitat baseline, retention and enhancement

Habitat Type	Area (ha)	Distinctiveness	Condition	Strategic Significance	Baseline (habitat units)	Area Retained	Area Enhanced	Units Retained	Area Lost	Units Lost
g3c-2 Other neutral grassland	0.260	4	3	1	3.120	0.018	0.00	0.211	0.242	2.91
h3d-1 Bramble scrub	0.004	4	1	1	0.016	0.000	0.00	0.000	0.004	0.02
h3d-2 Bramble scrub	0.030	4	1	1	0.118	0.012	0.00	0.049	0.017	00.07
u1-1 Built up areas and gardens	0.003	0	0	1	0.000	0.003	0.00	0.000	0.000	0.00
u1b-1 Developed land; sealed surface	0.019	0	0	1	0.000	0.019	0.00	0.000	0.000	0.00
u1b-2 Developed land; sealed surface	0.002	0	0	1	0.000	0.000	0.00	0.000	0.001	0.00
u1b5-1 Buildings	0.004	0	0	1	0.000	0.000	0.00	0.000	0.004	0.00
u1f-1 Open mosaic habitat on previously developed land	0.063	6	2	1	0.753	0.001	0.00	0.012	0.062	0.74
u1f-2 Vacant or derelict land	0.035	2	1	1	0.071	0.008	0.00	0.016	0.028	0.06
w1f7-1 Lowland mixed deciduous woodland	0.067	6	2	1.1	0.888	0.067	0.00	0.888	0.000	0.00
w1g-1 Other woodland, broadleaved	0.250	4	2	1	1.999	0.138	0.00	1.100	0.112	0.90
w1g-2 Other woodland, broadleaved	0.058	4	2	1	0.462	0.037	0.00	0.294	0.021	0.17
w1g-3 Other woodland, broadleaved	0.016	4	2	1	0.128	0.000	0.00	0.000	0.016	0.13
Totals	**0.81**[2]				**7.55**	**0.30**	**0.00**	**2.57**	**0.51**	**4.98**

[2] Total using a rounded value from the Defra statutory metric.

4.2 Post-development Scenario

The proposed habitat types and areas to be created are listed below in

4.2.1 Table 4.2. Multipliers have been applied for distinctiveness, condition, strategic significance, difficulty/risk and time to target, as described in Section 3.

4.2.2 For target condition assessment criteria of proposed post-development habitats see and .

Table 4.2: Habitat creation

Habitat Type	Area (ha)	Distinctive-ness	Condition	Strategic Significance	Time to Target	Time to Target Multiplier	Difficulty Multiplier	Units Delivered
g3 Neutral grassland	0.013	4	1	1	2	0.931	1	0.05
h3h Mixed scrub	0.012	4	1	1	1	0.965	1	0.05
u1 Built up areas and gardens	0.000	0	0	1	0	1.000	1	0.00
u1c Sustainable drainage system	0.028	2	1	1	1	0.965	0.67	0.04
u1b Developed land; sealed surface	0.445	0	0	1	0	1.000	1	0.00
w1g Other woodland, broadleaved	0.010	4	1	1	5	0.837	1	0.04
Individual trees	0.016	4	1	1.1	10	0.700	1	0.05
Totals	**0.52**							**0.22**

4.3 Biodiversity net change

4.3.1 The biodiversity net change estimation associated with the development is shown below in Table 4.3.

Table 4.3: Biodiversity net change

		On-Site Post-Intervention (Including habitat retention, creation & enhancement)							
Unit Type	**Baseline Units**	**Units Retained**		**Units Enhanced**		**Units Created**		**Post-Development Units**	**On-Site Net % Change**
Habitat	**7.55**	2.57	+	0.00	+	0.22	=	**2.79**	**-63.13%**

5. Conclusion

5.1.1 In the scenario set out in this report, the assessment has concluded that a net gain in biodiversity would not be achieved within the site boundary, and the development will therefore not meet the requirements of the Town and Country Planning Act (TCPA) 1990 (as inserted by Schedule 14 of the Environment Act 2021).

5.1.2 The assessment has concluded that a net gain in biodiversity cannot be achieved within the site boundary to meet the requirements of the Town and Country Planning Act (TCPA) 1990 (as inserted by Schedule 14 of the Environment Act 2021). To meet these requirements, the project requires off-site compensation in the form of 5.515 biodiversity units, to achieve a total 8.31 habitat units and 10% net gain. To satisfy the trading summaries, this must include high and medium distinctiveness habitats to replace those which will be lost on site; baseline high distinctiveness habitat to be lost comprises urban – open mosaic habitat on previously developed land, with areas of medium distinctiveness habitats to be lost including neutral grassland and broadleaved woodland.

5.1.3 Details of how the mandatory 10% BNG requirement will be achieved must be provided in a Biodiversity Gain Plan (BGP), which will be imposed as a pre-commencement planning condition by the Local Planning Authority (LPA), should the planning application be approved.

6. References

Barnsley Barnsley Metropolitan Borough Council Council (2024). Supplementary Planning Document: Biodiversity and Geodiversity. Available at: https://www.barnsley.gov.uk/media/uqcn3wiv/biodiversity-and-geodiversity-spd-2024.pdf [Accessed: 27/04/2026]

Chartered Institute of Ecology and Environmental Management (CIEEM, 2019). Biodiversity Net Gain: Good Practice Principles for Development.

Department for Environment Food & Rural Affairs (Defra, 2025a) Statutory biodiversity metric: calculation tool. July 2025.

Department for Environment Food & Rural Affairs (Defra, 2025b) Statutory biodiversity metric: user guide. July 2025.

Department for Environment Food & Rural Affairs (Defra, 2025c) Statutory biodiversity metric condition assessments. July 2025.

Department for Levelling Up, Housing & Communities (2024) National Planning Policy Framework (NPPF). London. December 2024.

PNS-SLC-XX-DRG-ARC-9001 - 'Proposed car park landscape' provided by Barnsley Metropolitan Borough Council on 21st September 2026

Thomson Environmental Consultants (2026). Penistone Footbridge and Car Park Preliminary Ecological Appraisal, Preliminary Roost Assessment and Ground Level Tree Assessment for Bats. Ref: BAR010-001-002/001/002

Appendix 1: Post-development Condition Assessment (Created Habitats)

Condition Sheets: GRASSLAND Habitat Type – g3 Neutral grassland created

Condition Assessment Criteria		Criterion passed (Yes or No)
A	The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type (and relative to Footnote 3 suboptimal species which may be listed in the UKHab description).[1] **Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.**	Yes
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds. and small mammals to live and breed.	No - Likely to be mown/managed
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens[2].	No
D	Cover of bracken *Pteridium aquilinum* is less than 20% and cover of scrub (including bramble *Rubus fruticosus* agg.) is less than 5%.	Yes
E	Combined cover of species indicative of suboptimal condition[3] and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species[4] (as listed on Schedule 9 of WCA[5]) are present, this criterion is automatically failed.	Yes
Additional Criterion - must be assessed for all non-acid grassland types		
F	There are 10 or more vascular plant species per m^2 present, including forbs that are characteristic of the habitat type (species referenced in Footnote 3 and 5 cannot contribute towards this count). **Note - this criterion is essential for achieving Good condition for non-acid grassland types only.**	No, small managed patches.
Essential criterion for Good condition achieved (for non-acid grassland) (Yes or No)		No
Number of criteria passed		3
Condition Assessment Result	**Condition Assessment Score**	**Score Achieved ×/✓**
Non-acid grassland types (Result out of 6 criteria)		
Passes 5 or 6 criteria, including essential criterion A and additional criterion F.	Good (3)	
Passes 3 - 5 criteria, including essential criterion A.	Moderate (2)	
Passes 2 or fewer criteria; OR Passes 3 or 4 criteria excluding criterion A and F.	Poor (1)	✓

Condition Sheets: URBAN Habitat Type – u1c Sustainable drainage system created

Condition Assessment Criteria		Criterion passed (Yes or No)
A	Vegetation structure is varied, providing opportunities for vertebrates and invertebrates to live, eat and breed. A single structural habitat component or vegetation type does not account for more than 80% of the total habitat area.	No
B	The habitat parcel contains different plant species that are beneficial for wildlife, for example flowering species providing nectar sources for a range of invertebrates at different times of year.	No
C	Invasive non-native plant species (listed on Schedule 9 of WCA) and others which are to the detriment of native wildlife (using professional judgement) cover less than 5% of the total vegetated area3. **Note - to achieve Good condition, this criterion must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).**	Yes
Additional Criteria - must be assessed for Bioswale and SuDS habitat types only:		
E1	Plant species are mostly native. If non-native species are present, they should not be detrimental to the habitat or native wildlife.	No
E2	The vegetation is comprised of plant species suited to wetland or riparian situations.	No
Essential criterion for Good condition achieved (Yes or No)		Yes
Number of criteria passed		1

Condition Assessment Result	Condition Assessment Score	Score Achieved ×/✓
Non-acid grassland types (Result out of 6 criteria)		
• Passes all 3 core criteria; AND • Meets the requirements for Good condition within criterion C; AND • Passes all additional criteria relevant to specific habitat type (Group E)	Good (3)	
• Passes 3 or 4 of 5 criteria; OR • Passes 5 of 5 criteria but does not meet the requirements for Good condition within criterion C.	Moderate (2)	
• Passes 2 or fewer of 5 criteria.	Poor (1)	✓

