The Bull Inn, 333 Crews Hole Road, Baptist Mills, Bristol BS5 8BQ

Preliminary Ecological Appraisal & Biodiversity Net Gain Assessment

January 2025

***on behalf of* Caldecotte Group**

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Client	Caldecotte Group
Job name	The Bull Inn, 333 Crews Hole Road, Baptist Mills, Bristol BS5 8BQ
Survey date	24th October 2024
Report date	26th November 2024, revised 6th January 2025
Report title	Preliminary Ecological Appraisal & Biodiversity Net Gain Assessment
Reference	W6128_rep_The Bull Inn, Bristol_06-01-25

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Report Contents

1 Introduction

1.1 Site Description & Context

The Bull Inn, referred to as 'the site' within this report, is a former Public House located to the east side of Crews Hole Road, Baptist Mills, in Bristol BS5 8BQ. The approximate Ordnance Survey grid reference for the site is ST 6290 7268.

The site comprises the former pub building of The Bull Inn (developed land; sealed surface – buildings) and areas of tarmacked hard-standing (developed land; sealed surface – other developed land). Also within the site is a neglected pub garden (vegetated garden) and an area of bramble scrub. *Buddleia davidii* is present within the site.

The site is located within a suburban area and is surrounded to the west, north and east by built residential development. To the south is an area of broadleaved woodland, which leads into an area of ancient woodland. The River Avon is located approximately 70m to the west of the site.

1.2 Proposed Works

There is a proposal to demolish the existing building and to erect a block of 9 flats within the site.

1.3 Aims of Study

The aims of this study are to describe and evaluate the habitats present within the site and to assess the potential for the site to support protected and notable species. The report discusses the likely impacts of the proposed development on the ecology of the site, on valued habitats and on protected/notable species. The study also makes recommendations for appropriate mitigation measures and habitat enhancement with regard to habitats and species.

One specific aim of this study is to survey the building for bats and/or evidence of bats. The study assesses the overall potential of the building to support roosting bats, and discusses the likely impact of the proposed removal of building on bats and their habitats.

The report makes recommendations for appropriate mitigation, compensation and enhancement measure and the potential impacts are assessed in accordance with the legal protection afforded to bats under The Conservation of Habitats & Species Regulations 2017. The need for a European Protected Species (Bat) Licence is also discussed in light of the impact assessment.

A further aim of this study is to assess and quantify the biodiversity value of the site and to assess and calculate the impacts of the proposed development on the site's biodiversity value, given as a net loss, no net change or net gain in biodiversity units, in line with the National Planning Policy Framework (NPPF) and Environment Act 2021.

This report aims to:

- Establish the total number of baseline biodiversity units for the site prior to the development taking place;
- Establish the total number of biodiversity units which will be created, retained and/or enhanced under landscape and ecological mitigation proposals for the site of; and
- Determine whether the proposed development scheme will result in a net loss, no net loss or a net gain for biodiversity

The Statutory Biodiversity Metric is used as a tool to assess Biodiversity Net Gain (BNG).

1.4 Biodiversity Statement

1.4.1 Exemptions

The proposals are not exempt from the Biodiversity Net Gain condition.

1.4.2 Pre-development Biodiversity Value of On-site Habitats

The pre-development biodiversity value of the site is 0.2 Habitat Units.

Watercourse Units and Hedgerow Units are not applicable to this site.

1.4.3 Date the On-site Pre-development Biodiversity Value was Calculated

12th November 2024.

1.4.4 Version of the Biodiversity Metric

Statutory Biodiversity Metric (Appendix 7).

1.4.5 Version of the Biodiversity Metric Publication Date

24th July 2023

1.4.6 Supporting Documentation

I. Biodiversity Metric calculation – provided in Excel format as Appendix 7 to this report. Results as follows:

- **+0.17 Habitat Units, +89.49% increase**

II. Onsite irreplaceable habitats – not applicable
III. Onsite habitats existing on the date of the application for planning permission.

Table 1. UKHab habitats existing on the date of the application for planning permission.

Primary Code	Secondary Code	Description
u1b5	-	Developed land; sealed surface – buildings
u1b6	-	Developed land; sealed surface – other developed land
u1	828, 518	Vegetated garden
h3d	518, 853	Bramble scrub (retaining wall)

1.4.7 Loss of On-site Habitats

There has been no loss of on-site habitats prior to the submission of the planning application.

Does the pre-development biodiversity value and date used above factor in the loss of any onsite habitat because of activities carried out before the submission of this application? – not applicable.

1.4.8 Irreplaceable Habitats

There are no irreplaceable habitats within the site.

2 Methodology

2.1 Desk Study

The Bristol Regional Environmental Records Centre (BRERC) was contacted in October 2024 to gather records that it holds for protected and notable species, and non-statutory sites of nature conservation importance from within a 1km radius of the site.

The Multi-Agency Geographic Information for the Countryside (www.magic.gov.uk) website was searched for information regarding internationally protected sites (e.g. Special Areas of Conservation) within 5km of the survey area and statutory sites of nature conservation importance (e.g. Sites of Special Scientific Interest) within a 1km radius of the site. Other Internet resources interrogated as part of the desk study include:

- Bing Maps - www.bing.com/maps
- Google Earth - www.earth.google.co.uk
- Google maps - www.google.co.uk/maps

Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 and the Buckinghamshire Biodiversity Action Plan (BAP) were also consulted to gather information pertaining to priority habitats and species for conservation action at the national and local level.

Aerial photography interpretation is used to place the site into an ecological context and to provide information on the nature of the habitats beyond the site boundary. The information gathered is used to provide a baseline to the habitat assessment.

Given the nature of the site, and the habitats that are present, it was not considered necessary to repeat the formal desk study through the Local Records Centre.

2.2 Extended UKHab Habitat Survey

An extended UKHab Habitat Survey was undertaken on 24th October 2024 by Edward Bodsworth *MA (Cantab) PhD MCIEEM*.

A walkover of the site was conducted, and a description of the habitats present was prepared using standard UKHab methodology. The field survey technique used is detailed in the UK Habitat Classification User Manual (Butcher, Carey, Edmonds, Norton, & Treweek, UK Habitat Classification Manual Version 1.1, 2020).

The MAGIC website and Google Earth Pro satellite imagery were also used to determine whether there are known or possible locations for rare and/or habitats of high nature conservation importance.

Field survey maps were prepared in QGIS and printed off for use in the field. Survey sheets were printed at a scale relevant to the scope and extent of the survey. They are between 1:10,000 and 1:200 scale.

