



Ecological Impact Assessment

Sea Chimneys, Beer

Client: Mr Leighton Chumbley

Date: July 2023 / March 2024

Richard Green Ecology Ltd

The Natural Selection

9C, Mill Park Industrial Estate, White Cross Road, Woodbury Salterton, Exeter, EX5 1EL

01395 239234

office@richardgreenecology.co.uk

www.richardgreenecology.co.uk

Reg no. 07287436



Version	Date	Prepared by	Checked and approved by
1	21/07/2023	Emily Phillips BSc (Hons)	Jen Paget BSc (Hons)
2	13/02/2024	Emily Phillips BSc (Hons)	Jen Paget BSc (Hons)
3	19/03/2024	Jen Paget BSc (Hons)	N/A – Revision to BNG metric

Date of surveys: 16/02/2023, 11/05/2023 and 08/06/2023

Richard Green Ecology Ltd has prepared this report in accordance with the instructions of their client, the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Report Writing and CIEEM Code of Professional Conduct. It is for the client's sole and specific use. Any other persons who use any information contained herein do so at their own risk.

BS 42020:2013 Biodiversity - Code of practice for planning and development states, '*ecological information should be sufficiently up to date (e.g., not normally more than two/three years old, or as stipulated in good practice guidance)*'. Therefore, this report may not be considered valid more than three years after survey was undertaken, and advice should be taken on validity after one year.

This report has been produced using all reasonable skill and care. Opinions are provided in good faith.

© Copyright Richard Green Ecology Ltd 2024.

Richard Green Ecology Ltd

The Natural Selection

9C, Mill Park Industrial Estate, White Cross Road, Woodbury Salterton, Exeter, EX5 1EL

01395 239234

office@richardgreenecology.co.uk

www.richardgreenecology.co.uk

Reg no. 07287436

Contents

Executive summary

Wildlife checklist

1	Introduction	1
	1.1 <i>Introduction</i>	1
	1.2 <i>Planning considerations</i>	1
2	Methods	2
	2.1 <i>Desk study</i>	2
	2.2 <i>Field survey</i>	3
	2.3 <i>Biodiversity net gain calculation</i>	4
	2.4 <i>Evaluation</i>	4
3	Survey results	5
	3.1 <i>Desk study</i>	5
	3.2 <i>Field survey</i>	6
	3.3 <i>Protected species</i>	9
4	Assessment, recommendations and mitigation	12
	4.1 <i>Designated sites</i>	12
	4.2 <i>Habitats</i>	12
	4.3 <i>Bats</i>	13
	4.4 <i>Nesting birds</i>	14
	4.5 <i>Reptiles</i>	14
	4.6 <i>Badgers</i>	15
	4.7 <i>Hedgehogs</i>	15
5	Biodiversity net gain	15
	5.1 <i>Introduction</i>	15
	5.2 <i>Assumptions</i>	16
	5.3 <i>Habitat and hedgerow baseline</i>	17
	5.4 <i>Habitat loss, creation and enhancement</i>	17
	5.5 <i>Biodiversity net gain result</i>	18
6	Conclusions	19
7	References and bibliography	20
	Figures	21
	<i>Figure 1 – UK Habitat Classification survey map</i>	22

Appendices	23
<i>A Photographs (Plates)</i>	<i>23</i>
<i>B Plant species list</i>	<i>28</i>
<i>C Bat emergence survey results</i>	<i>30</i>
<i>D Biodiversity net gain headline results</i>	<i>32</i>

Executive summary

It is proposed to demolish the existing building and construct a replacement residential dwelling. The site is located at Sea Chimneys, Southdowns Road, Beer, EX12 3AF, NGR SY 2280 8906.

An extended UK Habitat Classification survey was undertaken on 16 February 2023 by Richard Green Ecology Ltd. Bat emergence surveys were undertaken in May and June 2023.

The site comprised a detached house and outbuilding, bounded by areas of hardstanding, a rockery, modified grassland, introduced shrub, ornamental hedge, native hedge and individual trees.

The proposals would result in the destruction of approximately 0.011 hectares of garden lawn, classified as modified grassland and 0.036 hectares of ornamental shrubs. Four trees would also be removed (section 3.3.2 and Advanced Arboriculture, 2024). However, it is proposed to create approximately 0.025 hectares of native mixed scrub and enhance 0.02 hectares of retained garden lawn into wildflower grassland. Tree removal on the northern boundary would be replaced by approximately 20 m of species-rich native hedgerow, and two cherry trees from the garden area would be replaced with higher quality native trees.

No bats were seen to emerge from the buildings. Therefore, it is considered unlikely that bats are present, or would be affected by the proposals, so a European protected species licence (EPSL) from Natural England will not be required.

The proposals have the potential to adversely impact bats, nesting birds, reptiles, badgers, and hedgehogs. However, by implementing the mitigation and enhancement measures recommended, the proposal is considered to have a slight positive ecological effect at a local scale in the long term.

The site lies approximately 1.25 km to the south-east of Beer Quarry and Caves Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC). However, given the small scale and residential location of the development, no adverse impacts on the SAC are expected. A lighting scheme is currently being prepared and will be provided in due course.

Biodiversity Metric 4.0 has been used to calculate the biodiversity units on the site and those predicted following development, with the aim of achieving at least 10% biodiversity net gain (BNG). It is not expected that a biodiversity net gain of at least 10% would be a condition of a planning decision for the proposed development. However, the calculation has been undertaken to illustrate the potential for enhanced biodiversity on the site. Overall, assuming a precautionary approach to the biodiversity net gain calculations, the proposal would result in a gain of 0.09 habitat units (a 19.79% net gain), and a gain of 0.15 hedgerow units (96.24% net gain).

