

Novers Hill

Preliminary Ecological Appraisal

Bristol City Council

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Quality information

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1. Introduction

In 2021, AECOM Infrastructure & Environment UK Limited (AECOM) was instructed by Bristol City Council (BCC) to carry out a Preliminary Ecological Appraisal (PEA) of the land at Novers Hill, Knowle West, in South Bristol (hereafter known as 'the Site'). The 2021 appraisal followed a 2019 appraisal (AECOM, 2019a) and was conducted to record relevant ecological changes since the 2019 assessment.

This PEA was commissioned to identify whether there are known or potential ecological receptors (nature conservation designations and Protected and Notable Habitats and Species) that may constrain or influence the design and implementation of a future proposed development. The approach applied when undertaking this PEA accords with the *Guidelines for Preliminary Ecological Appraisal* published by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2017). The PEA addresses relevant wildlife legislation and planning policy as summarised in Section 2 of this report.

In order to deliver the PEA, a desk study, an extended Phase 1 Habitat Survey and a preliminary bat roost assessment were undertaken by an appropriately experienced ecologist, to identify ecological features within the Site and the wider potential zone of influence of the proposed development.

1.1 Site Location and Description

The central grid reference for the Site is ST 58272 69436 and the boundary of the Site is shown on Figure 1. The Site comprises a horse grazed field of semi-improved neutral grassland, unmanaged areas of semi-improved and unimproved calcareous grassland with parcels of dense and scattered scrub, scattered trees and a group of stable buildings in the north of the Site. Hardstanding associated with a former infant school and the stables is also present within the Site. The Site is bounded by residential areas to the east and a steeply sloping grazed area of grassland and scrub that leads to Pigeonhouse Stream and the Hartcliffe Way to the west. Further residential development is present beyond the Hartcliffe Way.

1.2 Zone of Influence

The zone of influence includes the Site and the immediate surrounding and connecting habitats, which include the grassland, scrub and stream to the west and north of the Site.

1.3 Proposed Development

Detailed information regarding the proposed development of the Site is not yet available. This will be informed by consultation in spring 2022.

1.4 Objectives

The purpose of the PEA is to:

- Identify and categorise all habitats present within the Site and any areas immediately outside of the Site where there may be potential for direct or indirect effects.
- Carry out an appraisal of the potential of the habitats recorded to support Protected or Notable Species of fauna and flora, including a preliminary bat roost assessment of buildings and trees within the Site.
- Provide advice on any potential ecological constraints and opportunities in the zone of influence, including the identification (where relevant) of any requirements for follow-up habitat and species surveys and/or requirements for ecological mitigation.
- Provide a map showing the location of the identified ecological receptors of relevance.

The purpose of this report is to provide a high-level appraisal of the ecological risks and opportunities associated with the potential future development of the Site. The report identifies the scope of further work (where necessary) that would be required to support a planning application. High level recommendations are made on potential options for the avoidance, mitigation or compensation of the potential impacts of the proposed development (where known) on the identified ecological receptors, and of potential enhancements to the biodiversity of the Site.

2. Wildlife Legislation and Planning Policy

2.1 Wildlife Legislation

The following wildlife legislation is potentially relevant to a future proposed development:

- Wildlife and Countryside Act (WCA) 1981 (as amended);
- Countryside and Rights of Way (CROW) Act 2000;
- Natural Environment and Rural Communities (NERC) Act 2006;
- The Conservation of Habitats and Species Regulations (as amended) 2019;
- Protection of Badgers Act 1992; and,
- The Hedgerow Regulations 1997.

The above legislation has been considered when planning and undertaking this PEA using the methods described in Section 3, when identifying potential constraints to the proposed development, and when making recommendations for further survey, design options and mitigation, as discussed in Section 5. Compliance with legislation may require the attainment of relevant Protected Species licences prior to the implementation of the proposed development.

Further information on the requirements of the above legislation is provided as Appendix A.

2.2 National Planning Policy

The National Planning Policy Framework (NPPF) was originally published on 27 March 2012 and detailed the Government's planning policies for England and how these are expected to be applied. The NPPF was later revised on 24 July 2018, 19 February 2019 and 20 July 2021.

The NPPF states the commitment of the UK Government to minimising impacts on biodiversity and providing securing measurable net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity.

The framework specifies the obligations that the Local Authorities and the UK Government have regarding statutory designated sites and Protected Species under UK and international legislation and how this is to be delivered in the planning system. Protected or Notable Habitats and Species can be a material consideration in planning decisions and may therefore make some sites unsuitable for particular types of development, or if development is permitted, mitigation measures may be required to avoid or minimise impacts on certain habitats and species, or where impact is unavoidable, compensation may be required.

The NPPF is clear that pursuing sustainable development includes moving from a net loss of biodiversity to achieving net gains for nature, and that a core principle for planning is that it should contribute to conserving and enhancing the natural environment and reducing pollution.

Further information on the relevant parts of the NPPF is provided as Appendix A.

2.3 Local Planning Policy

Relevant local planning policies for Bristol City Council are detailed in the following documents and shown on Figure 2:

- Site Allocations and Development Management Policies Local Plan (Adopted July 2014);
- Bristol Development Framework – Core Strategy (Adopted June 2011);
- Planning Obligations Supplementary Planning Document (Adopted January 2013); and,
- Bristol Biodiversity Action Plan.

Table 2.1 provides a summary of relevant local planning policies. For the precise wording of each specific policy please refer back to the source document. This planning policy has been considered when assessing potential ecological constraints and opportunities identified by the desk study and field surveys; and, when assessing requirements for further survey, design options and ecological mitigation, as described in Section 5.

Table 2.1 Summary of Local Planning Policy

Document	Planning Policy	Summary of Policy Text
Site Allocations and Development Management Policies Local Plan (Adopted July 2014)	Site Allocation	<p>The site allocation is the relevant policy for planning purposes. The Site is entirely within a Local Plan allocation for development – BSA1108 (see Figure 2). The allocation is for housing. The relevant development considerations within the allocation state that any development should:</p> <ol style="list-style-type: none"> Be informed by an ecological survey of the site and make provision for compensation and mitigation measures, including compensation for the loss of the 'Lowland Meadow', 'Lowland Calcareous Grassland' and semi-improved neutral grassland. The site currently has city-wide importance for nature conservation due to the presence and condition of particular species, habitats and / or features. Integrate appropriate landscaping to ensure that green infrastructure links to the surrounding area are maintained, including links to the Northern Slopes and Crox Bottom. Maintain or strengthen the integrity and connectivity of the Wildlife Network.
	Policy DM19: Development and Nature Conservation	<p>Policy DM19 applies to areas beyond the western boundary of the site (see Figure 2). DM19 states that development which would have a harmful impact on the nature conservation value of a Site of Nature Conservation Interest will not be permitted.</p>
Bristol Development Framework-Core Strategy	BCS9: Green Infrastructure	<p>The integrity and connectivity of the strategic green infrastructure network will be maintained, protected and enhanced.</p> <p>Opportunities to extend the coverage and connectivity of the existing strategic green infrastructure network should be taken.</p> <p>Individual green assets should be retained wherever possible and integrated into new development.</p> <p>Loss of green infrastructure will only be acceptable where it is allowed for as part of an adopted Development Plan Document or is necessary, on balance, to achieve the policy aims of the Core Strategy.</p> <p>Appropriate mitigation of the lost green infrastructure assets will be required.</p> <p>Development should incorporate new and/or enhanced green infrastructure of an appropriate type, standard and size. Where on-site provision of green infrastructure is not possible, contributions will be sought to make appropriate provision for green infrastructure off site.</p>
	BCS9: Green Infrastructure-Open Spaces	<p>Open spaces which are important for recreation, leisure and community use, townscape and landscape quality and visual amenity will be protected.</p> <p>Some areas of open space may be released, through the development plan process, for appropriate development where:</p> <ul style="list-style-type: none"> They are no longer important for recreation, leisure and community use, townscape and landscape quality and visual amenity; Development of all or part of an open space would result in improved urban form or an enhancement to existing open space areas. <p>New development should incorporate, or contribute towards, the provision of an appropriate level and quality of open space.</p>
	BCS9: Green Infrastructure-Biological and Geological Conservation	<p>Internationally important nature conservation sites are subject to statutory protection.</p> <p>National and local sites of biological and geological conservation importance will be protected having regard to the hierarchy of designations and the potential for appropriate mitigation. The extent to which a development would contribute to the achievement of wider objectives of the Core Strategy will be carefully considered when assessing their impact on biological and geological conservation.</p> <p>Where development would have an impact on the Bristol Wildlife Network it should ensure that the integrity of the network is maintained or strengthened.</p>
Planning Obligations Supplementary Planning Document		<p>This document outlines the Bristol Tree Replacement Standard and the requirement for compensatory tree planting on public land (open ground or hardstanding) to mitigate the loss of trees associated with a new development. The document states the number of trees that should be planted to compensate for the loss of a tree, which increases proportionally with the size of trees which are to be lost.</p>
The Bristol Local Biodiversity Action Plan (LBAP)		<p>The Bristol Local Biodiversity Action Plan (LBAP) is a material consideration in this application or planning permission. It provides the framework for habitat and species conservation in Bristol. Produced by the Bristol Biodiversity Partnership, it is aimed at organisations, businesses, groups and individuals, which are either working to protect and enhance biodiversity in the city, or who may impact on it in some way.</p>

3. Methods

3.1 Desk Study

A desk study was carried out to identify nature conservation designations and Protected and Notable Habitats and Species potentially relevant to the proposed development. The desk study used in this survey was as per the information sources used in 2019 (AECOM, 2019a). Given that AECOM undertook surveys on the Site in 2019, an update desk study was not considered necessary.

A stratified approach was taken when defining the desk study area, based on the likely zone of influence of the proposed development on different ecological receptors and, an understanding of the maximum distances typically considered by statutory consultees. Accordingly, the desk study identified any statutory nature conservations designations, local non-statutory nature conservation designations, and Protected and Notable Habitats and Species within 2 km of the Site boundary.

The desk study was carried out using the data sources detailed in Table 3.1. Protected and Notable Habitats and Species include those listed under Schedules 1, 5 and 8 of the WCA; Schedules 2 and 5 of the Habitats and Species Regulations (Amended) 2019; Species and Habitats of Principal Importance for nature conservation in England listed under Section 41 (S41) of the NERC Act; and other species that are Nationally Rare, Nationally Scarce or listed in national or local Red Data Lists and Biodiversity Action Plans.