The UKHab system comprises a five-level Primary Habitat Hierarchy and a list of Secondary Codes, the latter is divided into Essential codes and Additional Codes. It is mandatory that each recorded habitat parcel (which can be a point, line or polygon using geospatial vector data terminology) is allocated a single Primary Habitat Code and to record the presence of all Essential Secondary Code features associated with that habitat parcel. Additional Secondary Codes can also be associated with habitat parcels, where it is relevant to the whole parcel. The UKHab system recommends that up to six Secondary Codes can be allocated to a single habitat parcel.

The UKHab system includes all habitat types identified in the UK, irrespective of scale and geographic range, including all habitats listed under Section 41 of the NERC Act 2006 and all Habitats Directive Annex 1 habitats recorded in the UK. Where possible, synonyms for UKHAB habitats in other major habitat classifications are provided in the definitions.

The UK Habitat Classification Version 2.0 has been used (UKHab Ltd, 2023), with the use of Level 3 to 5 Primary Habitats and Secondary Codes. Primary Habitats and Secondary Codes follow the UKHab. Definitions listed in the aforementioned document. The Secondary Codes selected are appropriate to the site and habitats recorded.

Target notes were also prepared on features of particular ecological interest and an assessment was made of the site's potential to support protected and notable species (such as species listed under Section 41 of the NERC Act 2006) as well as invasive species (listed on Schedule 9 of the Wildlife & Countryside Act 1981).

2.3 Initial Bat Survey & Preliminary Roost Assessment

An initial (daytime) bat survey and preliminary bat roost assessment (PRA) were also undertaken on 24th October 2024 by Jan-Piet Stuursma, who holds a licence to survey for bats in all counties of England (Natural England Bat Survey Licence No. WLM-A34 Level 2: 2018-37063-CLS-CLS).

A detailed internal and external survey of the building of The Bull Inn was undertaken using a 1 million candle-power torch in order to look for bats and/or evidence of bats and to assess the potential of the building to support roosting bats. Internal rooms, loft spaces (if present) and external elevations were inspected for evidence of bats including, bat droppings, urine stains, feeding remains (such as moth wings) and characteristic fur staining around access points.

The bat survey was undertaken according to best practice guidelines published by the Bat Conservation Trust (Collins, 2023) and the *Bat Workers Manual* (JNCC, 2010).

The study also takes into account the nature of the building and the ecological context of the property, including the following factors which may increase the likelihood of roosting bats being present (Collins, 2023):

- Age of the building (pre-20th Century or early 20th Century construction)
- Nature of construction; traditional brick, stone or timber construction
- Large and complicated roof void with unobstructed flying spaces
- Large (>20 cm) roof timbers with mortise joints, cracks and holes
- Entrances and gaps for bats to fly and crawl through
- Poorly maintained fabric providing ready access points for bats into roofs, walls; but at the same time not being too draughty and cool
- Roof warmed by the sun, south-facing roofs in particular
- Weatherboarding and/or hanging tiles with gaps
- Undisturbed roof voids
- Buildings and built structures in proximity to each other providing a variety of roosting opportunities throughout the year
- Buildings or built structures close to good foraging habitat, in particular mature trees, parkland, woodland or wetland, especially in a rural setting

The following criteria are used to determine the level of 'bat roost potential' within buildings (Collins, 2023):

Table 2. Criteria for the assessment of buildings for roosting bats (Collins, 2023).

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

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

[a] Negligible is defined as 'so small or unimportant as to be not worth considering, insignificant'. This category may be used where there are places that a bat could roost or forage (due to one attribute), but it is unlikely that they actually would (due to another attribute).

[b] For example, in terms of temperature, humidity, height above ground level, light levels or level of disturbance.

[c] Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten *et al.,* 2016 and Jansen *et al.,* 2022). Common pipistrelle swarming has been observed in the UK (Bell, 2022 and Tomlinson, 2020) and winter hibernation of numbers of this species has been detected as Seaton Delaval Hall in Northumberland (National Trust, 2018). This phenomenon requires some research in the UK, but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in prominent buildings in the landscape, urban or otherwise.

Confirmed presence of roosting bats is where evidence indicates that a building or other structure is used by bats, this includes:

- bats seen roosting or observed flying from a roost or freely in the habitat;
- droppings, carcasses, feeding remains etc. found and/or
- bats heard 'chattering' inside a roost on a warm day or at dusk.

Where the possibility that bats are present cannot be eliminated or evidence of bats is found during the building inspection survey, then further surveys (such as winter hibernation, presence/absence and/or roost characterisation) are likely to be necessary if impacts on the roosting habitat (or the bats using it) are predicted.

2.4 Habitat Condition Assessment

A Habitat Condition Assessment was undertaken on 24th October 2024 by Edward Bodsworth *MA (Cantab) PhD MCIEEM*.

2.5 Biodiversity Net Gain Assessment

A Biodiversity Net Gain Assessment was conducted, using the Statutory Biodiversity Metric published by Natural England (December, 2023), to calculate the impact of the proposed development on biodiversity. The calculation also ascertains whether the proposals achieve a net gain, a net loss or no net loss in biodiversity, calculated as biodiversity units and percentage biodiversity units.

To effectively assess the impacts of the proposals the habitats within the site were classified according to the habitat types given in the UKHab classification system (Butcher *et al.*, 2020). Habitats were assessed for their condition and strategic significance according to the criteria given within the Statutory Biodiversity Metric User Guide and Technical Supplement (Natural England Joint Publication, 2023) through onsite visits and the interrogation of internet resources including MAGIC (www.magic.gov.uk) and Google Earth (www.earth.google.co.uk).

The areas of given habitats in both their current state and the proposed development were mapped using on site data, satellite imagery and QGIS software, with the resulting areas inputted into the Statutory Biodiversity Metric alongside strategic significance classifiers.

A site visit was undertaken by a suitably qualified ecologist to determine the habitats present on site, their location, size, condition and connectivity. This survey was conducted by Edward Bodsworth *MA (Cantab) PhD MCIEEM* on 24th October 2024.

The principles of biodiversity net gain as set out in the Biodiversity Net Gain Good Practice Guidelines (CIEEM, IEMA & CIRIA, 2019) have been considered throughout this process as listed below:

- **Principle 1.** Apply the Mitigation Hierarchy
- **Principle 2.** Avoid losing biodiversity that cannot be offset by gains elsewhere
- **Principle 3.** Be inclusive and equitable
- **Principle 4.** Address risks
- **Principle 5.** Make a measurable Net Gain contribution
- **Principle 6.** Achieve the best outcomes for biodiversity
- **Principle 7.** Be additional
- **Principle 8.** Create a Net Gain legacy
- **Principle 9.** Optimise sustainability
- **Principle 10.** Be transparent

2.6 Limitations on Survey Data

There were no specific limitations on the survey data, and all areas of the site and buildings could be accessed safely and thoroughly.