Condition Sheets: WOODLAND – w1g Other woodland, broadleaved created

Condition Assessment Criteria					
Indicator		Good (3 points)	Moderate (2 points)	Poor (1 point)	Score per criterion
A	Age distribution of trees	Three age-classes[1] present.	Two age-classes[1] present.	One age-class[1] present.	1
B	Wild, domestic and feral herbivore damage	No significant browsing damage evident in woodland[2].	Evidence of significant browsing pressure is present in less than 40% of whole woodland[2].	Evidence of significant browsing pressure is present in 40% or more of whole woodland[2].	2
C	Invasive plant species	No invasive species[3] present in woodland.	Rhododendron *Rhododendron ponticum* or cherry laurel *Prunus laurocerasus* not present, and other invasive species[3] <10% cover.	Rhododendron or cherry laurel present, or other invasive species[3] ≥10% cover.	3
D	Number of native tree species	Five or more native tree or shrub species[4] found across woodland parcel.	Three to four native tree or shrub species[4] found across woodland parcel.	Two or less native tree or shrub species[4] across woodland parcel.	3
E	Cover of native tree and shrub species	>80% of canopy trees and >80% of understory shrubs are native[5].	50 - 80% of canopy trees and 50 - 80% of understory shrubs are native[5].	<50% of canopy trees and <50% of understory shrubs are native[5].	3
F	Open space within woodland	10 - 20% of woodland has areas of temporary open space[6]. Unless woodland is <10ha, in which case 0 - 20% temporary open space is permitted[7].	21 - 40% of woodland has areas of temporary open space[6].	<10% or >40% of woodland has areas of temporary open space[6]. But if woodland <10ha has <10% temporary open space, please see Good category[7].	3
G	Woodland regeneration	All three classes present in woodland[8]; trees 4 - 7 cm Diameter at Breast Height (DBH), saplings and seedlings or advanced coppice regrowth.	One or two classes only present in woodland[8].	No classes or coppice regrowth present in woodland[8].	1
H	Tree health	Tree mortality 10% or less, no pests or diseases and no crown dieback[9].	11% to 25% tree mortality and or crown dieback or low-risk pest or disease present[9].	Greater than 25% tree mortality and or any high-risk pest or disease present[9].	3
I	Vegetation and ground flora	Recognisable NVC plant community[10] at ground layer present, strongly characterised by ancient woodland flora specialists.	Recognisable woodland NVC plant community[10] at ground layer present.	No recognisable woodland NVC plant community[10] at ground layer present.	1

J	Woodland vertical structure	Three or more storeys across all survey plots, or a complex woodland[11].	Two storeys across all survey plots[11].	One or less storey across all survey plots[11].	1
K	Veteran trees	Two or more veteran trees[12] per hectare.	One veteran tree[12] per hectare.	No veteran trees[12] present in woodland.	1
L	Amount of deadwood	50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, branch stubs and stumps, or an abundance of small cavities[13].	Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities[13].	Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities[13].	2
M	Woodland disturbance	No nutrient enrichment or damaged ground evident[14].	Less than 1 hectare in total of nutrient enrichment across woodland area, and or less than 20% of woodland area has damaged ground[14].	1 hectare or more of nutrient enrichment, and or 20% or more of woodland area has damaged ground[14].	1
				Total Score (out of a possible 39)	26
				Condition Assessment Result	Score Achieved ✓
				Total Score >32 (33 to 39) = Good Condition	
				Total Score 26 to 32 = Moderate Condition	
				Total Score <26 (13 to 25) = Poor Condition	✓

Notes

Footnote 1 - The extent of the lagoon waterbody should be recorded at high tide. This should be assessed at the end of the summer (late August - early September) and gives an indication of the amount of water that is present at all times of year. It should be noted that some lagoons are naturally very shallow.

Footnote 2 - Examples of species adapted to lagoons can be found in Bamber (2010): BAMBER, R.N. (2010) *Coastal saline lagoons and the Water Framework Directive* [online]. Natural England Commissioned Reports, Number 039. Available from: Coastal saline lagoons and the Water Framework Directive - NECR039 (naturalengland.org.uk)

For assessment of species characteristic of anoxic environments, for example presence of Capitellid worms, further information on the SACFOR scale can be found on the JNCC website at: JNCC (No date) *SACFOR abundance scale used for both littoral and sublittoral taxa from 1990 onwards* [online]. Available from: sacfor.pdf (jncc.gov.uk)

Footnote 3 - Abundances estimated using SACFOR scales details available here: JNCC (No date) *SACFOR abundance scale used for both littoral and sublittoral taxa from 1990 onwards* [online]. Available from: sacfor.pdf (jncc.gov.uk)

Use the non-native species list available here: Microsoft Word - UK_Marine_NIS_priority_list_2020 (nonnativespecies.org)

DEFRA (2022) *UK Marine Non-Indigenous Species Priority List (updated 2020)* [online]. Available on: Marine Pathways Group » NNSS (nonnativespecies.org)

Footnote 4 - High-risk species indicative of suboptimal condition at time of publication include:

- *Ficopomatus enigmaticus* -Trumpet tube worm

- *Styela clava* - Asian tunicate; leathery sea squirt, club tunicate
- *Corella eumyota* - Orange-tipped sea squirt
- *Grateloupia turuturu* - Devil's tongue weed, gracie, red menace and red tide
- *Undaria pinnatifida* - Asian kelp, wakame
- *Schizoporella japonica* - Orange ripple bryozoan
- *Sargassum muticum* - Wire weed
- *Hemigrapsus sanguineus* - Asian shore crab

Please check for updates of high-risk species.

Footnote 5 - Peak bloom time is July – September.

Footnote 6 - Please use the method as set out in Nelms et al (2017) to identify litter m^{-1} min^{-1} $person^{-1}$, which is summarised below:
Collect litter along a linear transect parallel with the strandline, located between the back of the beach and the strandline. The transect should be 100 m long. Assign gathered items of litter to one of 101 item categories, and further classify them into 12 material groups (plastic, polystyrene, rubber, cloth, metal, medical, sanitary, faeces, paper, wood, glass, pottery or ceramic) using MCS classifications. Following this, record and sum all anthropogenic litter items and remove them from the beach. Litter identification guides may be useful, please see Nelms et al (2017) for more details on the method:
NELMS, S.E. ET AL. (2017) Marine anthropogenic litter on British beaches: A 10-year nationwide assessment using citizen science data. *Science of the Total Environment* [online], 579. Available from: (PDF) Marine anthropogenic litter on British beaches: A 10-year nationwide assessment using citizen science data (researchgate.net)

The indicator thresholds for litter are based on the methods in Van Loon et al. (2020), which is guidance developed within the Common Implementation Strategy for the Marine Strategy Framework Directive (MSFD) by the MSFD Technical Group on Marine Litter.

VAN LOON, W. ET AL. (2020). *A European Threshold Value and Assessment Method for Macro Litter on Coastlines.* EUR 30347 EN, Publications Office of the European Union, Luxembourg. [online] Available from: (PDF) A European Threshold Value and Assessment Method for Macro Litter on Coastlines (researchgate.net)

Footnote 7 - Sources of physical damage include: excessive poaching, damage from machinery use, damaging management or public access activities.

Appendix 2: Legislation and Planning Policy Considerations

Legislation

In England, BNG is mandatory under Schedule 7A of the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2021).

Developers must deliver a BNG of 10%. This means a development will result in more or better-quality natural habitat than there was before development. Both on-site and off-site enhancements will need to be maintained for a period of at least 30 years following completion of a development.

Baseline Habitat Degradation

Schedule 7A of the Town and Country Planning Act 1990 (as amended) makes provision relating to unauthorised degradation takes place, and also makes provision relating to degradation taking place which is in accordance with a planning permission:

- Paragraph 6: '*Where unauthorised degradation of the onsite habitat has taken place on the land between 30 January 2020 and the date of relevant date, the biodiversity pre-development value of the onsite habitat should be calculated as the biodiversity value of the habitat on the date immediately before the carrying out of these degradation activities. The relevant date should therefore be set as a date immediately before these activities. Unauthorised degradation of onsite habitat is any degradation which is not in accordance with a previous planning permission'.*
- Paragraph 6A: *'If activities to implement or in connection with a planning permission are carried out after 25 August 2023 that lower the biodiversity value of the onsite habitat, the pre-development biodiversity value of the onsite habitat is taken to be the biodiversity value immediately before the carrying out of the activities. The relevant date should therefore be set as a date immediately before these activities.'*

National Planning Policy

The National Planning Policy Framework (NPPF) (Department for Levelling Up, Housing & Communities, 2024) sets out the Government's planning policies for England and how these should be applied. In relation to BNG, it states:

- Paragraph 187: '*Planning policies and decisions should contribute to and enhance the natural and local environment by… minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.'*
- Paragraph 193: '*When determining planning applications, local planning authorities should apply… opportunities to improve biodiversity in and around developments… as part of their design, especially where this can secure measurable net gains for biodiversity.'*

Local Planning Policy

The Supplementary Planning Document: Biodiversity and Geodiversity (Barnsley Council, 2024) states that:

- *'Development proposals will have due regard to the baseline biodiversity value of a development site and landscaping plans should identify opportunities to retain and maximise the provision for biodiversity within the new development.*
- *Minimum 10% Biodiversity Net Gain based on baseline ecological assessment should be achieved.'*

Appendix 3: Landscape Masterplan

N

SHEFFIELD RD

REFER TO INSET 1 FOR AREA NORTH OF THE CAR PARK

FIELD MAPLE

AS EXISTING WOODLAND

RED LINE BOUNDARY (SEE DRAWING PNS-SLC-XX-DRG-EMF-0001) FOR FULL EXTENTS

NEW BROADLEAVED WOODLAND
30% QUERCUS ROBUR (ENGLISH OAK)
20% BETULA PENDULA (BIRCH)
20% FAGUS SYLVATICA (BEECH)
5% SORBUS AUCUPARIA (ROWAN) UNDERSTOREY
10% CORYLUS AVELLANA (HAZEL)
10% CRATAEGUS MONOGYNA (HAWTHORN)
5% SAMBUCUS NIGRA (ELDERFLOWER)

SuDS

INNER BASE (WET)
10% IRIS PSEUDOACORUS (YELLOW FLAG IRIS)
25% CAREX PENDULA (SEDGE)
15% JUNCUS EFFUSUS (SOFT RUSH)

MARGINAL ZONE
15% LYTHRUM SALICARIA (PURPLE LOOSESTRIFE)
15% SILENE FLOS-CUCULI (RAGGED ROBIN)
10% DESCHAMPSIA CESPITOSA (TUFTED HAIR-GRASS)
10% ALCHEMILLA MOLLIS (LADY'S MANTLE)

