



Ecological Impact Assessment & Biodiversity Net Gain Assessment

Holt Village Hall, Holt Heath, Worcestershire, WR6 6ND

Prepared on behalf of Holt Village Hall

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Non technical summary

This report has been prepared by Sharpe Ecology, on behalf of Holt Village Hall. The report has been prepared to inform proposals for the demolition and rebuild of Holt Village Hall, Holt Heath, Worcester, WR6 6ND.

A walkover survey of the site, to assess the baseline condition of the site for the biodiversity net gain assessment was carried out in June 2024.

The site consisted of a building (the village hall), gravelled car parking area, amenity grass (modified grassland), two semi-mature trees and a species-poor native hedgerow along the western boundary.

A detailed building inspection was undertaken by Sharpe Ecology in September 2023. The building inspection found the presence of bat droppings (mainly old with a few slightly fresher droppings) within the roof void, indicating the possible presence of bat roosts, as well as a number of external potential roost features in the form of gaps under tiles and gaps within the south-facing gable roof verge and brickwork and within a rotten bargeboard on the north elevation.

Based on the type and location of the potential roost features and immediate surrounding habitat, the building was assessed as being of moderate to high suitability for bats, with a high likelihood that bats would be impacted by the proposals for the village hall if found to be present. Therefore, three dusk emergence surveys were conducted between April and June 2024, during which no bats were seen emerging from the building and the level of bat activity on or close to the site was very low and restricted to individual of common species only. As such, bats are deemed to be absent from the building.

Although bats are currently deemed to be absent from the building, and no impacts on bats are anticipated, there is a low risk that bats could use the potential roost features in the future and, as such, a small risk of disturbance to bats if present during works. Therefore, recommended precautionary working methods and mitigation include:

- A pre-commencement check will be carried out by a licensed ecologist.
- The removal of roof tiles, and other roof structures as deemed necessary, should to be carried out by hand and under the direct supervision of a licensed ecologist, with no timing constraints.
- If any bat is encountered on site, it will be left in situ and works will cease until an appropriate course of action has been agreed in writing with the ecologist.

Impacts on other protected or notable species are not anticipated, and there would be no impacts on priority habitats.

General biodiversity enhancement recommendations for the site include the provision of 2-3 bat boxes located on the retained pedunculate oak tree, the planting of native tree species of local provenance and the creation of a new species-rich hedgerow. The building design also includes a green (sedum) roof and green walls.

The baseline (pre-development) habitat values for the area of land within the redline boundary have been calculated, using the statutory biodiversity metric, as having a baseline habitat value of 0.38 habitat units and 0.08 hedgerow units.

The post-development habitats have been calculated as having a value of 0.43 habitat units and 0.18 hedgerow units resulting in a 12.20% net gain in habitat units and a 125.52% net gain in hedgerow units, exceeding the mandatory 10% net gain for both modules.

1. Introduction

1.1. Purpose of report

1.1.1. This report has been prepared by Sharpe Ecology, on behalf of Holt Village Hall. The report has been prepared to inform proposals for the demolition and rebuild of Holt Village Hall, Holt Heath, Worcester, WR6 6ND.

Ecological Impact Assessment

1.1.2. An extended phase 1 habitat survey, a detailed building inspection of the building for bats, and bat presence/absence (dusk emergence) surveys were undertaken by Sharpe Ecology between September 2023 and June 2024. This report describes the findings of the desk study and field surveys, describes the baseline ecological conditions of the site and assess the likely impacts of the proposals of protected and priority habitats and species, including bats.

1.1.3. With reference to the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Preliminary Ecological Appraisal 2017, the aims of this ecological appraisal are to:

- Identify any sites or features likely to be of conservation value within or close to the proposed development site;
- Establish baseline conditions and identify any features, habitats or species which could potentially constrain the proposed development;
- Provide an assessment of likely ecological impacts and set out mitigation measures;
- Provide recommendations for enhancement in line with national, regional and local policies relevant to nature conservation and biodiversity;
- Provide advice on measures to be taken in relation to designated sites and legally protected or otherwise notable species.

1.1.4. The survey and report follow the Chartered Institute for Ecology and Environmental Management's best practice guidelines for preliminary ecological appraisal (CIEEM 2017) and ecological impact assessment (CIEEM 2018) and relevant survey handbooks, best practice guidance, including the UK Habitats Classification (UKHab Ltd, 2023), UK Bat Mitigation Guidelines (Reason, P.F. & Wray, S. 2023), Bat Mitigation Guidelines (Mitchell-Jones, A. J. 2004), The Bat Conservation Trusts' Bat Surveys Good Practice Guidelines (Collins, J. 2023), and BS 42020:2013. The surveys and report have been completed by professional ecologists, who are full members of the Chartered Institute for Ecology and Environmental Management.

Biodiversity Net Gain Assessment

1.1.5. Biodiversity net gain (BNG) is a strategy to develop land and contribute to the recovery of nature. It is a way of making sure the habitat for wildlife is in a better state than it was before development. It is also an approach where developers work with local governments, wildlife groups, land owners and other stakeholders in order to support their priorities for nature conservation.

1.1.6. BNG follows the 'mitigation hierarchy' process of first avoiding and minimising biodiversity loss and then providing positive habitat intervention (restoration, compensation and enhancement) to achieve a net gain in biodiversity, and the 'biodiversity gain hierarchy', which emphasises that all efforts to avoid and mitigate for any impacts to significant on-site habitat must be considered, and compensation for

impacts to any on-site habitats and biodiversity gains must be considered on-site first, followed by the use of registered off-site biodiversity gains and - as a last resort- the use of statutory credits.

1.1.7. The BNG assessment within this report aims to:

- provide baseline data to classify the type, distinctiveness, condition and strategic significance of habitats prior to and post development
- ensure that the baseline habitat conditions are classified in a robust and consistent manner, and that classification is based on the best available data at the time of assessment
- clearly identify data collection methods and any limitations
- calculate baseline pre- and post-development habitat units for the site based on the current development proposals
- achieve BNG on-site wherever possible, with off-site contribution measures being considered as an alternative option if required

2. Legislation and planning policy

2.1. Local planning policy

2.1.1. The South Worcestershire Development Plan (adopted 25th February 2016) policy SWDP 22 (Biodiversity and Geodiversity) states that:

- Development likely to have an adverse effect on a SSSI will not be permitted, except where the benefits of the development at that site clearly outweigh both its likely impact on the features of the site that make it of special scientific interest and any broader impacts on the national network of SSSIs (policy requirement B);
- Development which would result in the loss or deterioration of a nationally protected species will not be permitted unless the need for and the benefits of the proposed development in that location clearly outweigh the loss or deterioration (policy requirement C);
- Development which would compromise the favourable condition or the favourable conservation status of species or habitats of principal importance recognised in the Biodiversity Action Plan, or listed under Section 41 of the Natural Environment and Rural Communities Act 2006, will only be permitted if the need for and the benefits of the proposed development outweigh the loss (policy requirement D);
- Where the policy requirements of B, C or D have been met, full compensatory provision, to include establishment (secured through a legal agreement where appropriate), commensurate with the ecological value of the site will be required. In the first instance this should be through on-site mitigation, the details of which should be agreed with the Local Planning Authority. Off-site mitigation will only be acceptable where on-site mitigation is shown not to be possible (policy requirement E);
- Development should, wherever practicable, be designed to enhance biodiversity conservation interests as well as conserve on-site biodiversity corridors / networks. Developments should also take opportunities, where practicable, to enhance biodiversity corridors / networks beyond the site boundary (policy requirement F).

