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Report prepared for: David White

For the Site of: The White House, Valley Rise, Royston, SG8 9GH

Version:	Written by:	Checked by:	Final:
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Final	Julian Newman 09/01/2023	Tanya O'Connor 15/01/2024	Julian Newman 16/01/2024

Cherryfield Ecology has prepared this report for the named clients' use only.

Ecological reports are limited in shelf life, Natural England usually expect reports for licences to be from the most recent or current season, e.g. May 2024 to May 2025 for bats. Therefore, should the project not proceed within 12 months of this report an updated survey should be undertaken in order to check for changes that may have occurred on site. Information is believed to be accurate at the time of the survey; recommendations are made without bias based on good practice guidelines within the industry. However, species presence and ecological parameters can change over time.

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Ecological Appraisal (EA)

0.0 Non-Technical Summary

0.1 Background

This report follows national guidelines JNCC (2010) and UKHab's (2023) allowing for a daytime inspection, and recommends for further surveys if considered necessary. If a deviation from the guidelines has been made, this will be detailed in the Method Section.

The following report details the findings and recommendations for the site of The White House, Valley Rise, Royston, SG8 9GH.

The client commissioned Cherryfield Ecology to undertake an EA as the proposals include for demolition of the existing garage, extension and shed and construction of three new dwellings.

Plans have been provided (Appendix I).

0.2 Results and Findings

The site consists of one detached two-storey dwelling with an attached garage and extension (B1), a storage shed (B2), Hardstanding (Developed Land; Sealed Surface), Amenity Grassland (Vegetated Garden), Scattered Trees (Urban Tree) and Lines of Trees (Line of Trees).

The site provides **low** potential for badger due to the lack of suitable habitat on-site, however, there is connectivity to more suitable habitats.

The site provides **low** potential for Great Crested Newt (GCN) and reptiles due to the limited suitable habitat on-site and available connectivity to more suitable habitats.

B1 is a **confirmed** bat roost as evidence of bats (droppings) were found within the loft.

B2 provides **negligible** potential for roosting bats due to the lack of roosting features and access points throughout the building.

The site provides **high** potential for breeding birds due to the presence of suitable habitat on-site.

The site provides **negligible** potential for other protected species due to the lack of suitable habitat on-site.

0.3 Impact Assessment and Recommendations

Badger - No further surveys are necessary; however, if any badger setts are found throughout works, all works must stop, and advice sought.

Bats - **Presence/likely absence surveys** (moderate) will be required (two surveys, three weeks apart), with two surveyors to cover the building B1; these must be undertaken between May to August. These are required to establish whether bats are accessing the loft void via the north-facing hip above the garage (where works are proposed). One of these surveys should be undertaken pre-dawn due to the potential presence of Brown Long-Eared Bats.

Breeding Birds - No further surveys are recommended; however, the development should take place outside the nesting season (March to August). If this is not possible, it is recommended that a qualified ecologist is on-site to ensure the building/vegetation is not occupied by breeding birds, prior to demolition/clearance. Should an occupied nest be found, a buffer zone would need to be created until the nest is no longer in use.

Great Crested Newt (GCN) - No further survey is necessary; however, a qualified ecologist will need to supervise the clearance of any compost heaps/timber piles on-site via a destructive search. If GCN are found on site, all works must stop, and advice sought.

Reptiles - No further survey is necessary; however, a qualified ecologist will need to supervise the clearance of compost heaps/timber piles on site via a destructive search.

Other protected species - No further survey is necessary; however, if any other protected species are found on site, all works must stop, and advice sought.

Habitats - All habitats found are common and widespread, no impacts are foreseen.

No impacts are foreseen; however, if any protected species are found during the development, all works must stop, and advice sought.

The findings outlined in this report are valid for one year, after which updated surveys will be required.

Enhancements and mitigation are recommended (please see Section 4.4 for further details).

1.0 Introduction

1.1 Aim

The aim of this report is to inform of ecological constraints that may affect the development proposals and recommend to the client if further surveys are required for protected species. An impact assessment is undertaken at this stage; however, if further surveys are required, additional and unexpected impacts may result. The information within this report can be used as the baseline for any Biodiversity Net Gain (BNG) metric requirements, however, the calculations are not included within this report.

1.2 Background Information

The client, David White, has commissioned Cherryfield Ecology to undertake an EA for the site of The White House, Valley Rise, Royston, SG8 9GH. Planning permission is being sought to demolish the existing garage, extension and shed and construct three new dwellings.

This survey has checked all habitats, buildings, trees (from ground level only) or structures due to be affected by the proposals on site; it includes checking for protected species, signs of protected species or habitat value e.g. crevices, badger setts, ponds etc. as well as mapping the habitats on site.

The inspection was conducted on 04/01/2024.

The survey can only ever provide a 'snapshot' of the site at the time of the survey and circumstances may change following this report. Health and Safety restrictions or obstructions may limit the ability to find evidence.

Biological records have been requested to give the report context and allow a study of the surrounding area. The information is often sensitive and therefore a synopsis is provided.

The survey can be conducted year-round with the optimal period between mid-March and mid-October (south)/1st April and 30th September (north). However, it can be limited due to bad weather and in the winter, when some species are not as active,

thus evidence and species are often not found. During these periods, habitat value (likely presence) becomes more important to the assessment of the site.

Summary of legislation and National Planning Policy that protects wildlife in England:

- The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.
- Wildlife and Countryside Act 1981 as amended.
- Countrywide and Rights of Way Act 2000.
- Natural Environment and Rural Communities Act 2006.
- National Planning Policy Framework (“NPPF”).
- Circular 06/05.

This legislation makes it illegal to:

- Intentionally or deliberately kill, injure or capture a protected species.
- Deliberately disturb a protected species, whether at rest or not.
- Damage, destroy or obstruct access to a resting place.
- Possess or transport a protected species or any part of that species, unless acquired legally.
- Sell, barter or exchange a protected species, or any part of a species.

1.3 Species Specific Information

All UK-protected species have the same protection and the detail under Bats also applies to GCN, Dormouse, Otters and the two UK-protected reptiles.

1.3.1 Breeding Birds

All nesting birds are protected under the Wildlife and Countryside Act (as amended) 1981, 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. Furthermore, a number of birds enjoy further protection under that Act and are listed on Schedule 1 of the Act. These further protected birds are also protected from disturbance and it may be necessary to operate a “no-go” buffer zone around such nests - typically out to 5m.