As with any survey undertaken on a certain date, the data presented within this report provide information at a particular point in time, and present a 'snap-shot' of the ecological status of the site. Ecosystems and species behaviour/activity are dynamic and can change over time.

Whilst this report presents a characterisation and evaluation of habitat and species status at the time of the study, it should not be taken as an exhaustive representation of the ecological status of the site either at present or into the future.

3 Results & Evaluation

3.1 Ecological Context

3.1.1 Sites of Nature Conservation Importance

3.1.1.1 Statutory Sites

There are no statutory sites of national nature conservation importance, such as Sites of Special Scientific Interest (SSSI), within a 1km radius of the site.

There are no statutory sites of international nature conservation importance, such as Special Areas of Conservation (SAC), within a 5km radius of the site.

3.1.1.2 Non-statutory Sites

The site is not located within a Site of Nature Conservation Importance (SNCI). However, one SNCI is located adjacent to the southern boundary of the site, namely Conham Vale and Dundridge Farm Woodland SNCI (see Figure1).

Conham Vale and Dundridge Farm Woodland SNCI

Semi-natural acid woodland including Priority Habitat Lowland Mixed Deciduous Woodland (much disturbed in the past by quarrying and industrial tipping). Semi-improved neutral and acidic grassland with shrubs and tall herbs.

The River Avon (Bristol) SNCI

The River Avon (Bristol) SNCI is located approximately 70m to the west of the site. The habitats of the SNCI range from tidal saline region in west (confluence with R. Severn), through brackish to freshwater in the City. Tidal to St. Anne's. Includes Priority Habitat Mudflats, and possibly Coastal Saltmarsh (Criteria 3).

In addition to these two nearby SNCIs, there are 11 other SNCIs within a 1km radius of the site, as shown in Figure 1.

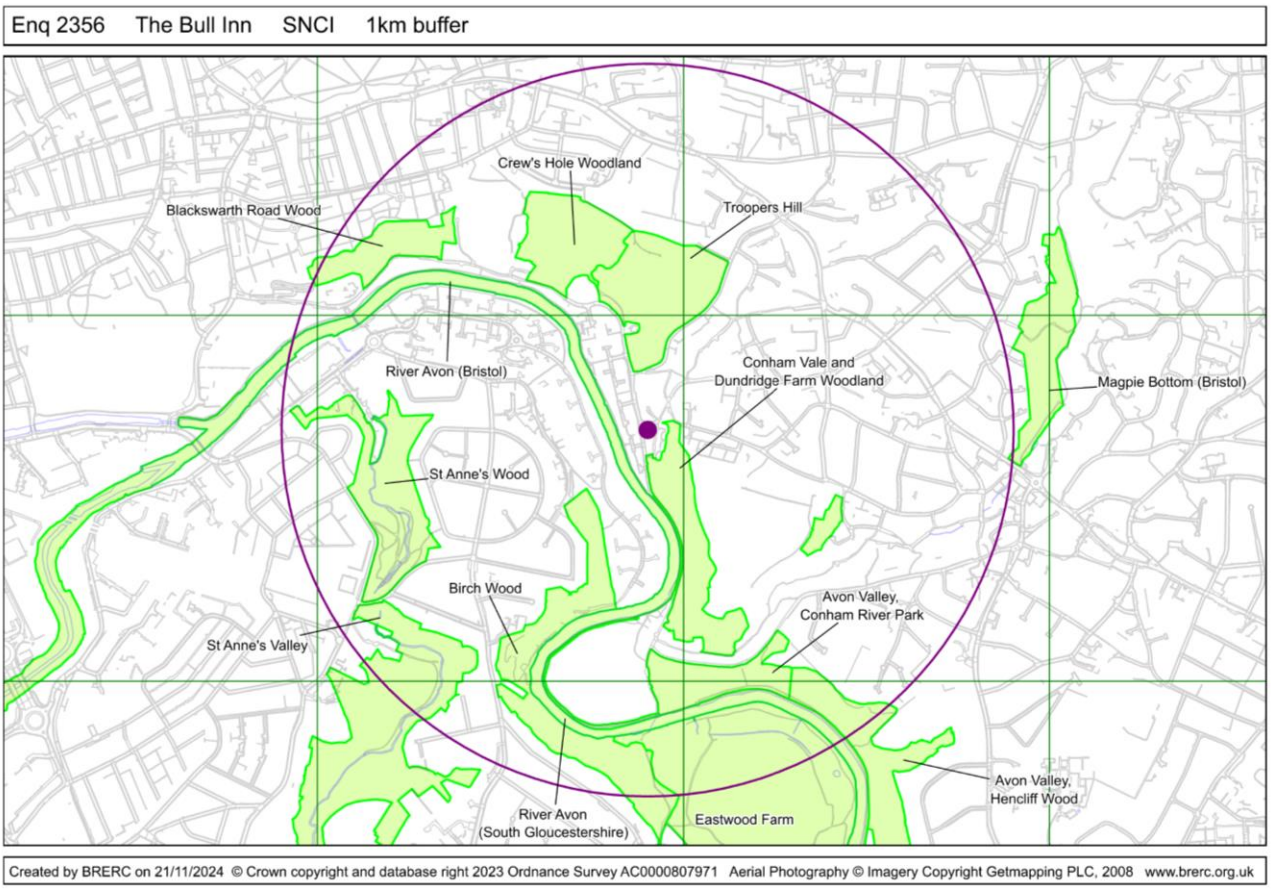

Figure 1. Non-statutory sites of nature conservation importance within a 1km radius of the site.

3.1.2 Species Records

The following sections discuss species records that are considered to be relevant, or potentially relevant to the site, given the nature of the habitats that are present within the site and the immediate surrounding area.

3.1.2.1 Bats

A number of different bat species have been recorded from the desk study search area, including species that often use buildings for roosting. The records include:

- Daubenton's bat *Myotis daubentonii*
- Soprano pipistrelle *Pipistrellus pygmaeus*
- Brown long-eared bat *Plecotus auritus*
- Common pipistrelle *Pipistrellus pipistrellus*
- Greater horseshoe bat *Rhinolophus ferrumequinum*
- Lesser horseshoe bat *Rhinolophus hipposideros*
- Natterer's bat *Myotis nattereri*
- Whiskered bat *Myotis mystacinus*

- Leisler's bat *Nyctalus leisleri*
- Noctule *Nyctalus noctula*

3.1.2.2 Other Mammals

Other mammal records include otter *Lutra lutra*, badger *Meles meles* and hedgehog *Erinaceus europaeus*.