Table 3.1 Desk Study Data Sources

Data Source	Accessed	Data Obtained
Multi-Agency Geographic Information for the Countryside (MAGIC) website	April 2019	<ul style="list-style-type: none"> Statutory designations within 2 km; Ancient woodlands and Notable Habitats (including Priority Habitats) within and adjacent to the Site boundary; and, Information on habitats and habitat connections (based on aerial photography) relevant to interpretation of planning policy and assessment of potential Protected and Notable Species constraints.
Bristol Regional Environmental Record Centre (BRERC)	April 2019	<ul style="list-style-type: none"> Non-statutory designations within 2 km; and, Protected and Notable Species records within 2 km (records for the last 10 years only).
Ordnance Survey (OS) 1:2500 Pathfinder maps and aerial photography	April 2019	<ul style="list-style-type: none"> Information on habitats and habitat connections (based on aerial photography) relevant to the interpretation of planning policy and assessment of potential Protected and Notable Species constraints.

3.2 Field Survey

The field survey comprised a Phase 1 Habitat Survey, which was extended to include an appraisal of the potential suitability of the habitats present to support Protected and Notable Species, and a preliminary bat roost assessment.

3.2.1 Phase 1 Habitat Survey

A Phase 1 Habitat Survey was undertaken in accordance with the standard survey method (Joint Nature Conservation Committee, 2010) (including 2016 minor corrections). Phase 1 Habitat Survey is a standard method of environmental audit. It involves categorising different habitat types and habitat features within a survey area. The information gained from the survey can be used to determine the likely ecological value of a site, and to direct any more specific survey work which may need to be carried out prior to the submission of a planning application.

The standard Phase 1 Habitat Survey method can be “extended”, as described further in Section 3.2.2, to record target notes (TNs) on Protected, Notable and Invasive Species.

The survey was undertaken on 07 September 2021 by suitably qualified AECOM ecologists who recorded and mapped all habitat types present within the Site, along with any associated relevant ecological receptors observed.

Where relevant ecological receptors were present, target notes were recorded and the position of these shown on the Phase 1 Habitat map (Figure 1). Typical and notable plant species were recorded for different habitat types and reflect the conditions at the time of survey. This was not intended to be a detailed inventory of the plant species present in the survey area, as this is not required for the purposes of a Phase 1 Habitat Survey.

3.2.2 Appraisal of Potential Suitability of Habitats to Support Protected and Notable Species

An appraisal was made of the potential suitability of the habitats present to support Protected and Notable Species of plants or animals (as defined in Section 3.1). Field signs, habitat features with potential to support Protected Species and any sightings or auditory evidence were recorded when encountered, but no detailed surveys were carried out for any particular species.

Prior to undertaking the extended Phase 1 Habitat Survey, aerial photography and 1:2,500 Ordnance Survey mapping were examined to identify ponds within 500 m of the Site. This process cannot guarantee to identify all ponds present, but is the best that can be achieved within the limits of available data.

A note was made of visible instances of invasive non-native species (INNS) of plant listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), including Japanese knotweed (*Reynoutria japonica*). Locations of plants or stands of any such INNS found were recorded.

Section 5 of this report identifies further requirements for species survey based on the results of the habitat survey. These surveys should be completed prior to submission of a planning application as the results are likely to be material for determination of the planning application.

3.2.3 Assessment of Bat Habitat Suitability

During the Extended Phase 1 Habitat Survey, a preliminary ground level roost assessment for bats of the trees and buildings identified as having bat roosting suitability in 2019 was undertaken, in accordance with good practice guidance (Collins, 2016).

A high-powered torch and close focussing binoculars were used as necessary to assess each building and tree for any potential access/egress points and potential roost features, including:

- holes, cankers, cracks or cavities within trees;
- lifted plates of bark;
- crevices under thick-stemmed ivy stems;
- crevices under lifted roof tiles, lead flashing, soffit boxes or barge boards;
- broken/missing roof tiles allowing internal access;
- cracks, crevices, cavities or holes within brick or woodwork; and,
- dark, sheltered and undisturbed spaces (such as loft voids or disused buildings).

During the assessment, external and internal searches were also undertaken for any evidence of bat use, including:

- presence of any live or dead bats;
- bat droppings within a feature, around an entrance to a feature or underneath a feature;
- feeding remains;
- stains around crevice entrance holes;
- scratch marks or smoothly polished surfaces around entrance holes; and,
- odours or noise characteristic of bats.

Trees and buildings were classified into categories dependent on the presence of features suitable as bat roost habitat and any evidence of bat use found. Table 3.2 provides descriptions of the categories for buildings and trees. Habitats on the Site were classified into categories dependent on the presence of features suitable for bats to commute and forage.

Table 3.3 provides descriptions for commuting and foraging habitats.

Table 3.2 Building and Tree Bat Roost Suitability Categories

Roost Suitability	Descriptions for Buildings/Structures	Description for Trees
Known or Confirmed	Confirmed signs of bat presence/ occupation (droppings, oily staining around entry points, insect remains, odour, scratching) and actual bat presence.	Confirmed signs of bat presence/ occupation (droppings, oily staining around entry points, insect remains,

Roost Suitability	Descriptions for Buildings/Structures	Description for Trees
		odour, scratching) and actual bat presence.
High	<p>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 potential for longer periods of time due to their size, shelter, protection, conditions (e.g. temperature, humidity, height above ground level, light levels or levels of disturbance) and surrounding habitat.</p> <p>Can include structures with points of access to the interior of the building and poorly maintained fabric providing ready access points for bats into structures, but at the same time not draughty. Structures of traditional stone, brick or timber construction. Structures with large (>20cm) roof timbers with mortice joints, cracks and holes. Structures of pre or early 20th century construction. Structures with large complicated and/or uncluttered roof spaces providing unobstructed flying spaces. Structures with weather boarding and/or hanging tiles with gaps. Structures with accessible south facing roofs. Structures with proximity to good foraging habitat such as woodland, wetland, water and/or good hedgerows.</p>	A tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potential for longer periods of time due to their size, shelter, protection, conditions (e.g. temperature, humidity, height above ground level, light levels or levels of disturbance) and surrounding habitat.
Moderate	<p>A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions (e.g. temperature, humidity, height above ground level, light levels or levels of disturbance) and surrounding habitat but unlikely to support a roost of high conservation status.</p> <p>Can include structures with some potential to support roosting bats, but fewer features than a high-risk building. Features may include areas suitable for crevice dwelling and/or access points into structures. Some proximity to foraging habitat.</p>	A tree 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.
Low	<p>A structure with one or more potential roost sites that could be used by individual bats opportunistically.</p> <p>However, these potential roost sites do not provide enough space, shelter protection, appropriate conditions and/or suitable habitat to be used on a regular basis or by large numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).</p>	Tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen have only very limited roosting potential.
Negligible	<p>No features suitable for roosting bats.</p> <p>Can include structures constructed from unsuitable materials e.g. prefabricated with steel and sheet material. Structure is draughty, light and cool buildings with no roosting opportunities. High levels of regular disturbance including external and/or internal lighting. Building is isolated from areas of foraging habitat.</p>	Trees with no potential to support bats.

Table 3.3 Commuting and Foraging Habitat Suitability Categories

Communiting and Foraging Suitability	Descriptions
High	<p>Continuous high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge.</p> <p>High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland.</p> <p>Site is close to and connected to known roosts.</p>
Moderate	<p>Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens.</p> <p>Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.</p>
Low	<p>Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or un-vegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat.</p> <p>Suitable, but isolated habitat that could be used by small number of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.</p>
Negligible	Negligible habitat features on site likely to be used by commuting or foraging bats.

Source: Category descriptions drawn from Collins, 2016 to be applied using professional judgement

3.3 Desk Study and Field Survey Limitations

The aim of a desk study is to help characterise the baseline context of a proposed development and provide valuable background information that would not be captured by a single site survey alone. Information obtained during the course of a desk study is dependent upon people and organisations having made and submitted records for the area of interest. As such, a lack of records for a particular habitat or species does not necessarily mean that the habitats or species do not occur in the study area. Likewise, the presence of records for particular habitats and species does not automatically mean that these still occur within the area of interest or are relevant in the context of the proposed development.

Physical boundaries on OS maps were used to plot coinciding habitats within the Site. Therefore, the accuracy of habitat mapping is determined by the resolution of the OS map. Elsewhere, habitat mapping is as estimated in the field and/or recorded by hand-held GPS. Where areas of habitat are given, they are approximate and should be verified by measurement on site where required for design or construction. While indicative locations of trees are recorded this does not replace requirements for detailed specialist arboricultural survey to British Standard 5837:2012 Trees in Relation to Design, Demolition and Construction.

In 2019, three trees were identified with potential bat roost suitability (AECOM, 2019). The woodpecker hole present on Tree 1 had High suitability to support roosting bats. However, this feature was not located in the 2021 PEA update and is assumed to have been lost from the tree as a result of natural decay or limb failure. Tree 1 has, therefore, been downgraded to Negligible suitability in the absence of other features.

Tree 2, identified in 2019, was not accessible at its base during the 2021 PEA update due to dense vegetation and dense foliage obscured features from a distance. Therefore, it is assumed that the suitability of the roost feature on Tree 2 has remained consistent with the results of the 2019 survey (AECOM, 2019a).

Two rows of trees (Section 4.2.9) were not fully accessible during the 2021 update PEA due to dense vegetation and private land preventing full access around the tree and dense foliage obscuring potential features from a distance. No features were recorded on these trees from suitable vantage points. However, the trees were of a suitable age and structure to support potential roost features, so precautionary recommendations are provided in Section 5.

Pond 1 identified during the 2019 Phase 1 survey was not accessible during the survey but is visible on up-to-date aerial imagery and is assumed to still be present.

4. Results

4.1 Nature Conservation Designations

No statutory nature conservation designations are present within 2 km of the Site boundary. Table 4.1 details the non-statutory nature conservation designations of sites identified by the desk study, based on the method given in Section 3.1 of this report. One designation is present within the Site, namely Pigeonhouse Stream and Meadows Site of Nature Conservation Interest (SNCI). The other designations are listed in descending order, with those closest to the Site listed first.