2.2. National planning policy

2.2.1. In accordance with the National Planning Policy Framework 2023, the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible, and promote the protection and recovery of priority species populations and ecological networks.

2.2.2. When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

- If significant harm resulting from a development cannot be avoided, adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- Encouraging opportunities to incorporate biodiversity in and around developments;

- By encouraging good design, planning policies and decisions should limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.

2.2.3. The Government's 25 Year Environment Plan (HM Government, 2021) sets out the Government's goals for improving the environment within a generation and leaving it in a better state to that which it inherited. This ambition is supported by the National Planning Policy Framework (NPPF) 2023, which states that the planning system should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils, and minimising impacts on and providing net gains for biodiversity, including by establishing more resilient, coherent ecological networks.

2.3. Legislation

2.3.1. Certain habitats and species are subject to protection as laid out in the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017. The following are of particular relevance to this assessment:

- In England all species of bat and their breeding or resting places (roosts) are fully protected under the Conservation of Habitats and Species Regulations 2017 and Section 9 of the Wildlife and Countryside Act 1981 (as amended). This legislation makes it an offence to deliberately, intentionally or recklessly:
 - Kill, injure or capture a bat;
 - Obstruct access to any structure or place used for shelter or protection by bat;
 - Disturb a bat while it is occupying a structure or place which is uses for that purpose;
 - Disturb bats in such a way it would affect the ability of any significant group of bat to survive, breed, rear or nurture or affect a local distribution or abundance;
 - Damage or destroy a breeding or resting place of a bat.
- In England great crested newts *Triturus cristatus* and their places of shelter are fully protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and Section 9 of the Wildlife and Countryside Act 1981 (as amended). This legislation makes it an offence to deliberately, intentionally or recklessly:
 - Kill, injure or capture a great crested newt;
 - Obstruct access to any structure or place used for shelter or protection by a great crested newt;
 - Disturb a great crested newt while it is occupying a structure or place which is uses for that purpose;
 - Take or destroy the eggs of a great crested newt;
 - Possess or control any live or dead specimen or anything derived from a great crested newt.
- In England all birds, their nests and eggs are afforded protection under the Wildlife and Countryside Act 1981 (as amended) making it an offence to:

- Intentionally kill, injure or take any wild bird;
 - Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built;
 - Intentionally take or destroy the egg of any wild bird;
 - Certain birds are subject to further protection under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), making it an offence to intentionally, or recklessly, disturb any wild bird listed on this Schedule while it is nest building, or is at, or near, a nest with eggs or young, or disturb the dependent young of such a bird.
- In England, all native species of reptile are protected under the Wildlife and Countryside Act 1981 (as amended), making it an offence to intentionally kill or injure any species.
 - Badgers *Meles meles* are subject to protection as laid out the Protection of Badgers Act 1992. This legislation makes it an offence to wilfully kill, injure, take, possess or cruelly ill-treat a badgers, or attempt to do so, or intentionally or recklessly interfere with a sett, which includes damaging or destroying a sett, obstructing access to the entrance of a badger sett, and disturbing a badger whilst it is occupying a sett. Badgers are also given protection from killing or taking by certain means under Schedule 6 of the Wildlife and Countryside Act 1981 (as amended).
- 2.3.2. In addition, the Natural Environment and Rural Communities (NERC) Act 2006 places a duty on public bodies to consider enhancement of biodiversity within all their actions, and this Act also includes measures to protect species and habitat considered to be of Principal Importance, using species / habitats listed on the UK Biodiversity Action Plan (superseded by the UK Post-2010 Biodiversity Framework covering the period 2011-2020).
- 2.3.3. Under the Environment Act 2021, all developments in the Town and Country Planning Act 1990, unless exempt, will be required to deliver at least 10% biodiversity net gain. This became mandatory for all but small site developments on 12 February 2024, and became mandatory for small sites on 2 April 2024.

3. Methods

3.1. Desk study

3.1.1. A desk study, to gather information on protected and notable species and habitats within 2km of the site, comprised a review of the following:

- The Multi-Agency Geographic Information for the Countryside (MAGIC) database, available at <http://www.natureonthemap.naturalengland.org.uk/MagicMap.aspx> and accessed in September 2023. The following features were searched for:
 - Nature reserves and country parks
 - Sites of Special Scientific Interest (SSSI's)
 - Internationally protected sites (e.g Ramsar, Special Protection Areas [SPA], Special Areas of Conservation [SAC])
 - Priority Habitats and Species
 - European protected species licences
- Aerial photographs and Ordnance survey maps
- The Worcestershire Biodiversity Action Plan (http://www.worcestershire.gov.uk/info/20252/environmental_policy/1155/biodiversity_action_plan).

3.2. Daytime building inspection for bats

3.2.1. A detailed daytime building inspection (internal and external) for bats was carried out on 7th September 2023. The inspection covered all accessible internal areas and all external walls and roof tiles, using 8x42 binoculars and high / low powered torches, and a walkover survey of the surrounding area.

3.2.2. The building was surveyed for signs of bats, including bat droppings, urine staining, oil marks from fur, feeding remains and bats, as well as features that could provide potential access points or roosting opportunities for bats, such as lifted, broken or missing tiles, gaps in mortar between brickwork and ridge tiles, broken or rotten fascias, gaps behind barge boarding, hanging tiles etc.

3.3. Bat activity surveys

3.4. Bat roost emergence surveys were carried out on 29 April, 17 May and 4 June 2024 and were conducted from 15 minutes before sunset to 1.5 hours after sunset. Pettersson D240x (heterodyne and time expansion), EchoMeter Touch (full spectrum) and Anabat Express (zero crossing) bat detectors were used and calls were analysed using Analook software and with the aid of British Bat Calls: A Guide to Species Identification (Russ 2012) where necessary. Night vision aids used included two infrared-cameras (Nightfox Whisper) and a Ordro AE20 5K video camera (with video footage being reviewed in the office the day after the survey) and a handheld thermal imaging camera (Pulsar Helion XP50 Pro).