1.3.2 Bats

All 18 species of bat common in the UK (17 known to be breeding) are fully protected under the Wildlife and Countryside Act (as amended) 1981 through inclusion in Schedule V of the Act. All bat species in the UK are also included in Schedule II of The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which transpose Annex II of the Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (“Habitats Directive”) which defines United Kingdom protected species of animals.

Bats species are afforded further protection by the Countryside and Rights of Way Act 2000; and the Natural Environment and Rural Communities Act 2006.

This combined legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture bats.
- Deliberately disturb bats, whether at roost or not.
- Damage, destroy or obstruct access to bat roosts.
- Possess or transport bats, unless acquired legally.
- Sell, barter or exchange bats.

1.3.3 Reptiles

There are six species of reptiles in Great Britain (Edgar *et al.*, 2010) and four of these are commonly found; the Barred Grass Snake *Natrix helvetica*, Adder *Vipera berus*, Common Lizard *Zootoca vivipara* and Slow Worm *Anguis fragilis*.

All native British species of reptiles are legally protected through their inclusion in Schedule V of the Wildlife and Countryside Act 1981. As such, all species are protected from deliberate killing or injury. Therefore, where development is permitted, and there will be a significant change in land use, a reasonable effort must be undertaken to avoid committing an offence. The same act makes the trading of native reptile species a criminal offence without appropriate licensing.

Two species of reptile; the Smooth Snake *Coronella austriaca* and Sand Lizard *Lacerta agilis* are further protected under The Conservation of Habitats and Species

(Amendment) (EU Exit) Regulations 2019, which defines UK protected species of animals (“rare reptiles”).

1.3.4 Badgers

Badger *Meles meles* and its habitat are protected under The Protection of Badgers Act 1992, Schedule V of the Wildlife and Countryside Act 1981, and Appendix III of the Bern Convention 1979.

This legislation makes it an offence to:

- Kill, injure, take or possess a badger.
- Interfere with, damage or destroy a badger sett including e.g. obstructing access to a badger sett.
- Cruelly treat or harm a badger.
- Disturb a badger in a sett.

1.3.5 Great Crested Newts

Great Crested Newts (GCN) *Triturus cristatus* are listed in both The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and in Schedule V of the Wildlife and Countryside Act 1981.

GCN are afforded further protection by the Countryside and Rights of Way Act 2000; and the Natural Environment and Rural Communities Act 2006.

1.3.6 Otter

The Eurasian Otter *Lutra lutra* is the only Otter species native to the UK. The Eurasian Otter is fully protected under Schedule V of the Wildlife and Countryside Act (as amended) 1981 and in Schedule II of The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which transpose Annex II of the Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (“Habitats Directive”) which defines United Kingdom protected species of animals. This legislation makes it illegal to:

- capture, kill, disturb or injure otters (on purpose or by not taking enough care).
- damage or destroy a breeding or resting place (deliberately or by not taking enough care).
- obstruct access to their resting or sheltering places (deliberately or by not taking enough care).
- possess, sell, control or transport live or dead otters, or parts of otters.

1.3.7 Water Vole

The Water Vole *Arvicola amphibius* is protected under Schedule V of the Wildlife and Countryside Act 1981 and is a priority conservation species. This legislation makes it illegal to:

- intentionally capture, kill or injure water voles.
- damage, destroy or block access to their places of shelter or protection (on purpose or by not taking enough care).
- disturb them in a place of shelter or protection (on purpose or by not taking enough care).
- possess, sell, control or transport live or dead water voles or parts of them (not water voles bred in captivity).

1.4 Protected Sites and Priority Habitats

Some areas with distinctive plants, animals, habitats, geology or landforms are protected at the international, European, national and local-level under statutory and non-statutory sites. Some habitats have been identified as needing priority conservation action; UK BAP Priority Habitats are a range of semi-natural habitat types that are identified as being the most threatened and requiring conservation action.

If a statutory site, non-statutory site or UK priority habitat is to be affected by proposed development, details will be outlined below:

There are no protected sites or priority habitats located within the site boundary.

2.0 Methods

The survey follows the national guidelines JNCC (2010) and UKHabs (2023), and the following equipment is available for the inspection:

- Torches (e.g. LED Lensar type).
- Ladders (Standard 4m telescopic surveying ladder).
- Endoscope where holes, cracks and crevices are accessible.
- Mirrors (extendable and movable mirror face).
- Binoculars (Pentax close focus).
- Thermometer/hygrometer.
- Camera.
- Sample bags for collecting dropping and feeding evidence.
- Quadrat for vegetation sampling

Condition Assessments for BNG are included (where required) within the table in the results section, the excel sheets for these are released separately.

Target notes are made when appropriate to highlight, for example, protected species or an 'other feature(s)' of ecological note.

If a deviation from the guidelines has been made the reason and justification will be explained below:

No deviation from the standard guidelines has been made for this survey.

2.1 Limitations

This survey provides a snapshot of the site at the time of the survey only. Species are highly mobile and can turn up from time to time unexpectedly. All care has been taken to ensure the results and recommendations are suitable to the context of the development and the information gathered on surveys.

Table 1: Habitat value (likelihood) of protected species presence assessed against Collins (2023), Edgar *et al.* (2010) and Natural England (2007) etc.

Likelihood of species presence (Habitat Value)	Features that species can use, regardless of evidence being present.
Confirmed Presence	Species are found to be present during the survey. Evidence of species is found to be present during the survey.
Higher likelihood of presence	Buildings, trees or other structures or habitat features of particular significance for use by protected species e.g. nesting habitat, roosting opportunities, and ponds. Habitat of high quality for foraging e.g. broadleaved woodland, tree-lined watercourses and grazed parkland. Site is connected with the wider landscape by strong linear features that would be used by commuting species e.g. river and or stream valleys and hedgerows. Site is close to known locations of records for protected species.
Moderate and Lower likelihood of species presence	Several potential habitat opportunities in buildings, trees or other habitats. Habitat could be used for foraging e.g. trees, shrub, grassland or water. Site is connected with the wider landscape by linear features that could be used by commuting species e.g. lines of trees and scrub or linked back gardens. A small number of less significant habitat opportunities. Isolated habitat for foraging e.g. a lone tree or patch of scrub. An isolated site not connected by prominent linear landscape features.
Negligible likelihood of species presence	No features suitable for roosting, minor foraging or commuting.

3.0 Results

The following section details the results of the desk study, inspection and survey; it includes MAGIC information, biological records data and map/aerial photo information. The results detail the building, structure or tree (numbered for reference) description of any evidence found and habitat value if no evidence has been located.

3.1 Desk Study

The desk study is centred on Grid Reference - TL 36543 40780 and Postcode - SG8 9GH.

