Ecological Impact Assessment

Land south of Locksey's Lane, Seaton

Client: Mr J. Walton

Date: April 2023

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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.

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Contents

Executive summary

It is proposed to replace two static caravans and install a wooden chalet in their place on land south of Locksey's Lane, Seaton, Devon, EX12 3BX, NGR SY 1998 8975.

Beer Quarry and Caves Special Area of Conservation (SAC) is located approximately 1.2 km east of the site. The site also lies within the core sustenance zone of a greater horseshoe bat maternity roost/formation roost (Tula Barn, located approximately 600 m south-east of the site). The woodland corridor to the east of the site is used by commuting greater horseshoe bats. A greater horseshoe bat was recorded on the site during a radiotracking study in 2009 (Ecopro, 2010).

If carried out insensitively, illumination arising from the new wooden chalet could result in the illumination of greater horseshoe bat commuting and foraging habitat in the immediate area.

The chalet has been designed to avoid the illumination of potential bat commuting and foraging habitat, with no windows installed on the northern or western elevations that would face the nearby hedgerows, and with window film fitted to other elevations to minimise visible light transmission (VLT) onto the southern and eastern elevations. All internal lighting has been designed in accordance with the Bat Conservation Trust and Institute of Lighting Professionals guidance Note 08/18 (BCT/ILP, 2018) to further reduce light spill including recessed internal lighting. No external lighting would be installed on the site, including along the access track.

The removal of the eastern caravan would result in the destruction of a brown long-eared bat night roost. A European protected species licence (EPSL) from Natural England would be required for the removal of the caravan. An EPSL can only be applied for once planning permission has been obtained.

Proposed habitat creation and enhancement includes at least 8,000 m2 of wildflower grassland to be managed as a meadow, 500 m2 of orchard planting using trees of local provenance, and 300 m2 of new native woodland and shrub planting. In addition, 216 m of the existing hedgerows on the site would be enhanced by planting up gaps with a mix of native species, rebuilding the Devon bank, and through sympathetic management to improve their condition. 15 m of native species-rich hedgerow would also be created to the east of the proposed chalet, to provide screening for visual landscape and lighting purposes. These measures are detailed within a separate Landscape and Ecological Specification and Management Plan (LEMP) (Greenearth Landscape, 2023).

With the proposed avoidance, mitigation, and enhancement measures in place, it is considered unlikely that the proposals would have any negative impact on greater horseshoe bats (or other bats) associated with Tula Barn or Beer Quarry and Caves SAC.

Overall, assuming a precautionary approach, the proposal would result in 12.89 % net gain for habitats and 16.99 % net gain for hedgerows using the Biodiversity Metric 3.1.

Wildlife checklist

Protected and priority species (Grid reference of the site: NGR SY 1998 8975)

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 Indicate with P or A and name the species	Impact on species?	Detailed Conservation Action Statement included? Sets out actions needed in relation to avoidance / mitigation / compensation / enhancement	EPS licence required?
Bats (roost)	✓	✓	✓	P - Brown long-eared bat night roost A - potential for bat roosts in trees	Loss of roost	✓	✓- For destruction of night roost in caravan And if PRFs are to be impacted and bats are utilising them
Bats (flight line / foraging habitat)	✓	×	×	P – Greater horseshoe bats	None - if recommendations followed	✓	×
Dormice	✓	×	×	A	None - suitable habitats will be retained	✓	×
Otters	×						
Great crested newts *(*check consultation zone)*	✓	×	×	A	None - suitable habitats will be retained	✓	×
Cirl buntings (check consultation zone*)**	×						
Barn owls	×						
Other Schedule 1 birds	×						
Breeding birds	✓	×	×	A	None - suitable habitats will be retained	✓	×
Reptiles	✓	×	×	A – common species	None - suitable habitats will be retained	✓	×
Native crayfish	×						

Water voles	×						
Badgers	✓	✓	✓	A	None - suitable habitats will be retained	✓	×
Other protected species	×						
UK BAP priority species	×						
Local BAP key species (other than those included above)	✓	✓	✓	A - Hedgehog	Not if recommendations followed	✓	×
Invasive species	×						

Designations / important habitats

Designation **Terrestrial, intertidal, marine**	**Within the site or potential impact.** **Yes or No**	**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	✓	×
Site of Special Scientific Interest (SSSIs)	✓	Beer Quarry and Caves	✓	×
Marine Conservation Zone (MCZ) (not before 2012)	×			
Local Nature Reserve (LNR)	×			
Non statutory wildlife designations				
County or Local Wildlife Site (CWS\LWS)	×			
Ancient woodland	×			
Special Verge	×			
Habitat of Principal Importance / BAP habitat	✓	Priority hedgerows	✓	×
Local Biodiversity Network	×			

1 Introduction

1.1 Introduction

It is proposed to replace two static caravans and install a wooden chalet in their place on land south of Locksey's Lane, Seaton, Devon, EX12 3BX, NGR SY 1998 8975.

An extended phase 1 habitat survey of the site was undertaken on 7th May 2021 by Richard Green Ecology Ltd for a proposal to locate a chalet in the southern part of the site. As the plans have now been updated to locate the chalet in the northern part of the site, an updated UK Habitat classification survey of the site, including an internal inspection of the eastern static caravan, was undertaken on 16th February 2023 to inform the new proposal.