3.5. Extended phase 1 habitat survey

3.5.1. An Extended Phase 1 Habitat Survey, to inform the Biodiversity Net Gain Assessment, was carried out on 4 June 2024 and involved undertaking a detailed walkover across the site. Observations of flora (and any fauna) were noted, in addition to an assessment

of the site for supporting protected or priority/notable species. The extended phase 1 habitat survey was conducted in accordance with the guidelines set out in the Handbook for Phase 1 Habitat Survey (JNCC 2010) and habitats were also classified in accordance with the UK Habitats Classification (UK Habitat Classification Version 2.0, UKHab Ltd 2023). A habitat map (baseline plan) has been provided in Appendix A and photographs (Appendix B) have also been included to provide an indication of the nature conservation interest and a clearer picture of existing conditions.

3.6. Scheme impact assessment methodology

3.6.1. The Chartered Institute of Ecology and Environmental Management Guidelines for Ecological Impact Assessment (CIEEM 2018) and Preliminary Ecological Appraisal (CIEEM 2017) are used as a basis to evaluate the nature conservation value of the site and features of ecological importance. These guidelines identify important ecological resources such as protected sites, species populations and habitats and attributes levels of importance at the following scales:

- International (in this case EU unless stated otherwise);
- National (in this case within the UK or England, depending on legislative scope);
- Regional (West Midlands);
- County / local authority (Worcestershire);
- Local (Holt Heath/within the context of the site and the zone of influence);

3.6.2. In addition, habitats and species are evaluated in terms of Priority Habitats and Species (NERC 2006 Section 41 habitats and species) and any other protected or notable species.

3.6.3. Following collation of ecological baseline information, the likely impacts of the any proposed development have been assessed based on the existing ecological baseline and against the valuation criteria noted above and within relevant guidance notes.

3.7. Surveyors

3.7.1. The building inspection, and extended phase 1 habitat survey was carried out by Dr Fiona Sharpe MCIEEM and the report written also by Dr Fiona Sharpe MCIEEM.

3.7.2. The bat activity surveys were carried out by Fiona Sharpe MCIEEM and Fergus Henderson MCIEEM.

3.7.3. Fiona is an experienced ecologist who holds a current Natural England Bat Survey Licence (WML-A34-Level 2 Class Licence; registration number 2018-37892-CLS-CLS) and has over 17 years ecological survey and assessment experience, including over nine years of specialist bat survey, mitigation and licensing experience.

3.7.4. Fergus holds a current Natural England Bat Survey Licence (WML-A34-Level 4 Class Licence; registration number 2015-15595-CLS-CLS) and has over 20 years survey and assessment experience for bats, and is also a Bat Mitigation Class Licence Registered Consultant.

3.8. Biodiversity net gain assessment

Guidance

3.8.1. The following publications have been used to inform the BNG assessment:

- The Statutory Biodiversity Metric calculation tool, The Statutory Biodiversity Metric User Guide, February 2024 and The Statutory Biodiversity Metric Condition Assessments (all available at <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>).
- Biodiversity Net Gain: Good practice principles for development (CIEEM, CIRIA, IEMA, 2016) and Biodiversity net gain. Good practice principles for development. Part A: A practical guide (Baker, J., Hoskin, R & Butterworth, N., 2019).
- Biodiversity Net Gain Report & Audit Templates (CIEEM, July 2021).

Condition assessment and strategic significance

- 3.8.2. The condition of each habitat type on site was assigned using the statutory biodiversity metric condition assessment sheets (provided in Appendix D). Assessment criteria were followed for each broad habitat type.
- 3.8.3. The strategic significance of each habitat type was assessed using the published plans, strategies and policies reviewed as part of the desk study.

Calculations of biodiversity units

- 3.8.4. The statutory biodiversity metric (February 2024) was used to calculate the change in biodiversity units and the overall percentage of biodiversity gain/loss achieved.
- 3.8.5. The pre-development baseline habitat areas were calculated using habitat measurements of the baseline habitat types illustrated on the Phase 1 Habitat Map provided in Appendix A. The post-development habitat type areas calculations were based on the Proposed Site Plan shown in Appendix E.

Competency statement

- 3.8.6. The metric calculations were undertaken by Fiona Sharpe BSc (Hons), PhD, MCIEEM, who is a consultant ecologist with over 17 years of professional ecological survey and assessment experience, and who has been involved in the mitigation design of a NSIP assessed using the Biodiversity Metric 3.0, who has attended the CIEEM Spring Conference (2022) on biodiversity net gain, and CIEEM webinars on biodiversity net gain and principles of offsite BNG delivery (2023), and who has also worked with a Local Planning Authority to help prepare for the mandatory BNG requirements for development, which involved a review of existing plans, policies and process, the updating of biodiversity policies as part of the local plan review, the production of BNG guidance (external and internal), the provision of BNG training sessions and the development of appropriate process to deal with BNG applications from pre-application to post-permission.

3.9. Assumptions and Limitations

- 3.9.1. The optimum survey period for Extended Phase 1 Habitat Surveys in the south of England is generally late March/early April to mid-October, although this does vary according to habitats, e.g. woodlands are best surveyed in spring, grasslands in mid-summer and heathlands in autumn. Although surveys can be conducted throughout the year, some plant and animal species that might be present may not have been evident during the survey.
- 3.9.2. The baseline conditions presented in this report represent those at the time of survey and reporting. Variations in these conditions will take place as a result of seasonal factors, and over time.

- 3.9.3. Access into the roof void was restricted to visual assessment from two access hatches (north end and south end of building) due to the lack of crawl boards and inability to determine the location of the rafters due to thick covering of insulation material
- 3.9.4. The following limitations and assumptions apply to the BNG assessment:
- Post-development target condition scores are indicative and dependent on the appropriate management and maintenance of the post-development habitats.

4. Baseline ecological conditions

4.1. Desk study

- 4.1.1. There were no statutory designated sites located within 2km of Holt Village Hall, and the site did not fall within the SSSI Impact Risk Zone for any SSSI. Therefore, given the nature of the proposal for the site, and the distance between the site and any designated sites, the proposals will not impact on the notified features of any designated site and as such does not require any further impact assessment.
- 4.1.2. There are no priority habitats within, or immediately adjacent to, the site boundary. Priority habitats within 1km of the site include deciduous woodland (closest located 315m to the north), traditional orchard (closest located 315m to the northeast), ancient & semi-natural woodland (closest located 665m to the south) and lowland meadow (610m to the south).
- 4.1.3. No protected species licences (bats and great crested newt *Triturus cristatus*) have been granted within 2km of the site.
- 4.1.4. The River Severn corridor was located 250m to the north, at its closest point.