3.1.1 MAGIC

The following statutory sites and Natural England Protected Species (NEPS) have been located within the 2km search area (Figure 1).

Table 2: Magic search results

Receptor	Distance and Direction to Nearest (m/km)	Description
Statutory sites	~1367m southwest	Therfield Heath (LNR)
	~1367m southwest	Therfield Heath (SSSI)
	~1620m northwest	Holland Hall (Melbourn) Railway Cutting (SSSI)
Granted protected species licenses	~1332m northwest	Great Crested Newt <i>Triturus cristatus</i> (licence 2014-1854)
Priority habitat	~1367m southwest	Lowland Calcareous Grassland
	~940m southeast	Lowland Meadows
	~114m east	Deciduous Woodland
	~1633m southwest	Traditional Orchards



A standard data search of existing records for protected species and nature reserves has been commissioned, below details the results and site context. *Data over 10 years old is not included.*

Biological records were obtained from Cambridgeshire & Peterborough Environmental Records Centre (2023) and Herts Environmental Records Centre (2023).

Table 3: Biological Records

Species	Number of Records	Closest Record (accuracy)	Most Recent Record (year)
Amphibians			
Common Frog <i>Rana temporaria</i>	-	-	-
Common Toad <i>Bufo bufo</i>	-	-	-
Great Crested Newt <i>Triturus cristatus</i>	-	-	-
Palmate newt <i>Lissotriton helveticus</i>	-	-	-
Smooth newt <i>Lissotriton vulgaris</i>	-	-	-
Bats			
Barbastelle <i>Barbastella barbastellus</i>	6	~750m (1km)	2018
Brown Long-Eared <i>Plecotus auritus</i>	4	~0m (1km)	2016
Common Pipistrelle <i>Pipistrellus pipistrellus</i>	3	~750m (1km)	2019
Daubenton's <i>Myotis daubentonii</i>	7	~0km (1km)	2016
Leisler's <i>Nyctalus leisleri</i>	-	-	-
Nathusius' Pipistrelle <i>Pipistrellus nathusii</i>	-	-	-
Natterer's <i>Myotis nattereri</i>	9	~0m (1km)	2016
Noctule <i>Nyctalus noctula</i>	-	-	-
Serotine <i>Eptesicus serotinus</i>	-	-	-
Soprano Pipistrelle <i>Pipistrellus pygmaeus</i>	-	-	-
Unidentified Bat <i>Chiroptera sp.</i>	18	~1270m (10m)	2020
Unidentified Long-Eared <i>Plecotus sp.</i>	2	~550m (1km)	2013
Unidentified Myotis <i>Myotis sp.</i>	-	-	-
Unidentified Pipistrelle <i>Pipistrellus sp.</i>	-	-	-
Unidentified Vesper <i>Vespertilionidae</i>	-	-	-
Whiskered <i>Myotis mystacinus</i>	-	-	-
Mammals (exc. Bats)			
Badger <i>Meles meles</i>	13	Withheld	2021
Hazel Dormouse <i>Muscardinus avellanarius</i>	-	-	-
Otter <i>Lutra lutra</i>	-	-	-
Water Vole <i>Arvicola amphibius</i>	-	-	-
West European Hedgehog <i>Erinaceus europaeus</i>	14	~210m (1m)	2021
Reptiles			
Adder <i>Vipera berus</i>	-	-	-
Common Lizard <i>Zootoca vivipara</i>	-	-	-

Grass Snake <i>Natrix helvetica</i>	-	-	-
Slow-Worm <i>Anguis fragilis</i>	-	-	-
Other Birds, Invertebrates, Plants etc.	Several records	n/a	n/a
Non-Statutory Sites (see Figure 2)			
Name	Reference No.	Type	Description/designated for
Royston Chalk Pit	04/001	Herts and Middlesex Wildlife Trust Nature Reserves	n/a
Royston Chalk Pit	04/001	Local Wildlife Sites	Chalk pit with a former lime kiln dominated by mature stand of deciduous scrub, mainly Beech (<i>Fagus sylvatica</i>), Sycamore (<i>Acer pseudoplatanus</i>), Ash (<i>Fraxinus excelsior</i>) and hybrid Elm (<i>Ulmus glabra</i> x <i>minor</i>). A chalky woodland flora is present, including Wood False-brome (<i>Brachypodium sylvaticum</i>), Yellow Archangel (<i>Lamium galeobdolon</i>) and Sanicle (<i>Sanicula europaea</i>). Yew (<i>Taxus baccata</i>) is well established in places. Remnant chalk grassland flora survives on an overgrown plateau at the top of the pit face. The site is important for protected species. Wildlife Site criteria: Species.
Shaftesbury Green	04/012	Local Wildlife Sites	A remnant area of semi-improved calcareous grassland supporting an Upright Brome (<i>Bromus erecta</i>) NVC community type with a fairly variable sward. Plants recorded

			include Agrimony (Agrimonia eupatoria), Common Knapweed (Centaurea nigra), Bird's-foot-trefoil (Lotus corniculatus), Quaking-grass (Briza media) and Small Scabious (Scabiosa columbaria). Wildlife Site criteria: Grassland indicators.
Royston Chalk Pit	04/001	RIGS	n/a
Royston Erratic	04/008	RIGS	n/a
Footpath, Layston Park	749	Veteran & Mature Trees from HERC database	Beech
Footpath, Layston Park	750	Veteran & Mature Trees from HERC database	Horse Chestnut