Wildlife checklist

Protected and priority species (Grid reference of the site: NGR SY 2280 8906)

Species - terrestrial, intertidal, marine	Walkover shows that suitable habitat present and reasonably likely that the species will be found?	Detailed survey needed to clarify impacts and mitigation requirements?	Detailed survey carried out and included?	Species Present or Assumed to be present on the site	Impact on species?	Detailed Conservation Action Statement included? Sets out actions needed in relation to avoidance / mitigation / compensation / enhancement	EPS licence required?
Bats (roost)	Yes - buildings	✓	✓	Confirmed absent by emergence surveys	✗	✓	✗
Bats (flight line / foraging habitat)	Yes - hedges	✓	✓	Assumed	Not if recommendations followed	✓	✗
Hazel dormouse	Yes - hedges	✗		Assumed	No – no hedgerow is to be removed	✗	✗
Otter	No suitable habitat	✗					
Great crested newt	No suitable habitat	✗					
Cirl bunting	No suitable habitat	✗					
Schedule 1 birds	No suitable habitat	✗					
Breeding birds	Yes - nesting habitat (hedges/trees)	✓		Assumed	Not if recommendations followed	✓	✗
Reptiles	Yes – limited habitat (grassland, hedges)	✓		Assumed	Not if recommendations followed	✓	✗
Native crayfish	No suitable habitat	✗					
Water vole	No suitable habitat	✗					
Badger	Yes - limited foraging habitat (grassland)	✓		Assumed	Not if recommendations followed	✓	✗
Section 41 species (other than those included above)	Yes - terrestrial habitat (garden shrubs, hedges)	✓		Assumed - hedgehog	Not if recommendations followed	✓	✗
Invasive species	No	✗					

Designations / important habitats

Designation Terrestrial, intertidal, marine	Within the site or potential impact.	Name of the site / habitat	Detailed Conservation Action Statement included in report?	Relevant organisation consulted & response included in the application?
Statutory designations				
European designations - Special Area of Conservation (SAC), Special Protection Area (SPA) and RAMSAR site or within Greater Horseshoe consultation zone	✓	Beer Quarry and Caves SAC	✓	N/A
Site of Special Scientific Interest (SSSIs)	✓	Beer Quarry and Caves SSSI	✓	N/A
Marine Conservation Zone (MCZ) (not before 2012)	✗			
Local Nature Reserve (LNR)	✗			
Non statutory wildlife designations				
County or Local Wildlife Site (CWS\LWS)	✗			
Ancient woodland	✗			
Habitat of Principal Importance	✓	Hedges	✗	

1 Introduction

1.1 Introduction

It is proposed to demolish the existing building and construct a replacement residential dwelling. The site is located at Sea Chimneys, Southdowns Road, Beer, EX12 3AF, NGR SY 2280 8906.

An extended UK Habitat Classification survey was undertaken on 16 February 2023 by Richard Green Ecology Ltd. Bat emergence surveys were undertaken in May and June 2023.

This report considers the potential impacts of the proposed development on habitats and protected/notable species. It includes the findings of the surveys and makes recommendations for ecological mitigation and enhancement measures, in accordance with national and local planning policy and BS 42020:2013 Biodiversity - Code of practice for planning and development.

1.2 Planning considerations

1.2.1 National Planning Policy Framework (NPPF), July 2021

The National Planning Policy Framework outlines the Government's commitment to protect and enhance sites of biodiversity value, and minimise impacts on and provide net gains for biodiversity, including the principle of refusing planning permission if significant harm to biodiversity resulting from a development cannot be avoided, adequately mitigated, or, as a last resort, compensated for.

1.2.2 East Devon District Local Plan

The East Devon District Local Plan 2013 to 2031 (adopted in 2016) contains the following relevant strategy and policies:

Strategy 47 – Nature Conservation and Geology

All development proposals will need to:

1. Conserve the biodiversity and geodiversity value of land and buildings and minimise fragmentation of habitats.
2. Maximise opportunities for restoration, enhancement and connection of natural habitats.
3. Incorporate beneficial biodiversity conservation features.

Development proposals that would cause a direct or indirect adverse effect upon internationally and nationally designated sites will not be permitted unless:

- a) They cannot be located on alternative sites that would cause less or no harm.
- b) The public benefits of the development clearly outweigh the impacts on the features of the site and the wider network of natural habitats.
- c) Prevention, mitigation and compensation measures are provided.
- d) In respect of Internationally designated sites, the integrity of the site will be maintained.

EN5 - Wildlife Habitats and Features

Wherever possible sites supporting important wildlife habitats or features not otherwise protected by policies will be protected from development proposals which would result in the loss of or damage to their nature conservation value, particularly where these form a link between or buffer to designated wildlife sites. Where potential arises positive opportunities for habitat creation will be encouraged through the development process.

Where development is permitted on such sites mitigation will be required to reduce the negative impacts and where this is not possible adequate compensatory habitat enhancement or creation schemes will be required and/or measures required to be taken to ensure that the impacts of the development on valued natural features and wildlife have been mitigated to their fullest practical extent.

EN14 - Control of Pollution

Permission will not be granted for development which would result in unacceptable levels, either to residents or the wider environment of:

1. Pollution of the atmosphere by gas or particulates, including. smell, fumes, dust, grit, smoke and soot.
2. Pollution of surface or underground waters including:
 - a) Rivers, other watercourses, water bodies and wetlands.
 - b) Water gathering grounds including water catchment areas, aquifers and groundwater protection areas.
 - c) Harbours, estuaries or the sea.
3. Noise and/or vibration.
4. Light intrusion, where light overspill from street lights or floodlights on to areas not intended to be lit, particularly in areas of open countryside and areas of nature conservation value.
5. Fly nuisance.
6. Pollution of sites of wildlife value, especially European designated sites or species.
7. Odour

1.2.3 Beer Quarry & Caves Special Area of Conservation (SAC) - Habitats Regulations Assessment (HRA) Guidance (June 2022)

The guidance includes a flow chart to assess whether a proposal is likely to have a significant effect on the SAC, and when HRA is required.

2 Methods

2.1 Desk study

A search for sites designated for nature conservation and any notable habitats was undertaken on the DEFRA Magic website (<http://magic.defra.gov.uk>). This resource includes statutory designated sites (e.g. Sites of Special Scientific Interest, SSSIs) and Biodiversity Action Plan (BAP) habitats. As impacts outside of the site are limited, only sites within 500 m of the site are noted. A search was also made using local planning policy documents (if applicable) to determine if there are any other local wildlife considerations.

2.1.1 *Protected and notable species*

Given the small extent and limited effects of the proposal, it is considered that any protected species outside the site would be unaffected. As a detailed survey has been undertaken and any protected species present or potentially present on the site would have been identified, it was not considered necessary to obtain any species records from a local records centre.

2.2 *Field survey*

2.2.1 *Extended UK Habitat Classification survey*

An extended UK Habitat Classification survey of the site was undertaken, combining recommendations made by the former Institute of Environmental Assessment (1995) and the UK Habitat Classification System. Habitats present are shown in Figure 1 using the primary habitat symbology based on the UK Habitat Classification (UKHab) System. Note was taken of the more conspicuous flora, and any evidence of, or potential for the presence of protected and alien invasive species was recorded.