4.2. Habitats

Habitats

- 4.2.1. The site (NGR SO 81722 63142) consisted of a building (the village hall), gravelled car parking area, amenity grass (modified grassland), two semi-mature trees and a species-poor native hedgerow along the western boundary.

Buildings (UK HAB Buildings u1b5)

- 4.2.2. The buildings consisted of a single storey open-fronted stone outbuilding located within the north corner of the site, and a small shed constructed of corrugated metal sheets and timber, located towards the rear of the site. Detailed descriptions of the two buildings are provided in section 4.3.
- 4.2.3. This habitat was categorised within the metric as Urban – developed land, sealed surface within the metric and the condition of Urban – developed land, sealed surface is already predefined within the metric as ‘N/A – Other’.

Hardstanding (UK HAB Artificial unvegetated – unsealed surface u1c)

- 4.2.4. Gravel car parking formed the southern part of the site, extending down along the west side of the building.
- 4.2.5. This habitat was categorised within the metric as Urban – artificial unvegetated, unsealed surface within the metric and the condition of Urban – artificial unvegetated, unsealed surface is already predefined within the metric as ‘N/A – Other’.

Amenity grass (UK HAB Modified grassland g4)

- 4.2.6. Mown amenity grass formed the eastern part of the site and also north of the village hall. The sward was short and uniform (subject to regular mowing) and dominated by common grass species including perennial rye-grass *Lolium perenne*, rough meadow grass *Poa trivialis*, red fescue *Festuca rubra*, with occasional Yorkshire fog *Holcus lanatus*, soft brome *Bromus hordeaceus* and bent sp. *Agrostis sp.* Herb species were infrequent and consisted of white clover *Trifolium repens*, daisy *Bellis perennis*, creeping buttercup *Ranunculus repens*, common mouse-ear *Cerastium fontanum*, dandelion *Taraxacum agg.*, greater plantain *Plantago major* and autumn hawkbit

Leontodon autumnalis. Very narrow unmown margins (adjacent to boundary fences) also contained false oat-grass *Arrhenatherum elatius*, nettle *Urtica dioica*, nipplewort *Lapsana communis*, barren brome *Bromus sterilis*, wood-avens *Geum urbanum*, cleavers *Galium aparine*, herb-robert *Geranium robertianum*, broadleaved willowherb *Epilobium montanum*, garlic mustard *Allaria petiolate*, green alkanet *Pentaglottis sempervirens* and ragwort *Senecio jacoabaea*. Bramble *Rubus fruticosus* and ivy *Hedera helix* extended through the fence from the gardens to the north and east.

- 4.2.7. This habitat was categorised within the metric as Grassland– modified grassland within the metric. The condition of Grassland– modified grassland was assessed as Poor, with the habitat passing three out of the seven core conditions for this habitat type, with less than 6 species recorded per square metre (see condition assessment sheet in Appendix D).

Individual trees (UKHab g4, secondary code 32 scattered trees)

- 4.2.8. There were two trees on site: a semi-mature walnut *Juglans regia*, located close to the southwest site entrance, and a semi-mature pedunculate oak *Quercus robur*, located in the southeast corner of the site.
- 4.2.9. This habitat was categorised within the metric as Urban - Individual trees, and the condition of both trees was assessed as Moderate (see condition assessment sheet in Appendix D).

Native hedgerow (UKHab h2ab Other native hedgerow)

- 4.2.10. A hedgerow formed the western boundary of the site. The hedgerow was well-maintained and consisted of holly *Ilex aquifolium* and hawthorn *Crataegus monogyna*, with a short extent of leylandii hedging at the southern end, and very occasional yew *Taxus baccata*, bramble, ivy and bracken *Pteridium aquilinum* also present within the hedgerow.
- 4.2.11. This habitat was categorised within the metric as Native hedgerow, and the condition was assessed as Poor (see condition assessment sheet in Appendix D).
- 4.2.12. A habitat map is provided in Appendix A and site photographs are provided in Appendix B.

4.3. Species

Birds

- 4.3.1. No birds were noted on site and there were no nesting opportunities for birds within the building. The boundary and adjacent habitats provided suitable nesting habitat for common garden species only.

Bats

Daytime building inspection

- 4.3.2. Holt Village Hall was a single storey red brick building with a pitched roof (ridgeline orientated north to south) tiled with interlocking clay tiles. There were three small single storey flat roofed extensions to the building: one on the north end of the west elevation, one on the south end of the west elevation and one on the south end of the east elevation.
- 4.3.3. The interlocking roof tiles were all intact but there some slightly lifted tiles on both of west and east pitches, just underneath the ridge, and gaps beneath some of the ridge tiles where the mortar had failed. There were two gaps in the verge mortar on the south elevation (one tile down from the roof apex, on both the east and west verges), a gap

between the brickwork and external render on the south-facing gable and a gap between the brickwork and a rotten bargeboard on the north elevation at the point where the single storey extension (west elevation) joined the main building). No other potential roost features (PRF) were noted and no external evidence of bats were noted.



Image 1 – South elevation



Image 2 – South and east elevations



Image 3 – North elevation



Image 4 – West elevation

- 4.3.4. Internally, the large enclosed roof void spanned the full length of the building. There were two access hatches - one located towards the south end of the building and one towards the north end. The roof was lined with bitumastic felt, which although largely intact, was torn and missing in places, exposing the overlying roof and ridge tiles. Daylight was visible through some of these gaps. The roof void was insulated with thick glasswool insulation on the floor and a number of metal cross trusses were located within the central part of the roof void. A mix of old and fresh bat droppings were located on the glasswool insulation, with small clusters noted beneath torn sections of bitumastic felt and where daylight under exposed tiles was evident. The bat droppings around the southern access hatch were small, mainly old with some slightly fresher scattered droppings (20+ droppings), whilst more bat droppings were noted around the northern access hatch (again mainly old with some slightly fresher droppings, with a range of scattered droppings and small clusters of droppings), with 50+ bat droppings noted. The roof void was largely clear of cobwebs and there were clear sections of ridgeboard.