MIXED SCRUB (1 PLANT PER SQM)
30% CRATAEGUS MONOGYNA (HAWTHORN)
20% PRUNUS SPINOSA (BLACKTHORN)
15% CORYLUS AVELLANA (HAZEL)
10% SORBUS AUCUPARIA (ROWAN)
10% ACER CAMPESTRE (FIELD MAPLE)
10% SALIX CAPREA (GOAT WILLOW)
5% ULEX EUROPAEUS (GORSE)

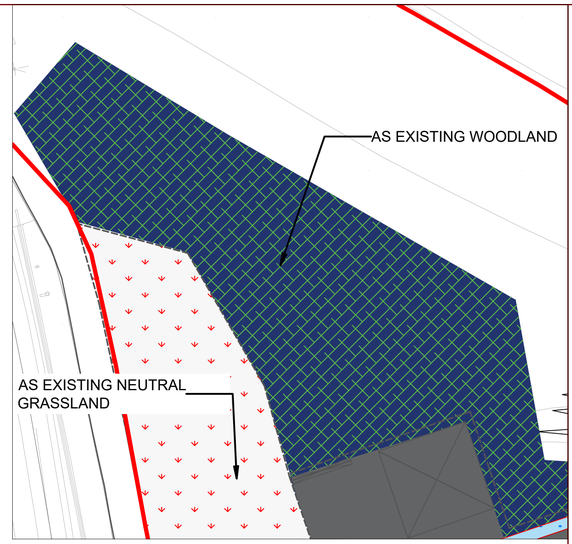
NO ENTRY

NO ENTRY

PLATFORM 1

PLATFORM 2

SCALE BAR 1:200
0 10m 20m 40m



INSET 1

Notes/Legend:

1. ALL DIMENSIONS ARE IN MM UNLESS STATED OTHERWISE.
2. TOPOGRAPHICAL INFORMATION OBTAINED FROM DRAWING 2207206_SKEYE_PENISTONE STATION_3D_FINAL_V2 BY SKEYE (22/07/2026) & P22-01501-MET-EXT-XX-TOP-M2-G-001-2 BY MET GEO ENVIRONMENTAL (07/12/2022)
3. THIS DRAWING IS INDICATIVE AND CONTAINS THE LATEST INFORMATION AVAILABLE AT THE TIME OF PRODUCTION. IT IS SUPPLIED FOR INFORMATION ONLY AND NO RESPONSIBILITY IS ACCEPTED FOR THE ACCURACY OF THE INFORMATION SHOWN.
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6. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH OTHER RELATED PROJECT DOCUMENTATION.

KEY

- ASPHALT SURFACE
- ASPHALT FOOTPATH
- SUSTAINABLE DRAINAGE SYSTEM (SUDS) AREA
- MIXED SCRUB
- AS EXISTING WOODLAND
- BROADLEAVED WOODLAND
- NEUTRAL GRASSLAND
- RED LINE BOUNDARY

Status: FOR PLANNING

REV	DATE	DESCRIPTION	DR	CHK	APVD
P01	21/09/2026	CLIENT ISSUE	KM	GZC	GZC

Client: BARNSLEY METROPOLITAN BOROUGH COUNCIL

Project Title: PENISTONE STATION CAR PARK

Drawing Title: PROPOSED CAR PARK LANDSCAPE

Sheet Size: A1 | Scale: 1:200 | Sheet: 1 of 1

Drawing Number: PNS-SLC-XX-DRG-ARC-9001 | Rev: P01

SLC-DOC-026 V0.1

Appendix 8: Arboricultural Survey Report

Thomson
environmental
consultants



Penistone Footbridge & Car Park

Arboricultural Survey Report

For **Barnsley Metropolitan Borough Council**

Project No.: **BAR010-003**

March 2026

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UKAS MANAGEMENT SYSTEMS
ISO 14001:2015 9940

Project Number	Report No.
BAR010-003	001

Revision No.	Date of Issue	Author	Reviewer	Approver
001	24th March 2026	Benjamin Stoker	Robert Armitage	Robert Armitage

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FIGURE 1: SITE LOCATION PLAN
FIGURE 2: TREE CONSTRAINTS PLAN (TCP01)

1. Summary

1.1.1 Barnsley Metropolitan Borough Council commissioned Thomson Environmental Consultants to undertake an arboricultural survey in accordance with BS5837:2012 'Trees in Relation to Design, Demolition and Construction – Recommendations' within and adjacent to their site at Penistone Railway Station, 15 Sheffield Road (S36 6FY). The arboricultural survey was carried out on Tuesday 17th March 2026.

1.1.2 All trees were categorised in accordance with the cascade chart for tree quality assessment in BS5837:2012 (see Appendix 2). Trees were given a ranking of A, B or C in descending order of value and assigned one or more subcategories qualifying the basis of that value as either arboricultural, landscape or cultural. Trees with only short-term remaining value or that require immediate removal for safety or management reasons are given a U rating.

1.1.3 A total of 26 individual trees and 11 groups of trees were recorded during the survey, details of which are listed in the Tree Schedule at Appendix 1. This comprised of 1 Category 'A' individual tree, 5 Category 'B' individual trees, 20 Category 'C' individual trees, 1 Category 'B' group of trees and 10 Category 'C' groups of trees.

1.1.4 There are no 'U' category trees identified on this site.

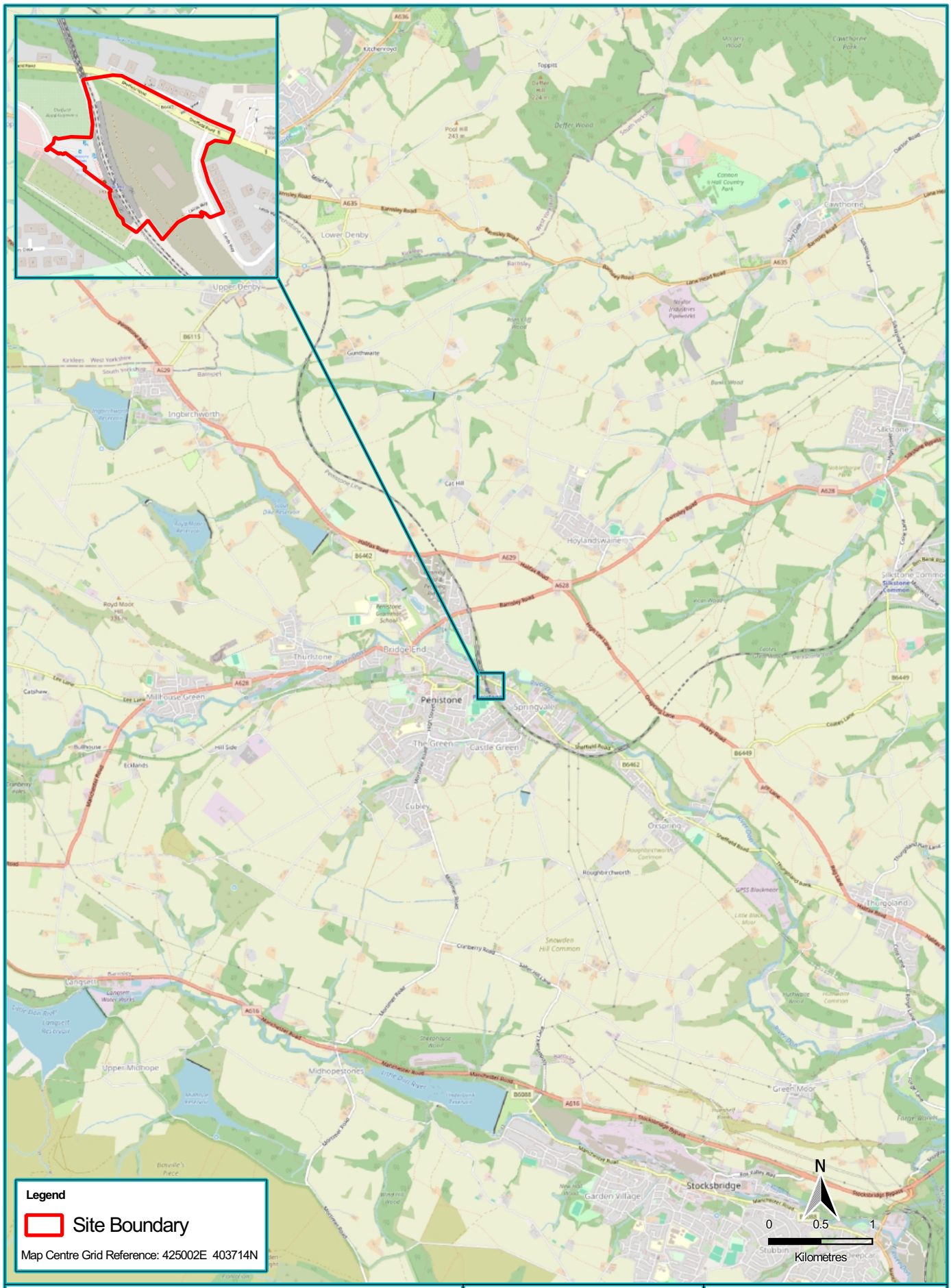
1.1.5 Category A, B and C trees represent a material consideration to development. Concerted effort should be made to retain A and B category trees within the development. While Category C trees should be retained where possible, they should not be retained where they would present a serious constraint to development.

1.1.6 The site contains a mixture of young to mature individual trees and unmanaged groups, including species such as Silver Birch, Willow, Ash, Sycamore, Hawthorn and Alder, typical of regeneration growth on previously developed land associated with the former railway storage use of the site. Most trees are in fair - good physiological condition but often with structural limitations due to multi-stem form, competition or proximity to structures, and generally requiring minimal management works aside from occasional deadwood removal and minor crown management.

1.1.7 A review of Barnsley Metropolitan Borough Council's online interactive mapping software indicates that none of the trees referenced in this report are protected by Tree Preservation Orders, and the site does not fall within a designated Conservation Area. Additionally, an examination of the DEFRA MAGIC map confirmed that there are no ancient woodlands within or immediately adjacent to the site. Both sites were checked on Wednesday, 18th March 2026.