3.1.2.3 Amphibians

There are records of five of the six UK species of amphibian from the 1km search radius around the site, including great crested newt *Triturus cristatus*, smooth newt *Lissotriton vulgaris*, palmate newt *Lissotriton helveticus*, frog *Rana temporaria* and toad *Bufo bufo*. The records of great crested newt date from 2000 and 2001.

3.1.2.4 Reptiles

Records of reptile species include all four of the commonest species which include adder *Vipera berus*, grass snake *Natrix helvetica*, slow worm *Anguis fragilis* and common lizard *Zootoca vivipara*.

3.1.2.5 Birds

Bird species make up by far the numerous group within the desk study data. Records of species that can use buildings for nesting are limited to house sparrow *Passer domesticus*. Records of species that often frequent gardens are also numerous and include wren *Troglodytes troglodytes*, song thrush *Turdus philomelos*, dunnock *Prunella modularis* and great tit *Parus major*.

3.1.2.6 Invertebrates

There are also numerous invertebrate species records including moths, beetles, flies, dragonflies, bees and butterflies. Butterfly species records include small heath *Coenonympha pamphilus* and grayling *Hipparchia semele*.

3.1.2.7 Plants

Plant species records are numerous and include rare plants of grassland, heathland and woodland habitats. There are also records of non-native, invasive species including Japanese knotweed *Fallopia japonica* and *Buddleia davidii*. The site is not considered to be suitable for rare grassland, woodland or heathland species.

3.2 Habitats

The following habitat types (UKHab) are present within the site.

Primary Code	Secondary Code	Description
u1b5	-	Developed land; sealed surface – buildings
u1b6	-	Developed land; sealed surface – other developed land
u1	828, 518	Vegetated garden
h3d	518, 853	Bramble scrub (retaining wall)

3.2.1 Developed Land; Sealed Surface (Building)

3.2.1.1 Former Pub Building (The Bull Inn)

The Bull Inn is a former public house of brick and stone construction, with a multi-pitched and hipped roof, and some flat-roofed sections. The pitched and hipped roofs have a covering of clay tiles. There are clay hanging tiles to the upper levels of some of the western and part of the northern elevations. There is a relatively large loft space, with multiple sections, and the roof has an underlay of traditional bitumen underfelt. The lofts are approximately 1.75m to 2m from floor to ridge.

Although disused, the external fabric of the building is in a good state of repair, with intact roof tiles and hanging tiles. Both the roof tiles and the hanging tiles are close-fitting and there are no significant gaps between or under the hanging tiles. The edges of the roofs are enclosed by intact boxes eaves and close-fitting barge boards. The external stonework and brickwork are also solid and intact and there is no obvious access for bats into the loft spaces of the building.

The former pub building is considered to have 'negligible' potential (Collins, 2023) to offer shelter to roosting bats within an undetectable roost site.

3.2.2 Developed Land; Sealed Surface (Other Developed Land)

To the south, west and north-west of the site are areas of tarmacked hard-standing, most of which appear to be former car parking areas, access and forecourt.

Areas of hard-standing are considered to be of negligible ecological value.

3.2.3 Vegetated Garden

To the north-eastern corner of the site is a neglected vegetated garden, the former pub garden. The lawns are overgrown and dominated by ruderals including stinging nettle *Urtica dioica*, ragwort *Senecio jacobaea*, Canadian goldenrod *Solidago canadensis*, hedge bindweed *Calystegia sepium*, creeping buttercup *Ranunculus repens*, ground ivy *Glechoma hederacea* and ivy *Hedera helix*, Bramble *Rubus fruticosus* and *Buddleia davidii* are also abundant to the edges of the garden. There are planted, non-native, small conifers.

The neglected vegetated garden is considered to be of low ecological value.

3.2.4 Bramble Scrub

Along the eastern boundary of the site is an area of bramble scrub, with abundant *Buddleia davidii*, to the east side of a retaining wall. Bramble scrub is considered to be of negligible ecological value.

3.3 Species

3.3.1 Bats

No bats or evidence of bats (such as bat droppings) were found within The Bull Inn. The building is considered to have 'negligible' potential suitability (Collins, 2023) for roosting bats within an undetected roost location. Roosting bats are considered to be absent.

The site is considered to be poor for foraging bats, with possible foraging habitats only in the form of the former pub garden and bramble scrub.

3.3.2 Amphibians

There are no ponds and waterbodies within the site, and therefore no opportunities for amphibians to breed. There are no ponds or standing water bodies (as shown on Ordnance Survey maps) within 500m of the site.

The site offers little or no habitat to amphibians whilst on land, as the building and hard-standing offer no shelter or protection. The former pub garden is considered to be too small and too ecologically isolated to offer habitat to amphibians. The bramble scrub may offer some cover for common amphibian species, but this habitat will be retained.

Great crested newts are considered to be absent from the site.

3.3.3 Reptiles

The site is not considered to offer suitable habitat to reptile species, including slow worms and grass snakes. The site is also surrounded by habitats that are unsuitable for reptile species.

3.3.4 Other Mammals

There is no suitable habitat for water voles or otters within the site or in immediately surrounding areas. No evidence of badgers, or badger activity, was noted in the site.

The bramble scrub may offer cover and shelter to hedgehogs and the woodland habitat immediately to the south of the site also offers potential habitat to hedgehogs.

3.3.5 Birds

The site is considered to be largely unsuitable for nesting birds, and nesting opportunities are limited to bramble scrub. However, bramble scrub can offer nesting opportunities for wren, dunnock and other small bird species. The site is not suitable for ground-nesting bird species.

There is no evidence to indicate that the building has been used by nesting birds and no old/inactive birds' nests were noted on the interior or exterior of the building.

3.3.6 Invertebrates

The site is not considered to offer any significant habitat to rare or uncommon invertebrate species. There are no suitable habitats for small heath or grayling butterflies.

3.3.7 Plants

No rare or uncommon plants are present within the site. The areas of hard-standing, bramble scrub and the pub garden provide no suitable habitats for rare or uncommon plants.

3.3.8 Other Species

The site does not offer any suitable habitat to other protected or notable species.

4 Discussion

4.1 Constraints on Study Information

There are considered to be no constraints of the study. All areas of the site could be accessed.