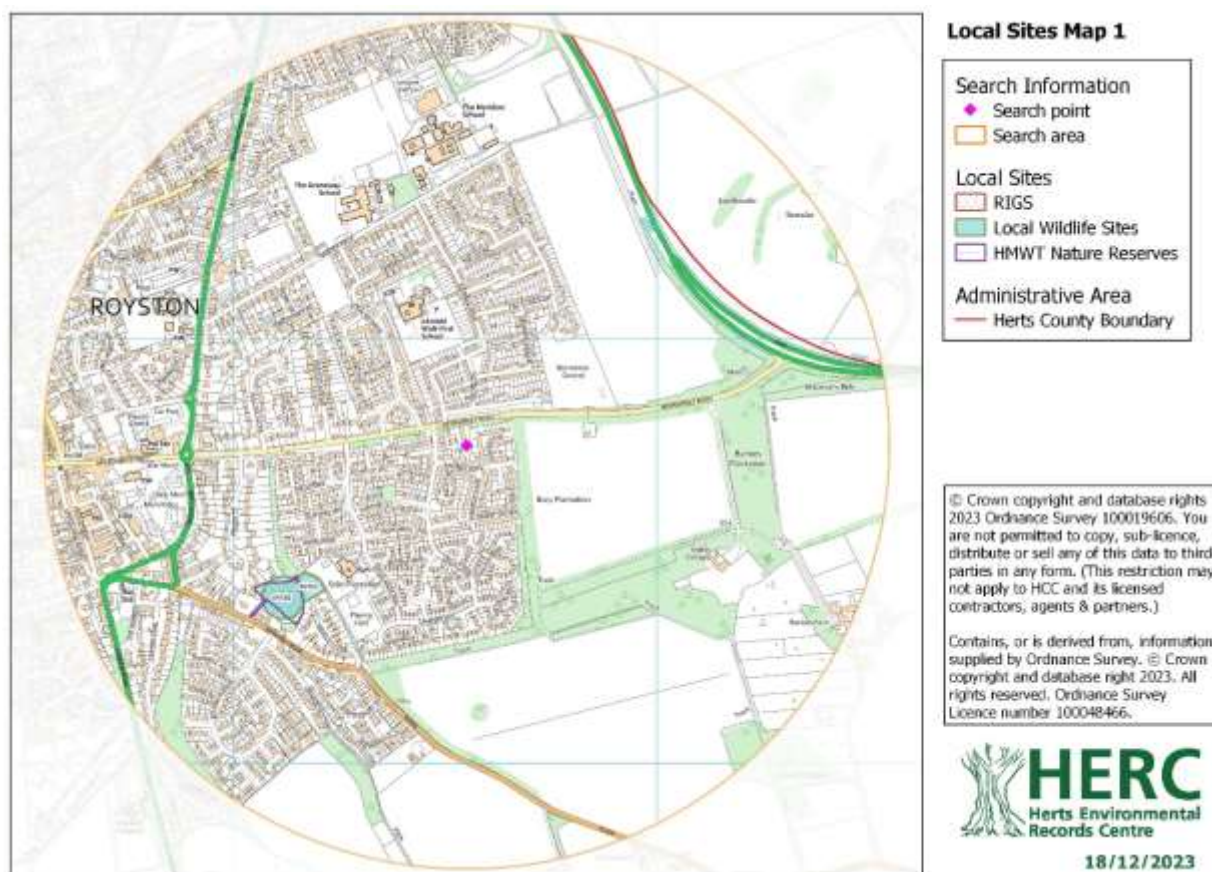


Figure 2: Local Sites Map (Herts Environmental Records Centre, 2023)

3.1.3 Site Location and Surrounds

The site is located in Royston, Hertfordshire and is surrounded by high-density housing in the immediate local area. Table 5 details the commuting, feeding and habitat features in a 1km radius of the site.

Table 4: Habitat features suitable for use by protected species.

Feature	Description
Watercourses	There are no significant watercourses within the search area.
Waterbodies	There are no significant waterbodies within the search area.
Woodland	Patches of woodland are found throughout the search area. The site borders an area of woodland to the east which connects the site to a larger area of woodland ~390m southeast.
Linear e.g. hedgerows	Field margin and garden hedgerows are found throughout the search area.
Pasture/arable/grassland	Arable fields dominate the eastern, outer northeastern and outer southern sections of the search area. Amenity grassland is also found throughout the search area in the form of parks, gardens, sports pitches and playing fields. The closest notable example is a park ~238m northeast of the site.
Other	Royston Cemetery East is located ~701m northwest of the site.

3.2 Habitat, Building, Tree or Other Structure

This section details the structures/habitat reference and descriptions (see Figure 28 for Site Plan).

Table 5: Weather Records

Parameter	Unit/value
Temperature	7°C
Cloud cover	20%
Precipitation	None
Wind	2/12

3.2.1 Habitats

Habitats found on site are mapped using the Phase 1 Habitat (JNCC, 2010) and UK Habs (UK Habs, 2023). When the UK Habs has a subset type, this has been used to match as best as possible to the Phase 1 Habitat.

Table 6: Habitat features found on site, this includes for the Phase 1 Habitat type and the nearest UK Habs type. UK Habs may be broken down to subsets when required and if the habitat meets the criteria.

Habitat Features			
Phase 1 Habitat Type	UKHab Habitat Type	Description	
Buildings	Developed Land; Sealed Surface	B1	External B1 is a detached, brick-built two-storey dwelling (Figure 3). The roof to the main section of B1 follows a T-shaped structure with opposite gable-ends and a hip on the long section. A further gable-end crosses into the hip and another extends out from the middle at the rear (Figure 4). Dormers, clad with waney boarding, are present at the front and the rear in the middle sections. Attached to B1 is a double garage and single-storey extension which was previously used as a veterinary practice (Figure 5 - 6). The garage has a hipped roof and joins at the hip on the main section, whilst the roof of the extension is flat. The main section and garage are both covered with clay tiles, and the extension is mostly covered with bitumen felt (with a small section of clay tile at the front). There are two chimney stacks protruding from the main section, both with associated lead flashing. The window frames are made from uPVC and the doors (including the garage doors) are wooden.



Figure 3: Front view of B1.



Figure 4: Rear view of B1.



Figure 5: Front view of garage and extension to B1.



Figure 6: Rear view of garage and extension to B1.

Internal

The main section of B1 has a loft void at the which follows the T-shaped layout of B1 (Figure 7 - 8). It is fully boarded and has a timber frame. The roof is lined internally with bitumen felt.

The garage section is open plan and has a timber king post and fink frame (Figure 9 - 10). The roof is internally lined with bitumen felt, and the walls are unlined.



Figure 7: Example of loft within B1.



Figure 8: Another example of loft within B1.

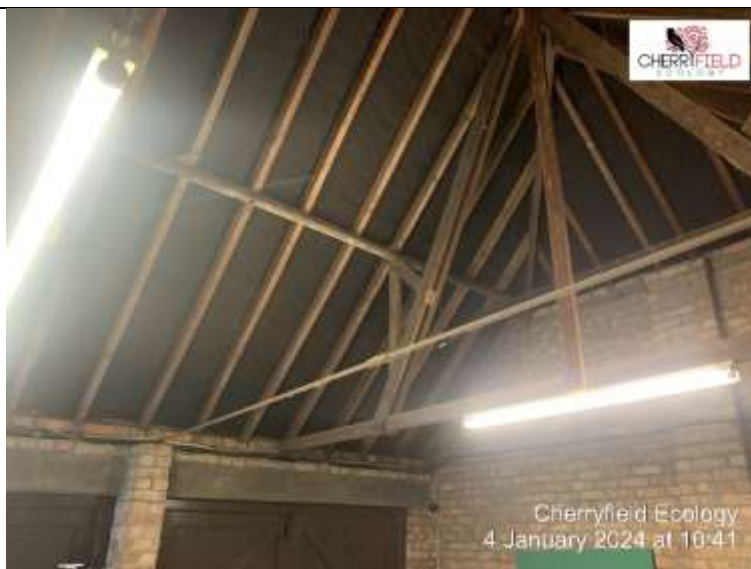


Figure 9: Example of the interior of the garage attached to B1.