This report considers the potential impacts of the proposed development on habitats and protected/notable species, including potential impacts on Beer Quarry and Caves Special Area of Conservation (SAC), and the nearby greater horseshoe bat formation and maternity roost at Tula Barn, Branscombe.

This report includes the findings of the surveys and makes recommendations for ecological mitigation and enhancement 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 site falls within a Greater Horseshoe Bat Hibernation Sustenance Zone, a Key Greater Horseshoe Bat Sustenance Zone, a Key Lesser Horseshoe Bat Sustenance Zone, and a Key Bechstein's Bat Sustenance Zone. 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

2.1.1 Designated sites

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 Habitats of Principle Importance. 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 to determine if there are any other local wildlife considerations.

2.1.2 Protected and notable species

The desk study included reference to a radio-tracking study of greater horseshoe bats from Beer Quarry Caves (Ecopro, 2010), and a search for granted European Protected Species Licences (EPSL) within 2 km of the site using the DEFRA Magic website.

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 (previously an extended phase 1 habitat 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.

2.2.2 Timings and weather conditions

Date	***Method***	***Timing***	***Personnel***	***Weather conditions***
07/05/2021	Extended phase 1 habitat survey	Daytime	Sam Chapman	4/8 oktas, light wind, dry, 15°C
16/02/2023	UK Habitat classification survey	Daytime	Jen Paget	6/8 oktas, calm, dry, 7°C

2.2.3 Personnel

Jen Paget has over three years' experience in ecological consultancy and holds Natural England scientific licences to disturb great crested newt [2021-53141-CLS-CLS] and hazel dormouse [2021-10085-CL10A-DOR]. She is an accredited agent under Natural England bat survey licence [2015-15554-CLS-CLS] and Natural England barn owl licence [CL29/00093].

Sam Chapman is experienced in undertaking extended phase 1 habitat surveys and is an accredited agent under Natural England scientific licences to disturb hazel dormouse [2016-20007-CLS-CLS], bats [2020-46563-SCI-SCI], and great crested newt [2015-18897-CLS-CLS].

2.3 Biodiversity net gain calculation

The DEFRA Biodiversity Metric 3.1 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 3.1: Auditing and accounting for biodiversity - User Guide and Technical Supplement. Natural England (2022).

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

Beer Quarry and Caves Special Area of Conservation (SAC), primarily designated for its use by hibernating Bechstein's bats *Myotis bechsteinii*, with greater horseshoe

bat *Rhinolophus ferrumequinum* and lesser horseshoe bat *Rhinolophus hipposideros* also forming qualifying features of the SAC, was located approximately 1.2 km east of the site.

The site is within Beer Quarry and Caves SAC bat sustenance zones[1] for Bechstein's, greater horseshoe, and lesser horseshoe bats.

The application site and surrounding habitats form part of the important foraging area and commuting routes for greater horseshoe bats moving through the local landscape, i.e., commuting from Tula Barn (located approximately 600 m south-east of the site) to foraging habitats around Southleigh, approximately 3.5 km north of the site, as evidenced by radio tracking studies (Ecopro, 2010).

Two EPSLs relating to the destruction of lesser horseshoe bat resting sites (non-maternity roosts) were issued in 2018 approximately 250 m to the east of the site and in 2016 approximately 1.5 km north-west of the site.

3.2 Field survey

3.2.1 Habitats

The site comprised a field, with a strip of woodland running through the centre, bounded by hedgerows and trees, as described below (including UKHab classification codes):

(i) Neutral grassland (g3c)

The northern and southern parts of the site were sheep-grazed pasture with a short sward height (Plate 2, Plate 10). Species included cock's-foot *Dactylis glomerata*, Yorkshire fog *Holcus lanatus,* clover *Trifolium sp.,* and bird's-foot trefoil *Lotus corniculatus*. Cover of bare ground was approximately 10 – 15 %, particularly in the southern section, which also included patches (approximately 100 m^2) of bracken. There were brash piles in the northern section of the field.

Two static caravans were located in the north-western part of the site, with sparsely vegetated ground beneath them.

(ii) Broadleaved woodland (w1g)

Approximately 0.2 ha in the centre of the site comprised broadleaved woodland with a sparse understorey. Woody species included ash *Fraxinus excelsior*, beech *Fagus sylvatica*, elder *sambucus nigra* and holly *Ilex aquifolium*. There was also a small group of trees in the south-western part of the site which included ash, hawthorn *Crataegus monogyna* and hazel *Corylus avellana*.

[1] A defined area around Key Roosts (distance will vary between species) which includes critical Foraging and Commuting Habitat.

In 2023, it was noted that two of the ash trees had been cut down (due to being diseased, applicant pers. comm.).

(iii) Species-rich hedgerows (h2a)

Each of the hedgerows on the site were species-rich (more than 5 woody species per 30 m). The northern boundary hedgerow was on a short earth bank (less than 750 mm high), woody vegetation had been cut short with a total height of approximately 1,750 mm, and a width of approximately 1,500 mm.