Table 4.1 Sites with Non-Statutory Designations for Nature Conservation

Designation	Reason(s) for Designation	Relationship to the Site
Pigeonhouse Stream and Meadows SNCI	Site consists of a field complex occupying a valley side and bottom. Notable Habitats include stream, semi-improved calcareous grassland and species-rich neutral grassland, Priority Habitat Lowland Meadow and Lowland Calcareous Grassland. (BRERC, 2014).	Covers most of the Site and extends further north
Crox SNCI	Bottom Crox Bottom consists of the Pigeonhouse Stream Valley. Habitats on site include unimproved calcareous grassland, semi-improved neutral grassland, two ponds, semi-natural broadleaved woodland along the stream and on the valley sides (BRERC, 2014).	Approximately 20 m south west of the Site, separated by Hartcliffe Way
Malago SNCI	Valley Linear site in south Bristol, following the course of the Malago Stream. Almost surrounded by housing, with industrial sites to the north-west. Mainly used as a public open space. Habitats include: Priority Habitat Lowland Calcareous Grassland, semi-improved neutral grassland, semi-natural broadleaved woodland, filled clay pit and earth cliffs, hedgerows, scrub, stream and pond (BRERC, 2014).	Approximately 0.2 km west
Novers Common SNCI	Situated in south Bristol, surrounded by urban development, apart from playing fields to the south-east. Site is composed of semi-improved neutral grassland with pockets of semi-improved calcareous grassland, hawthorn, blackthorn and bramble scrub. Site also contains an ash dominated secondary woodland. There are 17+ bird species breeding on site (BRERC, 2014).	Approximately 0.2 km north east
Glyn Vale SNCI	Lies on north-facing slope in south Bristol and is completely enclosed by housing. Habitat consist of grassland, mainly neutral with some calcareous patches, scrub and planted native and exotic tree species (BRERC, 2014)	Approximately 0.6 km north east
Airport SNCI	Road A former aeroplane hangar site, now partially vegetated, consisting of flat areas with raised embankments. Site is important for its unimproved neutral grassland. Species diversity is further increased by the presence of other habitats such as scrub, tall herb vegetation and damp grassland (BRERC, 2014).	Approximately 1 km east
Hengrove SNCI	Park Located in south Bristol and bordered by roads to the south and west, industry to the east and a recreation ground to the north. Western half of the site consists of tipped soils, forming a bowl-shaped area. The slopes of the bowl comprise diverse neutral grassland. The flat area in the centre of bowl has patches of neutral grassland, plus two damper areas. The eastern half of the site is ranker grassland with patches of flowering herbs, and mown grassland (BRERC, 2014).	Approximately 1 km south east
Colliter's SNCI	Brook Extensive site in south-west Bristol, bordered to the west by the brook itself. Habitat consists of semi-improved calcareous grassland including Priority Habitat Lowland Calcareous Grassland, damp fields by Colliter's Brook, hedgerows and scrubby woodland. Part of the site is restored landfill with neutral grassland, planted native scrub and tree species (BRERC, 2013).	Approximately 1.1 km north west
Wedmore SNCI	Vale Habitats consist of amenity grassland, a remnant patch of semi-improved calcareous grassland, semi-improved neutral grassland and scrub woodland (BRERC, 2014).	Approximately 1.2 km north east
Hawkfield Meadows SNCI	Bordered by Whitchurch Lane to the North, a commercial site to the west, housing to the east and playing fields to the south. Habitats include unimproved, damp, neutral grassland Priority Habitat Lowland Meadow, semi-improved neutral grassland and scrub (BRERC, 2014).	Approximately 1.3 km south east

4.2 Habitats

4.2.1 Phase 1 Habitat Types

The habitats recorded, their extent and distribution are shown in Table 4.2 and Figure 1. The areas are approximate only. The associated target notes are provided in Appendix B, illustrative photographs are provided in Appendix C. Areas are not given for habitats that form linear features or habitats that have been target noted as the area they occupy cannot be determined accurately using aerial imagery

Table 4.2 Habitats Present, in Descending Order Based on Spatial Area Occupied

Habitat	Brief Description	Area (ha)	% of Site Area
Scrub – Dense/ Continuous	Vegetation dominated by locally native shrubs, usually less than 5 m tall. Occasional scattered trees may be present. Dense scrub is impenetrable vegetation.	2.18	30.7
Neutral Grassland – Semi-Improved	A transitional category of grassland, which occurs on neutral soils (approximately pH of 7.0) and has been modified through a variety of factors. Factors include, but are not limited to: intensive grazing, fertilisers or herbicides. Species diversity is less than unimproved grassland.	2.03	28.6
Poor Semi-Improved Grassland	A transitional category of grassland which has been modified through a variety of factors. Factors include, but are not limited to: intensive grazing, fertilisers or herbicides. Poor semi-improved grassland will have a restricted list of species, and being more improved, is likely to resemble a species-poor neutral grassland.	1.00	14.1
Improved Grassland	Grassland which has been affected by heavy grazing, drainage, or the application of herbicides, inorganic fertilisers, slurry or high doses of manure that they have lost many of the species which one could expect to find in an unimproved sward. They have only a very limited range of grasses and a few common forbs, mainly those demanding of nutrients and resistant to grazing.	0.54	7.6
Calcareous Grassland – Unimproved	Species-rich grassland, not managed intensively, and occur on calcareous soils (pH above 7.0).	0.46	6.5
Hardstanding	Areas of ground surfaced with a hard material. Typical examples include roads, pavements and concrete foundations.	0.40	5.6
Calcareous Grassland – Semi-Improved	A transitional category of grassland, which occurs on calcareous soils (pH above 7.0) and has been modified through a variety of factors. Factors include, but are not limited to: intensive grazing, fertilisers or herbicides. Species diversity is less than unimproved grassland.	0.35	5.0
Buildings	Any permanent man-made, above-ground structure with an internal space.	0.11	1.5
Other Tall Herb and Fern – Tall Ruderal	Stands of tall perennial or biennial dicotyledonous species, usually more than 25 cm high.	0.03	0.4
Scrub Scattered	– Vegetation dominated by locally native shrubs, usually less than 5 m tall. Occasional scattered trees may be present. Scattered scrub is somewhat open vegetation that can be walked through.	-	-
Scattered Trees and Rows of Trees – Broadleaved	Areas where tree cover is less than 30%; or, stand alone, scattered trees.	-	-

The habitats within the Site are described in greater detail below.

4.2.2 Scrub – Dense/ Continuous

Dense scrub is present in many patches across the Site, particularly along the eastern margins of the Site. Much of the dense scrub is mature and areas in the centre of the Site have an open understorey created by horse grazing. Species include hawthorn (*Crataegus monogyna*), field maple (*Acer campestre*), blackthorn (*Prunus spinosa*), elder (*Sambucus nigra*), ash (*Fraxinus excelsior*) and sycamore (*Acer pseudoplatanus*). See Photograph 1, Appendix C.

4.2.3 Neutral Grassland – Semi-improved

Semi-improved neutral grassland is present in the north of the Site between two patches of poor semi-improved grassland and in the south of the Site. The two areas of semi-improved neutral grassland are located on a moderate slope and subject to moderate grazing, reflected in the average sward height of 10-15 cm. Species include

cocksfoot (*Dactylis glomerata*), crested dog's tail (*Cynosurus cristatus*), red fescue (*Festuca rubra*), Yorkshire fog (*Holcus lanatus*), yarrow (*Achillea millefolium*), creeping buttercup (*Ranunculus repens*), red clover (*Trifolium pratense*), black knapweed (*Centaurea nigra*), ribwort plantain (*Plantago lanceolata*), rough hawkbit (*Leontodon hispidus*), agrimony (*Agrimonia eupatoria*), selfheal (*Prunella vulgaris*), vervain (*Verbena officinalis*), common ragwort (*Jacobaea vulgaris*) and red bartsia (*Odontites vernus*). See Photograph 2, Appendix C.

4.2.4 Poor Semi-improved Grassland

Poor semi-improved grassland is present in the north and centre of the Site on the relative flat ground between slopes. These areas of grassland are more heavily grazed, evidenced by the short average sward height (less than 10 cm), reduced species diversity and more frequent occurrence of faeces. Species include cocksfoot, red fescue, perennial rye-grass (*Lolium perenne*), yarrow, vervain, creeping buttercup, creeping cinquefoil (*Potentilla reptans*), meadow buttercup (*Ranunculus acris*) and greater plantain (*Plantago major*).

4.2.5 Improved Grassland

Improved grassland is present in the horse paddock in the north of the Site. The grassland is heavily grazed with several patches of bare soil. Dominant species include perennial rye-grass, greater plantain, dandelion (*Taraxacum officinale*), white clover (*Trifolium repens*), creeping cinquefoil and vervain.

4.2.6 Calcareous Grassland – Unimproved

Unimproved calcareous grassland is present in the centre and south of the Site on west-facing slopes that are infrequently grazed by the horses, indicated by the lack of faeces and taller sward height of approximately 15-30 cm. Dominant species include: upright brome (*Bromus erectus*), red fescue, cocksfoot, quaking grass (*Briza media*), black knapweed, wild carrot (*Daucus carota*), oxeye daisy (*Leucanthemum vulgare*), ribwort plantain, common ragwort, hoary plantain (*Plantago media*), rough hawkbit, birds-foot trefoil (*Lotus corniculatus*), Lady's bedstraw (*Galium verum*), common restharrow (*Ononis repens*), yarrow, burnet saxifrage (*Pimpinella saxifrage*) and field scabious (*Knautia arvensis*). See Photograph 3, Appendix C.

4.2.7 Hardstanding

Hardstanding is present around the stable buildings in the north of the Site and in the east of the Site as a relic of the old school grounds.

4.2.8 Calcareous Grassland – Semi-improved

A relatively small area of semi-improved calcareous grassland is present in the north-east of the Site. This area is dominated by tall, tussock-forming grass species with frequent ant hill formations, indicating a lack of management. Dominant species include: upright brome, tor-grass (*Brachypodium pinnatum*), cocksfoot, Canadian fleabane (*Conyza canadensis*), wild carrot, red clover, common ragwort and oxford ragwort (*Senecio squalidus*). See Photograph 4, Appendix C.