4.2 Relevant Legislation & Policy Guidance

4.2.1 Nesting Birds

Nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. The nesting season for most species is between March and August inclusive.

4.2.2 The Natural Environment and Rural Communities Act 2006

Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 places a duty on the Secretary of State to publish, review and revise lists of living organisms and types of habitat in England that are of principal importance for the purpose of conserving English biodiversity.

It also requires the Secretary of State to take, and promote the taking of, steps to further the conservation of the listed organisms and habitats. This is important in the context of planning decisions as the National Planning Policy Framework affords planning policy protection to the habitats of species listed by virtue of Section 41.

There are no habitats listed within Section 41 of the NERC Act 2006 that are considered relevant to the site.

Species listed within Section 41 of the NERC Act 2006 that are considered relevant to the site, or potentially relevant, include:

- Dunnock and other common birds – bramble scrub offers potential nesting opportunities

4.2.3 National Planning Policy Framework (NPPF)

The National Planning Policy Framework was updated on in December 2023 and sets out the government's planning policies for England and how these are expected to be applied. This revised Framework replaces the previous National Planning Policy Framework published in March 2012, revised in July 2018 and updated in February 2019 and July 2021.

The NPPF states that planning policies and decisions 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.

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.

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.

When determining planning applications, 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 integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

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 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.

The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitat's 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.

4.2.4 Environment Act 2021

On 15th October 2019, the government introduced a new Bill to Parliament; The Environment Bill. This Bill was given Royal Assent on 9 November 2021 thereby passing the Environment Act 2021. This legislation will help ensure that England maintains and improves its environmental protection.

The Act details a legal requirement for all developments (if not exempt) to ensure that a minimum of +10% net gain in Biodiversity is delivered.

4.3 Impact Assessment

4.3.1 Sites of Nature Conservation Importance

There are no foreseeable impacts on non-statutory sties of nature conservation importance due to their distance from the site, and the nature of the proposals, which are unlikely to have any indirect impacts on habitats outside of the site boundary.

Although Conham Vale and Dundridge Farm Woodland SNCI is located adjacent to the site boundary, the proposed development will not have any foreseeable direct or indirect impacts on woodland habitats. The main construction zone will be to the north side of the site, with soft landscaping to the southern boundary of the site.

4.3.2 Habitats

There are no foreseeable impacts on habitats of significant ecological value. Habitat loss will be limited to developed land; sealed surface and vegetated garden. Bramble scrub will be retained. Habitat creation will include modified grassland and planted trees.

The proposals will result in a predicted Biodiversity Net Gain of **+89.49% Habitat Units**; please refer to Section 5 for further detail.

4.3.3 Species

4.3.3.1 Bats

There is no evidence to suggest that the building is being used as a place of shelter/protection by roosting bats. Proposed removal of the existing building is unlikely to result in any significant impacts on bats or the places that they use for breeding, shelter and/or protection (roosts) and no specific compensation measures are considered necessary (Mitchell-Jones, 2004).

In addition, since no significant impacts on bats are predicted under The Conservation of Habitats and Species Regulations 2017, a European Protected Species (bat) licence will not be required for the proposed works to proceed. Since there are no predicted impacts on bats or their habitats, it is not necessary to consider the 'three tests' of The Conservation of Habitats and Species Regulations 2017 in this instance.

Loss of areas of developed land; sealed surface and some vegetated garden is unlikely to result in any significant impacts with regard to loss of potential bat foraging habitat, or bat movement/activity.

4.3.3.2 Birds

There is no evidence that birds are using the building for nesting, and so removal of the building will result in no foreseeable impacts on nesting birds. There are no foreseeable impacts on ground-nesting bird species.

Trimming and management of bramble scrub during the bird breeding period has the potential to result in the damage or destruction of active birds' nests, and the killing/injury of young/eggs.

4.3.3.3 Other Species

There are no foreseeable impacts on other species including reptiles, amphibians and badgers. With the retention of the bramble scrub, there are no foreseeable impacts on hedgehogs.

5 Biodiversity Net Gain Assessment

5.1 Habitat Status Before Development

The site comprises developed land; sealed surface (building and other developed land), vegetated garden, bramble scrub and a retaining wall.

Table 3. UKHab habitat baseline before development.

Area habitat baseline	
UKHab Habitat Type	**Area (ha)**
Developed land; sealed surface – buildings & other developed land	0.1008
Built linear features (retaining wall)	0.0077
Vegetated garden	0.044
Bramble scrub	0.024

5.1.1 Habitat Condition Assessment

The Habitat Condition Assessments for on-site habitats can be seen in Table 4. No habitat condition assessment is required for any of the on-site habitats.

Table 4. Baseline UKHab habitats and condition assessment before development.

Habitat	Condition	Rationale
Developed land; sealed surface – buildings & other developed land	N/A	No assessment required.
Built linear features (retaining wall)	N/A	No assessment required.
Vegetated garden	N/A	No assessment required.
Bramble scrub	N/A	No assessment required.

5.1.2 Habitat Strategic Significance

The site is not located within a local strategy area for nature conservation. However, given the proximity of woodland it is considered to be located within an area that is ecologically desirable.

5.2 Habitat Status After Development

The proposals are to remove the existing building and to erect a block of 9 flats within the site. The landscaping will include areas of amenity (modified) grassland and young (small) planted trees.

The proposed post-development habitat areas can be seen in Table 5.

Table 5. UKHab habitat areas after development.

Habitat	Retained Area (ha)	Created Area (ha)
Developed land; sealed surface – buildings & other developed land	-	0.0816
Built linear features	0.0077	-
Vegetated garden	0.0371	0.0026
Bramble scrub	0.024	-
Modified grassland	-	0.0235
Individual trees – urban trees	-	0.0407

5.2.1 Habitat Condition Assessment

The target condition assessments for post-development habitats are set out in Table 6.

It is considered that the proposed modified grassland will not pass essential criterion A, as it is likely to be species-poor. Therefore, the proposed modified grassland is likely to be of poor condition.

For individual trees to be of moderate condition, at least 3 of the following criteria will be met:

- The tree is a native species (or at least 70% within the block are native species).
- The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).
- There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.
- More than 20% of the tree canopy area is oversailing vegetation beneath.

Table 6. On-site area habitat target condition assessment after development.

Habitat	Target Condition	Rationale
Developed land; sealed surface – buildings & other developed land	N/A	No assessment required.
Built linear features	N/A	No assessment required.
Vegetated garden	N/A	No assessment required.
Bramble scrub	N/A	No assessment required.
Modified grassland	Poor	Fails essential criterion A.
Individual trees – urban trees	Moderate	Passes 3 or 4 criteria.