1.1.8 It is advised that before any works to trees within the site are carried out, those proposing to carry out the works should satisfy themselves that all appropriate consents are in place to avoid any potential breach of legislation.

1.1.9 In order to meet the requirements of the Local Planning Authority, an Arboricultural Impact Assessment and Arboricultural Method Statement should be undertaken once detailed plans of the proposed development are available.



Client: Barnsley Metropolitan Borough Council		Drawing Ref: BAR010-003/409450/1	
Figure Number: 1		Scale at A4: 1:50,000	
Figure Title: Site Location		Drawn: JTW	Checked: AS
		Date: 20/03/2026	Date: 20/03/2026

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Filepath: M:\Live Projects\Arboriculture\BAR010-003-Penistone Station PEA\6 - Mapping\Working\BAR010-003_SiteLocation_JTW_200326.qgz

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Legend

- Existing Site Layout
- Canopy Extent of Category 'A' Tree
- Canopy Extent of Category 'B' Tree
- Canopy Extent of Category 'C' Tree
- Root Protection Area of Tree / Group
- Stem of Individual Tree
- Extent of Tree Stems within Groups / Hedges
- Site Boundary



Map Centre Grid Reference: 425138E 403310N

This map has been drawn at a sufficient level of accuracy to fulfil the requirements of an Arboricultural survey. The level of accuracy depends on both the size of the area involved, GPS accuracy and the detail of topographic mapping. Every effort has been made to create a map that is as accurate as possible. However, this map is not intended to represent a scaled landscape survey so should not be used to pin-point accurate engineering work or as a basis for detailed site planning where an accurate topographical survey has not been provided to help inform the arboricultural survey.

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Drawing Ref	BAR010-003/409451/1
Scale at A3	1:1,000
Drawn: JTW	Checked: AS
Date: 24/03/2026	Date: 24/03/2026
Client	Barnsley Metropolitan Borough Council
Figure Number	2a
Figure Title	Tree Constraints Plan (TCP01)



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Legend

- Existing Site Layout
- Canopy Extent of Category 'B' Tree
- Canopy Extent of Category 'C' Tree
- Root Protection Area of Tree / Group
- Stem of Individual Tree
- Extent of Tree Stems within Groups / Hedges
- Site Boundary



Map Centre Grid Reference: 425160E, 403289N

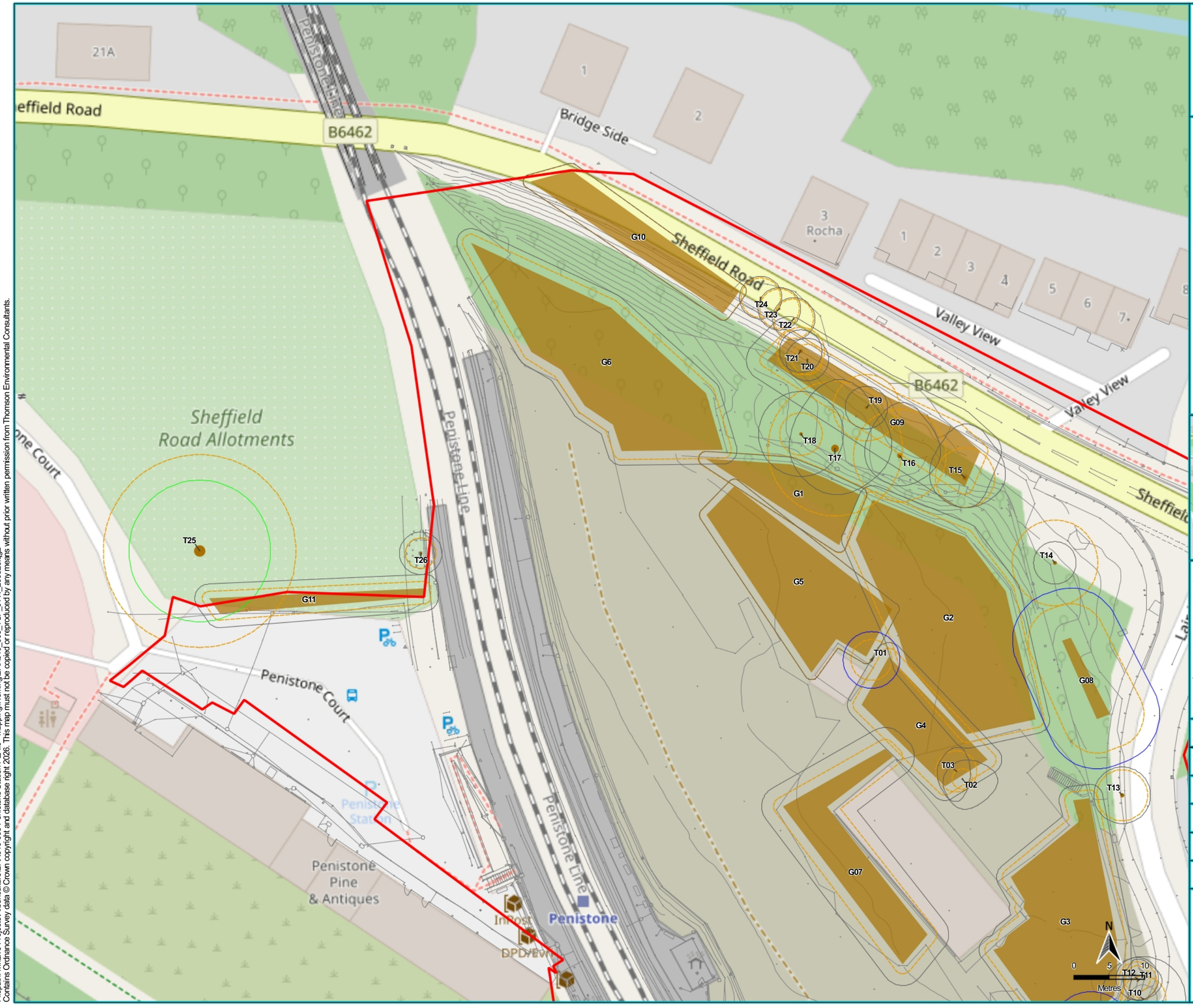
This map has been drawn at a sufficient level of accuracy to fulfil the requirements of an Arboricultural survey. The level of accuracy depends on both the size of the area involved, GPS accuracy and the detail of topographic mapping. Every effort has been made to create a map that is as accurate as possible. However, this map is not intended to represent a scaled landscape survey so should not be used to pin-point accurate engineering work or as a basis for detailed site planning where an accurate topographical survey has not been provided to help inform the arboricultural survey.

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Drawing Ref	BAR010-003/409451/1
Scale at A3	1:500
Drawn	JTW
Checked	AS
Date	24/03/2026
Date	24/03/2026
Client	Barnsley Metropolitan Borough Council
Figure Number	2b
Figure Title	Tree Constraints Plan (TCP01)

Filepath: M:\Live Projects\Arboriculture\BAR010-003-Penistone Station PEA\6 - Mapping\Working\BAR010_003_TCP_JTW_200326.qgz
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Legend

- Existing Site Layout
- Canopy Extent of Category 'A' Tree
- Canopy Extent of Category 'B' Tree
- Canopy Extent of Category 'C' Tree
- Root Protection Area of Tree / Group
- Stem of Individual Tree
- Extent of Tree Stems within Groups / Hedges
- Site Boundary



Map Centre Grid Reference: 425115E 403339N

This map has been drawn at a sufficient level of accuracy to fulfil the requirements of an Arboricultural survey. The level of accuracy depends on both the size of the area involved, GPS accuracy and the detail of topographic mapping. Every effort has been made to create a map that is as accurate as possible. However, this map is not intended to represent a scaled landscape survey so should not be used to pin-point accurate engineering work or as a basis for detailed site planning where an accurate topographical survey has not been provided to help inform the arboricultural survey.

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Drawing Ref	BAR010-003/409451/1
Scale at A3	1:500
Drawn: JTW	Checked: AS
Date: 24/03/2026	Date: 24/03/2026
Client	Barnsley Metropolitan Borough Council
Figure Number	2c
Figure Title	Tree Constraints Plan (TCP01)

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2. Introduction

2.1 Brief and Objectives

2.1.1 Barnsley Metropolitan Borough Council commissioned Thomson Environmental Consultants to undertake an arboricultural survey of trees within and adjacent to Penistone Railway Station (hereafter referred to as 'the Site') in order to record their condition, value and management requirements.

2.1.2 The objective of the survey and report was to assess the condition of trees within and immediately adjacent to the site that might be affected by future development proposals. This will enable decisions to be made on the design layout and tree retention for the proposed development. The brief was to complete:

- An Arboricultural Survey of trees within or immediately adjacent to the site, in line with BS5837:2012;
- A desktop exercise to determine whether trees on site are subject to any Tree Preservation Orders or are located within a Conservation Area; and
- An Arboricultural Report detailing our survey methods, results and recommendations, including the Tree Schedule and Tree Constraints Plan, which should be used to inform feasibility studies and design options at an early stage.

2.1.3 In accordance with the brief, this report details the methods and results of the tree survey and includes the Tree Schedule and Tree Constraints Plan.

2.2 Development Background

2.2.1 At this stage, Thomson Environmental Consultants has not been informed of any development proposals for the site. Once proposals become available, they should be shared with Thomson without delay to allow a review of their potential impacts on existing trees. This will enable the early identification of any potential conflicts between the development and arboricultural constraints, and the preparation of suitable mitigation measures to minimise impacts on tree health, safety, and amenity value. Early engagement at this stage will also help to inform design decisions, ensure compliance with relevant standards and legislation, and support a smoother planning process.

2.3 Site Description

2.3.1 The site is approximately 1.5 ha and is located on grid reference 425143, 403310 (SE 25142 03309), as shown on Figure 1.

2.3.2 It is not known at this stage of the project which trees, if any, within or adjacent to the site boundary will be affected by the future development proposals.

2.4 Limitations

2.4.1 The information provided within this report and in the accompanying Tree Schedule covers only those trees that were inspected and their condition at the time of survey.

2.4.2 A full hazard assessment has not been made, and therefore, no guarantee is given as to the structural integrity of any of the trees on site.