The western boundary hedgerow was on a bank of up to 1,000 mm, it had gaps which made up approximately 15 % of the total length, and also had gaps at the hedge base. The width of the woody vegetation was up to 2,000 mm.

Part of the southern boundary (approximately 75 m) was considered to be a hedgerow without a bank, though the remaining 60 m was grown out and considered a line of trees (w1g6).

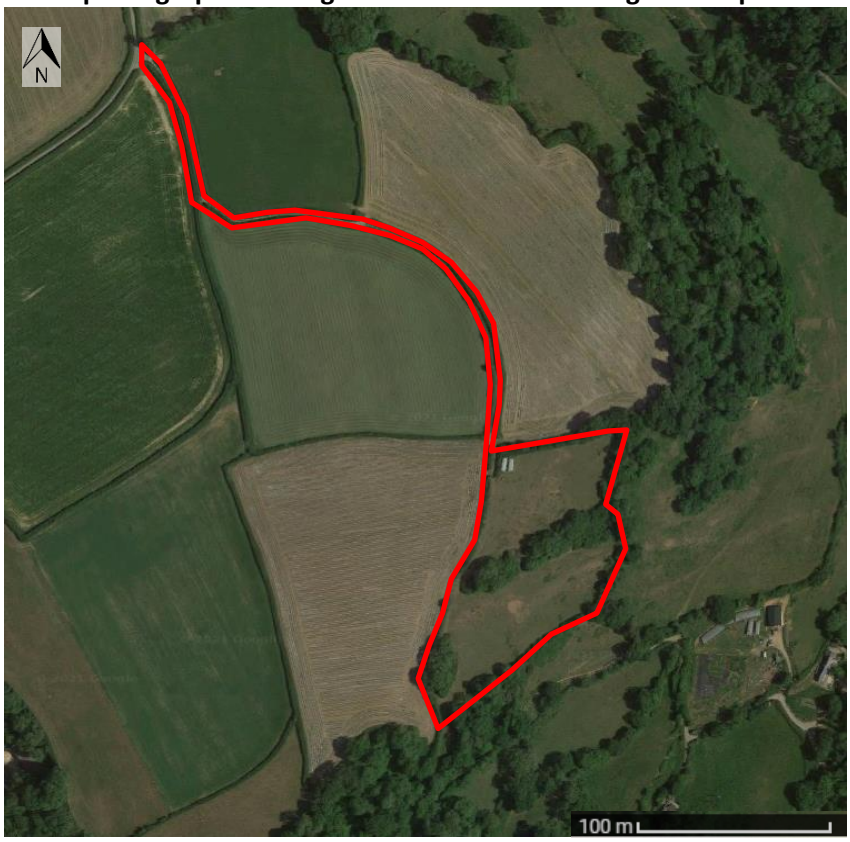
(iv) Line of trees (w1g6)

The eastern boundary of the site comprised a line of mature trees which extended from the woodland to the north-east to the woodland in the centre of the site.

The wider landscape consisted of agricultural fields, broadleaved woodland (including an area designated as ancient and semi-natural woodland), a Priority Habitat, just to the north-west of the site, a network of mature hedgerows, and a small number of agricultural and residential dwellings.

Refer to Appendix B for a list of plant species recorded on the site.

Aerial photograph showing the site and surrounding landscape



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) Roosts

A number of trees in the central woodland strip contained potential roosting features (PRFs) for bats. A number of these PRFs were considered to be of moderate suitability for roosting bats, based on a ground level assessment.

In February 2023, one of the doors on the eastern caravan had come away from its hinges (Plate 3). Upon internal inspection, approximately 100 scattered brown long-eared bat *Plecotus auritus* droppings (identified by DNA analysis - refer to Appendix C) were observed within all internal rooms.

There were no suitable crevices inside the caravan to provide day roosting locations for bats as the internal ceilings and furniture were smooth veneer, meaning that there were no perching locations. As the curtains and door were open, the inside of the caravan was bright and somewhat draughty. As such, the caravan was unsuitable as a day roost and was considered to be an occasional night roost for brown long-eared bats.

(b) Foraging and commuting habitat

The broadleaved woodland corridor to the east of the site is used by commuting greater horseshoe bats. A greater horseshoe bat was recorded on the site during a radiotracking study in 2009. It is likely that these bats are commuting from Tula Barn, a nearby greater horseshoe bat maternity/formation roost to the south-east of the site. These bats are likely to forage on the site, given its close proximity to Tula Barn (approximately 600 m) and be commuting around the site to access the known foraging habitats to the north of the site, around Southleigh (Ecopro, 2010).

Greater horseshoe bats typically forage over permanent pasture and are associated with woodland edge habitats. The habitats on the site (sheep grazed grassland and woodland), were considered to be suitable habitat for foraging greater horseshoe bats.

Given the site's proximity to a known maternity roost for greater horseshoe bats and Beer Quarry and Caves SAC, the site is considered to be of national ecological value to bats.

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.

Hazel dormice are known to be present throughout Devon and live in hedgerows, trees, and scrub. It is possible that dormice may be present in the hedgerows and woodland on the site.