Image 5 – South end of roof void



Image 6 – Central area of roof void



Image 7 – North end of roof void



Image 8 – Bat droppings (near north hatch)

[Dusk emergence surveys](#)

- 4.3.5. The first dusk emergence survey was carried out on 29 April 2024 and was carried out by one surveyor using two infrared cameras: camera one (paired with Echometer Touch 2 detector) and surveyor 1 was located on the southwest side of the hall, and camera two (paired with anabat detector) was located on the northeast corner of the hall. The weather at the time of the survey was dry, light-moderate breeze, 100% cloud cover, 11.8°C – 10.7°C and 82.0% - 84.2% relative humidity.
- 4.3.6. The second dusk emergence survey was carried out on 17 May 2024 and was carried out by two surveyors (with NVAs): surveyor 1 was located on the southwest side of the hall and surveyor 2 was located on the northeast corner of the hall. The weather at the time of the survey was dry, calm, 70% cloud cover, 21.2°C – 15.7°C and 57.5% - 80.9% relative humidity.
- 4.3.7. The third dusk emergence survey was carried out on 4 June 2024 and was carried out by two surveyors (with NVAs): surveyor 1 was located on the southwest side of the hall and surveyor 2 was located on the northeast corner of the hall. The weather at the time of the survey was dry, light breeze, 50% cloud cover, 12.2°C – 10.1°C and 71.1% - 81.1% relative humidity.
- 4.3.8. **Dusk survey 1:** No bats were seen emerging from the building. Bat activity throughout the course of the survey was low and consisted of occasional foraging passes by individual common pipistrelle and soprano pipistrelle, with bats coming onto the site from the south, and a single overhead noctule pass. Full details of the survey are given in Appendix C.
- 4.3.9. **Dusk survey 2:** No bats were seen emerging from the building. Bat activity throughout the course of the survey was low and consisted of occasional foraging passes by 1-2 common pipistrelles and soprano pipistrelles, with bats coming onto the site from the east south, a single overhead noctule pass, and a single pass by a Myotis species (north to south on west side) at 21.49. Full details of the survey are given in Appendix C.
- 4.3.10. **Dusk survey 3:** No bats were seen emerging from the building. Bat activity throughout the course of the survey was low and consisted of occasional foraging passes by individual common pipistrelle and soprano pipistrelle, with bats coming onto the site from the east south. Full details of the survey are given in Appendix C.

Other mammals

- 4.3.11. No evidence of badgers, such as setts, latrines, dung pits, snuffle holes, well-worn pathways or footprints was noted on site or within 30m of the site boundary (accessible areas only).
- 4.3.12. The site did not provide any suitable foraging habitat for hedgehog *Erinaceus europaeus* or any other mammal species.

Reptiles

- 4.3.13. The site did not provide any habitat suitable for supporting reptiles and no reptiles were encountered on site.

Amphibians

- 4.3.14. The site did not provide any habitat suitable for supporting amphibians, including great crested newt and no amphibians were encountered on site.

Invertebrates

- 4.3.15. The grassland had the potential to support a narrow range of common invertebrate species only.

5. Ecological evaluation, mitigation and enhancement

5.1. Proposals

- 5.1.1. The proposals for the site (construction of new village hall) would require the demolition of the existing village hall, small-scale loss of amenity grass and the removal of the walnut tree.

5.2. Statutory protected sites and other features

- 5.2.1. Given the size and nature of the proposed development and the distance between the site any designated site, no statutory or non-statutory designated sites are considered likely to be significantly affected by proposals; therefore, no further survey or assessment is required.

5.3. Plants and habitats

- 5.3.1. All of the habitats and plants within the site are common and widespread, and the small-scale loss of amenity grass and the loss of the walnut tree would not be significant in ecological terms other than for the species that may be supported on the site (see below).
- 5.3.2. No further surveys in relation to protected or notable habitats are required.
- 5.3.3. The proposals for the site include a green (sedum) roof and green wall on the new building, and new tree planting.
- 5.3.4. Suitable native trees include silver birch *Betula pendula*, bird cherry, wild cherry *Prunus avium*, crab apple *Malus sylvestris*, rowan, pedunculate oak *Quercus robur* and small-leaved lime *Tilia cordata*.

5.4. Birds

- 5.4.1. The two trees were the only features on the site that provided any potential bird nesting opportunities, although no nests were noted on site. The hedgerow along the western boundary is outside of the redline boundary and would not be impacted by the proposals. Some cutting back of overhanging vegetated (from the gardens to the north and east) may be required.
- 5.4.2. Therefore, to avoid the risk of harm/disturbance to nesting birds, any vegetation removal/cutting back should be undertaken outside of the peak bird nesting season (March to August inclusive) to avoid potential conflict with the legislation concerning breeding birds. If vegetation removal/cutting back cannot be scheduled to avoid the bird nesting season, then a check by an ecologist immediately prior to commencement of clearance works will be required, and if nests are found to be present, they should be adequately protected until breeding has finished and the nest is no longer in use.
- 5.4.3. The planting of new trees and a short extent of native hedgerow would provide additional nesting opportunities for sites.

5.5. Bats

- 5.5.1. The building inspection identified a small number of external potential roost features and the presence of a small number of bat droppings inside the roof void. However, the three dusk emergence surveys did not record any bats emerging from the building, and the levels of bat activity on the site were very low and restricted to individual passes by common species only.

- 5.5.2. As such, bats are deemed to be absent from the building and no impacts on bats are anticipated.
- 5.5.3. Although bats are currently deemed to be absent from the building, and no impacts on bats are anticipated, there is a low risk that bats could use the potential roost features in the future and, as such, a small risk of disturbance to bats if present during works. Therefore, report sets out suitable mitigation for bats and to ensure the works are undertaken in a precautionary manner to demonstrate reasonable avoidance of harm to and disturbance of bats. Precautionary working methods and mitigation includes:
- A pre-commencement check will be carried out by a licensed ecologist.
 - The removal of roof tiles, and other roof structures as deemed necessary, should be carried out by hand and under the direct supervision of a licensed ecologist, with no timing constraints.
 - If any bat is encountered on site, it will be left in situ and works will cease until an appropriate course of action has been agreed in writing with the ecologist.
- 5.5.4. The site can be enhanced for bats through the provision of 2-3 bat boxes located on the retained oak in the southeast corner of the site. The bat boxes should be sited on the Suitable bat boxes include Greenwood's Ecostyocrete Half and Half Bat Box, Large Multi Chamber WoodStone Bat Box, Schwegler 2FN Bat Box, Habibat Triple Chambered Access Bat Box or Schwegler 1FF Bat Box. Boxes should be located in a sunny position, at a height of 4-6m, and with unobstructed access for bats.

5.6. Other mammals

- 5.6.1. There was no evidence to suggest the presence of badgers, hedgehog or any other mammal species on site, therefore impacts on other mammal species are not anticipated.