4.2.9 Buildings

There are three blocks of stables and dog kennels and a single shed in the north of the Site. Further details of the buildings are provided in Table 4.5. See Photograph 5, Appendix C.

4.2.10 Other Tall Herb and Fern – Tall Ruderal

Two small areas of ruderal vegetation dominated by nettle (*Urtica dioica*) are present near the buildings in the north of the Site.

4.2.11 Scrub – Scattered

Scattered scrub is present in the north-east of the Site growing amongst the calcareous semi-improved grassland and in the south of the Site growing over the unimproved calcareous grassland. Species include bramble (*Rubus fruticosus* agg.), hawthorn, rose species (*Rosa* spp.), guelder rose (*Viburnum opulus*), sapling sycamore and sapling ash. See Photograph 6, Appendix C.

4.2.12 Scattered Trees – Broadleaved

Scattered trees are present throughout the areas of dense scrub on the Site. Species include ash, field maple, hawthorn, apple (*Malus* sp.), sycamore and elm (*Ulmus* sp.).

4.2.13 Row of Trees – Broadleaved

A row of trees is present on the eastern Site boundary and between the old school ground and farmland. Species include sycamore, ash and silver birch (*Betula pendula*).

A second row of trees is present and runs perpendicular to the row on the eastern boundary at its northern-most end. Species include ash and sycamore.

4.2.14 Notable Habitats

Table 4.3 provides a summary of Notable Habitats associated with the Site based on the results of the Phase 1 Habitat survey and with reference to guidance for the recognition of NERC Act S41 (Maddock, 2010), LBAP¹ and Local Wildlife Site (LWS)/Site of Nature Conservation Interest (SNCI)² quality habitats.

Table 4.3 Notable Habitats within the Site

Habitat	NERC Act?	LBAP?	LWS/SNCI Quality?	Supporting Comments
Calcareous Grassland – Unimproved	✓	✓	✓	The species composition and diversity in this habitat are typical of lowland calcareous grassland. Lowland calcareous grassland is also included in the Bristol LBAP as the Species Rich Grassland Priority Habitat.
Calcareous Grassland – Semi-Improved	✓	✓	?	The species composition and diversity in this habitat are typical of lowland calcareous grassland. Lowland calcareous grassland is also included in the Bristol LBAP as the Species Rich Grassland Priority Habitat.
Neutral Grassland – Semi-Improved	?	?	?	The Priority Habitat Lowland Meadow was cited as a reason for designation with the Pigeonhouse and Meadows SNCI. However, the semi-improved neutral grassland within the Site does not reflect the species composition and diversity of a typical lowland meadow community. The semi-improved neutral grassland is, therefore, considered unlikely to be the Priority Habitat Lowland Meadow or species-rich grassland under the LBAP, but confirmation should follow a detailed botanical survey (see Section 5).
Scattered and Dense Scrub	x	✓	x	The patches of scattered and dense scrub present across the Site match descriptions for scrub on neutral soil, which is an LBAP habitat in Bristol.

Key to symbols: ✓ = yes, x = no, ? = possible, further survey required to determine this

4.3 Protected and Notable Species

Table 4.4 provides a summary of potentially relevant species identified through a combination of desk study and field survey. The table summarises the conservation status of each species and provides comment on the likelihood of presence.

Where species are identified in Table 4.4 as likely or possible, they are likely to represent legal constraints or may be material to determination of a planning application. Further surveys will or may be required to determine presence or probable absence. Requirements for further survey are identified in Section 5 of this report.

Table 4.4 Protected and Notable Species Relevant or Potentially Relevant to the Proposed Development

Species	Legally Protected Species?	Protected Species of Principal Importance?	Notable Other Species?	Present on Site?	Present / Potentially Present in Wider Zone of Influence?	Supporting Comments
Protected and Notable Plant Species	✓	✓	✓	?	✓	The desk study returned records of the following Notable plant Species: trifid bur-marigold (<i>Bidens tripartite</i>), wych elm (<i>Ulmus glabra</i>), spiny restharrow (<i>Ononis spinosa</i>), flattened meadow-grass (<i>Poa compressa</i>), lesser meadow-rue (<i>Thalictrum minus</i>), snowdrop (<i>Galanthus nivalis</i>), and bluebell (<i>Hyacinthoides non-scripta</i>).

¹ <https://www.bristol.gov.uk/documents/20182/35052/BBAP.pdf/9074afdf-8f21-4296-b457-bc50830f0efc>

² <https://democracy.bathnes.gov.uk/documents/s20850/Appx%201%20Local%20Sites%20Designation%20Procedure.pdf>

Species	Legally Protected Species?	Species of Principal Importance?	Other Notable Species?	Present on Site?	Present / Potentially Present in Wider Zone of Influence?	Supporting Comments
The unimproved calcareous grassland provides suitability for Notable Species.						
Invertebrates	x	✓	✓	?	✓	<p>The desk study returned records of the following Notable invertebrate Species: cinnabar moth (<i>Tyria jacobaeae</i>), small ranunculus (<i>Hecatera dysodea</i>), buff ermine (<i>Spilosoma lutea</i>), garden tiger (<i>Arctia caja</i>), small blue (<i>Cupido minimus</i>) and latticed heath (<i>Chiasmia clathrata</i>).</p> <p>A number of butterflies have been recorded whilst on Site in 2019 and 2021, namely marbled white (<i>Melanargia galathea</i>), small tortoiseshell (<i>Aglais urticae</i>), gatekeeper (<i>Pyronia tithonus</i>), comma (<i>Polygonia c-album</i>), speckled wood (<i>Pararge aegeria</i>) and common blue (<i>Polyommatus icarus</i>). Two day flying moths have also been recorded on Site: cinnabar and burnet moth species (<i>Zygaena</i> sp.)</p> <p>The relatively limited botanical and structural diversity of the habitats on the Site makes the Site of limited value for invertebrate species. Nonetheless, it is likely that the Site supports a common invertebrate assemblage that is typical of the habitats present in an urban environment.</p>
Amphibians, including great crested newt	✓	✓	-	X	X	<p>No records of great crested newt were returned during the desk study. The one pond within 500 m of the Site not separated by barriers to amphibian dispersal tested negative for great crested newt eDNA in 2019 (AECOM, 2019). The pond is isolated from the wider landscape and further ponds by extensive residential areas and Hartcliffe Way, so great crested newt migration into the pond is unlikely. Great crested newt is, therefore, considered likely absent from the Site and is not considered to present a constraint on the proposed development.</p> <p>Records for smooth newt (<i>Lissotriton vulgaris</i>) were returned during the data search. There is some suitable terrestrial habitat within the Site for this species. However, the intensity of grassland grazing means much of the Site presents sub-optimal habitat for amphibians.</p>
Reptiles	✓	✓	-	✓	✓	<p>Records for slow-worm (<i>Anguis fragilis</i>) and common lizard (<i>Zootoca vivipara</i>) were returned during the data search. The semi-improved grassland, unimproved grassland and scrub habitats across the Site provide suitable habitat for active and hibernating reptiles. A Good population of slow-worm (Froglife, 1999) was found to be present on the Site following reptile surveys in 2019 (AECOM, 2019b).</p>
Breeding Birds	✓	✓	-	✓	✓	<p>Several records of Priority and Notable bird Species were returned during the desk study, including swallow (<i>Hirundo rustica</i>), skylark (<i>Alauda arvensis</i>), starling (<i>Sturnus vulgaris</i>), linnet (<i>Linaria cannabina</i>), song thrush (<i>Turdus philomelos</i>), tree sparrow (<i>Passer montanus</i>), house sparrow (<i>Passer domesticus</i>), dunnock (<i>Prunella modularis</i>), and bullfinch (<i>Pyrrhula pyrrhula</i>). The stables buildings and the trees and scrub across the Site have potential to support breeding birds. Breeding bird surveys undertaken in 2019 for the Site found there to be a common bird assemblage on-site with no Annex 1 or Schedule 1 birds present.</p>
Bats	✓	✓	-	✓	✓	<p>The data search returned records for seven bat species, including common pipistrelle (<i>Pipistrellus pipistrellus</i>), soprano pipistrelle (<i>Pipistrellus pygmaeus</i>), lesser horseshoe bat (<i>Rhinolophus hipposideros</i>), serotine (<i>Eptesicus serotinus</i>), noctule (<i>Nyctalus noctula</i>), Leisler's bat (<i>Nyctalus leisleri</i>) and brown long-eared bat (<i>Plecotus auritus</i>). Bat roosting surveys undertaken in 2019 found there to be no tree or building roosts within the Site. The grassland, scrub and trees across the Site provide Moderate suitability foraging and commuting habitat for bat species. Bat activity surveys undertaken in 2019 recorded mainly common and widespread species, including common pipistrelle and noctule; other species recorded included soprano pipistrelle, serotine, <i>Myotis</i> sp., and <i>Plecotus</i> sp. Activity from rarer species, including lesser horseshoe and Leisler's bats was also recorded (AECOM, 2019c).</p> <p>Section 4.3.1 provides details of bat roost potential on the Site.</p>
Badger (<i>Meles meles</i>)	x	x	✓	x	✓	<p>Records of badger were returned during the data search. The grassland and scrub habitats across the Site provide suitable sett building and foraging opportunities for this species, however, no evidence of their presence was found during the extended Phase 1 Survey on 07 September 2021.</p>
Hedgehog (<i>Erinaceus europaeus</i>)	x	✓	-	?	✓	<p>Records of hedgehog were returned during the data search. The grassland and scrub habitats across the Site provide suitable shelter, commuting and foraging opportunities for this species.</p>

Species	Legally Protected Species?	Species of Principal Importance?	Other Notable Species?	Present on Site?	Present / Potentially Present in Wider Zone of Influence?	Supporting Comments
INNS	x	x	✓	✓	✓	A number of records of INNS were returned during the data search, including Japanese knotweed, Himalayan balsam (<i>Impatiens glandulifera</i>), and Virginia-creeper (<i>Parthenocissus quinquefolia</i>). During the Phase 1 Survey, wall cotoneaster (<i>Cotoneaster horizontalis</i>) was recorded in the north-east of the Site.

Key to symbols: ✓ = yes, x = no, ? = possibly, see Supporting Comments for further rationale.