If present, the site is considered to be of no more than local ecological value to dormice, because of the large amount of suitable habitat in the immediate area, i.e., large network of hedgerows and the large area of woodland to the east.

3.3.3 Nesting birds

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

The trees and hedges on the site offer potential nesting habitat for breeding birds.

Because of the amount of suitable habitat in the immediate area (connected hedgerows, large areas of woodland and other trees), the site is considered to be of no more than local ecological value for nesting birds.

There was no evidence of nesting birds on the outside of the caravans or inside the eastern caravan.

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 principle importance under Section 41 of the Natural Environment and Rural Communities Act 2006 (NERC Act, 2006).

Closely grazed grassland is not considered to be favourable reptile habitat. The surrounding Devon bank hedgerows and their margins may provide some suitable habitat for reptiles, if present.

The site is considered to be of no more than local ecological value for reptiles because of the small amount of suitable habitat on the site.

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 principle importance under Section 41 of the Natural Environment and Rural Communities Act 2006 (NERC Act, 2006).

The site is within a Devon Great Crested Newt (GCN) Consultation Zone, i.e., within 5 km of a known GCN record. There are two ponds approximately 250 m and 325 m southeast of the site boundary. There are no ponds on the site.

The areas of grazed grassland do not provide suitable terrestrial shelter habitat for GCN or other amphibians. The Devon banks on the site may provide suitable winter habitat for GCN and other amphibians, however, given the small size of the suitable habitat on the site it is considered to be of no more than local value for GCN and other amphibians, if present.

3.3.6 *Badger*

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

No badger setts or other signs of badgers were found during the survey in May 2021.

In February 2023, a badger latrine was observed on the boundary of the adjacent field, north-west of the site. However, no badger setts were found in the boundary hedgerows or central woodland on the site. The fields may be used by foraging badgers. Therefore, the site was considered to be of local 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).

No signs of hedgehogs were found during the survey. However, it is likely that they are occasionally present on the site. The surrounding fields and hedgerows provide foraging and shelter habitat for hedgehogs, and the site is considered to be of no more than local value for this species.

4 Assessment, recommendations and mitigation

4.1 Designated sites – Beer Quarry and Caves SAC

4.1.1 Impacts

There would be no direct impact on the qualifying features, e.g., by construction works or occupation, on Beer Quarry and Caves SAC.

If carried out insensitively, illumination arising from the new wooden chalet could result in the illumination of greater horseshoe bat commuting and foraging habitat in the immediate area. This would decrease the suitability and quality of the surrounding habitat for greater horseshoe bats and possibly negatively influence the resilience and conservation status of the colony using the nearby Tula Barn roost and Beer Quarry and Cave SAC.

4.1.2 Mitigation

The chalet has been designed to avoid the illumination of potential bat commuting and foraging habitat, with no windows installed on the northern or western elevations that would face the nearby hedgerows, and with window film fitted to other elevations to minimise visible light transmission (VLT) onto the southern and eastern elevations.

All internal lighting has been designed in accordance with the Bat Conservation Trust and Institute of Lighting Professionals guidance Note 08/18 (BCT/ILP, 2018) to further reduce light spill including recessed internal lighting.

No external lighting would be installed on the site, including along the access track.

New planting over the site, including the provision of native trees, scrub, and the sensitive management and enhancement of retained hedges and grassland (refer to 4.2.2 and 4.2.3) would also enhance the site for bats associated with the SAC (and other wildlife).

The new hedge and scrub planting to the south and east of the chalet would also further reduce any potential light spill.

Details regarding planting and management of habitats are provided within a separate Landscape and Ecological Management Plan (LEMP) (Greenearth Landscape, 2023).

4.2 Habitats

4.2.1 Impacts

The proposals would result in the destruction of approximately 300 m^2 of neutral grassland for the new wooden chalet and parking area. This is considered to result in a negligible ecological impact on a local scale because of the abundance of this habitat in the surrounding area.

The delivery of the chalet could result in an adverse impact on hedges surrounding the access track due to the limited width of the track.

4.2.2 Mitigation

The details of the proposed habitats are set out within the supporting LEMP (Greenearth Landscape, 2023), with area measurements set out in the DEFRA Metric 3.1 biodiversity calculation tool submitted separately and summarised in Section 5 of this report.

To compensate for the loss of a small area of neutral grassland and to provide greater biodiversity benefits to the site, the remaining existing grassland on the site would be enhanced with wildflower seed and an area of at least 8,000 m^2 would be managed as a meadow, with a late-August hay cut.

In addition, 500 m^2 of the existing grassland would be enhanced with orchard planting. The orchard trees would be of local provenance.

A method statement for the delivery of the chalet has been produced to ensure the boundary hedges remain unaffected by the delivery of the chalet. The proposed chalet will be transported in two halves, passing through agricultural land adjacent to the site and avoiding any harm to the surrounding vegetation. Delivery and construction will take place during dry weather, reducing the impact upon the adjacent fields. (Marrons, 2023).

4.2.3 Ecological enhancement

An additional 300 m^2 of new native woodland and shrub planting would be provided on the site.

Approximately 216 m of the existing hedgerows on the site would be enhanced by planting up gaps with a mix of native species, rebuilding the Devon bank, and through sympathetic management to improve their condition.