2.4.3 The trees surveyed were inspected from ground level only, and no internal investigations were undertaken.

2.4.4 Whilst this report makes general observations on the long-term potential of the trees surveyed, trees are dynamic organisms and subject to continual change, thus this report should not be relied upon for the purposes of development for more than 24 months from the date of survey.

2.4.5 The locations of trees not recorded on the topographical survey have been plotted as accurately as possible using a GPS-enabled tablet but will require verification if to be relied upon.

2.4.6 The dimensions of off-site and inaccessible trees have been estimated.

2.4.7 No topographical survey was provided to Thomson Environmental Consultants prior to the survey, and therefore, the trees have been plotted as accurately as possible using the geolocator within the Samsung tablet. The tablet claims accuracy within 2m, but like all GPS-enabled devices, its accuracy is limited and is impaired by dense canopy cover. It is therefore advised that a topographical survey of the site is carried out prior to the development of detailed designs for the site. This will give a more accurate representation of the locations of the trees, which could be particularly important where development is proposed close to retained trees.

3. Methodology

3.1 Desk Study of Statutory Protections and Designations

3.1.1 As part of Barnsley Metropolitan Borough Council's instruction to Thomson Environmental Consultants, Barnsley's interactive mapping software was checked for any Tree Preservation Orders and Conservation Area designations affecting the site on Wednesday 18th March 2026.

3.1.2 A review of the DEFRA MAGIC map was also undertaken to determine whether there are any designated ancient woodlands within or adjacent to the site, checked on Wednesday 18th March 2026.

3.2 Tree Survey

3.2.1 All significant trees at the site were assessed for their potential to be affected by the development proposals. Significant trees are defined as those with a trunk diameter of greater than 75mm at 1.5m above ground level according to the survey methodology outlined in BS5837:2012. Off-site or third-party trees have been included where it is likely they would influence the development.

3.2.2 The trees surveyed were inspected from ground level only, and no internal investigations were undertaken.

3.2.3 Trees were categorised as single trees or those that formed part of a distinct group, such as a woodland or hedgerow. Groups can be defined as cohesive arboricultural features, either aerodynamically (for example, companion shelter), visually or culturally, including for biodiversity (BS5837:2012). The information recorded for each tree can be seen in Table 1.

Table 1: Information recorded for each tree during survey

Attribute	Description
Tree No.	Numerical reference given in sequential order starting at number '1', corresponding with the numbers as set out in Figure 2; trees are given the prefix 'T', groups 'G', woodlands 'W' and hedgerows 'H'.
Species	The common names are based upon on-site identification and expressed according to *Tree Guide* (Johnson & More, 2004).
Height	Measured approximately from ground level with the aid of a clinometer and shown in metres (m).
Stem Diameter	Diameter measured at approximately 1.5m above ground level. In the case of multi-stemmed trees, measurement is taken of each stem at 1.5m, where there are two to five stems; or a mean stem diameter at 1.5m, where there are more than five stems. Given in millimetres (mm).

Attribute	Description
Canopy Spread	Maximum branch spread measured in metres from the centre of the trunk in the direction of the four cardinal points of the compass (or an average can be given if branches demonstrate an even spread).
Crown Clearance	Height above ground level of the first significant branch and direction of growth, and the height above ground level of the overall canopy.
Age Class	• Young – recently planted (or self-sown) tree, not yet established, typically less than 150mm stem diameter. (Less than 10% life stage). • Semi mature – fully established tree in the early stages. (10-20% life stage). • Early mature – approaching full height and crown development. (20-50% life stage). • Mature – fully grown, at full height and crown spread. (50-90% life stage) • Over-mature – fully grown and entering the next stage of life e.g. crown dieback and having reduced ability to withstand change. (90-100% life stage). • Veteran – surviving beyond the typical age range for the species with high conservation features. (100+% life stage).
Physiological Condition	Overall health, condition and function of the tree in comparison to a 'normal' example of the species of a similar age; e.g. 'good', 'fair', 'poor' or 'dead'. If deemed necessary, these gradings may be elaborated upon in the 'Comments' section.
Structural Condition	The overall structural condition of the tree including the roots, butt, trunk, limbs and their unions, and the presence of any structural defects, decay or pathological defects. • Good - no significant visible structural defects with a form typical for the species; • Fair - a specimen with only minor defects that are easily remedied or of no long-term significance; • Poor - significant and irremediable physiological or structural defects that may lead to early or premature decline; • Hazardous - significant structural defects of such a degree that there is a risk of imminent collapse or failure. If deemed necessary, these gradings may be elaborated upon in the 'Comments' section.
Comments	Comments have been made, where appropriate, relating to location, health and condition, structure and form, estimated life expectancy, conservation value and amenity value within the local landscape.

Attribute	Description
Preliminary Management Recommendations	Tree work that should be undertaken for good arboricultural management, regardless of the requirements of the development.
Estimated Remaining Contribution	The estimated time, in years, that the tree will provide a safe contribution to the site (i.e. <10, 10+, 20+ and >40).

Quality Assessment

3.2.4 During the survey, the trees were assessed qualitatively, categorising the quality and value of the trees based on arboricultural, landscape and cultural (including conservation) features. Each tree was then placed into one of four categories. The four categories can be seen in Table 2. Definitions for these categories can be found in Appendix 2.

Table 2: Quality assessment categories

Category	Description
Category U	Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.
Category A	Trees of high quality with an estimated life expectancy of at least 40 years.
Category B	Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
Category C	Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.

3.2.5 Trees categorised as either A, B or C, were also allocated up to three subcategories. The subcategories chosen for each tree are dependent on the main reasons for selection of the particular category grading. The three subcategories are as follows:

1. Category grading based on mainly arboricultural qualities;
2. Category grading based on mainly landscape qualities; and
3. Category grading based on mainly cultural values, including conservation.

Root Protection Areas (RPAs)

3.2.6 Trees that are selected for retention on the site could be at risk of damage during construction, such as root damage during excavations for foundations or services, or any ground-working for landscaping. Further impacts on the trees may potentially result from vehicle movements and materials storage, including root severance, compaction of the soil and exclusion of air and water

to the soil. The risk of tree damage is minimised if construction activities are planned to avoid the roots of trees.

3.2.7 The area of ground adjacent to each tree or group of trees that contains the majority of the roots can be calculated using the equation provided in the BS5837:2012. This Root Protection Area (RPA) is a radius around the tree of 12 times the stem diameter for a single stem. For multi-stemmed trees of two to five stems and greater than five stems, the cumulative stem diameters to be multiplied by 12, are calculated as per the equations in Table 3.

Table 3: Equations for the calculation of the RPA of multi-stemmed trees

Number of stems	Equation
Two to five	√((stem diameter 1)² + (stem diameter 2)² … + (stem diameter 5)²)
More than five	√(mean stem diameter)² x number of stems

3.2.8 The RPA for each tree in the Tree Schedule has been calculated and, where relevant, has been adjusted to take into account site conditions. For example, when a tree is growing in a confined root space adjacent to an existing building or other solid structure that would restrict root growth in that direction, the RPA has been adjusted accordingly (see Figure 2).

3.2.9 The RPA for tree groups is calculated using the stem diameter of the largest tree within the group. The RPA radius is calculated as per Section 3.2.7 and then used to define the RPA by following the outline of the group's extent.

3.2.10 Where the calculated RPA exceeds 707m^2, it has been capped at this figure, as per BS5837:2012. This is equivalent to a circle with a radius of 15m or a square with approximately 26m width and length.

Date of Survey

3.2.11 The site was visited and the survey undertaken on 17th March 2026 by Benjamin Stoker, ABC Awards Level 4 Diploma in Arboriculture, Arboricultural Consultant.

4. Results

4.1 Statutory Protections and Designations

4.1.1 Checks made on Barnsley Metropolitan Borough Council's online interactive mapping software indicate that no trees recorded as part of this report are subject to any Tree Preservation Orders, and the site is not located within a Conservation Area site was checked on Wednesday 18th March 2026.

4.1.2 A review of the DEFRA MAGIC map was also undertaken, which showed that there are no designated ancient woodlands within or adjacent to the site, checked on Wednesday 18th March 2026.

4.2 Tree Survey

4.2.1 A total of 26 significant individual trees and 11 groups of trees were recorded during the survey, with a breakdown of the categories shown in Table 4 below. A detailed description of each tree is given in the Tree Schedule in Appendix 1, which also includes the area of the RPAs, in m2, for the individual trees. The locations of all trees, RPAs, retention categories and reference numbers are shown on Figure 2 Tree Constraints Plan.

Table 4: Number of significant trees allocated to each retention category.

Tree Category	Number of Trees	Number of Groups	Number of Woodlands	Number of Hedges	Total
A	1	0	0	0	**1**
B	5	1	0	0	**6**
C	20	10	0	0	**30**
U	0	0	0	0	**0**
Total	**26**	**11**	**0**	**0**	**37**

4.2.2 A full breakdown of the surveyed trees and their individual retention categories, as well as their reference numbers, can be found at Appendix 3.

5. Recommendations

5.1 General Tree Retention Guidance

5.1.1 All trees on site should be considered for retention where possible, with the greatest consideration given to Category A trees and then B trees where these specimens occur, and finally Category C trees. However, the retention of Category C trees should not be at the expense of an efficient design. Category U trees are recommended for removal for sound arboricultural reasons. Where trees of any category are on adjacent land, and removal is required for the development, permission must be sought from the landowner before any works can be undertaken.

5.1.2 Category A tree are high-quality trees worthy of retention. They are excellent examples of the typical form for their species, and the removal of these trees would adversely affect the amenity value of the local landscape. Category 'A' trees/ groups are shown with green canopies on the attached Tree Constraints Plan at Figure 2.

5.1.3 Category B trees are in good condition and are important features within the locality. Loss of these trees would adversely affect the landscape and reduce the canopy cover in the area. Category 'B' trees/ groups are shown with a blue canopy on the attached Tree Constraints Plan at Figure 2.