5.3 Biodiversity Metric Calculation Summary

The result of the calculation is:

Total net unit change in habitats: **+0.17 Habitat Units**
Total net % change in habitats: **+89.49% Habitat units**

The Trading Rules are satisfied.

Please refer to Appendix 7 (separate Excel Spreadsheet for the Statutory Biodiversity Metric) for full details of the calculation.

6 Recommendations

6.1 Further Survey

No further surveys are considered necessary.

6.2 Mitigation/Enhancement Measures

6.2.1 Habitats

Native tree and shrub species which are considered suitable for the site include:

- Beech *Fagus sylvatica*
- Blackthorn *Prunus spinosa*
- Crab apple *Malus sylvestris*
- Dog rose *Rosa canina*
- Dogwood *Cornus sanguinea*
- English oak *Quercus robur*
- Field maple *Acer campestre*
- Guelder rose *Viburnum opulus*
- Hawthorn *Crataegus monogyna*
- Hazel *Corylus avellana*
- Holly *Ilex aquifolium*
- Hornbeam *Carpinus betulus*
- Spindle *Euonymus europaeus*
- Wayfaring tree *Viburnum lantana*
- Wild cherry *Prunus avium*

It is recommended that *Buddleia davidii* is removed and eradicated from the site.

6.2.2 Species

6.2.2.1 Bats

Timing

No timing constraints are considered necessary.

Careful Work Practices

Works to the building should proceed in a careful and controlled manner. Contractors should be briefed with regard to the fact that individual bats can often exploit very small crevices as roost sites (such as gaps under roof tiles) and that bats can move between roost sites on a regular basis.

In the very unlikely event that bats or significant evidence of bats (for example large accumulations of fresh bat droppings) are encountered, works should stop immediately, and advice sought from a suitably qualified and licenced ecologist.

Lighting

External lighting should only be installed for reasons of safety and security and should be designed in such a way as to avoid and minimise potential impacts on bats that may be active within the locality in accordance with guidance contained in '*Bats and artificial lighting in the UK Bats and the Built Environment series Guidance Note 08/18'* (Bat Conservation Trust and the Institute of Lighting Professionals).

If lighting is required, it should be kept at low level and at low intensity, with hoods and baffles used to direct the light to where it is required (Bat Conservation Trust 2008, Emery 2008). To minimise the impact on bats, the use of low pressured sodium lamps is recommended in preference to mercury or metal halide lamps which have a UV element that can affect the distribution of insects and attract bats to the area, affecting their natural behaviour (Bat Conservation Trust 2008).

The key principles for choosing a suitable type of lamp are:

- Avoid blue-white short wavelength lights: these have a significant negative impact on the insect prey of bats. Use alternatives such as warm-white (long wavelength) lights as this will reduce the impact on insects and therefore bats.
- Avoid lights with high UV content: (e.g. metal halide or mercury light sources) or reduce/completely remove the UV content of the light. Use UV filters or glass housings on lamps which filter out a lot of the UV content.

Selecting an appropriate lamp unit that is designed to be environmentally friendly will minimise light spill, but further controls can be imposed by installing directional accessories such as baffles, hoods and louvres on lamps to direct light away from ecologically sensitive areas.

LED (Light Emitting Diode) units are an effective way to direct the light into small target areas and are recommended for lighting the proposed parking and turning area. Composite LEDs can be switched off to reduce/direct the light beam to specific areas.

Enhancement

It is recommended that bat boxes are integrated into the external fabric of the proposed new building.

6.2.2.2 Birds

Timing

The clearance of scrub and woody vegetation (if at all required) should be undertaken outside of the bird breeding period, avoiding March to August inclusive. This will protect birds from the destruction of active nests and the killing/injury of eggs and young.

Enhancement

It is recommended that bird boxes are integrated into the external fabric of the proposed new building.

7 References

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8 Appendix 1. Photographs

Photograph 1. The Bull Inn viewed from the west.

Photograph 2. Detail of the north-western corner of the former pub building.

Photograph 3. General view of the former pub building.

Photograph 4. General view of the former pub building from the south.

Photograph 5. General view of the building from the south-west.

Photograph 6. Hard-standing to the west of the building.

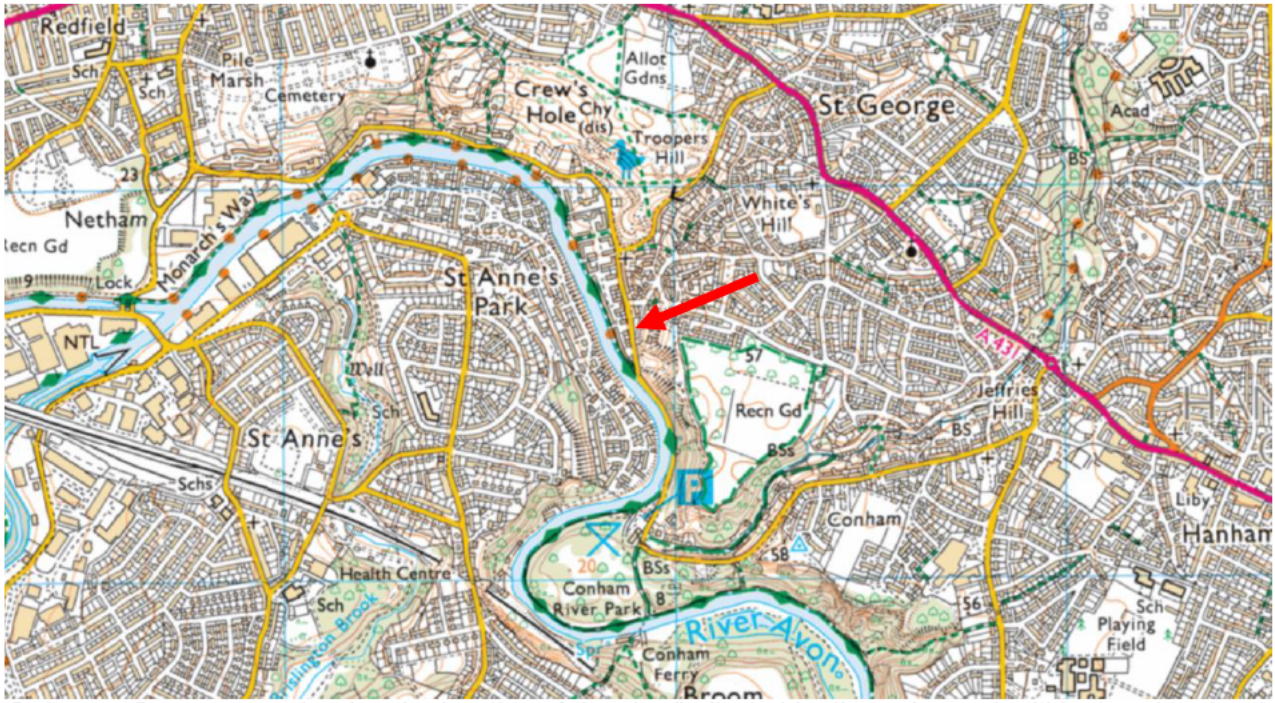
Photograph 7. Hard-standing to the south of the building.