An additional 15 m of native species-rich hedgerow would also be created to the east of the chalet, to provide screening for visual landscape and lighting purposes.

4.3 Bats

4.3.1 Impacts

(a) Roosts

The removal of the eastern caravan would result in the destruction of a brown long-eared bat night roost and would require a European protected species licence (EPSL) from Natural England. An EPSL can only be applied for once planning permission has been granted.

It is considered that the roost has been adequately categorised through an internal inspection and DNA analysis of bat droppings. As there are no locations where bats could roost unseen, no further bat activity surveys are considered necessary, as they are unlikely to provide additional information to change the proposed mitigation or impact assessment.

(b) Habitats

The loss of 300 m^2 of neutral grassland would have no more than a minor potential loss of bat foraging habitat.

The development could also result in the indirect loss of bat foraging habitat through increased lighting on the site.

4.3.2 Further survey - trees

Should any tree limbs with PRFs need to be removed, it is recommended that a suitably licensed ecologist undertakes a climbing inspection of the PRFs prior to felling. If bats are present, or evidence of bats is present, then a licence would be required from Natural England for the destruction of the PRFs.

4.3.3 Mitigation

(a) Roosts

It is proposed to provide a dedicated timber bat shed in the north-eastern corner of the site adjacent to the area of deciduous woodland, to provide compensation for the destruction of the brown long-eared bat night roost.

The bat shed would measure 3,000 mm (L), 2,000 mm (W) x 2,000 mm (H). It would have free-flight access and be suitable for horseshoe bats, with a felt roof lined with type 1F bituminous lining and rough sawn timbers for bats to grip. It would also include a length of Oriented Strand Board (OSB) positioned at the top of the interior wall with a 25 mm crevice behind, providing an internal roosting feature for crevice dwelling bats, providing enhancement for a range of bat species. Refer to drawing BHC/01R.

(b) Habitats

The habitat creation and enhancement measures detailed in section 4.2.2 and 4.2.3 (and within the supporting LEMP) are considered to enhance the site for foraging

bats by increasing the biodiversity value of the site, which would result in an increase of invertebrate abundance across the site.

Once established, the proposed habitat features are likely to be used by a wide range of bat species, including greater horseshoe bats, which are considered likely to respond positively to the increase in habitat and invertebrate diversity on the site.

4.3.4 Ecological enhancement

It is recommended to provide additional enhancement through the provision of two woodcrete bat boxes (or similar durable material), e.g., Schwegler 2FN (or similar) installed on mature trees in the central woodland strip. Bat boxes should be installed at least 3 m from the ground, facing south or south-west.

4.4 Hazel dormouse

4.4.1 Impacts

As there are no plans to remove any habitats suitable for dormice on the site, the proposals would have no impact on dormice.

4.4.2 Ecological enhancement

The proposed hedgerow, shrub, and woodland planting described in section 4.2.2 and detailed in the LEMP (Greenearth Landscape, 2023), would provide additional nesting and foraging habitat for any dormice present.

4.5 Nesting birds

4.5.1 Impacts

As there are no plans to remove any habitats suitable for nesting birds on the site, the proposals are unlikely to negatively impact on nesting birds.

4.5.2 Ecological enhancement

The proposed wildflower meadow, hedgerow, shrub, and woodland planting described in section 4.2.2 and 4.2.3, would provide additional nesting and foraging habitat for nesting birds.

It is also recommended to install two woodstone bird nesting bird boxes, e.g, Vivara Pro Seville 32mm and 28 mm (or similar) on mature trees within the site. Bird nesting provision should be installed at least 3 m above the ground, and should face north or east to avoid excessive heating and prevailing weather conditions.

4.6 Reptiles and amphibians

4.6.1 Impacts

As there are no plans to remove any habitats suitable for reptiles and amphibians on the site, the proposals are unlikely to negatively impact on any reptiles and amphibians, if present.

4.6.2 Ecological enhancement

The proposed wildflower meadow, hedgerow, shrub, and woodland planting described in section 4.2.2 and 4.2.3, would provide additional refugia and foraging habitat for any reptiles and amphibians present.

4.7 Badger

4.7.1 Impacts

The development would result in the negligible loss of potential badger foraging habitat.

4.8 Hedgehog

4.8.1 Impacts

Clearance of the brash pile in the north-east part of the site would result in a negligible amount of winter habitat loss for hedgehogs. Its clearance could also result in the death or injury of hedgehogs, if present during clearance.

4.8.2 Mitigation and ecological enhancement

It is recommended that (if necessary) the brash pile is moved by hand from the field between March and September, and placed elsewhere within the site, to continue to provide a hibernaculum for hedgehogs and other wildlife. Any hedgehogs found should be moved and placed with the relocated pile.

5 Biodiversity net gain

5.1 Introduction

Biodiversity Metric 3.1 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 detailed within a LEMP (Greenearth Landscape, 2023).

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.

Whilst it is proposed to enhance approximately 1.1 ha of the existing grassland with wildflower grassland seeding and management. An area of 0.8 ha has been set aside for enhancement from moderate condition to good condition. This precautionary approach makes allowances for shorter areas of wildflower grassland to be created in areas that might be subject to footfall and possible trampling.