Species present on site are those for which recent direct observation or field signs confirmed presence. Species which are possibly present are those for which there is potentially suitable habitat based on the results of the Phase 1 Habitat survey, or this combined with desk study records.

Legally protected species are those listed under Schedules 1, 5 and 8 of the Wildlife and Countryside Act 1981 (as amended); and, Schedules 2 and 4 of The Conservation of Habitat and Species and Planning (Various Amendments) (England and Wales) Regulations 2018.

Species of Principal Importance as those listed under Section 41 of the NERC Act. Planning Authorities have a legal duty under Section 40 of the same Act to consider such species when determining planning applications.

Other notable species include native species of conservation concern listed in the LBAP (except species that are also of Principal Importance), those that are Nationally Rare, Scarce or Red Data List, and invasive non-native species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

4.3.1 Preliminary Bat Roost Assessment

During the ground-based preliminary bat roost assessment of trees and buildings on the Site two of the trees identified in 2019 as having suitability for roosting bats could not be located. One tree, Tree 3, was downgraded to Negligible suitability. The stable buildings within the Site were identified as having Low bat roost suitability. Table 4.5 provides full details of the bat roost suitability assessment. The locations of these buildings and trees are shown on Figure 1.

Table 4.5 Results of Preliminary Bat Roost Assessment

Building/ Tree ID	Description	Bat Roost Suitability Category 2019	Bat Roost Suitability Category 2021
Stable Buildings	Three lines of joined horse stables/shelters. The stables have mostly block walls, with some sections of corrugated metal or plywood panelling. The flat roofs are of various materials including corrugated metal, corrugated plastic and corrugated asbestos-type material. Some of the sections have metal or wood barge boards; however, none of these features offered a crevice suitable for roosting bats. A few small, suitable crevices were found within several of the stables, in cracks and joins in the timber frames of the buildings. These could be accessed by bats through the open stable doors/windows. No evidence of bat use was observed during the survey; however, most floors were either covered in hay or recently swept which may have obscured any evidence.	Low	Low
T1	A mature apple tree within a group of shrubby trees/scrub identified in 2019. Large woodpecker hole at 3 m on north side. The woodpecker hole could not be located in 2021 and is assumed to have been lost from the tree as a result of natural decay or limb failure. The trees roosting suitability has therefore been downgraded.	High	Negligible
T2	Mature sycamore tree along the boundary fence identified in 2019. Fissure where two branches meet forming a crevice at 2 m on south side. The tree was not accessible at its base in 2021 due to dense vegetation and dense foliage obscured features from a distance. The trees roosting suitability assumed to be consistent with 2019 assessment.	Moderate	Moderate
T3	Standing dead tree, elm species identified in 2019. No features visible in 2021, the lifted bark previously identified in 2019 is no longer present. Trees roosting suitability has therefore been downgraded.	Low	Negligible

The two rows of trees within the Site (see Section 4.2.13) had no visible features in 2021, however they were not fully accessible during the survey (see Section 3.3). Therefore, the roosting suitability cannot be assessed. Precautionary recommendations for these trees are provided in Section 5.5.

5. Ecological Constraints and Opportunities: Risks and Recommendations for Further Action

5.1 Approach to the Identification of Ecological Constraints

Relevant ecological receptors that may represent constraints to the proposed development, or that provide opportunities to deliver ecological enhancement in accordance with planning policy, are identified in this Section of the report.

The NPPF and local planning policy (summarised in Section 2 of this report) specify requirements for the protection of features of importance for biodiversity. Planning policy is a material consideration when determining planning applications.

Compliance with planning policy requires that the proposed development considers and engages the following mitigation hierarchy where there is potential for impacts on relevant ecological receptors:

1. Avoid features where possible;
2. Minimise impact by design, method of working or other measures (mitigation) e.g. by enhancing existing features; and,
3. Compensate for significant residual impacts, e.g. by providing suitable habitats elsewhere (whether in the control of Bristol City Council or otherwise legally enforceable through planning condition or Section 106 agreement).

This hierarchy requires the highest level to be applied where possible. Only where this cannot reasonably be adopted should lower levels be considered. The rationale for the proposed mitigation and/or compensation should be provided with planning applications, including sufficient detail to show that these measures are feasible and would be provided.

In pursuance of the objective within the NPPF of providing net gains in biodiversity where possible, consideration should be given to the scope for enhancement as part of the proposed development. This should represent biodiversity gain over and above that achieved through mitigation and compensation. Enhancement could be achieved on and/or off the Site.

The likelihood of the relevant ecological receptors constraining the proposed development has been assessed with reference to the scale described in Table 5.1. The higher the importance of the ecological receptor for the conservation of biodiversity at national and local scales, the more likely it is to be a material consideration during determination of the planning application for the proposed development.

Opportunities for ecological enhancement are not scaled in Table 5.1, but are identified in the accompanying appraisal. There may be scope for ecological enhancement where existing habitat features could be improved or enhanced within the proposed development as designed, or with only minor amendment to the design of the proposed development. Ecological enhancement may not be possible where there is little scope to accommodate enhancement within the proposed development, e.g. due to a lack of utilisable space, or where land is required for essential mitigation. Consideration could be given to enhancing biodiversity in the vicinity of the Site.

Table 5.1 Scale of Constraint to Development

Likelihood	Definition
High	An actual or potential constraint that is subject to relevant legal protection and is likely to be a material consideration in determining the planning application (e.g. statutory nature conservation designations and European/nationally protected species). Further survey likely to be required (as detailed in this report) to support a planning application.
Medium	An actual or potential constraint that is covered by national or local planning policy and, depending on the level of the potential impact as a result of the proposed development, may be a material consideration in determining the planning application. Further survey may be required (as detailed in this report) to support a planning application.
Low	Unlikely to be a constraint to development or require further survey prior to submission of a planning application. Mitigation is likely to be covered under Construction Environmental Management Plan (CEMP) or precautionary working method statement (e.g. generic requirements for the management of nesting bird risks).

5.2 Constraints and Requirements for Further Survey: Designations

There are no statutory nature conservation designations considered to potentially constrain the proposed development.

The Site is covered by a non-statutory designation – Pigeonhouse Stream and Meadows SNCI, cited for its Priority Habitats Lowland Meadow and Lowland Calcareous Grassland. A botanical survey for the Site is therefore recommended and should be undertaken between May and August, inclusive.

In the absence of mitigation, pollution (including run-off of sediment, chemicals, fuel and oil) has the potential to impact this on-site designation; especially the Pigeonhouse Stream part of the designation, which is just off the Site to the west. Pollution prevention guidelines should therefore be followed, as detailed in Section 5.5.2.

The other non-statutory designations are not considered to require further survey or present a constraint to the development. This is due to their spatial separation and the lack of connecting ecological pathways; combined with the limited diversity and value of the habitats supported by the Site.

5.3 Constraints and Requirements for Further Survey: Habitats

The dense and scattered scrub within the Site is a Notable Habitat due to its status as an LBAP habitat in Bristol. This habitat does not require further survey.

The grassland within the Site, notably the calcareous grassland and semi-improved neutral grassland, should be subject to a botanical survey owing to its designation as a SNCI, as described above. Further recommendations are made in Section 5.5.

No further surveys of the habitats within the Site are required.

5.4 Constraints and Requirements for Further Survey: Species

The Site has the potential to support the following Protected and Notable Species that require further consideration as possible constraints.

See also the summary table provided in Table 5.2 of this report.

5.4.1 Reptiles

The data search provided records of slow-worm and common lizard within the search area. The Site supports suitable habitat for both species within its grassland and scrub habitats. Reptile surveys undertaken in 2019 recorded a Good population (Froglife, 1999) of slow-worm within the Site (AECOM, 2019b). An update survey for reptiles within the Site is therefore recommended. Artificial refugia should be placed within areas of suitable habitat at an appropriate density and checked for presence of reptiles in April/May or September. At least seven survey visits would be required to meet current survey guidelines (Froglife, 1999; and Gent & Gibson, 2003).

5.4.2 Breeding Birds

The data search provided records of many bird species from within 2 km of the Site, including some notable species that could be supported by the Site. The scrub, scattered trees and buildings provide suitable nesting habitats for breeding birds within the Site. Breeding bird surveys undertaken in 2019 recorded a common bird assemblage on the Site with no Annex 1 or Schedule 1 bird species observed. As such, no further bird surveys are recommended.

5.4.3 Bats

The data search provided field records of seven species of bat within 2 km of the Site. Based on the habitats present on Site and guidance on valuing commuting and foraging habitats (Wray et al., 2010), most of the Site has moderate suitability habitat for commuting and foraging bats. Bat activity and bat emergence/re-entry surveys were undertaken in 2019 (AECOM, 2019c), during which at least eight species of bat were recorded including common pipistrelle, noctule, soprano pipistrelle, serotine, *Myotis* sp., and *Plecotus* sp. Activity from rarer species, including lesser horseshoe and Leisler's bats was also recorded. As such, surveys to determine the level of use within the Site by foraging or commuting bats will be required to inform a planning application. Surveys will need to be undertaken prior to a planning application being submitted and will need to be undertaken during a full bat active season (April to October). If key bat flight lines are identified, these will need to be retained or mitigated for. The surveys should also inform the masterplan for the proposed development and allow for mitigation to be included in the masterplan rather than it being retrofitted at a later date.

The stables within the Site are classified as having Low bat roost suitability and Tree 2 is classified as having Moderate roost suitability. Bat surveys undertaken in August 2019 showed there to be no bat roosts present within the stables or Tree 2. As a precautionary measure, and in accordance with good practice guidance (Collins, 2016), a single emergence or re-entry survey is recommended for the stables and two emergence/re-entry surveys, one dusk and one dawn, are recommended for Tree 2, to identify whether bat roosts are present within the stables or Tree 2. These further surveys should be carried out between May and August, inclusive (the optimum period to detect summer roosts).

If a roost is identified during these further surveys, additional emergence/re-entry or climbing surveys will then be required to support a European Protected Species Mitigation Licence (EPSML), which may be necessary for the works if they are assessed as impacting a bat roost.

5.4.4 Badger

The desk study returned records for badger within 600 m of the Site. Although no evidence of this species was found during the extended Phase 1 Survey, the Site provides suitable sett building, foraging and commuting habitat, and this species is known to be mobile and frequently establishes new setts. The Site should therefore be re-surveyed prior to works commencing to confirm the continued absence of this species from the Site.