Photograph 8. The site viewed from the south, with bramble and *Buddleia davidii* scrub to the right.

Photograph 11. Former pub garden.

Photograph 12. Former pub garden.

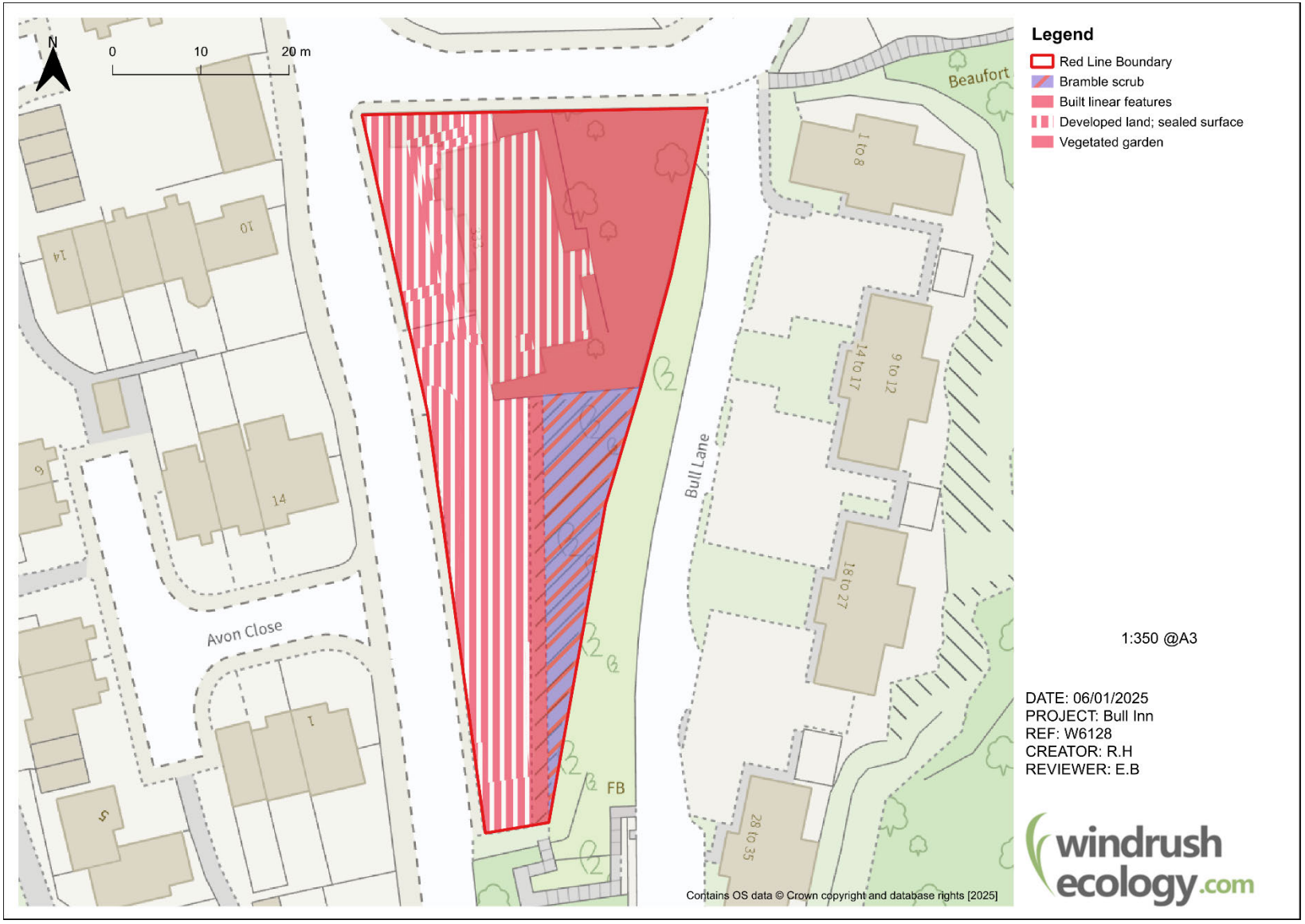
9 Appendix 2. Site Location Plans



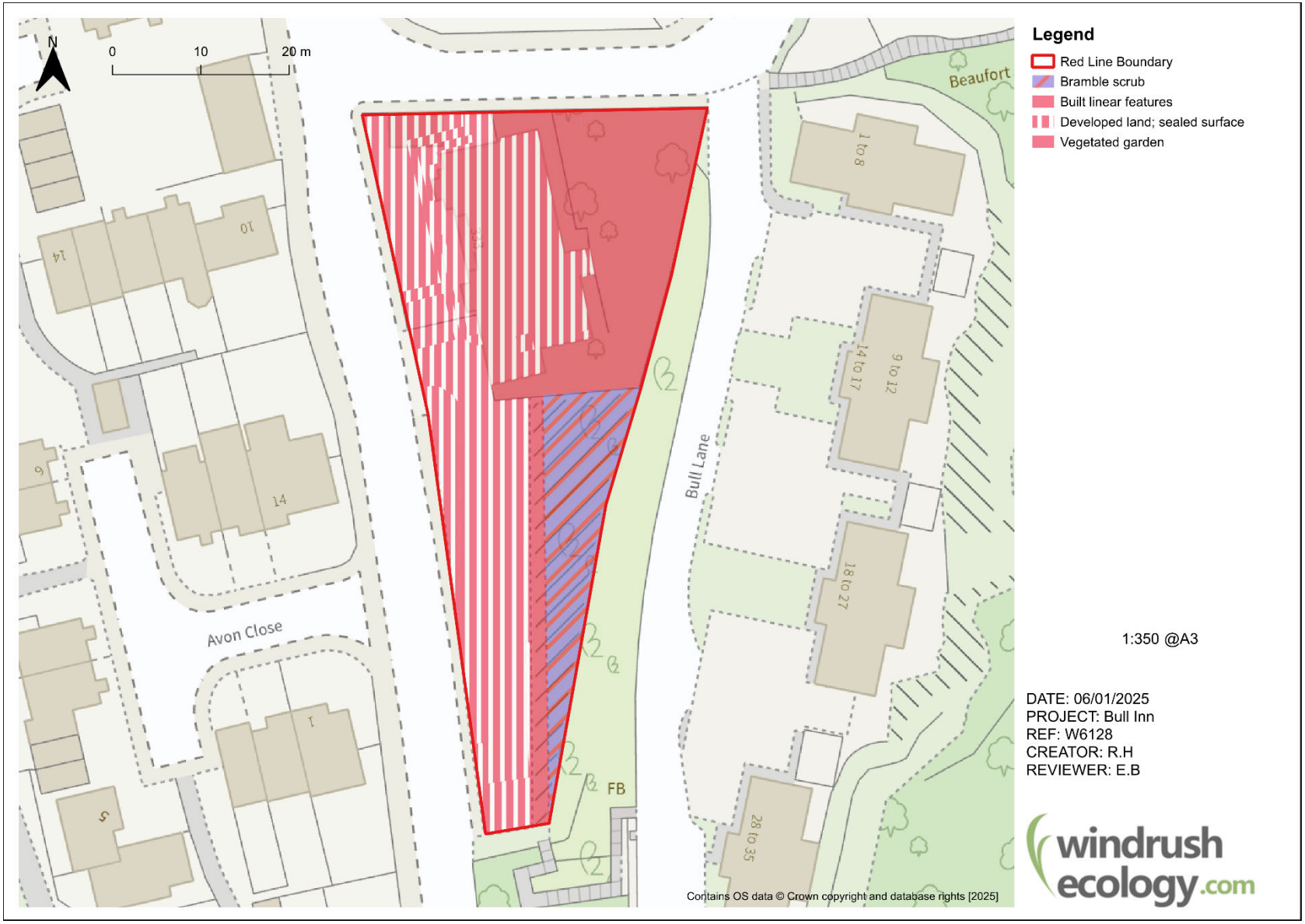
Ordnance Survey map showing the location of the site (indicated by the red arrow) within the wider local area (Source: OSM Standard).