Figure 10: Another example of the interior of the garage attached to B1.

B2

External

B2 is a gable-ended storage shed with a wooden construction (Figure 11). The roof is lined with bitumen felt and there is an awning with timber support posts at the rear (Figure 12).



Figure 11: Front view of B2.



Figure 12: Rear view of B2.

Interior

The interior of B2 is unlined and follows the structure of the exterior (Figure 13).

		 Figure 14: Example of interior of B2.
Hardstanding	Developed Land; Sealed Surface	There is a tarmacked driveway and parking area at the front of B1 (Figure 15), concrete steps and path at the entrance to B1, and a paved pathway around the sides and rear of B1 and leading to B2 (Figure 16).  Figure 15: Tarmacked driveway and parking area at the front of B1.

		 Figure 16: Concrete steps and path at the entrance to B1 (visible on the right).
		 Figure 17: Example of paved pathway around B1 (visible on the right).
Amenity Grassland	Vegetated Garden	The majority of the garden at the rear of B1, as well as a small area at the front (see Figure 16) is comprised of amenity grassland dominated by Perennial Rye-Grass <i>Lolium perenne</i> with abundant Daisy <i>Bellis perennis</i> and Bristly Oxtongue <i>Picris echioides</i> (Figure 18).

		 Figure 18: Example of amenity grassland on-site.
Scattered Trees	Urban Tree/Rural Tree	Scattered Hawthorn <i>Crataegus monogyna</i>, Yew <i>Taxus baccata</i>, Silver Birch <i>Betula pendula</i>, Horse Chestnut <i>Aesculus hippocastanum</i>, Sycamore <i>Acer pseudoplatanus</i>, and Apple <i>Malus</i> sp. are present throughout the site (Figure 19).  Figure 19: Example of scattered trees on-site.
Hedgerow Features		
Trees	Line of Trees (Ecologically Valuable)	Lines of trees are present along the eastern and southern site boundaries, and are comprised of Elder <i>Sambucus nigra</i> , Holly <i>Ilex</i>

		<i>aquifolium</i>, Lawson's Cypress <i>Chamaecyparis lawsoniana</i>, and Ash <i>Fraxinus excelsior</i> (Figure 20).  Figure 20: Example of line of trees on-site.
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Table 7: Target Notes

Target Note	Description
T1	Compost heap and brush pile with stacked concrete blocks providing gaps to enter that could provide habitat for various species (Figure 21).  Figure 21: Compost heap and brush pile with stacked concrete blocks (T1).

T2	Gap in wooden fence that could provide site access for various species (Figure 22).  Figure 22: Gap in wooden fence (T2).
T3 & T4	Timber piles by B2 that could provide habitat for various species (Figure 23 - 24).  Figure 23: Timber pile by B2 (T3).



Figure 24: Timber pile by B2 (T4).

T5 & T6

Brush piles within amenity grassland area by the site entrance that could provide habitat for various species (Figure 25 - 26).



Figure 25: Brush pile near site entrance (T5)



Figure 26: Brush pile near site entrance (T6).

T7

Disused Swallow *Hirundo rustica* nests found within the garage attached to B1.



Figure 27: Disused Swallow nests within the garage attached to B1.

3.2.2 Species List

Table 8: Species found on site with relevant *DAFOR abundance.

Common Name	Scientific Name	*DAFOR Scale
Annual Meadow-Grass	<i>Poa annua</i>	D
Apple	<i>Malus</i> sp.	R

Ash	<i>Fraxinus excelsior</i>	F
Bristly Oxtongue	<i>Picris echioides</i>	A
Cat's-Ear	<i>Hypochaeris</i> sp.	A
Cleavers	<i>Galium aparine</i>	A
Cock's-foot	<i>Dactylis glomerata</i>	F
Common Sowthistle	<i>Sonchus oleraceus</i>	F
Cotoneaster	<i>Cotoneaster</i> sp.	R
Cow Parsley	<i>Anthriscus sylvestris</i>	F
Creeping Buttercup	<i>Ranunculus repens</i>	A
Daffodil	<i>Narcissus</i> sp.	O
Daisy	<i>Bellis perennis</i>	A
Elder	<i>Sambucus nigra</i>	O
Garlic Mustard	<i>Alliaria petiolata</i>	F
Green Alkanet	<i>Pentaglottis sempervirens</i>	F
Ground-Ivy	<i>Glechoma hederacea</i>	F
Groundsel	<i>Senecio vulgaris</i>	F
Hawthorn	<i>Crataegus monogyna</i>	O
Holly	<i>Ilex aquifolium</i>	O
Horse-Chestnut	<i>Aesculus hippocastanum</i>	R
Ivy	<i>Hedera helix</i>	A
Lawson's Cypress	<i>Chamaecyparis lawsoniana</i>	F
Mouse-Ear Chickweed	<i>Cerastium vulgatum</i>	F
Nettle	<i>Urtica dioica</i>	F
Perennial Rye-Grass	<i>Lolium perenne</i>	D
Petty Spurge	<i>Euphorbia peplus</i>	O
Ribwort Plantain	<i>Plantago lanceolata</i>	F
Silver Birch	<i>Betula pendula</i>	O
Stinking Iris	<i>Iris foetidissima</i>	O
Sycamore	<i>Acer pseudoplatanus</i>	O
White Clover	<i>Trifolium repens</i>	A
White Dead-Nettle	<i>Lamium album</i>	F
Yew	<i>Taxus baccata</i>	R

*DAFOR - Dominant, Abundant, Frequent, Occasional and Rare



Figure 28: Site Plan

3.3 Evidence or Likelihood of Species Presence

This section details the evidence located and likelihood of species presence.

3.3.1 Bats

Table 9: Bats, evidence or the potential for the species.