5.7. Reptiles

- 5.7.1. The habitats on site were deemed unlikely to support reptiles. Therefore, no significant impacts on reptiles are anticipated and no further survey or specific mitigation is required.

5.8. Amphibians

- 5.8.1. The habitats on site were deemed unlikely to support amphibians. Therefore, no significant impacts on amphibians are anticipated and no further survey or specific mitigation is required.

5.9. Invertebrates

- 5.9.1. Habitats on site were deemed unlikely to support priority invertebrate species. Therefore, no significant impacts on invertebrates are anticipated and no further survey or specific mitigation is required.

6. Biodiversity net gain assessment

6.1. BNG good practice principles for development

6.1.1. This BNG assessment has followed the good practice principles for biodiversity net gain (CIEEM, CIRIA, IEMA 2016). Table 16. below lists the BNG principles and states how each one has been considered.

TABLE 6.1. BNG PRINCIPLES AND APPLICATION ON THE PROJECT

Principle	Description	Application on the project
Apply the mitigation hierarchy	Do everything possible to first avoid and then minimise impacts on biodiversity. Only as a last resort, and in agreement with external decision makers where possible, compensate for losses that cannot be avoided. If compensating for losses within the development footprint is not possible or does not generate the most benefits for nature conservation then offset biodiversity losses by gains elsewhere.	<p>The proposed development will not result in the loss of any medium or high distinctiveness habitats.</p> <p>The loss of low distinctiveness habitats is restricted to the loss of modified grassland.</p> <p>All losses of biodiversity will be compensated within the development footprint through the provision of new grassland creation, tree planting and the provision of a green roof and green walls.</p>
Avoid losing biodiversity that cannot be offset elsewhere	Avoid impacts on irreplaceable biodiversity - these impacts cannot be offset to achieve NNL/net gain.	The proposed development will not result in any impacts/losses of irreplaceable habitats as none are present on site.
Be inclusive and equitable	Engage stakeholders early, and involve them in designing, implementing, monitoring and evaluating the approach to net gain. Achieve net gain in partnership with stakeholder where possible.	Stakeholder engagement has been required throughout this project.
Address risk	Mitigate difficulty, uncertainty and other risks to achieving net gain. Apply well-accepted ways to add contingency when calculating biodiversity losses and gains in order to account for any remaining risks, as well as to compensate for the time between the losses occurring and the gains being fully realized.	<p>The difficulty of creating habitat types and the time lag between initial habitat creation and habitats reaching target condition has been accounted for by the post-development habitat multipliers in the statutory metric calculator and is reflected in the final BNG scores.</p> <p>Target habitat types and the condition of created habitats have been assessed using a precautionary approach to</p>

		ensure targeted habitat types are realistic.
Make a measurable net gain contribution	Achieve a measurable, overall gain for biodiversity and the services ecosystems provide while directly contributing towards nature conservation priorities.	This development will result in an overall net gain for biodiversity.
Achieve the best outcomes for biodiversity	<p>Achieve the best outcomes for biodiversity by using robust credible evidence and local knowledge to make clearly justified choices when:</p> <ul style="list-style-type: none"> • delivering compensation that is ecologically equivalent in type, amount and condition and that accounts for the location and timing of biodiversity losses • compensating for losses of one type of biodiversity by providing a different type that delivers greater benefits for nature conservation • achieving net gain locally to the development while also contributing towards nature conservation priorities at local, regional and national levels • enhancing existing or creating new habitat • enhancing ecological connectivity by creating more, bigger, better and joined up areas for biodiversity. 	<p>The habitat creation as part of the proposed development has been targeted to avoid trading down in habitat value and low distinctiveness modified grass has been replaced with low distinctiveness modified grassland.</p> <p>In addition to the provision of low distinctiveness habitats, the proposals also include new native tree planting and a new species-rich hedgerow, both medium distinctiveness habitats.</p> <p>The development exceeds the national BNG 10% net gain requirements.</p>
Be additional	Achieve nature conservation outcomes that demonstrably exceed obligations, ie do not deliver something that would occur anyway.	The proposed development will achieve a measurable net gain of over 12% for habitat units, and over 125% for hedgerow units, which exceeds the 10% gains mandated by the Environment Act 2021. These net gains would not have occurred if the site remained as existing.
Create a net gain legacy	<p>Ensure net gain generates long-term benefits by:</p> <ul style="list-style-type: none"> • engaging stakeholders and jointly agreeing practical solutions that secure net gain in perpetuity 	New tree planting, using native species, and the inclusion of a green roof will contribute towards the long-term adaptation of the local area to changes in climate.

	<ul style="list-style-type: none"> • planning for adaptive management and securing dedicated funding for long-term management • designing net gain for biodiversity to be resilient to external forces, especially climate change • mitigating risk from other land uses • avoiding displacing harmful activities from one location to another • supporting local-level management of net gain activities. 	
Optimise sustainability	Prioritise BNG and, where possible, optimise the wide environmental benefits for a sustainable society and economy.	BNG has been a priority and the proposed site has been designed to be sustainable with the inclusion of habitats suitable for the change in use of the site.
Be transparent	Communicate all net gain activities in a transparent and timely manner, sharing the learning with all stakeholders.	Full details of the BNG process are included within this report.

6.2. Proposed design

6.2.1. Post-intervention habitat creation, which will be delivered as part of the development, is shown on the proposed site layout in Appendix D, and includes the following:

- Urban – developed land, sealed surface (0.0031 ha) – new village hall (minus area of green roof).
- Urban – artificial unvegetated, unsealed surface (0.0696 ha) – new car parking.
- Urban – other green roof (0.023 ha) – sedum roof on new village hall.
- Urban – façade-bound green wall (0.035 ha)
- Grassland – modified grassland (0.0366 ha) – maintained as amenity grassland.
- Individual trees – urban tree (0.0163 ha) – four new native trees.
- Species-rich native hedgerow (0.015km) – a 15m stretch of new species-rich hedgerow along the eastern boundary.

6.3. BNG metric

Value of baseline habitats

- 6.3.1. The baseline habitat values for the area of land within the redline boundary have been calculated, using the statutory metric, as having a baseline habitat value of 0.38 habitat units and 0.08 hedgerow units.
- 6.3.2. Summaries of the pre-development habitats, including their area/length, distinctiveness, condition and biodiversity unit value are provided in Tables 6.2 and 6.3 below, and a map of the pre-development baseline habitats are provided within Appendix A.