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

(a) Habitats

Area (ha)	Habitat	Equivalent habitat units
1.674	Neutral grassland	14.73
0.007	Existing caravans (grassland beneath)	0.03
0.226	Broadleaved woodland	1.99
1.907	**Totals**	**16.75**

(b) Hedgerows

Length (km)	Habitat	Equivalent habitat units
0.126	Species-rich hedgerow on Devon bank	2.61
0.216	Species-rich hedgerow with trees on Devon bank	2.98
0.233	Line of trees	2.14
0.575	**Totals**	**7.73**

5.4 Habitat loss, creation and enhancement

The following areas of habitats are used for the metric calculations, including their equivalent UK Habitat 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) or length (km)	UK Habitat Classification	Creation / enhancement or succession or retained	Habitat units delivered
Habitats				
Wildflower meadow	0.800	Other neutral grassland	Enhancement	9.50
Orchard with wildflower meadow	0.500	Traditional orchards	Enhancement	0.54
New woodland planting	0.030	Other woodland; broadleaved	Creation	0.15
Building and hardstanding areas	0.017	Developed land; sealed surface	Creation	0.00
Shrub planting	0.010	Heathland and shrub - Mixed scrub	Creation	0.07
Reedbed	0.006	Sustainable urban drainage feature	Creation	0.01
Hedgerow				
Species-rich hedgerow with trees on Devon bank	0.216	Native Species Rich Hedgerow - Associated with bank or ditch	Enhancement	4.18
Species-rich hedgerows	0.015	Native Species Rich Hedgerow	Creation	0.12

5.5 Biodiversity net gain result

Overall, assuming a precautionary approach, and that the accompanying LEMP is followed (refer to 5.2), the proposal would result in a gain of 2.16 habitat units (a 12.89 % net gain), and a gain of 1.31 hedgerow units (16.99 % net gain).

Trading rules have been satisfied, with positive unit change for each of the habitat distinctiveness groups.

6 Conclusions

The proposed development would provide habitat enhancement for protected species including bats, nesting birds, reptiles, amphibians, and dormice.

The design of the chalet (i.e., removal of glazing on the northern and western elevations), along with mitigation and enhancement measures proposed for bats (including those associated with Beer Quarry and Caves SAC), would reduce the

illumination of surrounding habitats and would provide additional foraging and roosting habitat for a range of bat species.

With this mitigation in place, it is considered unlikely that the proposals would have a negative impact on bats or impact on the integrity of Beer Quarry and Caves SAC. Overall, it is considered that the development would result in a biodiversity net gain and the proposals are in line with the East Devon District local plan.

7 References and bibliography

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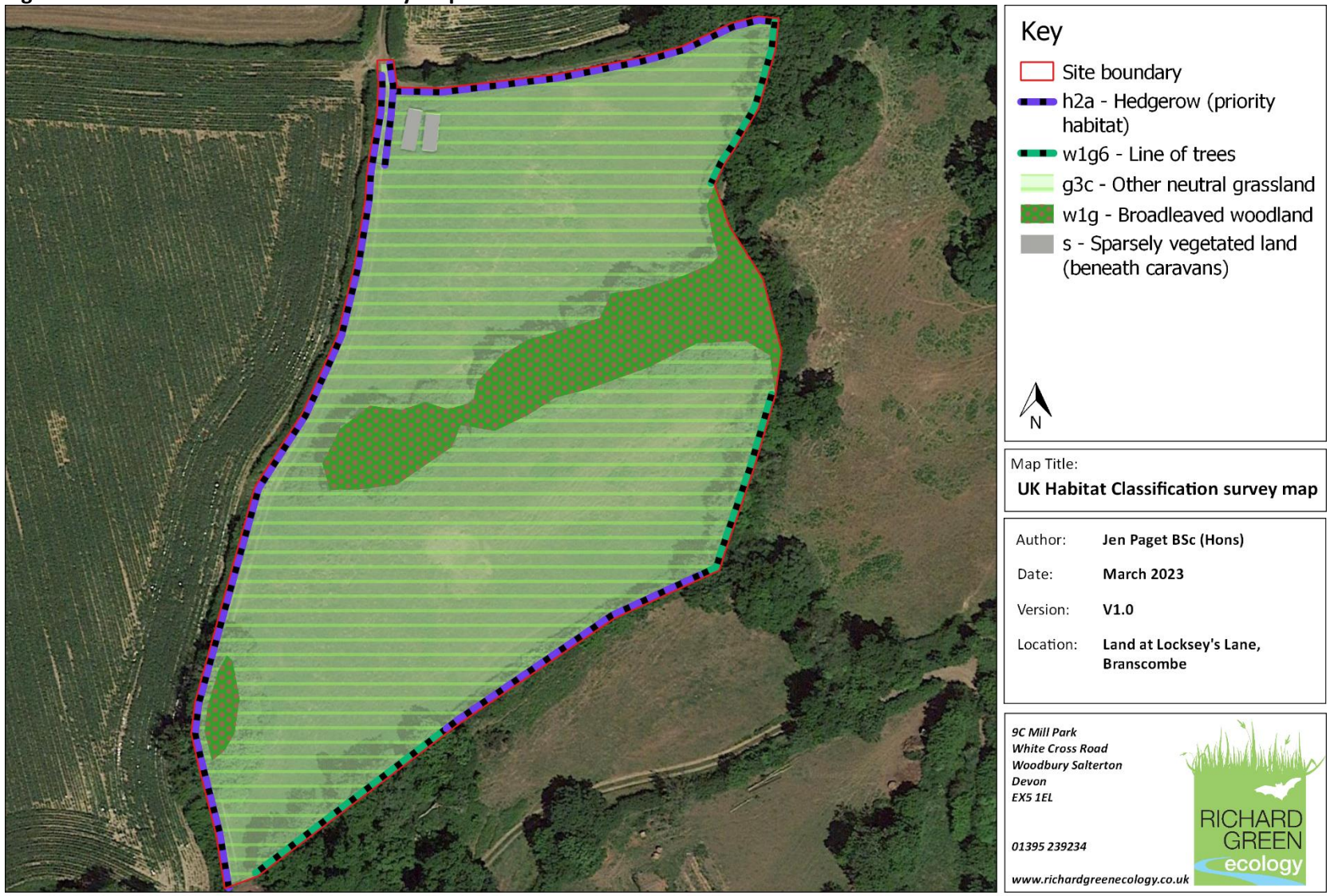
Figures