The UK Habitat survey code (e.g., g3c) that the habitat is attributed to, along with secondary codes (as appropriate) are given with a description.

2.2.2 *Bat and bird survey - visual inspection*

The survey involved a thorough visual inspection of the buildings for any signs of protected species. A search for characteristic signs of bats was made, such as droppings, feeding remains, staining, and any bats present. A search was also made for any signs of bird nesting activity.

Equipment used and at hand included: Nikon 10x close-focusing binoculars, Lightway BMFL1265 720 lumen torch, Lightway 160 lumen torch, Ridgid Micro CA-300 inspection camera and a 3.8 m extendable ladder.

2.2.3 *Timings and weather conditions*

The extended UK Habitat Classification survey and visual inspection for bats and birds was undertaken on the 16 February 2023 during the daytime. The weather was cloudy (8/8 oktas), approximately 15°C, with a slight breeze.

2.2.4 *Bat emergence surveys*

Bat emergence surveys of the buildings were undertaken from 15 minutes before sunset and continued until 90 minutes after sunset. Two surveyors and three night vision aids were used to provide full coverage of the buildings.

Refer to Appendix C for survey dates, details of weather conditions, equipment used, surveyors and surveyor locations.

2.2.5 *Personnel*

Jen Paget has over three years' experience in ecological consultancy and holds Natural England scientific licences to disturb bats [2023-11282-CL18-BAT], great

crested newt [2021-53141-CLS-CLS] and hazel dormouse [2021-10085-CL10A-DOR]. She is an accredited agent under Natural England barn owl licence [CL29/00093].

Other surveyors are experienced in undertaking bat surveys.

2.2.6 Survey limitations

The extended UK Habitat Classification survey was undertaken in February, outside of the growing season, meaning that some botanical species may not have been visible. Similarly, not all of the ornamental shrubs were identified to species level. However, it is considered that sufficient vegetation was identified to gain an accurate understanding of the site.

Richard Green Ecology Ltd accepts no responsibility for any invasive species not identified during the survey.

2.3 Biodiversity net gain calculation

The DEFRA Biodiversity Metric 4.0 calculation tool was used to quantify the direct impacts on habitats within the footprint of the proposed development. The calculation tool uses habitat as a proxy for wider biodiversity with different habitat types scored according to their relative biodiversity potential. This score is then adjusted, depending on the size, condition, and location of the habitat, to calculate 'biodiversity units' for the proposed development.

The condition of the habitats on the site were assessed in accordance with the Biodiversity Metric 4.0 - Technical Annex 1 - Condition Assessment Sheets and Methodology (2023).

2.4 Evaluation

Habitat evaluations are based on guidance from the Chartered Institute of Ecology and Environmental Management (CIEEM). The level of value of specific ecological receptors is assigned using a geographic frame of reference, i.e. international value being most important, then national, regional, county, district and lastly, local.

Value judgements are based on various characteristics that can be used to identify ecological resources or features likely to be important in terms of biodiversity. These include site designations (such as Sites of Special Scientific Interest (SSSI)), or for undesignated features, the size, conservation status (locally, nationally or internationally), and the quality of the ecological resource. In terms of the latter, 'quality' can refer to habitats (for instance if they are particularly diverse, or a good example of a specific habitat type), other features (such as wildlife corridors or mosaics of habitats) or species populations or assemblages.

3 Survey results

3.1 Desk study

3.1.1 Designated sites

The site is within the East Devon Area of Outstanding Natural Beauty (AONB). The next closest statutory designated site is Sidmouth to Beer Coast Site of special scientific interest (SSSI), located approximately 0.12 km to the southeast. Refer to Table 1 below for sites within 500 m of the site.

Table 1 - Summary of the statutory designated sites within 500 m of the site

Designated site	Distance from site (m)	Reason for designation
East Devon Area of Outstanding Beauty (AONB)	Within the site.	The East Devon AONB is 26,913 hectares (ha), comprises a range of habitats including heathland, woodland, and the World Heritage Site 'Jurassic' coastline.
Sidmouth to Beer Coast Site of special scientific interest (SSSI)	120 m South-east.	This site is 239 ha and supports species-rich chalk grassland, woodland, and scrubland. These habitats support a diverse assemblage of invertebrate fauna.
Sidmouth to west bay Special Area of Conservation (SAC)	120 m South-east.	This site is 896 ha and the primary reason for selection is the vegetated sea cliffs of the Atlantic and Baltic coasts and the <i>Tilio-Acerion</i> forests f slopes, screes, and ravines.
Lyme Bay and Torbay SAC	190 m South-east.	The site is 31,246 ha and I designated for the range and diversity of the reef and sea cave habitats present. These habitats support nationally scarce fauna such as the sponge (<i>Geodia cydonium</i>)

The site lies approximately 1.25 km to the south-east of Beer Quarry and Caves Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC). The SSSI/SAC is designated for its use as a hibernation site for Bechstein's bat *Myotis bechsteinii*, greater horseshoe bat *Rhinolophus ferrumequinum* and lesser horseshoe bat *Rhinolophus hipposideros*. The application site is within the SAC sustenance zones for each of the above bat species.

3.1.2 Protected and notable species

One European protected species licence (EPSL) for bats was located within 500 m of the site. Refer to Table 2 below for more information.

Table 2 – EPSL for bats within 500 m of the site

Licence Number	Distance from site (m)	Start and finish dates	Species	Actions / roost type
2020-49755-EPS-MIT	435 m north	15/10/2020 to 01/11/2023	Common pipistrelle <i>Pipistrellus pipistrellus</i> and lesser horseshoe bat	Destruction of a resting place

3.2 Field survey

3.2.1 Habitats

The site is located in Beer and it consisted of a detached house and outbuilding, bounded by areas of hardstanding, a rockery, modified grassland, introduced shrub, ornamental hedge, native hedge and individual trees. The wider landscape comprised residential developments to the north, Beer beach to the east, allotments to the south, and agricultural fields to the west.