Bats found	No bats were found at the time of the survey.
Evidence of bat use	Evidence of bats was found at the time of the survey.
Potential for bat use	Level of likelihood of presence - B1 - Confirmed (Moderate) B2 - Negligible

B1 is **confirmed** as a bat roost as bat droppings were found within the loft (Figure 29). It otherwise provides **moderate** potential for roosting bats. There are lifted tiles above the garage (Figure 30) which could potentially be used as a roosting feature by crevice-dwelling species, along with the waney boarding on the dormers. The droppings were found on the floor beneath the internal ridges, indicating a likely Brown Long-Eared *Plecotus auritus* roost. The unlined brick wall and bitumen felt could be used as an internal roosting feature. It is possible that bats have accessed the loft via the air brick (Figure 31). Disused Swallow *H. rustica* nests were found within the garage attached to B1 (T7), indicating birds have been able to access the garage in the past. No points of entry to the garage were visible, however, and there was no evidence of use by bats found in this section of the building.

B2 provides **negligible** potential for roosting bats due to the lack of entry points or potential roosting features.



Figure 29: Bat droppings found within the loft in the main section on B1.



Figure 30: Lifted clay tiles above garage attached to B1.



Figure 31: Air brick within the loft in the main section of B1.

3.3.2 Badgers

Table 10: Badgers, evidence or the potential for the species

Badgers found	No badgers were found at the time of the survey.
Evidence of badger use	No evidence of badger use was found at the time of the survey.
Potential for badger use	Level of likelihood of presence - Low

	Although there is connectivity to suitable habitat in the form of woodland and arable, the site provides low potential for use by badgers due to the lack of suitable habitat available on-site.
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3.3.3 Breeding Birds

Table 11: Breeding birds, evidence or potential for the species

Breeding birds found	No breeding birds were found at the time of the survey.
Evidence of breeding bird use	Evidence of breeding birds was found at the time of the survey.
Potential for breeding bird use	Level of likelihood of presence - High The site provides high potential for breeding birds due to the presence of suitable habitat in the form of scattered trees and lines of trees on-site. Disused Swallow <i>H. rustica</i> nests were also found within B1, indicating that it has been used by breeding bird sin the past, however, no access points were found at the time of the survey.

3.3.4 Amphibian

Table 12: Amphibians, evidence or potential for species use.

Amphibians found	No Great Crested Newt (GCN) were found at the time of the survey.
Evidence of amphibian use	No evidence of GCN was found at the time of the survey.
Potential for amphibian use	Level of likelihood of presence - Low Although there is connectivity to suitable habitat in the form of woodland, the site provides low potential for use by GCN due to the limited suitable habitat available on-site. The compost heap (T1), timber piles (T3, T4) and brush piles (T5 , T6) could potentially be used as refugia but the rest of the site consists of regularly mown amenity grassland and hardstanding.

3.3.5 Reptile

Table 13: Reptiles, evidence or potential for species use.

Reptiles found	No reptiles were found at the time of the survey.
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Evidence of reptile use	No evidence of reptiles was found at the time of the survey.
Potential for reptile use	Level of likelihood of presence - Low Although there is connectivity to suitable habitat in the form of woodland, the site provides low potential for use by reptiles due to the limited suitable habitat available on-site. The compost heap (T1), timber piles (T3, T4) and brush piles (T5 , T6) could potentially be used as refugia but the rest of the site consists of regularly mown amenity grassland and hardstanding.

3.3.6 Other Species e.g. Hazel Dormouse / Otter / Water Vole

Table 14F: Other protected species, evidence or potential for species use.

Species found	No other protected species were found at the time of the survey.
Evidence of species use	No evidence of other protected species was found at the time of the survey.
Potential for species use	Level of likelihood of presence - Negligible No suitable habitat for any other protected species is found on-site.

3.3.7 Invasive Non-Native (Schedule 9 Species)

Species found	A <i>Cotoneaster</i> <i>Cotoneaster</i> sp. is present within the front garden of B1.
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4.0 Conclusions, Discussion, Impacts and Recommendations

The following section details the conclusions, discussion, impacts and recommendations in the context of the proposed works.

4.1 Conclusion and Discussion

The proposals include for the demolition of the existing garage, extension and shed and construction of three new dwellings..

The site consists of one detached two-storey dwelling with an attached garage and extension (B1), a storage shed (B2), Hardstanding (Developed Land; Sealed Surface), Amenity Grassland (Vegetated Garden), Scattered Trees (Urban Tree) and Lines of Trees (Line of Trees).

Recommended surveys are found in section 4.3.

4.2 Potential Impacts

Impact assessments must be proportionate to the scale of the development (CIEEM, 2018) and Table 16 details a proportionate impact assessment based on current information.

Table 16: Impact Assessment

Impact	Bats - A bat roost may be lost, damaged or disturbed in the development. Breeding Birds - Active nests may be lost in the development. GCN - Loss of habitat. Reptiles - Loss of habitat.
Characterisation of unmitigated impact on the feature	Bats - A low-level loss/impact at a local level. Breeding Birds - A low-level loss/impact at a local level. GCN - A low-level loss/impact at a local level. Reptiles - A low-level loss/impact at a local level.
Effect without mitigation	Without mitigation, individual bats, birds, GCN and reptiles could be killed, injured or trapped during the works.
Mitigation and/or potential enhancement	See Table 17 and Table 18
Significance of effects	Bats - If mitigation is followed, the effects would be negligible.

of residual impacts (after mitigation)	Breeding Birds - If lost habitat is replaced by bird boxes and mitigation is followed, the effects would be negligible. GCN - If mitigation is followed, the effects would be negligible. Reptiles - If mitigation is followed, the effects would be negligible.
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4.3 Recommendations

Badger - No further surveys are necessary; however, if any badger setts are found throughout works, all works must stop, and advice sought.

Bats - **Presence/likely absence surveys** (moderate) will be required (two surveys, three weeks apart), with two surveyors to cover the building B1; these must be undertaken between May to August. These are required to establish whether bats are accessing the loft void via the north-facing hip above the garage (where works are proposed). One of these surveys should be undertaken pre-dawn due to the potential presence of Brown Long-Eared Bats.

Breeding Birds - No further surveys are recommended; however, the development should take place outside the nesting season (March to August). If this is not possible, it is recommended that a qualified ecologist is on-site to ensure the building/vegetation is not occupied by breeding birds, prior to demolition/clearance. Should an occupied nest be found, a buffer zone would need to be created until the nest is no longer in use.

Great Crested Newt (GCN) - No further survey is necessary; however, a qualified ecologist will need to supervise the clearance of any compost heaps/timber piles on-site via a destructive search. If GCN are found on site, all works must stop, and advice sought.

Reptiles - No further survey is necessary; however, a qualified ecologist will need to supervise the clearance of compost heaps/timber piles on site via a destructive search.