TABLE 6.2. SUMMARY OF PRE-DEVELOPMENT BASELINE HABITAT UNITS

Habitat type	Area (ha)	Distinctiveness	Condition	Habitat units
Developed land; sealed surface	0.0178	V. Low	N/A	0.00
Artificial unvegetated; unsealed surface	0.0531	V. Low	N/A	0.00
Modified grassland	0.0613	Low	Poor	0.12
Individual trees – urban tree	0.0326	Medium	Moderate	0.26
Total habitat units	0.38			

TABLE 6.3. SUMMARY OF PRE-DEVELOPMENT BASELINE HEDGEROW UNITS

Habitat type	Length (km)	Distinctiveness	Condition	Hedgerow units
Native hedgerow	0.04	Low	Poor	0.08
Total hedgerow units	0.08			

Value of post-development habitats

- 6.3.3. The post-development habitats have been calculated as having a value of 0.43 habitat units and 0.18 hedgerow units.
- 6.3.4. Summaries of the post-development habitats, including their area/length, distinctiveness, condition and biodiversity unit value are provided in Tables 6.4 and 6.5 below, and a map of the post-development habitats are provided within Appendix E.

TABLE 6.4. SUMMARY OF POST-INTERVENTION HABITAT UNITS

Habitat type	Retained/created	Area (ha)	Distinctiveness	Condition	Habitat units
Developed land; sealed surface	Created	0.0031	V. Low	N/A	0.00
Artificial unvegetated; unsealed surface	Created	0.0696	V. Low	N/A	0.00
Modified grassland	Created	0.0366	Low	Poor	0.07
Other green roof	Created	0.0230	Low	Condition Assessment N/A	0.04
Façade-bound green wall	Created	0.0035	Low	Poor	0.01
Individual trees – urban tree	Retained	0.0326	Medium	Moderate	0.26
Individual trees – urban tree	Created	0.0163	Medium	Moderate	0.05
Total habitat units	0.43				

TABLE 6.5. SUMMARY OF POST-INTERVENTION HEDGEROW UNITS

Habitat type	Retained/created	Length (km)	Distinctiveness	Condition	Hedgerow units
Native hedgerow	Retained	0.04	Low	Poor	0.08
Species-rich	Created	0.015	Medium	Moderate	0.1
Total hedgerow units	0.18				

6.3.5. The loss of low distinctiveness modified grassland (0.0613 ha) has been compensated for through the proposed creation of new modified grassland (0.0366ha) and other green roof (0.023 ha) and façade-bound green walls (0.0035 ha), with the creation of green roof and green walls also enhancing the biodiversity value of the site, along with the planting of four new native trees. The overall increase in the biodiversity value of habitats is 12.20%. The addition of a new species-rich hedgerow increases the biodiversity value of hedgerows by 125.52%.

- 6.3.6. The detailed summary of the metric is provided in Appendix F and the completed metric spreadsheet has been submitted with this report.

6.4. Project implementation and construction plan

- 6.4.1. A detailed implementation plan, which should include drawings (including detailed landscape planting schedules), management proposals, a construction handover checklist and a timetable for implementation, plus details of those responsible for activities, should be produced.

6.5. Biodiversity net gain management and monitoring plan

- 6.5.1. A Landscape Ecological Management Plan (LEMP) should be produced to form the main mechanism for delivering net gain, and the LEMP should focus on the delivery of long-term management and monitoring of created habitats (modified grassland, green roof, green walls, native hedgerow and trees).

7. Conclusions

7.1. Summary of mitigation/enhancement measures

7.1.1. Table 7.1 summaries the need for further survey and general mitigation/compensation and enhancement measures for key ecological receptors to ensure compliance with relevant wildlife legislation and to ensure no significant effects on species or biodiversity

TABLE 7.1 – SUMMARY OF FURTHER SURVEY AND MITIGATION/COMPENSATION AND ENHANCEMENT MEASURES

Ecological receptor	Further survey and/or mitigation measures	Enhancement measures	Mechanism for securing delivery
Statutory and non-statutory designated sites	None	N/A	N/A
Plants and habitats	None	New native hedgerow, green roof, green walls and native tree planting	Planning condition
Breeding birds	Vegetation removal/cutting back outside bird nesting season, or prior check for nesting birds.	New potential nesting habitat in the form of tree and hedgerow planting	Planning condition
Bats	Precautionary working methods relating to building demolition	Provision of bat boxes on retained oak	Planning condition
Other mammals	None	None	N/A
Reptiles	None	None	N/A
Great crested newt	None	None	N/A
Invertebrates	None	None	N/A