Plate 1 – Aerial photograph showing the site and the surrounding landscape



Plate 2 – Close up aerial photograph of the site and the buildings surveyed

(a) Modified grassland (g4)

There were at least 15 vascular plant species identified within the grassland. However, using UKHab condition assessment methodology, the average number of species present per m² was less than eight. Grass species included meadow grass *Poa annua*, common bent *Agrostis capillaris*, and perennial rye grass *Lolium perenne*. Other species included dove's-foot crane's-bill *Geranium mole*, evening primrose *Oenothera biennis*, lesser celandine *Ficaria verna*, wild chives *Allium schoenoprasum* and yarrow *Achillea millefolium*. The sward height varied throughout the garden area ranging from less than 5cm to 10cm.

(b) Introduced shrub (u 1160)

Introduced shrub was scattered throughout the site and included non-native species such as cherry laurel *Prunus laurocerasus*, Wilson's honeysuckle *Lonicera nitida*, stinking hellebore *Helleborus foetidus*, and winter heliotrope *Petasites fragrans*.

(c) Developed land, sealed surface (u1b)

A concrete driveway and pavement encompassed the house and outbuilding, and there was a raised wooden deck to the east of the house.

(d) Native hedgerow (priority habitat) (h2a)

A native hedgerow along the western site boundary comprising beech *Fagus sylvatica*, bramble *Rubus fruticosus agg.*, hawthorn *Crataegus monogyna*, and common ivy *Hedera helix*.

(e) Other hedgerow – ornamental (h2b)

A hedgerow along the northern and southern site boundary comprising introduced shrubs including Wilson's honeysuckle *Lonicera nitida* and cherry laurel *Prunus laurocerasus* in the shrub layer, with Wilson's honeysuckle being the dominant shrub. Winter heliotrope *Petasites fragrans*, common ivy *Hedera helix* and daffodil *Narcissus sp.* were recorded in the field layer.

(f) Scattered trees (g4 11)

Individual trees were scattered throughout the site and included species such as apple *Malus sp.*, cherry *Prunus sp.*, hazel *Corylus avellana*, and fir *Abies sp.* Refer to the Arboricultural Report for more information (Advanced Arboriculture, 2024)

3.2.2 House (B1)



The house was constructed from timber clad and rendered concrete blocks with a man-made concrete tile, gable pitched roof, lined with type 1F bituminous felt. Extending from the northern elevation of the building was a dormer window with a flat, felt roof. Extending from the southern elevation was a flat-roofed conservatory constructed from polymer plastic, and a timber deck.

The soffit boards and fascias were constructed from timber and polymer plastic and were in fair condition. However, there were missing tiles and mortar from the roof and a small gap between the bargeboard and timber cladding on the southern elevation, providing potential access points into the loft space and features for bats to roost unseen (see Plate 5 to Plate 7 in Appendix A).

3.2.3 *Outbuilding (B2)*



The outbuilding was also constructed from timber clad and rendered concrete blocks with a man-made concrete tile, gable pitched roof, also lined with type 1F bituminous felt. The outbuilding did not have an internal loft space, but the roof lining was visible.

There was missing mortar from the roof tiles on the north-eastern elevation of the outbuilding providing a potential feature for bats to roost unseen.

Upon internal inspection, daylight could be seen through a small gap in the roof tiles in the southern corner of the building providing a potential access point for bats into the outbuilding. The windows on the eastern elevation provided considerable light ingress into the outbuilding.

3.3 *Protected species*

3.3.1 *Bats*

Bats are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

- (a) Visual inspection
 - i. House

No evidence of bats was found in the internal loft spaces in the house which were accessed via eaves cupboards on both the northern and southern sides of a central hallway on the first floor of the house. The loft spaces were being used for storage at the time of the survey and so only a small area of each loft space could be inspected. However, there were multiple features that could have provided access into the loft space and where bats could potentially roost unseen. The house was therefore considered to be of moderate suitability for roosting bats.

ii. Outbuilding

No evidence of bats was found in the outbuilding. However, as there were features where bats could roost unseen, the outbuilding was considered to be of moderate suitability for roosting bats.

(b) Bat emergence surveys

No bats were seen to emerge from either the house or the outbuilding during the surveys in May and June 2023. Two common pipistrelle bats were observed foraging in the garden during the survey in May. However, no bats of other species were seen or heard during either survey.

3.3.2 *Hazel dormouse*

Hazel dormice *Muscardinus avellanarius* are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

The western hedgerow and shrub planting was not well connected to the wider landscape and comprised ornamental shrubs such as cherry laurel *Prunus laurocerasus* and Wilson's honeysuckle *Lonicera nitida*. The eastern hedgerow included native species and was considered more suitable for hazel dormouse. However, due to its poor connectivity and suburban location, it is unlikely that dormice will utilise the hedgerows on the site. The site is therefore considered to be of no more than local ecological value for hazel dormouse.

An arboricultural report, undertaken by Advanced Arboriculture in January 2024, identified the need to remove the following trees:

- T1 – Holly, category C¹. Engulfed in undergrowth rendering previous management procedures difficult to ascertain.
- T2 – Hazel, category C. A historic coppice stool.
- G1 – Two cherry stems with evidence of poor-quality historic pruning. The rootplates of these trees are lifting the existing driveway to the east and are collectively considered to have a limited safe useful life expectancy.

The individual trees listed above do not provide suitable nesting habitat for dormice, given their size and locations. As the proposal does not include the removal of suitable dormouse habitat, they are not mentioned further in this report.

3.3.3 *Nesting birds*

Nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended).

The buildings and ornamental hedgerow on the site offered potential nesting sites for birds. As bird nesting habitat is ubiquitous in the surrounding area, including

¹ Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm

hedgerows, trees, scrub and woodland, the site is considered to be of no more than local ecological value for nesting birds.

3.3.4 Reptiles

Common reptiles, such as slow worm *Anguis fragilis*, common lizard *Zootoca vivipara* and grass snake *Natrix helvetica* are protected under the Wildlife and Countryside Act 1981 (as amended) against killing and injury and are species of principal importance under Section 41 of the Natural Environment and Rural Communities Act 2006 (NERC Act, 2006).

The sheltered area under the wooden decking, the rockery and the hedgerows provide suitable hibernacula sites for hibernating reptiles. The modified grassland could also provide basking opportunities for common reptile species. Overall, given its small size and relative isolation from suitable reptile habitat, the site is considered to be of no more than local ecological value for reptiles, if present.

3.3.5 Amphibians

Great crested newts *Triturus cristatus* are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Common toad *Bufo bufo* is a species of principal importance under Section 41 of the Natural Environment and Rural Communities Act 2006 (NERC Act, 2006).