Other protected species - No further survey is necessary; however, if any other protected species are found on site, all works must stop, and advice sought.

4.4 Additional Recommendations

Table 17: Additional Recommendations

Work	Specification
General information	The following must be undertaken: - All works must be undertaken within 12 months of this report, thereafter a material change check will be required to check for changes that could affect potential protected species habitat. - If any protected species are found at any point whatsoever during works, works will stop and further advice will be sought.
General Precautions	- Trenches and open holes - All trenches and open holes should be covered overnight, or if the hole or trench can't be covered it should be filled in or a rough sawn timber plank installed as an escape route for any species. - General maintenance - If grassland and vegetation is kept in a mown/cut state this should be maintained for the duration of the works. - Store all material on hardstanding or in buildings to prevent artificial refuges from being created.
General bat Information	No development will occur until bat surveys consistent with the Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition) (Collins, 2023) have been undertaken in the appropriate survey season, May to September (Mid-May to August optimal). The Three Tests to be answered before planning can be granted (NE, 2017): <i>Test 1:</i> Regulation 53(2)(e) states: a licence can be granted for the purposes of “preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment”. Test 1 can be achieved via the ‘imperative reasons of overriding public interest’. Although not for the ecologist to determine the planning officer will on grant of consent. <i>Test 2:</i> Regulation 53(9)(a) states: the appropriate authority shall not grant a licence unless they are satisfied “that there is no satisfactory alternative”

	Test 2 would be achieved on the grant of consent as no other sites have been considered for the development. Test 3: Regulation 53(9) (b) states: the appropriate authority shall not grant a licence unless they are satisfied “that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.” Test 3 will be achieved once full emergence/re-entry surveys are conducted and full mitigation appropriate to species and population has been designed and implemented via an NEPS licence issued from the statutory authority (Natural England) if this becomes necessary following a dusk and pre-dawn survey.
Lighting	Any lighting near or shining onto any trees/buildings etc, will be designed to minimise the impact it has on potential species and commuting. Lighting will be in line with the BCT lighting guidelines (Bats and Lighting in the UK (Bat Conservation Trust, 2023) https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/ This lighting, where possible, will be of low level, be on downward deflectors and be on PIR sensors. Using LED directional lighting can also be a way of minimising the light spill affecting the habitat. No up-lighting should be used. Light spill must be minimised to as low as possible. This will ensure that the foraging and commuting resources that the protected species are likely to be using is maintained.

Table 18: The local authority has a duty to enhance biodiversity in its day-to-day duties; the following are suggested enhancements that are easily installed into a development and can be cost-effective whilst ensuring a gain for local wildlife.

Work	Specification
Bat, bird and insect box enhancement.	Bat tubes can be installed in the new dwellings (Figure 32). These require no maintenance, can be installed on a gable end/under an eave (no less than 3m above ground level), face south or north and can be faced in any material to provide an aesthetic matching the reminding building.



Figure 32: Example of bat tube

Bird boxes for a variety of different species can also be installed.

A selection of open-fronted boxes and songbird boxes can be installed (Figure 33 and Figure 34); it is recommended that a minimum of two of each of the boxes are installed. These will be installed at a minimum of 2m high and ideally face north to east.



Figure 33: Robin box



Figure 34: Songbird box

A variety of insect boxes can be installed in the area; a minimum of one box is recommended (Figure 35 and Figure 36).



Figure 35: Urban bee nesting box, used for solitary bees and wasps.



Figure 36: Bug biome, ideal for ladybirds, lacewings and bees

Hedgehog highways and small mammal connectivity.

Hedgehog highways can or will be installed in order to allow hedgehogs and other small mammals a continuous corridor across the site, thus linking the garden/site etc. and green spaces in the area.

- A 13cm-by-13cm is sufficient for any hedgehog to pass through. This will be too small for nearly all pets (Figure 37).
- Remove a brick from the bottom of the wall, creating a 13cm-by-13cm hole.
- Cut a small hole in your fence if there are no gaps (the existing gap in the fence [T2] can be retained).
- Dig a channel underneath your wall, fence or gate.
- Ideally, rather than walls or fences, a hedge will provide foraging, shelter and a route along as well as through the site.

	How to make a hedgehog highway  www.wildlifewatch.org.uk
Swifts <i>Apus apus</i>	Swift nest bricks are recommended due to the increased lack of nesting opportunities swifts are finding in modern-built dwelling homes. Information is adapted from the RSPB https://www.rspb.org.uk/our-work/rspb-news/news/stories/swift-advice-for-ecologists/ and http://actionforswifts.blogspot.com The following will be undertaken: - Wherever possible, swift bricks will be installed into new or restored buildings to increase the overall availability of nest sites for swifts and other species. Birds such as house sparrows can use swift bricks, but swifts cannot use house sparrow nest bricks. - Integral swift bricks are the preferred option for new housing developments. These should be fitted in clusters of 2 to 4 on gable ends and near the roofline where swifts would naturally look for a potential nest site. - Try to ensure swift bricks have a minimum of 5m clearance beneath and in front. Always avoid locating them above doors and windows to help prevent a disturbance issue to both the birds and human owners.

- Alternatively, swift boxes can be placed on the external walls of a building where the installation of swift bricks is not possible.



Figure 38: Example of swift bricks, that can be built into a dwelling, Source: <https://www.birdbrickhouses.co.uk/brick-nesting-boxes/>



Figure 39: Swift box, source: <http://actionforswifts.blogspot.com/p/diy-swift-box-designs.html>

Hedgerows

Hedgerows provide excellent corridors for wildlife and are extremely important to many species of wildlife. A hedgerow could be included in development plans to assist a range of species (Figure 40).