5.4.5 Hedgehog

The data search provided records of hedgehog within 2 km of the Site. The grassland and scattered scrub on Site provide suitable foraging, commuting and nesting habitat for hedgehogs. No further survey is required for this species. Opportunities for mitigation and enhancement measures to benefit hedgehog have been provided in the appropriate sections below.

5.4.6 Invasive Non-Native Species

INNS wall cotoneaster was recorded on Site during the Phase 1 Habitat Survey. As such, it is recommended that a comprehensive INNS survey is undertaken of the Site and adjacent areas during May – September, inclusive. The aim of the survey will be to determine the presence, location, viability and extent of INNS (Schedule 9 and Invasive Alien Species of Union concern) and any other biosecurity hazards. The information required for the production of an options appraisal for the control of any INNS identified will be collected and presented along with recommendations for management in a Site-specific report.

Table 5.2 Requirements for Further Survey

Survey	Season	Method	Why required	When required		
				To Inform Design	Before Planning Application	Pre-construction Onwards
Reptile surveys	April-May or September	Artificial refugia surveys.	Legislation – WCA 1981.	✓	✓	✓
Botanical Survey	May to August (Optimal June-July)	National Vegetation Classification (NVC) survey	Legislation – Regulations WCA 1981.	✓	✓	✓
Bat activity surveys	April to October	Monthly transect and automated detector surveys (Collins, 2016)	Legislation – Regulations WCA 1981.	✓	✓	✓
Bat roost surveys	May to August	Emergence/re-entry surveys for structures and trees, or climbing surveys for trees (Collins, 2016)	Legislation – Regulations WCA 1981.	✓	✓	✓
Badger survey	Any	Pre-commencement check for badger setts	Legislation – Protection of badgers act 1992.	x	x	✓
INNS	May to September	Comprehensive survey undertaken for Site and adjacent areas, by an INNS specialist.	Legislation – It is an offence to cause Schedule 9 plant species to spread in the wild.	✓	✓	x

The constraints outlined here will need to be reassessed if there is a significant change to the type or scale of development proposed, or if there are any significant changes in the use or management of the land that would affect the habitats and species. If a planning application is made two years or more after a PEA it is advisable to review and update the survey data.

5.5 Requirements for Mitigation and Reasonable Avoidance Measures

5.5.1 General

All contractors should be given a toolbox talk by an ecologist ahead of the commencement of the proposed works at the Site. The talk should include the identification of sensitive ecological features and methods of working that minimise the risk of harm to these features.

No holes/trenches should be left open at night without a means of escape in place (such as a scaffolding board). Open trenches should be checked first thing every morning to ensure that no wildlife has become trapped. If any animals are trapped, an ecologist should be contacted.

Root protection measures should be identified and implemented for all nearby trees and boundary vegetation in accordance with BS: 5837 – Trees in Relation to Design, Demolition and Construction.

5.5.2 Pollution Controls

Pollution control measures as outlined in best practice guidance CIRIA C762 (Law and D'Aleo 2016), should be implemented in order to avoid and minimise adverse effects of pollution and runoff on the surrounding environments. These measures should include:

1. Spill kits should be stored in appropriate locations on site
2. Appropriate training in relation to pollution prevention measure should be provided for all site staff.
3. Refuelling and servicing of vehicles should be undertaken within a designated refuelling area with an impermeable base.
4. Refuelling should be carried out by pumping through a trigger delivery nozzle.
5. Fuel, oil and other potential contaminants stored within bunded tanks, to 110% of the volume stored and only the minimum quantity required should be stored on site.
6. The designated area for fuel, oil and other potential contaminants should be maintained in a secure and clean manner.
7. An adequate quantity of oil absorbent material should be stored on site and spillages cleared up immediately.
8. All construction equipment should be maintained in good working order and checked regularly for spillages/leaks.

5.5.3 Pigeonhouse Stream and Meadows SNCI

The proposals should aim to minimise impacts on the SNCI as far as possible and help ensure that its function of providing a north-south connectivity route for wildlife is maintained.

Where possible, habitats should be retained, particularly those which are species-rich and/or a notable habitat – neutral semi-improved and calcareous unimproved grassland, and scrub. Where possible, this habitat should be retained within the proposed development.

Permission should be sought from the local authority prior to the removal of any SNCI habitat. The local authority is likely to request that any loss of SNCI habitat should be replaced, and in line with current planning policy, a net gain achieved.

Any retained habitats should maintain connectivity to the wider landscape to allow for its continued use by wildlife. Any retained habitats should be subject to an appropriate management regime to maintain and enhance the floristic diversity.

5.5.4 Habitats

Where possible, habitats should be retained, particularly those which are species-rich and/or a notable habitat. This includes the semi-improved calcareous grassland and scrub located in the north-east of the Site that does not form part of the SNCI designation. Where possible, this habitat should be retained within the proposed development.

5.5.5 Reptiles

Mitigation in relation to reptiles may be required following the recommended reptile surveys. If required, this will be detailed within the Reptile Survey Report that will follow the surveys.

5.5.6 Breeding Birds

Any loss of vegetation suitable for nesting birds, including the buildings, trees and scrub, should be removed, if possible, outside of the bird nesting season (i.e. clearance should be undertaken between September and early February). If this is not possible, a suitably qualified and experienced ecologist should undertake a search for active nests immediately before the clearance. If an active nest is encountered, a species-appropriate protective buffer (typically 5 m) should be erected around the nest and should remain in place until all young have fully fledged. This can be up to eight weeks.

5.5.7 Bats

A sensitive lighting scheme should be implemented to limit any light spill upon retained or new trees/other habitats within or adjacent to the Site. This would reduce disturbance to nocturnal wildlife such as bats and hedgehogs during both construction and operation. This should follow guidance within the Bat Conservation Trust & Institution of Lighting Professionals (2018) Guidance Note 08/18 Bats and artificial lighting in the UK Bats and the Built Environment series.

Should any trees identified as having Low bat roost suitability (shown on Figure 1), require removal a 'soft fell' methodology must be employed. The methodology includes felling the tree in section, with the following precautions:

- cutting above or below (rather than directly through) a potential roosting feature;
- lowering the cut sections gently to ground level by rope; and,
- cut sections should be left on-site, with any potential roost feature entrances left unobstructed, for 48 hours prior to chipping or removal from site.

Further mitigation in relation to bats may be required following the further bat emergence/re-entry and/or tree climbing surveys. If required, this will be detailed within the Bat Survey Report that will follow the additional surveys.

5.5.8 Badger

Where possible, habitats on the Site should be retained within the scheme as far as possible, or mitigation for loss of the grassland, scrub and scattered trees within the Site should be provided with replacement habitat.

Excavations should be covered over night or ramps installed to prevent animals becoming trapped or to allow trapped animals to escape.

5.5.9 Hedgehog

Where possible, habitats on the Site should be retained within the scheme as far as possible, or mitigation for loss of the grassland, scrub and scattered trees within the Site should be provided with replacement habitat.

A sensitive lighting scheme should be implemented on the Site, as detailed above for bats, to limit disturbance to hedgehogs. Measures should be incorporated into the proposed development that allow the continued use of the Site by hedgehogs such as gaps under garden fences and areas of rough grassland and scrub for foraging and sheltering.

Excavations should be covered over night or ramps installed to prevent animals becoming trapped or to allow trapped animals to escape

5.5.10 Invasive Non-Native Species

The information required to produce an options appraisal for the control of any INNS identified will be collected during the recommended INNS survey. This information will then be presented along with recommendations for management in a site-specific report.

5.6 Opportunities for Ecological Enhancement

General opportunities for ecological enhancements within the Site, such as those recommended below, should be sought where possible:

- Landscaping at the Site should be designed to include native species suitable for the area. Areas to benefit wildlife should be created including planting of trees and hedgerows, gardens, wildflower areas of grassland and native shrub planting.
- Installing durable (woodcrete or similar) bird and bat boxes upon the buildings or suitable retained mature trees will increase nesting/roosting opportunities within the Site for these species.
- Prepare an Ecological Mitigation and Enhancement Strategy which includes details of measures to protect and enhance ecological features within the Site.
- Installing hedgehog houses and leaving small gaps in fences will create suitable hibernation/resting sites and maintain habitat connectivity for hedgehogs. In line with the objectives of Bristol City Council's Hedgehog Species Action Plan³, the development should ensure that any open spaces are subject to hedgehog friendly management and people are encouraged to provide hedgehog friendly environments in their gardens.

³ <https://www.bristol.gov.uk/documents/20182/35052/hedgehog.pdf/9ccc98a9-6c90-4fc2-ae17-18e6e2ea79d1>

6. References

AECOM (2019a). Novers Hill Preliminary Ecological Appraisal.

AECOM (2019b). Novers Hill Reptile Report.

AECOM (2019c). Novers Hill Bat Report. CIEEM. (2017). Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.

Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London.

Defra (2019) Net gain Summary of responses and government response July 2019.

Froglife, 1999. Reptile Survey: an Introduction to Planning, Conducting and Interpreting Surveys for Snake and Lizard Conservation. Froglife Advice Sheet 10. Halesworth: Froglife.