The site is within a great crested newt consultation zone. However, there were no ponds on, or within 250 m of the site. It is therefore considered unlikely that great crested newts will be present, and they are not mentioned further in this report. Low numbers of common amphibians may be present on the site in terrestrial habitat. However, the site is considered to be of no more than local ecological value for common amphibians, considering its small size.

3.3.6 Badger

Badger *Meles meles* is protected under the Protection of Badgers Act 1992.

The site offered limited foraging resource for badger, although it is possible for badgers to commute across site. The open fields to the east of the site provide more favourable foraging and refuge habitat for badgers. On this basis, the site is considered of negligible ecological value for badgers.

3.3.7 Hedgehog

Hedgehog *Erinaceus europaeus* is a species of principal importance under Section 41 of the Natural Environment and Rural Communities Act 2006 (NERC Act, 2006).

Hedgehogs are widespread throughout Devon and utilise grassland and hedgerows for foraging and refuge. The site offered limited foraging resource while the hedgerow field layer provided potential refuge habitat for hedgehogs. The site is considered of no more than local ecological value for hedgehogs, if present.

4 Assessment, recommendations and mitigation

4.1 Designated sites

4.1.1 Impacts

The development is small-scale, and there would be no direct impact on the qualifying features, e.g., by construction works or occupation, of Beer Quarry and Caves SAC. Loss or change in the quality of foraging habitat would be mitigated by habitat creation (section 4.2). There would be no severance or disturbance of linear features used for navigating or commuting bats. There would be no disturbance to or loss of land/features secured as mitigation for SAC bats from previous planning applications or projects, and no loss, damage restriction or disturbance of a pinch point.

If carried out insensitively, lighting arising from the new dwelling could result in the illumination of bat commuting and foraging habitat in the immediate area. However, given that the site is already subject to illumination from street lights and the surrounding dwellings, no impacts from lighting is expected. A lighting scheme is currently being prepared and will be provided in due course.

Given the small size of the site, the proposed development is unlikely to have an impact on other designated sites within 500 m.

4.1.2 Mitigation

There is currently glazing on all aspects of the house, meaning that there is a considerable amount of light spill onto the garden and surrounding hedges. It is recommended that all glazing in the new dwelling has a visible light transmission (VLT) rating of 0.6 to ensure that light spill does not exceed the current level. All lighting should be designed in accordance with the Bat Conservation Trust and Institute of Lighting Professionals guidance note 08/18 (BCT and ILP, 2018) to avoid the increased lighting of potential bat foraging and commuting habitat.

As described in section 4.2 and section 5, the northern boundary would be strengthened by the creation of species-rich native hedgerow, increasing the amount of habitat suitable for commuting bats.

4.2 Habitats

4.2.1 Impacts

The proposals would result in the destruction of approximately 0.011 hectares of garden lawn, classified as modified grassland and 0.036 hectares of ornamental shrubs. Four trees would also be removed (section 3.3.2 and Advanced Arboriculture, 2024). However, it is proposed to create approximately 0.025 hectares of native mixed scrub and enhance 0.02 hectares of retained garden lawn into wildflower grassland. Tree removal on the northern boundary would be

replaced by approximately 20 m of species-rich native hedgerow, and two cherry trees from the garden area would be replaced with higher quality native trees.

Given the small area of habitat to be destroyed, in combination with the proposed creation of native mixed scrub, wildflower grassland and hedgerow creation, it is considered that the proposal would result in a minor positive ecological impact at a local scale in the long term.

4.2.2 Mitigation

New planting should comprise locally sourced, native species, ensuring a three-dimensional habitat and the supply of year-round food sources for wildlife. A non-exhaustive list of native tree and shrub species is shown in Table 3.

Table 3: Suggested species list for hedgerow planting

Common name	Scientific name
Hazel	<i>Corylus avellana</i>
Blackthorn	<i>Prunus spinosa</i>
Hawthorn	<i>Crataegus monogyna</i>
English oak	<i>Quercus robur</i>
Field maple	<i>Acer campestre</i>
Wild cherry	<i>Prunus avium</i>
Honeysuckle	<i>Lonicera periclymenum</i>
Wayfaring tree	<i>Viburnum lantana</i>
Guelder rose	<i>Viburnum opulus</i>
Spindle	<i>Euonymus europaeus</i>
Holly	<i>Ilex aquifolium</i>

4.3 Bats

4.3.1 Impacts

As it is considered unlikely that bats are present within the house or the outbuilding, a European protected species licence (EPSL) from Natural England will not be required for demolition of the buildings.

Internal and external lighting, such as security lights, could increase light levels on the site and adversely impact foraging and commuting bats.

4.3.2 Mitigation

As described in section 4.1.2, lighting of potential bat habitat must not exceed the existing lux levels, and lighting should be designed in accordance with the Bat Conservation Trust and Institute of Lighting Professionals guidance note 08/18 (BCT and ILP, 2018).

4.3.3 Ecological enhancement

It is recommended that at least one integrated bat box, such as the Vivara Pro Build-in WoodStone bat box (or similar), be incorporated on the southern elevation of the proposed dwelling, in an unshaded location. The bat box should be installed at least

4 m above ground level and away from light pollution, to increase roosting opportunities for bats.

4.4 Nesting birds

4.4.1 Impacts

The demolition of the buildings and removal of four trees and ornamental shrubs would result in the destruction of potential nesting habitat. These works could also result in the disturbance of nests, and the killing or injuring of birds, their young or their eggs, should they be present during clearance.

4.4.2 Mitigation

Demolition of the building and tree and shrub clearance should be undertaken outside of the nesting bird season (March to September inclusive), where possible. Otherwise, a detailed search for active bird nests should be undertaken immediately prior to demolition and other habitat clearance. Should any active nests be present, works should be postponed until the young have fledged.

4.4.3 Ecological enhancement

It is recommended that at least one integrated bird box, such as the Vivara Pro WoodStone house sparrow nest box (or similar), be incorporated on the northern elevation of the proposed building. The bird box should be installed at least 3 m above ground level, away from light pollution and sheltered from the prevailing wind, with a clear flight path to the entrance hole.

4.5 Reptiles

4.5.1 Impacts

There is a low chance that clearance of the sheltered area under the wooden decking, the rockery, and the modified grassland could result in the killing or injury of common reptiles, if present. The removal of these habitats would result in the destruction of potential basking, foraging, and sheltering reptile habitats, which is considered to result in a minor ecological effect at a local scale.