5.1.4 Category C trees could be a constraint to any future development, and removal of some or all of the trees may be necessary if the site is to be developed. Whilst the loss of these Category C trees will have an impact on the arboricultural value of the site, it will provide an opportunity to plant suitable species of a better quality with a longer useful life expectancy. Over time, this will increase the arboricultural and landscape value of the site, and the impact of the tree losses will be negated. Category 'C' trees/ groups features are shown with grey canopies on the attached Tree Constraints Plan at Figure 2.

5.1.5 Category 'U' trees/ groups have less than 10 years of useful life expectancy and are shown with a maroon canopy on the attached Tree Constraints Plan at Figure 2.

5.2 Site Specific Guidance

5.2.1 The felling of over 5m3 of timber in any one calendar quarter requires permission from the Forestry Commission under the Forestry Act (1967). If tree removal of this scale is to be undertaken, a Felling License application will need to be made, unless full planning permission has been granted.

5.2.2 At the time of the survey, 4 Ash trees (*Fraxinus excelsior*), identified as T14, T19, T20 and T21, were observed to exhibit symptoms consistent with Ash Dieback (*Hymenoscyphus fraxineus*) at varying levels of severity. Based on the current condition and observed crown retention, the trees do not presently require immediate remedial action. However, given the progressive nature of the disease, it is recommended that these trees be periodically monitored on an annual basis as part of ongoing site management. Should the condition of the trees decline, resulting in increased structural defects or an elevated risk due to their location, appropriate management measures should be implemented accordingly.

5.3 Protecting trees during development

5.3.1 For those trees selected to be retained as part of the development, it will be necessary to maintain Construction Exclusion Zones (CEZs) during the construction phase. The purpose of CEZs is to prevent damage to the tree roots from severance, compaction of the soil, or exclusion of air and water to the soil.

5.3.2 The CEZ should protect the RPAs of all trees to be retained. The CEZ should be maintained by suitable stout fencing (see examples at Appendix 4 and 5) and identified by marking with suitable notices (see Appendix 6) or adequate ground protection suitable to withstand any likely loading. The fencing should be fit for the purpose of excluding construction activity and remain rigid and complete throughout the duration of the works. If ground protection is intended for pedestrian movements, a single thickness of scaffold boards on top of a compressible layer laid onto a geotextile may be acceptable; however, if intended for wheeled or tracked construction traffic, the ground protection should be designed by an engineer.

5.3.3 Where CEZs overlap with existing areas of tarmac, restricted working may be allowed and may not require protection by fencing. Such areas should, however, be clearly identified as restricted working areas within the CEZ by markings on the ground and notices. Within restricted working areas in CEZs, construction activities should be limited to surfacing works only. Strictly no digging should be allowed within these areas, except in cases where root-sensitive excavation techniques have been recommended in an Arboricultural Method Statement.

5.3.4 An adequate water and air supply to roots should be provided for all trees both during and after construction. This should include preventing impermeable surfacing from being allowed to cover more than 20% of the RPA.

5.4 General Recommendations

5.4.1 The following points are made as general recommendations:

- Building lines should be kept outside the RPA where possible. Limited use of RPAs may be made for parking, drives or hard surfaces, subject to advice from a qualified arboriculturist;
- Wherever possible, service runs should be routed outside the RPAs. If this is not possible, they should be kept together, and trenchless techniques should be used. At all times where services pass within an RPA, detailed plans showing the proposed routing should be drawn up in conjunction with an arboriculturist.
- On residential developments, consideration must be given to future tree growth and orientation (BS5837:2012), i.e., adverse shading and blocked views from windows, which may lead to pressure to fell or remove trees in the future. Wherever possible, the windows of primary rooms should be orientated to avoid any potential conflict with tree canopies;
- A full ecological survey should be undertaken in order to determine the presence of any protected species; and
- An Arboricultural Impact Assessment and Arboricultural Method Statement should be produced once detailed plans for the development are available.

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Appendix 1 - Tree Schedule

Tree/ Group No	Species	height (m)	Stem diameter (mm)	N	E	S	W	Height of lowest limb and direction	Crown clearance (m)	Age class	Estimated remaining contribution	Physiological condition	Structural condition	Comments	Preliminary management recommendations	BS category	RPA (m2)	RPA radius (m)
T01	silver birch; Betula pendula	15	240	4	4	4	4	2 S	2.5	Semi-mature	20+	Good	Fair	Growing next to the structure. The stem has a slight lean; however, the tree appears to be self-correcting and currently stable. The crown is developing close to the structure and, if allowed to continue growing in this direction, is likely to cause damage to the structure in the future.	Lateral reduction of the crown away from the structure	B 1	26.05	2.88
T02	goat willow; Salix caprea	12	7 x 120	3	6	5	3	0 W	-	Semi-mature	10+	Fair	Poor	Growing over hard standing. The tree splits at the base into multiple stems. A small cavity is present on the larger stem within the group, measuring approximately 5 cm in depth.	No works required	C 1	6.51	1.44
T03	goat willow; Salix caprea	12	150, 140, 90, 90	4	2	5	3	0 SW	0.5	Semi-mature	10+	Fair	Poor	Stem split at the base. The crown is being suppressed by neighbouring trees and also its own limbs are competing for space.	No works required	C 1	26.41	2.90
T04	goat willow; Salix caprea	10	130	2	2	4	3	0 SW	0.5	Semi-mature	10+	Fair	Poor	Growing on the bank. Surface roots are visible on the east side of the tree. The crown is being suppressed by a neighbouring tree.	No works required	C 1	7.64	1.56
T05	silver birch; Betula pendula	10	180	2	3	4	3	0 SW	0.5	Semi-mature	10+	Fair	Poor	Growing on a bank with hard standing located near the base. Surface roots are visible on the east side of	No works required	C 1	14.65	2.16

Tree/ Group No	Species	height (m)	Stem diameter (mm)	N	E	S	W	Height of lowest limb and direction	Crown clearance (m)	Age class	Estimated remaining contribution	Physiological condition	Structural condition	Comments	Preliminary management recommendations	BS category	RPA (m2)	RPA radius (m)
														the tree. The crown is being suppressed by a neighbouring tree.				
T06	goat willow; Salix caprea	17	9 x 250	6	6	6	6	4 S	4	Early mature	20+	Good	Poor	Old pruning wounds are present around the stem on the north and east sides. The stem splits at approximately 0.5 m and again at 1 m above ground level.	No works required	B 1	28.26	3.00
T07	silver birch; Betula pendula	15	150	3	3	3	3	4 NE	4	Semi-mature	10+	Good	Fair	Multiple historic pruning wounds present at the base and along the main stem; callusing is visible. Stem exhibits a 23-degree lean. Tree is suppressed/competing for crown space with neighbouring tree.	No works required	C 1	10.17	1.80
T08	hawthorn; Crataegus monogyna	7	90	1	1	1	1	2 S	2	Semi-mature	20+	Fair	Fair	Fresh pruning wounds were observed around the main stem. Tree is being suppressed by a neighbouring tree, which is near the entrance to the site.	No works required	C 1	3.66	1.08
T09	goat willow; Salix caprea	7	90, 75	1	1	1	1	2 S	2	Semi-mature	10+	Fair	Fair	Fresh pruning wounds were observed around the main stem on the east side only. Tree is being suppressed by the neighbouring tree.	No works required	C 1	6.24	1.41
T10	goat willow; Salix caprea	17	170, 170, 90, 80	6	6	6	6	4 S	4	Early mature	20+	Good	Poor	Old pruning wounds were observed around the stem on the north and east sides. Stem splits at 0.5 and again at 1m.	No works required	C 1	32.76	3.23

Tree/ Group No	Species	height (m)	Stem diameter (mm)	N	E	S	W	Height of lowest limb and direction	Crown clearance (m)	Age class	Estimated remaining contribution	Physiological condition	Structural condition	Comments	Preliminary management recommendations	BS category	RPA (m2)	RPA radius (m)
T11	goat willow; Salix caprea	10	170, 120, 90	3	4	3	2	1 E	1	Semi-mature	10+	Poor	Poor	Growing on top of hard surface, the stem looks to have failed in the past and has regrown from there. The crown is suppressing the neighbouring tree.	No works required	C 1	23.23	2.72
T12	Sambucus sp.	8	75, 80, 75, 75	3	3	3	3	1 E	1	Semi-mature	10+	Poor	Poor	Growing next to a brick wall. The fruiting body of Jelly ear (Auricularia auricula - judae) is seen growing on the stem, which indicates that the tree is in decline. Impact damage is seen on the stem from the wall.	No works required	C 1	10.52	1.83
T13	sycamore; Acer pseudoplatanus	18	6 x 300	4	4	4	4	1 N	1	Early mature	10+	Fair	Poor	Limited access to the tree due to a fence on the south side of the tree and a wall on North. The tree is growing next to hard standing. The tree splits at the base. Historic pruning wounds on the south side of the stem.	Remove due to location	C 1	40.70	3.60
T14	ash; Fraxinus excelsior	18	410, 250, 150	3	3	3	3	2 W	2	Early mature	10+	Fair	Fair	Limited access to the tree due to its location, and it has been fenced off. The tree splits at the base. Signs of Ash Dieback seen in the crown, with it being a class 1, 100-75 remaining crown with small-diameter deadwood seen throughout the crown.	Remove deadwood	C 1	114.56	6.04
T15	grey willow; Salix cinerea	23	6 x 350	9	7	5	6	5 N	5	Early mature	20+	Fair	Poor	Stem splits at the base and again at 1 meter, with a lean on the stems to the south of 15 degrees, and crossed and rubbing stems are seen. Surface roots are seen around the base of the east side. Small-	Remove deadwood	C 1	55.40	4.20