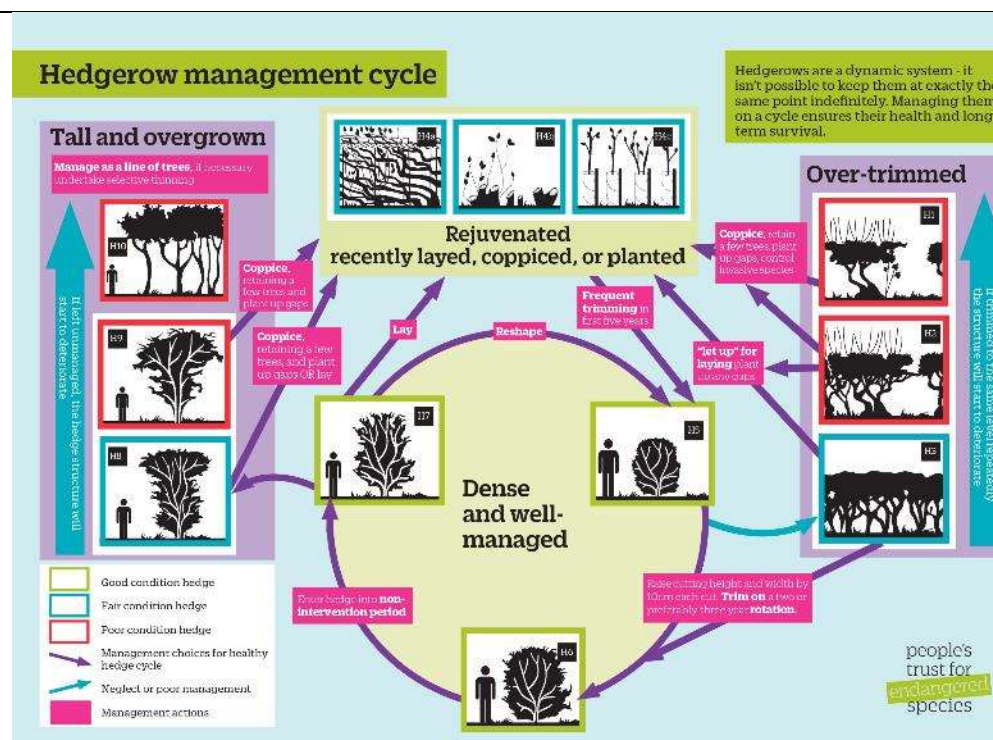


Figure 40: Hedgerow management cycle (<https://hedgerowsurvey.ptes.org/>)

It is recommended that a diversity of hedgerow species is included in the proposed hedgerows on site. Suitable hedgerow species include:

- Hawthorn (*Crateagus monogyna*)
- Hazel (*Corylus avellana*)
- Wild Privet (*Ligustrum vulgare*)
- Field Maple (*Acer campestre*)
- Blackthorn (*Prunus spinosa*)
- Guelder Rose (*Viburnum opulus*)
- Wayfaring Tree (*Viburnum lantana*)
- Dog Rose (*Rosa canina*)
- Spindle (*Euonymus europaea*)
- Holly (*Ilex europaeus*)

The hedgerow should include 5 or more woody species within a 30m length in order to be classified as **species-rich**.

Where possible, no cutting will take place during peak bird nesting season, which runs from March to September. Where possible, shrubs and hedgerows will not be cut back annually, as flower buds often form on second-year growth. Trimming

	hedges on a two-year or three-year rotation, targeting different sections each year, will make sure there are always flowers for pollinators in spring and berries for birds in autumn. Hedges cut every three years can produce two and a half times as many blossoms as those cut annually. Rotational cutting can also save time and money that would be invested in annual cutting.
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5.0 References

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NEWMARKET ROAD

VALLEY RISE

67

2

6

Valley Lodge

The White House

SITE PLAN 1:200

0 5 10 20 30
metres

LOCATION PLAN 1:1250

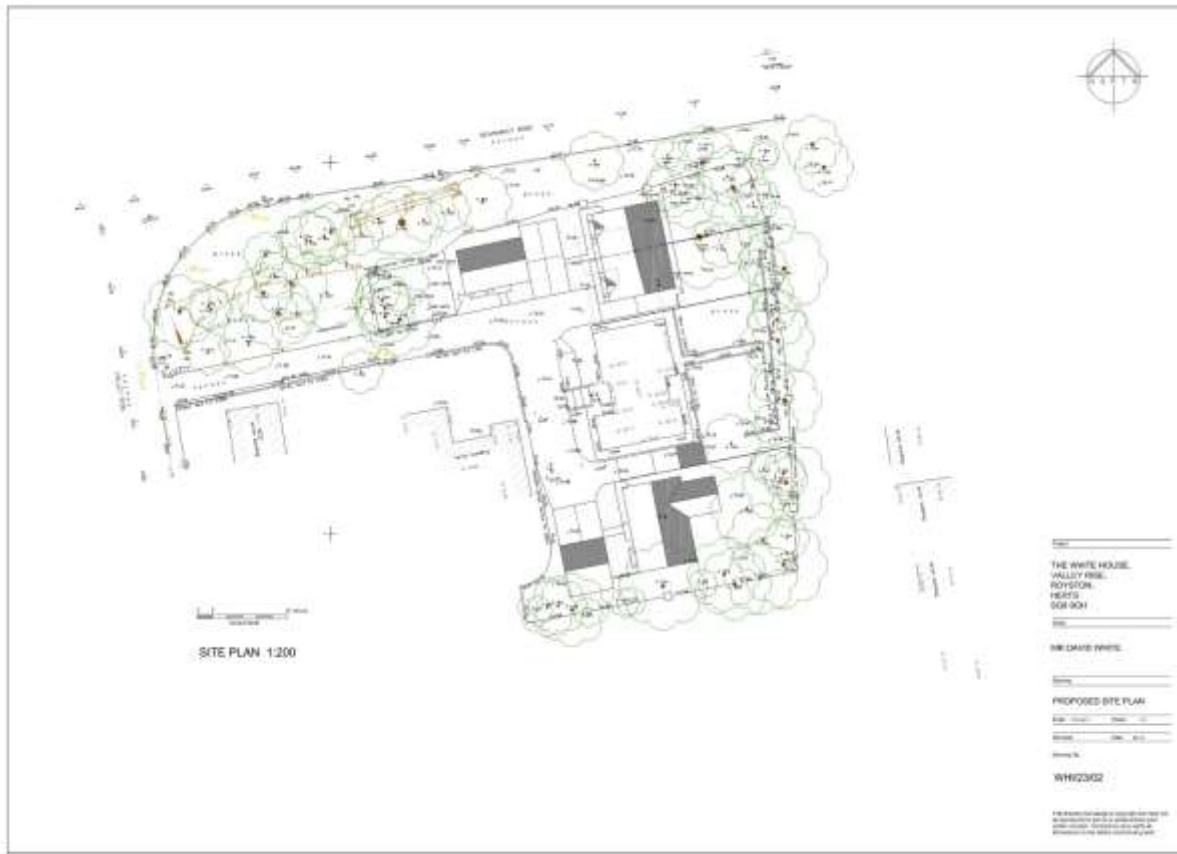
THE WHITE HOUSE,
VALLEY RISE, ROYSTON,
HERTS SG8 6QH

DAVID WHITE

3/20/15

W14/21/151

Existing Site Plan (Client Drawing, 2023)



Proposed Site Plan (Client Drawing, 2023)