4.5.2 Mitigation

The rockery should be carefully dismantled by hand or using handheld tools.

A precautionary approach to grassland clearance should be undertaken to safeguard common reptiles, if present. Clearance of the grassland should be undertaken in a phased way that comprises cutting vegetation to an initial height of no less than 150 mm above ground level at the first cut, 75 mm above ground level at the second cut and 30 mm above ground level at the third cut. It is recommended that care be taken when removing the roots of ornamental shrubs to safeguard common reptiles. All arisings should be removed from the site area on the same day.

Should any common reptiles be found during removal of the rockery, and/or grassland, they should be captured and moved to alternative suitable habitat in an unaffected area.

4.6 Badgers

4.6.1 Impacts

Commuting badgers could become trapped in excavations.

4.6.2 Mitigation

If left overnight, excavations should be covered or a ramp or sloped side should be created to allow means of escape for badger and other fauna, such as hedgehogs and other small mammals. Excavations should be checked daily prior to filling to ensure no animals are trapped.

4.7 Hedgehogs

4.7.1 Impacts

Hedgehogs could become trapped in excavations.

4.7.2 Mitigation

Measures detailed in 4.5.2 would mitigate for the impact of excavations on hedgehogs, if present.

Where possible, any fencing used should have 130 mm square holes provided at ground level, at 10 m intervals, to allow movement of hedgehogs between boundaries.

5 Biodiversity net gain

5.1 Introduction

Biodiversity Metric 4.0 has been used to calculate the biodiversity units on the site and those predicted following development, with the aim of achieving at least 10% biodiversity net gain (BNG). Under the Environment Act 2021, all planning permissions granted in England (with a few exemptions) will have to deliver at least 10% biodiversity net gain from an as yet unconfirmed date, expected to be in November 2023. Some authorities are already implementing such a requirement, hence why BNG is included in this report. Created habitats will need to be secured and managed appropriately for at least 30 years.

The metric can be used to measure both on-site and off-site biodiversity changes for a project or development and can be used to measure the change in biodiversity achieved by different land management interventions. The metric also accounts for some of the risks associated with creating or enhancing habitat.

The units generated by the metric come with a 'health warning'. The outputs of this metric are not absolute values but provide a proxy for the relative biodiversity worth of a site pre- and post-intervention.

The metric does not include species explicitly. Instead, it uses habitats as a proxy. The metric does not change existing levels of species protection and does not replace regulatory processes for species protection.

Biodiversity units are calculated using the size of a parcel of habitat and its quality. The metric uses habitat area (measured in hectares) as its core measurement, except for linear habitats (hedgerows, lines of trees, rivers and streams) where habitat length (measured in kilometres) is used.

To assess the quality of a habitat, the biodiversity metric scores:

- a. Habitats of different types, such as woodland or grassland, according to their relative distinctiveness. Habitats that are scarce or declining typically score highly relative to habitats that are more common and widespread.
- b. The condition of a habitat. Scoring the biodiversity value of the habitat relative to others of the same type.
- c. Being 'better' and 'more joined-up' are important facets of habitats that can contribute to halting and reversing biodiversity declines, so the metric also accounts for whether or not the habitat is sited in an area identified, typically in a relevant local strategy or plan, as being of strategic significance for nature.

Where new habitat is created, or existing habitat is enhanced, the difficulty and associated risks of doing so are considered by the metric. If habitat is created to compensate for losses elsewhere, then the metric also considers its proximity to the site of the losses.

The metric assigns distinctiveness bands to each habitat based on the following criteria:

- Total amount of remaining habitat in England (its rarity)
- Proportion of habitat protected in SSSI: Where less is protected in SSSIs, it is considered of higher distinctiveness
- UK Priority Habitat Status²⁹: Priority Habitats are classed as High or Very High distinctiveness
- European Red List Categories

Trading rules which are applied by the metric require that any loss of habitat is replaced on a 'like for like' or 'like for better' principle. The trading rules applied for individual habitats are based on their distinctiveness.

5.2 Assumptions

Areas of proposed habitats have been agreed with the applicant. Exact species composition, planting and management are not detailed at this stage. However, it is expected that best practice would be followed to achieve the assumed condition for

created or enhanced habitats. This may require the subsequent production and implementation of a Landscape and Ecological Management Plan (LEMP), often made a condition of planning permission.

A precautionary approach was undertaken when using the metric in terms of assessing habitat creation and enhancement, i.e., when assuming the likely condition of the habitats following creation/implementation of management to enhance existing habitats.

Individual trees have now been included in the calculation. Their condition is assumed to be poor, in accordance with descriptions given in the arboricultural report (Advanced Arboriculture, 2024).

A summary of the baseline and post-development habitat units are provided below. Refer to Appendix D and the metric spreadsheet submitted separately for more detail on how the calculation was made.

5.3 *Habitat and hedgerow baseline*

The following measurements of habitats on the site were taken using a combination of manual measurement during the habitat classification survey and digital measurement using Geographical Information Systems (GIS).

Area (ha) / No.	Habitat	Equivalent habitat units
0.057	Existing building and paving	0
0.072	Garden lawn – modified grassland	0.29
0.051	Garden shrubs	0.10
5	Individual trees	0.08
0.18	Totals	0.76

Length (km)	Hedgerow	Equivalent hedgerow units
0.092	Non-native and ornamental hedgerow	0.09
0.034	Native hedgerow	0.07
0.13	Totals	0.16

5.4 *Habitat loss, creation and enhancement*

The following areas of habitats are used for the metric calculations, including their equivalent UK Habitats classification and whether they are considered as ‘creation’, i.e., existing habitats are removed/modified or new habitat is planted, or ‘enhancement’, e.g., management of existing habitats to enhance their ecological value over time.

Proposed habitat	Area (ha), length (km) or number	UK Habitats Classification	Creation / enhancement or succession or retained	Habitat units delivered
Habitats				
Garden lawn	0.041	Modified grassland	Retained	0.16
Wildflower grassland	0.02	Neutral grassland	Enhanced	0.08
Garden shrubs	0.015	Introduced shrub	Retained	0.03
Individual trees	2 (No.)	Individual trees	Retained	0.02
New building and paving	0.079	Developed land, sealed surface	Creation	0.00
Native shrub planting	0.025	Mixed scrub	Creation	0.17
Hedgerows				
Ornamental hedgerow	0.092	Non-native and ornamental hedgerow	Retained	0.09
Native hedgerow	0.034	Native hedgerow	Retained	0.07
Species-rich native hedgerow	0.02	Species-rich native hedgerow	Creation	0.15

5.5 Biodiversity net gain result

Overall, assuming a precautionary approach (refer to 5.2), the proposal would result in a gain of 0.09 habitat units (a 19.79% net gain), and a gain of 0.15 hedgerow units (96.24% net gain). Trading rules have been satisfied.