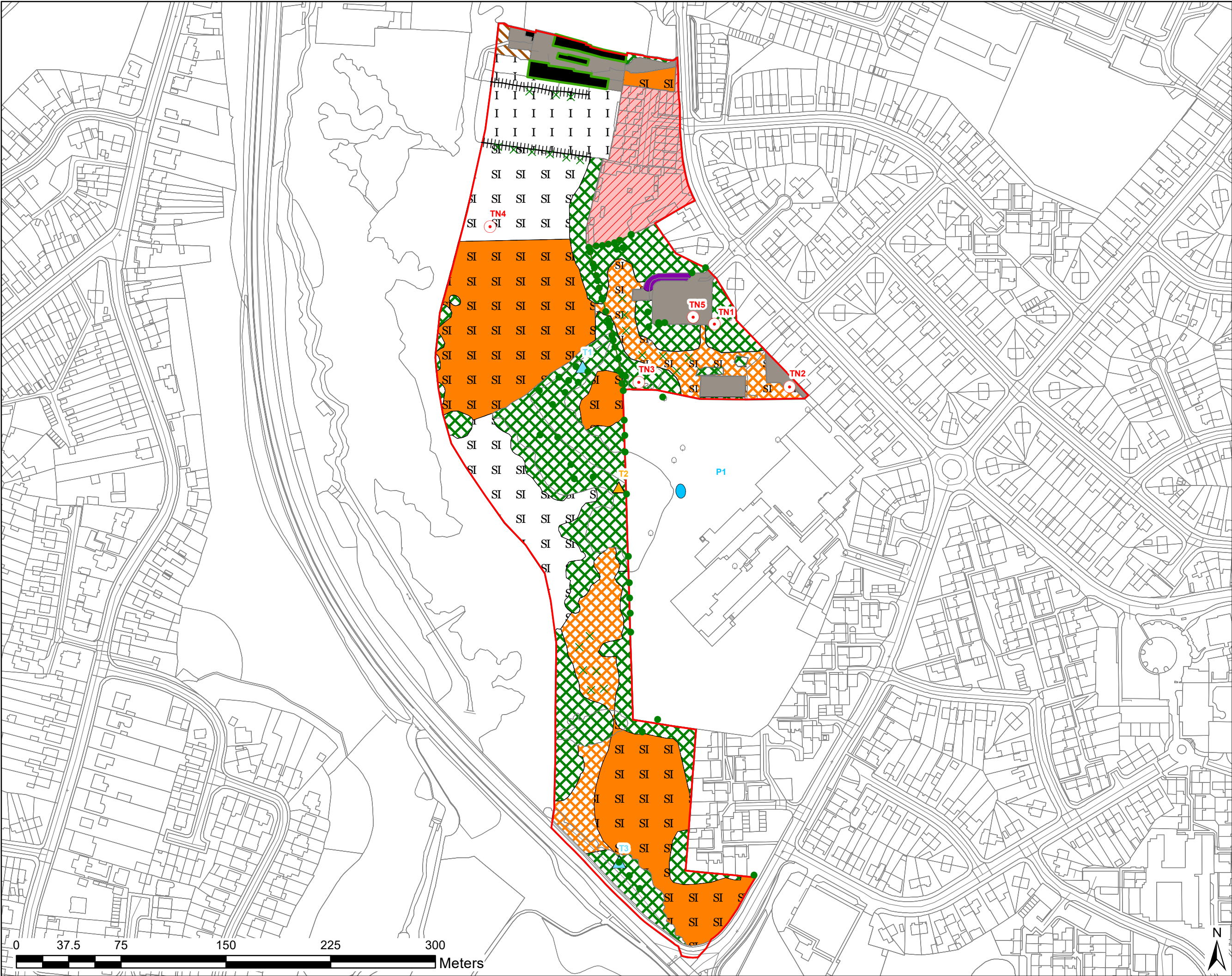
Gent, T., & Gibson, S., 1998. Herpetofauna Workers' Manual. Peterborough: JNCC.

Joint Nature Conservation Committee. (2010). Handbook for phase 1 habitat survey – a technique for environmental audit. Joint Nature Conservation Committee, Peterborough

Law, C. and D'Aleo, S. (2016) PUB C762 Environment good practice on site pocketbook (fourth edition). CIRIA ISBN: 978-0-86017-777-7

Maddock, A. (2008). UK Biodiversity Action Plan Priority Habitat Descriptions. JNCC, Peterborough

Figure 1. Phase 1 Habitat Plan



Site Boundary

Phase 1 Habitats

Scrub - Dense/Continuous

Neutral Grassland - Semi-Improved

Calcareous Grassland - Unimproved

Calcareous Grassland - Semi-Improved

Improved Grassland

Poor Semi-Improved Grassland

Other Tall Herb and Fern - Ruderal

Standing Water

Buildings

Hardstanding

NA - Not Accessed Land

Invasive Species

Building - Low

Row of trees - Broadleaved

Fence

Broadleaved scattered tree

Scrub - scattered

Target note

Bat Roost Suitability

Tree - Moderate

Tree - Negligible

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Drawing Title:

**PHASE 1 HABITAT PLAN
- NOVERS HILL**

Scale at A3: 1:2,500

Drawing No:

FIGURE 1

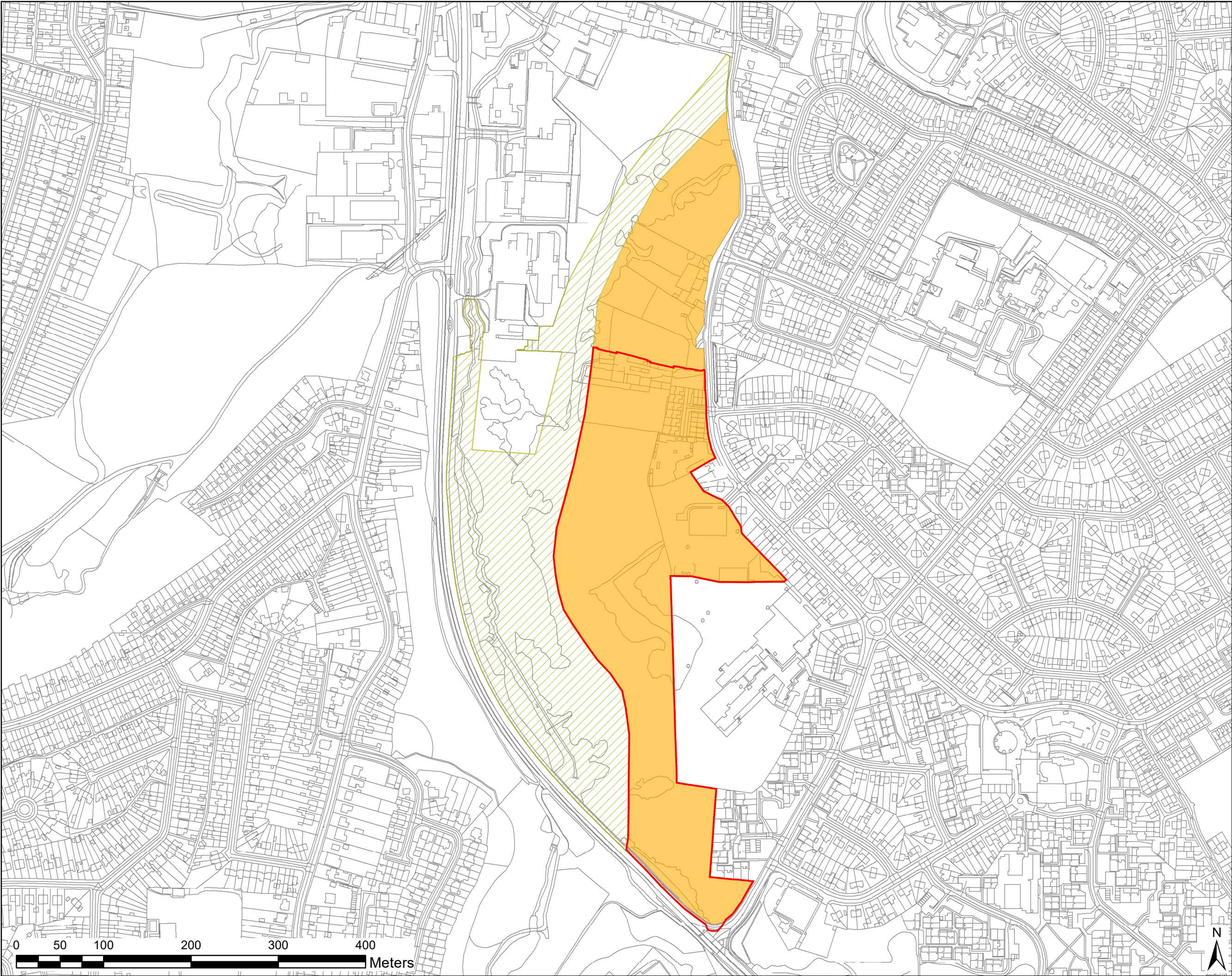
Drawn: Chk'd: App'd: Date:

CB AM MG 01/10/21

Rev:

004

Figure 2. Local Planning Policy



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4th Floor Portwall Place,
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www.aecom.com

Project Title:

**BRISTOL CITY COUNCIL
HOUSING SITES**

Client:



LEGEND

- Site Boundary
- BSA1108
- DM19

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60601667

Drawing Title:

**LOCAL PLANNING POLICY
– NOVERS HILL**

Scale at A3: 1:4,000			
Drawing No:	Rev:		
FIGURE 2	004		
Drawn:	Chk'd:	App'd:	Date:
CB	AM	MG	03/02/22

Appendix A Legislation and Planning Policy

The Conservation of Habitats and Species Regulations (as amended) 2019

The UK is no longer a member of the European Union. EU legislation as it applied to the UK on 31 December 2020 is now a part of UK domestic legislation, under the control of the UK's Parliaments and Assemblies, and is published on [legislation.gov.uk](https://www.legislation.gov.uk). It is being kept up to date on [legislation.gov.uk](https://www.legislation.gov.uk) in the same way as other forms of domestic legislation.

Changes have been made to the Conservation of Habitats and Species Regulations 2017 to make them operable from 1 January 2021. The changes are made by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Most of these changes involved transferring functions from the European Commission to the appropriate authorities in England and Wales. A competent authority is a public body, statutory undertaker, minister or department of government, or anyone holding public office. All other processes or terms in the 2017 Regulations remain unchanged and existing guidance is still relevant.

The main changes to the 2017 Regulations are:

- the creation of a national site network within the UK territory comprising the protected sites already designated under the Nature Directives, and any further sites designated under these Regulations;
- the establishment of management objectives for the national site network (the 'network objectives');
- a duty for appropriate authorities to manage and where necessary adapt the national site network as a whole to achieve the network objectives;
- an amended process for the designation of Special Areas of Conservation (SACs);
- arrangements for reporting on the implementation of the Regulations, given that the UK no longer provides reports to the European Commission;
- arrangements replacing the European Commission's functions with regard to the imperative reasons of overriding public interest (IROPI) test where a plan or project affects a Priority Habitat or Species; and,
- arrangements for amending the schedules to the Regulations and the annexes to the Nature Directives that apply to the UK.