Figure 1 – UK Habitat Classification survey map



Appendices

A Photographs

Plate 1 – Peeling bark forming a PRF in the central woodland

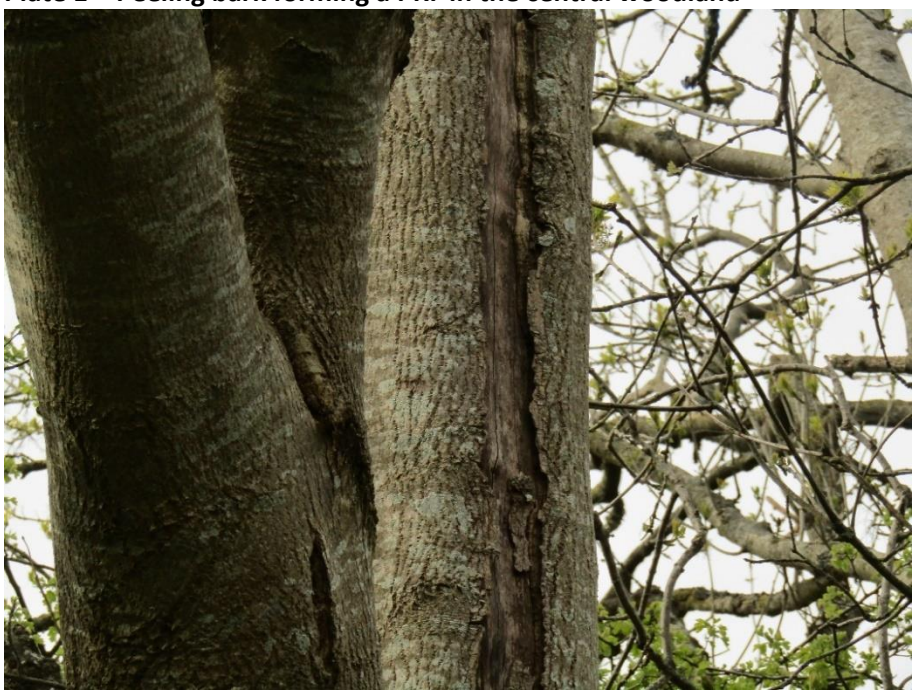


Plate 2 – Section of neutral grassland in the southern section of the field

Plate 3 – Static caravans (inset, loss of door observed in 2023)

Plate 4 – Scattered brown long-eared bat droppings in eastern caravan

Plate 5 – Northern boundary hedgerow

Plate 6 – Brash pile and short, grazed grassland in the northern part of the field

Plate 7 – Western hedgerow and access track

Plate 8 – Southern part of the field and hedgerow with trees

Plate 9 – Central woodland and gappy western hedgerow

Plate 10 – Neutral grassland in the southern part of the site, looking east towards the line of trees connecting to wider woodland network

B Plant species list

Neutral grassland (g3c)	
Common name	***Scientific name***
Bird's-foot trefoil	*Lotus corniculatus*
Bracken	*Pteridium aquilinum*
Cat's-ear	*Hypochaeris radicata*
Cock's-foot	*Dactylis glomerata*
Common nettle	*Urtica dioica*
Creeping buttercup	*Ranunculus repens*
Daisy	*Bellis perennis*
Dove's-foot crane's-bill	*Geranium molle*
Great mullein	*Verbascum thapsus*
Ground ivy	*Glechoma hederacea*
Hairy sedge	*Carex hirta*
Lesser stitchwort	*Stellaria graminea*
Perennial rye grass	*Lolium perenne*
Red clover	*Trifolium pratense*
Red fescue	*Festuca rubra*
Ribwort plantain	*Plantago lanceolata*
Spear thistle	*Cirsium vulgare*
Sweet vernal grass	*Anthoxanthum odoratum*
White clover	*Trifolium repens*
Yarrow	*Achillea millefolium*
Yorkshire fog	*Holcus lanatus*