6 Conclusions

The proposals would result in the destruction of approximately 0.011 hectares of garden lawn, classified as modified grassland and 0.036 hectares of ornamental shrubs. Four trees would also be removed (section 3.3.2 and Advanced Arboriculture, 2024). However, it is proposed to create approximately 0.025 hectares of native mixed scrub and enhance 0.02 hectares of retained garden lawn into wildflower grassland. Tree removal on the northern boundary would be replaced by approximately 20 m of species-rich native hedgerow, and two cherry trees from the garden area would be replaced with higher quality native trees.

The proposals have the potential to adversely impact bats, nesting birds, reptiles, badgers, and hedgehogs. However, by implementing the mitigation and enhancement measures recommended, the proposal is considered to have a slight positive ecological effect at a local scale in the long term.

The site lies approximately 1.25 km to the south-east of Beer Quarry and Caves Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC). However, given the small scale and residential location of the development, no adverse impacts on the SAC are expected.

Overall, assuming a precautionary approach to the biodiversity net gain calculations, the proposal would result in a gain of 0.09 habitat units (a 19.79% net gain), and a gain of 0.15 hedgerow units (96.24% net gain).

7 References and bibliography

Advanced Arboriculture (2024). Sea Chimneys Beer. British Standard 5837:2012 Arboricultural Report.

Averis, B. (2013). Plants and Habitats: an introduction to common plants and their habitats in Britain and Ireland.

Bat Conservation Trust and Institute of Lighting Professionals (2018). Guidance Note 08/18 Bats and artificial lighting in the UK.

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

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

Institute of Environmental Assessment (1995). Guidelines for Baseline Ecological Assessment. E. & F.N. Spon.

Nature Conservation Council (1990). Handbook for Phase 1 habitat survey – a technique for environmental audit. Peterborough: Nature Conservation Council.

Natural England (2023) Biodiversity Metric 4.0 - Technical Annex 1 - Condition Assessment Sheets and Methodology.

Natural England (2023) Biodiversity Metric 4.0 - Technical Annex 2 - Technical Information.

Natural England (2023) Biodiversity Metric 4.0 - User guide.

Rose, F. (2006). The Wildflower Key: Penguin Books: London.

UK Habitat Classification Working Group (2018). UK Habitat Classification User Manual: <https://ukhab.org/>

UK Habitat Classification Working Group (2018). UK Habitat Classification - Habitat Definitions V1.0.

Figures

Figure 1 – UK Habitat Classification survey map



Key

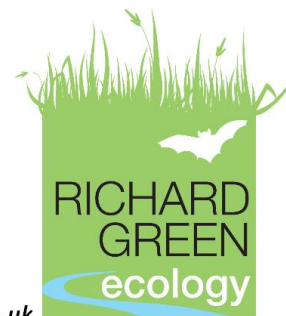
- g4 - Modified grassland
- u 1160 - Introduced shrub
- u1b - Developed land, sealed surface
- u1b5 - Buildings
- h2a - Hedgerow (priority habitat)
- h2b - Other hedgerow

Map Title:
UK Habitat Classification Survey Map

Author: Jen Paget BSc (Hons)
Date: March 2024
Version: V2
Location: Sea Chimneys, Beer

9C Mill Park
White Cross Road
Woodbury Salterton
Devon
EX5 1EL

01395 239234
www.richardgreenecology.co.uk



Appendices

A Photographs (Plates)



Plate 3 - Internal loft space of the house (B1)



Plate 4 - Internal space of the outbuilding (B2)



Plate 5 - Missing tile from house roof (B1), potential roosting feature for bats and birds



Plate 6 - Gap in the mortar in house (B1), potential roosting feature for bats and birds



Plate 7 - Gap in the mortar in outbuilding (B2), potential roosting feature for bats and birds



Plate 8 - Concrete driveway leading to the house (B1) and outbuilding (B2), lined by introduced shrub



Plate 9 - East-facing view of modified grassland and introduced shrub



Plate 10 - Ornamental hedge along the northern site boundary



Plate 11 - West-facing view of the decking and the area underneath the decking

B Plant species list

The botanical species composition percentages for each habitat are indicated using the DAFOR Scale:

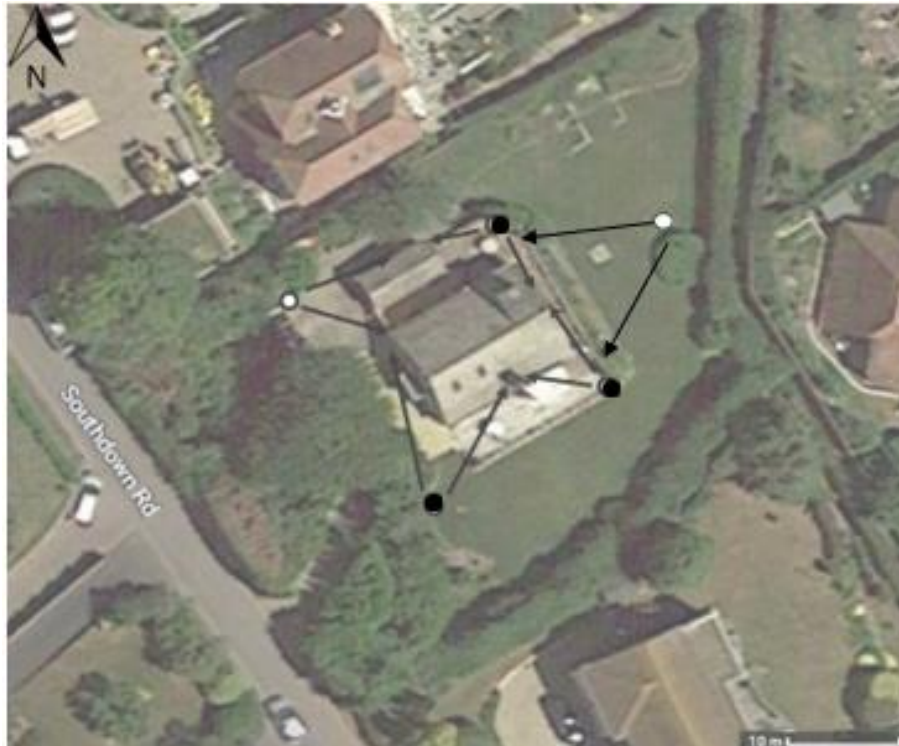
Value	Percentage cover
D - Dominant	> 75%
A - Abundant	51 – 75%
F - Frequent	26 – 50%
O - Occasional	11 – 25%
R - Rare	1 – 10%