Aerial photograph of the site, indicated by the red outline (Source: Google Satellite).

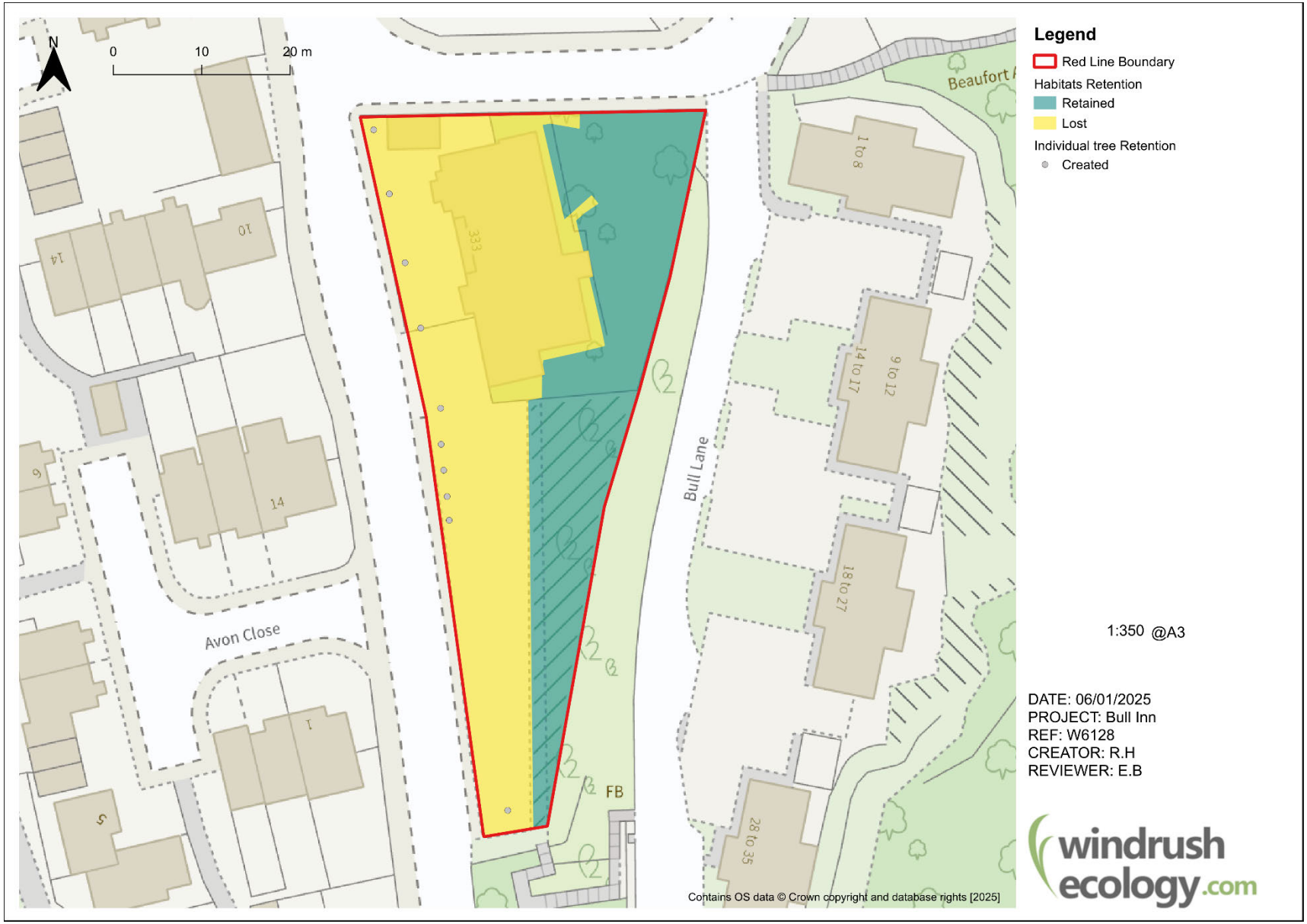
10 Appendix 4. UKHab Baseline Site Plan



11 Appendix 5. UKHab Proposed Site Plan



12 Appendix 6. Habitat Change Plan



13 Appendix 7. Statutory Biodiversity Metric

Please refer to separate Excel spreadsheet.