The Habitats Regulations consolidate all the various amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994 in respect of England and Wales. The 1994 Regulations transposed Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) into national law. The Regulations came into force on 30th October 1994.

The Regulations provide for the designation and protection of 'UK sites', the protection of 'UK protected species', and the adaptation of planning and other controls for the protection of UK sites.

Under the Regulations, competent authorities i.e. any Minister, Government department, public body, or person holding public office, have a general duty, in the exercise of any of their functions, to have regard to the EC Habitats Directive.

The European Commission no longer has a role in designating SACs in the UK. The 2019 Regulations establish a single stage designation process, where the appropriate authority is the decision maker. The selection and designation of SACs is based on the criteria set out in Annex III of the Habitats Directive so far as it applies to the UK. For new proposed sites, the appropriate authority will:

- consider the criteria in the first stage of Annex III of the Habitats Directive; and,
- have regard to the advice of the appropriate nature conservation body - Natural England or Natural Resources Wales (NRW).

The JNCC will provide an assessment to ministers on how a proposed SAC meets the criteria in the second stage of Annex III.

The Regulations enable the competent authority to management agreements on land within or adjacent to a national site (listed on the national site network), in order to secure its conservation. If the competent authority is unable to conclude such an agreement, or if an agreement is breached, it may acquire the interest in the land compulsorily. The competent authority may also use its powers to make byelaws to protect national sites. The

Regulations also provide for the control of potentially damaging operations, whereby consent from the competent authority may only be granted once it has been shown through Appropriate Assessment that the proposed operation will not adversely affect the integrity of the site. When considering potentially damaging operations, the competent authority apply the precautionary principle' i.e. consent cannot be given unless it is ascertained that there will be no adverse effect on the integrity of the site.

In instances where damage could occur, the competent authority may, if necessary, make special nature conservation orders, prohibiting any person from carrying out the operation. However, an operation may proceed where it is or forms part of a plan or project with no alternative solutions, which must be carried out for reasons of overriding public interest. In such instances the Secretary of State must secure compensation to ensure the overall integrity of the national site network. The competent authority are required to review consents previously granted under the Wildlife and Countryside Act 1981 for land within a national site network and may modify or withdraw those that are incompatible with the conservation objectives of the site.

The Regulations make it an offence (subject to exceptions) to deliberately capture, kill, disturb, or trade in the animals listed in Schedule 2, or pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 4. However, these actions can be made lawful through the granting of licenses by the appropriate authorities. Licenses may be granted for a number of purposes (such as science and education, conservation, preserving public health and safety), but only after the appropriate authority is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on wild population of the species concerned.

Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 is the major domestic legal instrument for wildlife protection in the UK, and is the primary means by which the following are implemented:

- The Convention on the Conservation of European Wildlife and Natural Habitats ('the Bern Convention'); and
- The Council Directive 79/409/EEC on the Conservation of Wild birds (the 'Bird Directive')

Wild Birds

The Act makes it an offence (with exception to species listed in Schedule 2) to intentionally:

- kill, injure, or take any wild bird,
- take, damage or destroy the nest of any wild bird while that nest is in use or being built (also [take, damage or destroy the nest of a wild bird included in Schedule ZA1] under the Natural Environment and Rural Communities Act 2006), or
- take or destroy an egg of any wild bird.

Special penalties are available for offences related to birds listed on Schedule 1, for which there are additional offences of disturbing these birds at their nests, or their dependent young. The Secretary of State may also designate Areas of Special Protection (subject to exceptions) to provide further protection to birds. The Act also prohibits certain methods of killing, injuring, or taking birds, restricts the sale and possession of captive bred birds, and sets standards for keeping birds in captivity.

Other Animals

The Act makes it an offence (subject to exceptions) to intentionally kill, injure or take any wild animal listed on Schedule 5, and prohibits interference with places used for shelter or protection, or intentionally disturbing animals occupying such places. The Act also prohibits certain methods of killing, injuring, or taking wild animals.

Flora, Fungi and Lichens

The Act makes it an offence (subject to exceptions) to intentionally) pick, uproot or destroy:

- any wild plant listed in Schedule 8, or
- unless an authorised person, to intentionally uproot any wild plant not included in Schedule 8,
- to sell, offer or expose for sale, or possess (for the purposes of trade), any live or dead wild plant included in Schedule 8, or any part of, or anything derived from, such a plant.

Non-native Species

The Act contains measures for preventing the establishment of non-native species which may be detrimental to native wildlife, prohibiting the release of animals and planting of plants listed in [Schedule 9](#) in England and Wales. It also provides a mechanism making any of the above offences legal through the granting of licences by the appropriate authorities.

Countryside and Rights of Way (CROW) Act 2000

[The Countryside and Rights of Way Act 2000](#) applies to England and Wales only. Part III of the Act deals specifically with wildlife protection and nature conservation.

The Act places a duty on Government Departments and the National Assembly for Wales to have regard for the conservation of biodiversity and maintain lists of species and habitats for which conservation steps should be taken or promoted, in accordance with the Convention on Biological Diversity.

Schedule 9 of the Act amends the SSSI provisions of the Wildlife and Countryside Act 1981, including increased powers for their protection and management of SSSIs. The provisions extend powers for entering into management agreements; place a duty on public bodies to further the conservation and enhancement of SSSIs; increase penalties on conviction where the provisions are breached; and include an offence whereby third parties can be convicted for damaging SSSIs.

Schedule 12 of the Act amends the species provisions of the Wildlife and Countryside Act 1981, strengthening the legal protection for threatened species. The provisions make certain offences 'arrestable', include an offence of reckless disturbance, confer greater powers to police and wildlife inspectors for entering premises and obtaining wildlife tissue samples for DNA analysis, and enable heavier penalties on conviction of wildlife offences.

Natural Environment and Rural Communities (NERC) Act 2006

The Natural Environment and Rural Communities (NERC) Act came into force on 1st October 2006. Section 41 (S41) of the Act required the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The list was drawn up in consultation with Natural England, as required by the Act.

The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under Section 40 of the Natural Environment and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

Fifty-six habitats of principal importance are included on the S41 list. These are all the habitats in England that were identified as requiring action in the (now withdrawn) UK Biodiversity Action Plan (UK BAP) and continue to be regarded as conservation priorities in the subsequent UK Post-2010 Biodiversity Framework. They include terrestrial habitats such as upland hay meadows to lowland mixed deciduous woodland, and freshwater and marine habitats such as ponds and subtidal sands and gravels.

There are 943 species of principal importance included on the S41 list. These are the species found in England which were identified as requiring action under the (now withdrawn) UK BAP and which continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework. In addition, the hen harrier has also been included on the list because without continued conservation action it is unlikely that the hen harrier population will increase from its current very low levels in England.

Protection of Badgers Act 1992

Badgers and their setts (burrows) are protected under the Act. This makes it an offence to kill or take a badger, to cruelly ill-treat a badger, or to interfere with a badger sett, including disturbing a badger while it is occupying a sett.

Licences to permit otherwise prohibited actions can be granted under Section 10 of the Act for various purposes. This includes licences to interfere with a badger sett for the purpose of development as defined by Section 55(1) of the Town and Country Planning Act 1990.

Licences may be granted in order to close down setts, or parts of setts, prior to development or to permit activities close to a badger sett that might result in disturbance. A licence will be required if a sett is likely to be damaged or destroyed in the course of development or if the badger(s) occupying the sett will be disturbed.

Licences can be applied for at any time, but a licence for development will not normally be issued unless full planning permission has been granted. The closure of setts under licence is normally only permitted during July to November, inclusive.

The Hedgerow Regulations 1997

The intention of the Act is to protect important countryside hedges from destruction or damage. The Act does not apply where planning permission has been granted. There are various other exemptions under the Act, including:

- To make a new opening in substitution for an existing one that gives access to land. For example, a gate. However, the old opening must be filled in within 8 months;
- To obtain access to land where other means are not available or are only available at disproportionate cost;
- For the proper management of the hedgerow. This means real management, such as coppicing. But if the hedgerow is deliberately 'over-managed' this might qualify as removal.

If the proposed works are not exempt or subject to a current planning permission then the landowner must serve a Hedgerow Removal Notice in writing on their local planning authority. The authority then has 42 days (which period can be extended if the applicant agrees) to determine whether or not the hedge is considered 'important' under the regulations, and if so, whether or not to issue a Hedgerow Retention Notice. The local authority does not have to issue a Retention Notice, even if the hedgerow counts as important. If they do not issue a notice for an important hedge this is often on condition that certain things are done, e.g. reinstatement or replanting to a certain standard, or creation of an equivalent boundary elsewhere.

National Planning Policy Framework

The latest version of the NPPF came into being in July 2021, relevant sections are as follows:

Section 15 of the NPPF relates specifically to 'Conserving and Enhancing the Natural Environment'. Paragraph 174 states that '*Planning policies and decision should contribute to and enhance the natural and local environment by:*

- *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);*
- *recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*
- *maintaining the character of the undeveloped coast, while improving public access to it where appropriate;*
- *minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*
- *preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and*
- *remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.'*

Paragraph 175 states that '*Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.*'

Paragraph 179 states that '*To protect and enhance biodiversity and geodiversity, plans should:*

- *Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and*
- *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.*'

Paragraph 180 states that *'When determining planning application, local planning authorities should apply the following principles:*

- *if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- *development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the Site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
- *development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and*
- *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.'*

Paragraph 181 states that *'The following should be given the same protection as habitats sites:*

- *potential Special Protection Areas and possible Special Areas of Conservation;*
- *listed or proposed Ramsar sites; and*
- *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.'*

Paragraph 182 states that *'The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site. '*

Appendix B Target Notes

1. Fly-tipped waste present in the dense scrub.
2. Chicken coup.
3. Dried pond.
4. The semi-improved grassland is horse-grazed. Horses were recorded grazing at the time of survey.
5. Wall cotoneaster.

Appendix C Illustrative Site Photographs



Photograph 1: Dense scrub present throughout the majority of the Site.



Photograph 2: Neutral semi-improved grassland present in the north of the Site.



Photograph 3: Unimproved calcareous grassland in the southern half of the Site.



Photograph 4: Semi-improved calcareous grassland in the north-east of the Site.



Photograph 5: The paddock area and stables buildings in the north of the Site.



Photograph 6: Scattered scrub within the calcareous grassland in the south of the Site.