Tree/ Group No	Species	height (m)	Stem diameter (mm)	N	E	S	W	Height of lowest limb and direction	Crown clearance (m)	Age class	Estimated remaining contribution	Physiological condition	Structural condition	Comments	Preliminary management recommendations	BS category	RPA (m2)	RPA radius (m)
														diameter deadwood is seen in the crown.				
T16	grey willow; Salix cinerea	23	460, 290	9	7	5	6	5 N	5	Early mature	10+	Fair	Poor	Slight lean on the stem. Crown has long lengths of deadwood seen on the north side of the crown. Crossed and rubbing limbs seen.	Remove deadwood	C 1	133.91	6.53
T17	grey willow; Salix cinerea	23	690, 390	12	10	8	8	5 N	5	Early mature	10+	Fair	Poor	Growing next to boundary fence. Lean on the stem of 35 degrees. Stem has failed in the past, and new growth has been seen from this point. Small-diameter deadwood is seen in the crown.	Remove deadwood	C 1	284.01	9.51
T18	grey willow; Salix cinerea	23	8 x 250	6	6	6	6	5 N	5	Early mature	10+	Fair	Poor	Stem split at base with included union seen at multiple points. Small-diameter deadwood is seen in the crown.	Remove deadwood	C 1	28.26	3.00
T19	ash; Fraxinus excelsior	20	270, 250, 130	3	3	3	3	5 N	5	Semi-mature	10+	Fair	Poor	Stem splits at the base. ADB class 2 75-50%. Epicormic growth is seen around the crown.	Remove deadwood	C 1	68.78	4.68
T20	ash; Fraxinus excelsior	20	180	3	3	3	3	2 S	3	Semi-mature	10+	Fair	Poor	Stem splits at 2m. The crown is showing signs of Ash Dieback, class 2, 75-50% of the crown remaining. Epicormic growth is seen around the crown, indicating that the tree is under stress.	Remove deadwood	C 1	14.65	2.16
T21	ash; Fraxinus excelsior	20	280	3	3	3	3	2 S	3	Semi-mature	10+	Fair	Poor	The crown is showing signs of Ash Dieback, class 2, 75-50% of the crown remaining. Epicormic growth seen around the	Remove deadwood	C 1	35.45	3.36

Tree/ Group No	Species	height (m)	Stem diameter (mm)	N	E	S	W	Height of lowest limb and direction	Crown clearance (m)	Age class	Estimated remaining contribution	Physiological condition	Structural condition	Comments	Preliminary management recommendations	BS category	RPA (m2)	RPA radius (m)
														crown indicates that the tree is under stress.				
T22	grey willow; Salix cinerea	10	210, 100	3	3	3	3	2 E	2	Semi-mature	10+	Fair	Fair	Split near the base included union seen at the base area. Typical example of the species. Growing behind a stone wall.	No works required	C 1	24.44	2.79
T23	grey willow; Salix cinerea	10	210, 100	3	3	3	3	2 E	2	Semi-mature	10+	Fair	Fair	Split near the base included union seen at the base area. Typical example of the species. Growing behind a stone wall.	No works required	C 1	24.44	2.79
T24	grey willow; Salix cinerea	10	210, 100	3	3	3	3	2 E	2	Semi-mature	10+	Fair	Fair	Split near the base included union seen at the base area. Typical example of the species. Growing behind a stone wall.	No works required	C 1	24.44	2.79
T25	sycamore; Acer pseudoplatanus	24	850, 750	10	10	10	10	1 S	4	Mature	40+	Good	Good	Limited access, only able to see from the public open space. Growing on third-party land. Ivy is growing up the stem. Small-diameter deadwood is seen in the crown	Remove deadwood	A 1	580.84	13.60
T26	common alder; Alnus glutinosa	10	180	3	3	3	3	3 SE	3	Semi-mature	10+	Fair	Poor	The tree has been heavily pruned, with epicormic growth seen around the stem. Old pruning wounds can be seen. The tree looks to have been topped in the past.	No works required	C 1	14.65	2.16
G001	goat willow; Salix caprea / hazel; Corylus avellana / silver birch; Betula pendula	9	90	1	1	1	1	-	2	Young	10+	Fair	Fair	Unmanaged group located near the boundary fence. All trees are of a similar age.	No works required	C 2	-	1.08

Tree/ Group No	Species	height (m)	Stem diameter (mm)	N	E	S	W	Height of lowest limb and direction	Crown clearance (m)	Age class	Estimated remaining contribution	Physiological condition	Structural condition	Comments	Preliminary management recommendations	BS category	RPA (m2)	RPA radius (m)
G002	goat willow; Salix caprea / hazel; Corylus avellana / silver birch; Betula pendula	9	100	2	2	2	2	-	2	Young	10+	Fair	Fair	Unmanaged group located near the boundary fence. All trees are of a similar age.	No works required	C 2	-	1.20
G003	goat willow; Salix caprea / hazel; Corylus avellana / silver birch; Betula pendula	9	100	2	2	2	2	-	2	Semi-mature	10+	Fair	Fair	Unmanaged group located near the boundary fence. All trees are of a similar age.	No works required	C 2	-	1.20
G004	goat willow; Salix caprea / hazel; Corylus avellana / silver birch; Betula pendula	9	100	2	2	2	2	-	2	Semi-mature	10+	Fair	Fair	Unmanaged group located in the middle of the site. All trees are of a similar age and look to be self-seeded trees.	No works required	C 2	-	1.20
G005	goat willow; Salix caprea / hazel; Corylus avellana / silver birch; Betula pendula	9	80	1	1	1	1	-	2	Young	10+	Fair	Fair	Unmanaged group located in the middle of the site. All trees are of a similar age and look to be self-seeded trees.	No works required	C 2	-	0.96
G006	goat willow; Salix caprea / hazel; Corylus avellana / silver birch; Betula pendula / Buddleia; Buddleja davidii	12	100	2	2	2	2	-	2	Semi-mature	10+	Fair	Fair	Unmanaged group is located partly near the boundary fence. Limited access to the group due to dense brambles around the group and felled trees stored in front of the group.	No works required	C 2	-	1.20
G07	goat willow; Salix caprea / hazel; Corylus avellana / silver birch; Betula pendula	12	110	3	3	3	3	-	0	Semi-mature	10+	Fair	Fair	A group of trees that have been unmanaged all look to be self-seeded.	No works required	C 2	-	1.32
G08	goat willow; Salix caprea	20	400	7	7	7	7	-	1	Early mature	20+	Fair	Poor	Limited access due to a fence to the south and growing on the raised border. The trees have limited growing space, with	No works required	B 2	-	4.80

Tree/ Group No	Species	height (m)	Stem diameter (mm)	N	E	S	W	Height of lowest limb and direction	Crown clearance (m)	Age class	Estimated remaining contribution	Physiological condition	Structural condition	Comments	Preliminary management recommendations	BS category	RPA (m2)	RPA radius (m)
														all trees having a slight lean to the north.				
G09	goat willow; Salix caprea / silver birch; Betula pendula / holly; Ilex aquifolium / hazel; Corylus avellana / hawthorn; Crataegus monogyna	10	90	3	3	3	3	-	3	Young	10+	Fair	Poor	A group of trees that have been unmanaged all look to be self-seeded. Located near the road on the bank.	No works required	C 2	-	1.08
G10	silver birch; Betula pendula / ash; Fraxinus excelsior / goat willow; Salix caprea	8	80	1	1	1	1	-	1	Young	10+	Fair	Fair	Growing on the bank, providing screening to the railway area.	No works required	C 2	-	0.96
G11	sycamore; Acer pseudoplatanus / ash; Fraxinus excelsior	10	80	2	2	2	2	-	2	Young	10+	Fair	Fair	Growing on third-party land, with limited access to trees due to a boundary fence in front of the trees.	No works required	C 2	-	0.96

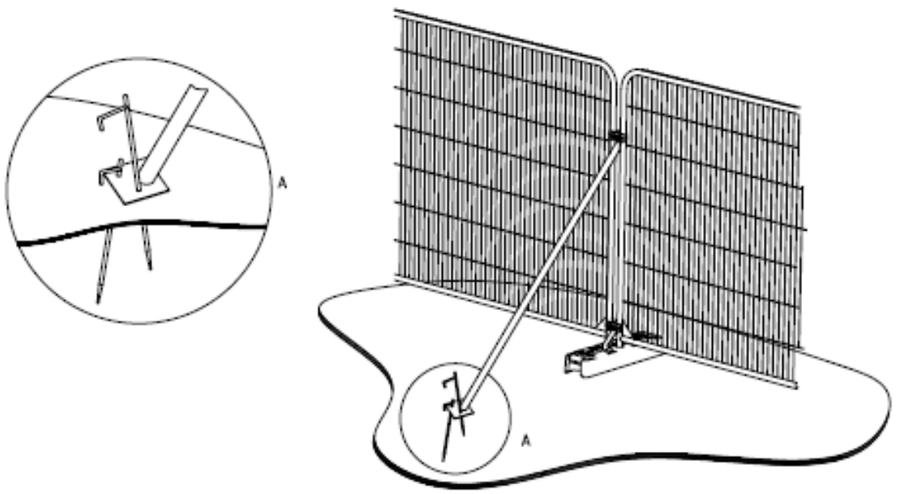
Appendix 2 – Table of Quality Assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot be retained as living trees in the context of the current land use for longer than 10 years	• Trees that have serious, irremediable, structural defects, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low-quality trees suppressing adjacent trees of better quality NOTE Category U trees can have existing or potential conservation value which might be desirable to preserve			DARK RED
	1 Mainly arboricultural values	**2 Mainly landscape values**	**3 Mainly cultural values, including conservation**	
Trees to be considered for retention				
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or of formal or semi-formal arboricultural features (e.g. the dominant and/or principle trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical commemorative or other value (e.g. veteran trees or wood-pasture)	LIGHT GREEN
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	MID BLUE
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	GREY