Broadleaved woodland (w1g)	
Common name	***Scientific name***
Ash	*Fraxinus excelsior*
Beech	*Fagus sylvatica*
Blackthorn	*Prunus spinosa*
Bramble	*Rubus fruticosus agg.*
Common bluebell	*Hyacinthoides non-scripta*
Common nettle	*Urtica dioica*
Elder	*Sambucus nigra*
Fern sp.	*Dryopteris species*
Field maple	*Acer campestre*
Foxglove	*Digitalis purpurea*
Ground Ivy	*Glechoma hederacea*
Hawthorn	*Crataegus monogyna*
Hazel	*Corylus avellana*
Herb Robert	*Geranium robertianum*

Holly	*Ilex aquifolium*
Lesser celandine	*Ficaria verna*
Spindle	*Euonymus europaea*
Traveller's Joy	*Clematis vitalba*
Wild Cherry / Bird Cherry	*Prunus avium/padus*

Species-rich hedgerows (h2a)	
Common name	***Scientific name***
Blackthorn	*Prunus spinosa*
Bracken	*Pteridium aquilinum*
Bramble	*Rubus fruticosus agg.*
Bush vetch	*Vicia sepium*
Cleavers	*Galium aparine*
Common ivy	*Hedera helix*
Common nettle	*Urtica dioica*
False brome	*Brachypodium sylvaticum*
Fern sp.	*Dryopteris sp.*
Field maple	*Acer campestre*
Foxglove	*Digitalis purpurea*
Greater stitchwort	*Stellaria holostea*
Ground elder	*Aegopodium podagraria*
Ground ivy	*Glechoma hederacea*
Hart's-tongue fern	*Asplenium scolopendrium*
Hawthorn	*Crataegus monogyna*
Hazel	*Corylus avellana*
Holly	*Ilex aquifolium*
Oak species	*Quercus sp.*
Spear thistle	*Cirsium vulgare*
Spindle	*Euonymus europaea*
Traveller's Joy	*Clematis vitalba*
White dead nettle	*Lamium alba*
Wild Cherry / Bird Cherry	*Prunus avium/padus*
Yellow archangel	*Lamiastrum galiobdolon*

Line of trees (w1g6)	
Common name	***Scientific name***
Ash	*Fraxinus excelsior*
Beech	*Fagus sylvatica*
Blackthorn	*Prunus spinosa*
Bramble	*Rubus fruticosus agg.*
Common nettle	*Urtica dioica*
Elder	*Sambucus nigra*

Fern sp.	*Dryopteris species*
Ground Ivy	*Glechoma hederacea*
Hawthorn	*Crataegus monogyna*
Hazel	*Corylus avellana*
Herb Robert	*Geranium robertianum*
Holly	*Ilex aquifolium*
Lesser celandine	*Ficaria verna*
Traveller's Joy	*Clematis vitalba*

C DNA results

Ecotype Genetics

Results

Sample ID: EG-1019-1

Sample information:

Sample type: Faecal
Species group: Bats
Suspected species:
Site Location: SY 19991 89743
Comments: Static caravan, Land south of Locksey's Lane, Branscombe

Laboratory information:

DNA Extraction Code: EG-EG-2023-0126
Identification method: qPCR

Analysis Procedure Notes:
All UK bat species tested for - only a single species detected in this sample.

Laboratory Comments:
None

Species Identified:

Species 1: Plecotus auritus (Brown long-eared bat)
qPCR Ct Value: 22

Ecotype Genetics

What do my results mean?

DNA extraction code: This identifies the DNA extraction sample within our laboratory so that it can be revisited if necessary. We keep these extractions for a minimum of 6 months.

ID method: qPCR - These results are obtained using species-specific qPCR (a.k.a real-time PCR) tests. A positive result indicates the presence of DNA from the species reported.

ID method: DNA sequencing - where qPCR fails or is not possible, standard DNA sequencing will be performed. Sequences are then matched against the BLAST database.

Ct value: This is a relative measurement of the amount of species DNA in the sample, derived from the qPCR data. The lower the value, the more DNA present in the reaction. This is for laboratory reference only.

% match - this value is the percentage match of sequences derived from DNA sequencing compared to the database. Due to differences in DNA sequence between individuals within a species this match may not always be exactly 100%.

D Biodiversity net gain headline results

On-site baseline	*Habitat units*	16.75
	Hedgerow units	7.73
	River units	0.00
On-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	18.91
	Hedgerow units	9.05
	River units	0.00
On-site net % change (Including habitat retention, creation & enhancement)	*Habitat units*	12.89%
	Hedgerow units	16.99%
	River units	0.00%
Off-site baseline	*Habitat units*	0.00
	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	0.00
	Hedgerow units	0.00
	River units	0.00
Total net unit change (including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	2.16
	Hedgerow units	1.31
	River units	0.00
Total on-site net % change plus off-site surplus (including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	12.89%
	Hedgerow units	16.99%
	River units	0.00%
Trading rules Satisfied?		Yes ✓