Common name	Scientific name	DAFOR
Modified grassland (g4)		
Annual meadow grass	<i>Poa annua</i>	F
Common bent	<i>Agrostis capillaris</i>	O
Daisy	<i>Bellis perennis</i>	O
Dandelion	<i>Taraxacum officinale</i>	R
Dove's-foot crane's-bill	<i>Geranium molle</i>	O
English stonecrop	<i>Sedum anglicum</i>	R
Evening primrose	<i>Oenothera biennis</i>	R
Lady's bedstraw	<i>Galium verum</i>	R
Lesser celandine	<i>Ficaria verna</i>	O
Perennial rye grass	<i>Lolium perenne</i>	F
Red dead-nettle	<i>Lamium purpureum</i>	R
Ribwort plantain	<i>Plantago lanceolata</i>	O
Sel-fheal	<i>Prunella vulgaris</i>	R
Speedwell species	<i>Veronica sp.</i>	R
Wild chives	<i>Allium schoenoprasum</i>	R
Yarrow	<i>Achillea millefolium</i>	O
Scrub – introduced (u 1160)		
Cherry laurel	<i>Prunus laurocerasus</i>	F
Holly	<i>Ilex aquifolium</i>	R
Stinking hellebore	<i>Helleborus foetidus</i>	R
Wilson's honeysuckle	<i>Lonicera nitida</i>	R
Winter heliotrope	<i>Petasites fragrans</i>	O
Native hedgerow (priority habitat) - shrub layer (h2a)		
Beech	<i>Fagus sylvatica</i>	O
Bramble	<i>Rubus fruticosus agg.</i>	O
Common hawthorn	<i>Crataegus monogyna</i>	R
Common ivy	<i>Hedera helix</i>	O
Native hedgerow (priority habitat) – field layer (h2a)		
Bramble	<i>Rubus fruticosus agg.</i>	F
Herb Robert	<i>Geranium robertianum</i>	O
Hart's tongue fern	<i>Asplenium scolopendrium</i>	R
Lords and ladies	<i>Arum maculatum</i>	R

Common name	Scientific name	DAFOR
Ornamental hedgerow – shrub layer (h2b)		
Cherry laurel	<i>Prunus laurocerasus</i>	F
Holly	<i>Ilex aquifolium</i>	R
Wilson's honeysuckle	<i>Lonicera nitida</i>	O
Ornamental hedgerow – field layer (h2b)		
Bramble	<i>Rubus fruticosus agg.</i>	O
Common ivy	<i>Hedera helix</i>	R
Daffodil	<i>Narcissus sp.</i>	R
Snowdrop	<i>Galanthus nivalis</i>	R
Winter heliotrope	<i>Petasites fragrans</i>	R
Scattered trees (g4 11)		
Apple sp.	<i>Malus sp.</i>	R
Cherry species	<i>Prunus sp.</i>	R
Hazel	<i>Corylus avellana</i>	R
Fir	<i>Abies sp.</i>	R

C Bat emergence survey results

Emergence surveyor positions and lines of sight for both surveys



Key	
Surveyor position	○
Camera position	●
Lines of sight	→

Survey 1

Date	Survey timings	Structure reference	Equipment used	Weather (start and end)
11/05/2023	Start: 20:46 End: 22:16 Sunset: 20:31	Sea Chimneys, Beer	PeerSonic Bat Recorder X4 Canon XA10 X2 Canon XA15 X1	Cloud cover: 4/8 – 2/8 oktas Temp: 12°C - 10°C Wind start: Moderate Wind end: Moderate Precipitation start: Dry Precipitation end: Dry
Surveyors Jen Paget and Adrian Bayley				
Results:				
No bats were seen to emerge from the buildings.				

Survey 2

Date	Survey timings	Structure reference	Equipment used	Weather (start and end)
08/06/2023	Start: 21:07h End: 22:52h Sunset: 21:22h	Sea Chimney	Bat Detectors used Peersonic X2 Cameras used Canon XA10 X3	Cloud cover: 0/8 – 0/8 oktas Temp: 16°C - 17°C Wind start: Calm throughout Precipitation start: Dry throughout
Surveyors Kelsey Marratt and Carly Benson				
Results:				
No bats were seen to emerge from the buildings				

Summary of peak counts for each roost present

Building ref	Roost location	Species	Peak count	Roost type
House	0	N/A	N/A	N/A
Outbuilding	0	N/A	N/A	N/A

D Biodiversity net gain headline results

Sea Chimneys, Beer		Return to results menu	
Headline Results			
Scroll down for final results ▲			
On-site baseline	Habitat units	0.47	
	Hedgerow units	0.16	
	Watercourse units	0.00	
On-site post-intervention <small>(Including habitat retention, creation & enhancement)</small>	Habitat units	0.56	
	Hedgerow units	0.31	
	Watercourse units	0.00	
On-site net change <small>(units & percentage)</small>	Habitat units	0.09	19.79%
	Hedgerow units	0.15	96.24%
	Watercourse units	0.00	0.00%
Off-site baseline	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site post-intervention <small>(Including habitat retention, creation & enhancement)</small>	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site net change <small>(units & percentage)</small>	Habitat units	0.00	0.00%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%
Combined net unit change <small>(Including all on-site & off-site habitat retention, creation & enhancement)</small>	Habitat units	0.09	
	Hedgerow units	0.15	
	Watercourse units	0.00	
Spatial risk multiplier (SRM) deductions	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
FINAL RESULTS			
Total net unit change <small>(Including all on-site & off-site habitat retention, creation & enhancement)</small>	Habitat units	0.09	
	Hedgerow units	0.15	
	Watercourse units	0.00	
Total net % change <small>(Including all on-site & off-site habitat retention, creation & enhancement)</small>	Habitat units	19.79%	
	Hedgerow units	96.24%	
	Watercourse units	0.00%	
Trading rules satisfied?	Yes ✓		