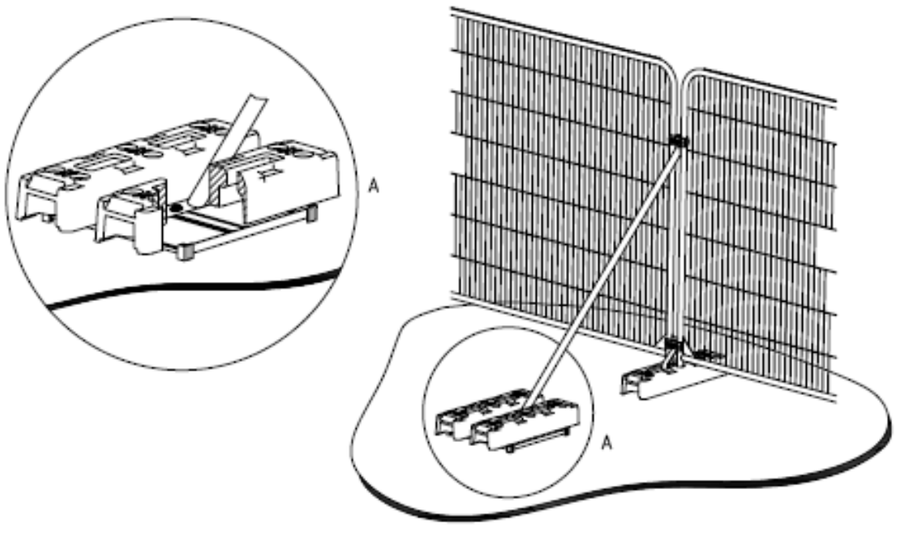
Appendix 3 – Number of trees in each retention category with tree reference numbers

Tree Category	Number of Trees	Tree References	Number of Groups	Group References	Number of Hedges	Hedge References	Number of Woodlands	Woodland References	Total
A	1	T25	0	-	0	-	0	-	**1**
B	5	T01, T06, T08, T10, T15	1	G08	0	-	0	-	**6**
C	20	T02, T03, T04, T05, T07, T09, T11, T12, T13, T14, T16, T17, T18, T19, T20, T21, T22, T23, T24, T26	10	G001, G002, G003, G004, G005, G006, G07, G09, G10, G11	0	-	0	-	**30**
U	0	-	0	-	0	-	0	-	**0**
Total	**26**		**11**		**0**		**0**		**37**

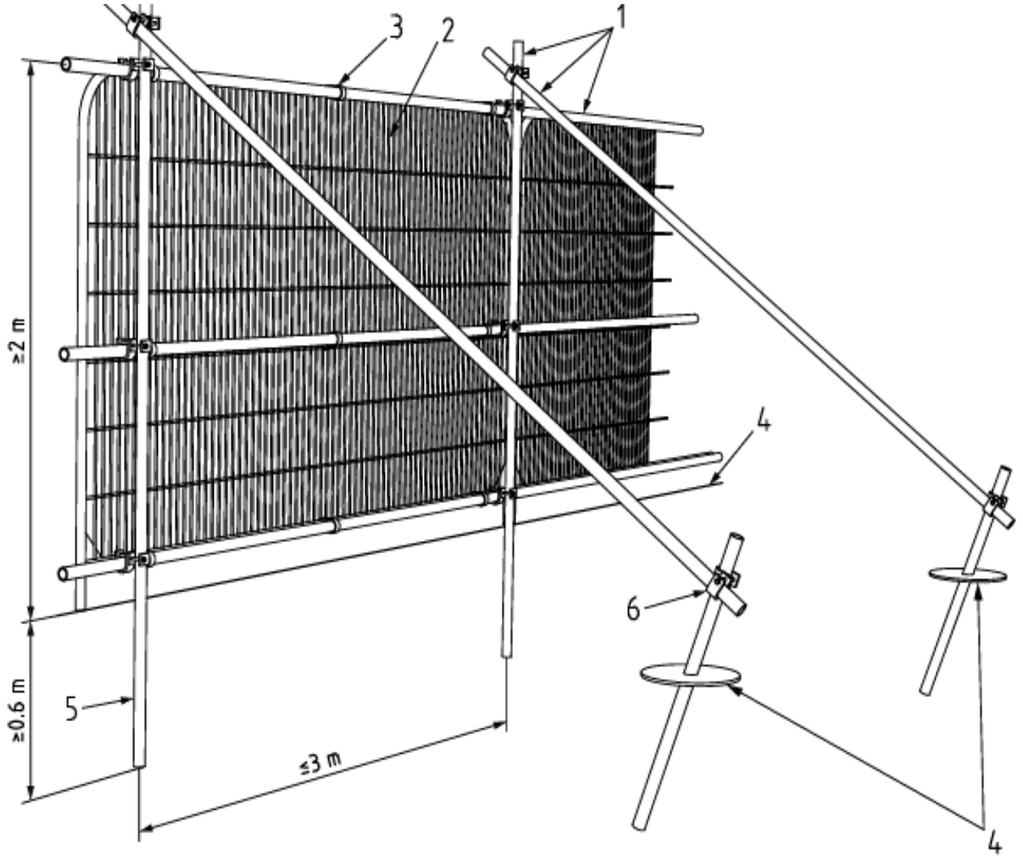
Appendix 4 – Examples of Tree Protection Fencing



a) Stabilizer strut with base plate secured with ground pins



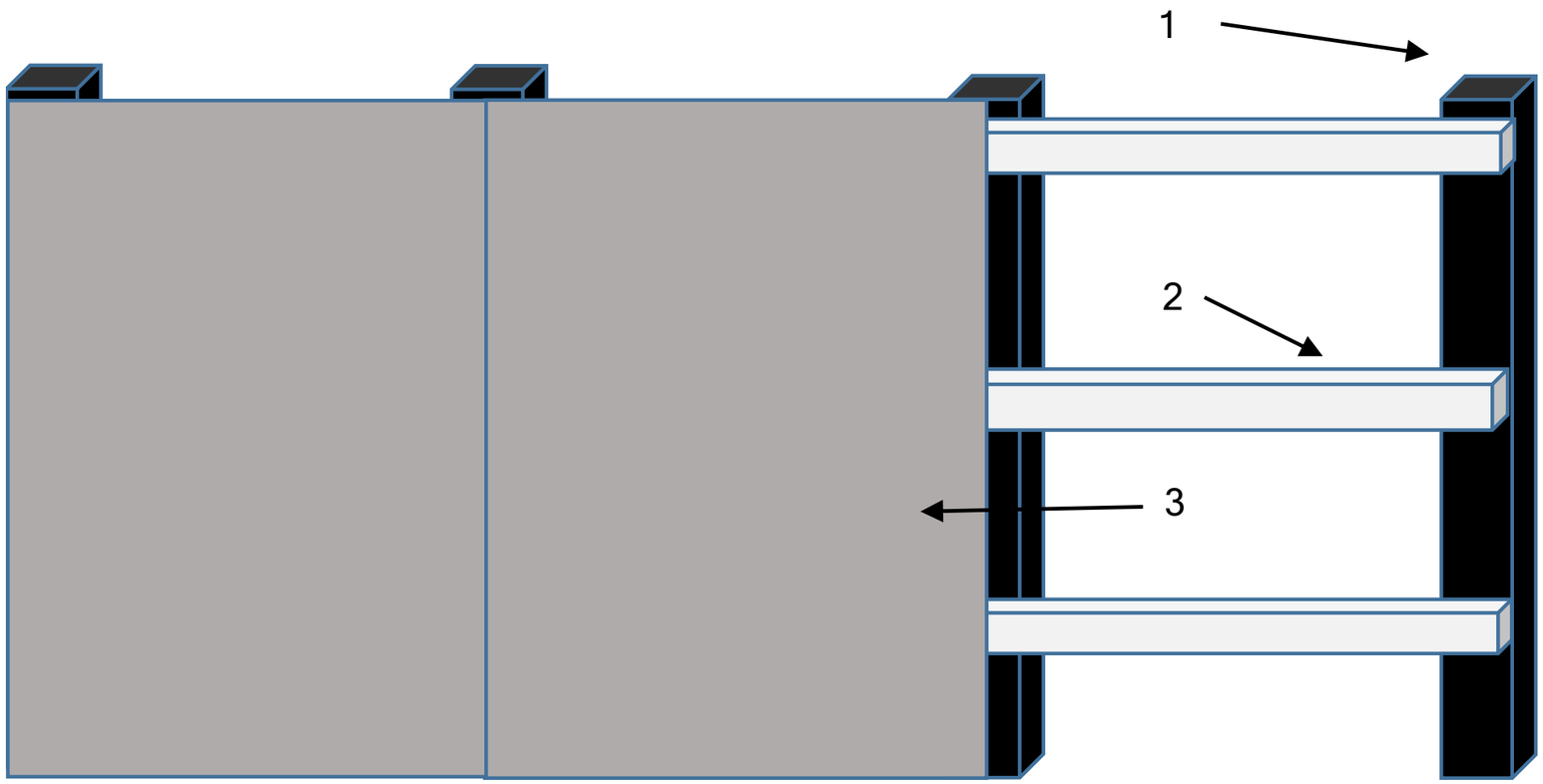
b) Stabilizer strut mounted on block tray



Key

1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

Appendix 5 – Example of Tree Protection Fencing



1. 100mm x 100mm timber posts at 1.2m centres

2. Three 100mm x 50mm timber rails

3. 12mm WBP Virola hardwood through plywood framed panels

Appendix 6 – Tree Protection Fencing Notice





Appendix 9: OMH Condition Sheet

	Criterion	Justification
1	The area of open mosaic habitat is at least 0.25ha in size.	Current parcel of potential OMH is split across an area of grassland and an area of sparsely vegetated urban land totalling over 0.3ha in size
2	Known history of disturbance at the site or evidence that soil has been removed or severely modified by previous use(s) of the site. Extraneous materials/substrates such as industrial spoil may have been added.	Historical mapping shows the site was previously used in conjunction with the adjacent railway as a siding. Ground truthing of the site showed areas of substrate across soil, gravel and concrete types.
3	The site contains some vegetation. This will comprise early successional communities consisting mainly of stress-tolerant species (e.g. indicative of low nutrient status or drought). Early successional communities are composed of (a) annuals, or (b) mosses/liverworts, or (c) lichens, or (d) ruderals, or (e) inundation species, or (f) open grassland, or (g) flower-rich grassland, or (h) heathland.	Early successional communities on site noted as; a and g
4	The site contains unvegetated, loose bare substrate and pools may be present	Area of gravel, railway ballast and concreted areas are present.
5	The site shows spatial variation, forming a mosaic of one or more of the early successional communities (a)–(h) above (criterion 3) plus bare substrate, within 0.25ha.	Mosaic of above noted communities and bare ground.