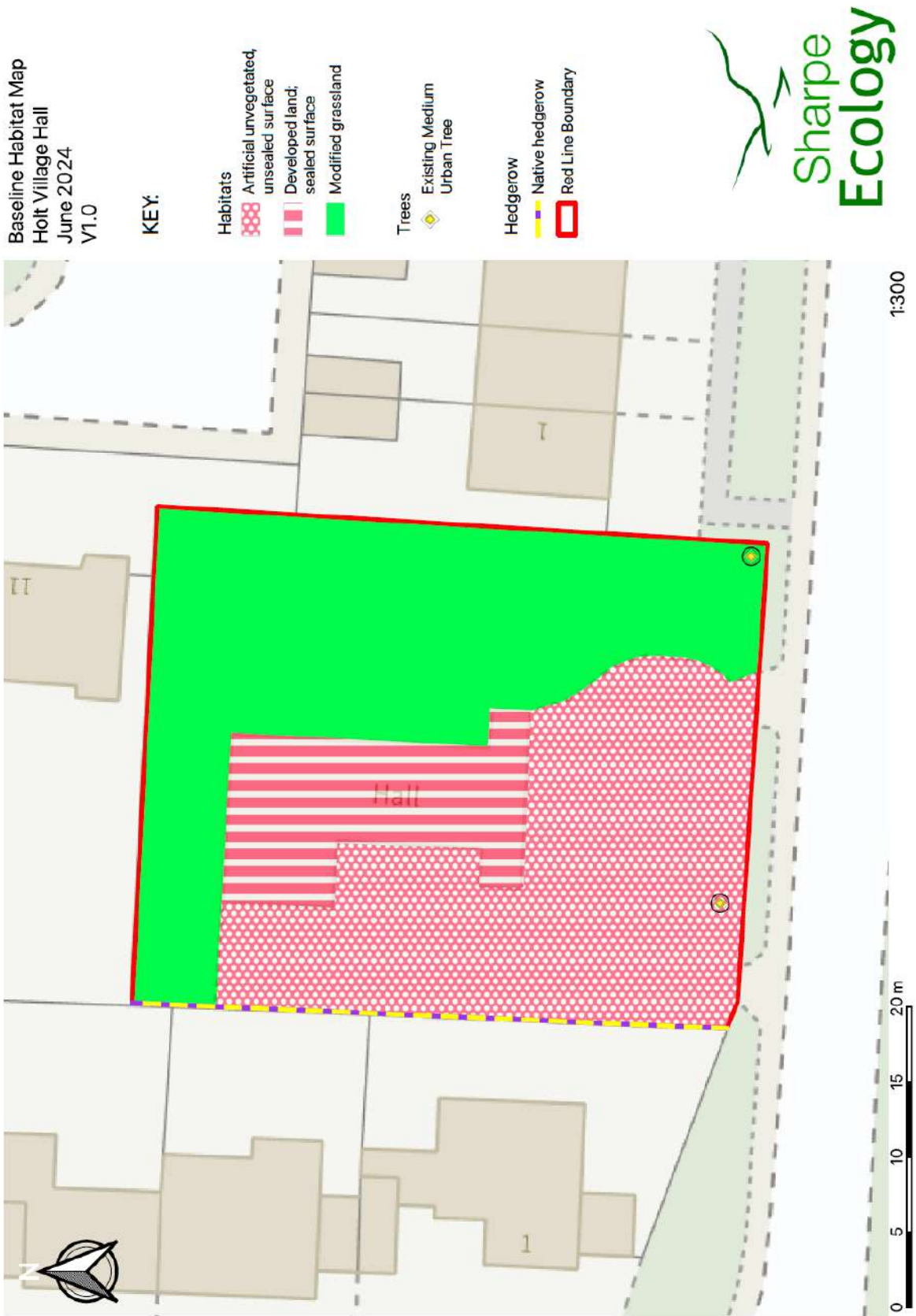
7.2. BNG

7.2.1. This development would result in a 12.20% (habitats) and 125.52% (hedgerow) net gain in biodiversity, which is above the mandatory 10% net gain.

References

- Baker, J., Hoskin, R. and Butterworth, T. (2019). Biodiversity net gain. Good practice principles for development. Part A: A practical guide. CIRIA, Griffin Court, 15 Long Lane, London, EC1A 9PN.
- CIEEM (2021). Biodiversity Net Gain Report and Audit Templates. Chartered Institute of Ecology and Environmental Management, Winchester, UK.
- CIEEM (2016). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- CIEEM (2017). Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Collins, J. (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines, (3rd edn). The Bat Conservation Trust, London. ISBN-13 978-1-872745-96-1
- Defra (2024). The Statutory Biodiversity Metric. User Guide. February 2024. Department for Environment Food & Rural Affairs (available at <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>).
- HM Government (2018). A Green Future: Our 25 Year Plan to Improve the Environment (available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf).
- JNCC (2010). Handbook for Phase 1 habitat survey: A technique for environmental audit. Joint Nature Conservation Committee, Peterborough, UK.
- Mitchell-Jones, A. J. (2004). Bat Mitigation Guidelines, English Nature ISBN 1 85716 781 3.
- Reason, P.F. & Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Chartered Institute of Ecology and Environmental Management, Ampfield.
- UKHab Ltd (2023). UK Habitat Classification Version 2.0 (at <https://www.ukhab.org>).

Appendix A Baseline habitat map



Appendix B Site photographs



Photo 1. Modified grassland (amenity grass) to east of hall



Photo 2. Gravel car parking to south of hall with native hedgerow along west boundary



Photo 3. Pedunculate oak



Photo 4. Walnut

Appendix C Details of bat emergence/activity surveys

Dusk emergence 1

Site	Holt Village Hall		Date	29 April 2024
Surveyors	Fiona Sharpe + NVA (1) Standalone NVA (2)		Surveyor Position	1 – Southwest 2 – Northeast
Survey Type	Dusk emergence		Detectors Used	Pettersson D240x; EM Touch, Anabat Express
Weather	Dry, light-moderate breeze, 100% cloud cover			
Temperature	11.8°C – 10.7°C		Humidity	82.0% - 84.2%
Sunset	20.34		Sunrise	
Start	20.19		Finish	22.04
Time	Surveyor	Species	Activity	
20.56	1	55kHz pipistrelle	Faint foraging pass to north – audio only	
20.57	1 & 2	45kHz pipistrelle	Pass around building, onto site from south	
20.58	1	45kHz pipistrelle	Faint foraging activity in garden to north	
20.58	1	55kHz pipistrelle	Low fast pass south to north on west side	
21.01	2	45kHz pipistrelle	Pass – audio only	
21.07	1 & 2	55kHz pipistrelle & 55kHz pipistrelle	One of each species foraging in garden to north	
21.08	1 & 2	45kHz pipistrelle	Foraging activity in garden to north	
21.16	2	Noctule	Pass – audio only	
21.36	1 & 2	45kHz pipistrelle	Pass – audio only	
21.40	1 & 2	55kHz pipistrelle	Pass – audio only	
21.48	2	55kHz pipistrelle	Pass on west side & social call	
21.56	1	55kHz pipistrelle	Brief pass & social call on north side – audio only	
21.57	1	55kHz pipistrelle	Brief pass & social call to north – audio only	



NVA southwest, end of survey



NVA northeast, end of survey

Dusk emergence 2

Site	Holt Village Hall	Date	17 May 2024
Surveyors	Fiona Sharpe + NVA (1) Fergus Henderson + NVA (2) Standalone NVA (3)	Surveyor Position	1 – Southwest 2 – Northeast 3 - Northwest
Survey Type	Dusk emergence	Detectors Used	Pettersson D240x; EM Touch, Anabat Express, Anabat Walkabout
Weather	Dry, calm, 70% cloud cover		
Temperature	21.2°C – 15.7°C	Humidity	57.5% - 80.9%
Sunset	21.01	Sunrise	
Start	20.46	Finish	22.31
Time	Surveyor	Species	Activity
21.19	2	55kHz pipistrelle	Single bat flew onto site from east & flew west on north side
21.20	2	55kHz pipistrelle	Brief pass – audio only
21.25	1 & 2	Noctule	Overhead pass – audio only
21.26	2	45kHz pipistrelle	Faint pass – audio only
21.27	2	55kHz pipistrelle	Single bat foraging on north and east side
21.28	1	45kHz pipistrelle	Pass southeast to north on west side
21.28	2	45kHz pipistrelle	2x bats foraging on north side
21.29 – 22.20	1 & 2	45kHz pipistrelle	Intermittent foraging passes by single bat, with more activity in garden to north
21.31 – 22.14	1 & 2	55kHz pipistrelle	Intermittent foraging passes by single bat, with more activity in garden to north
21.49	1	Myotis sp.	Low fast pass north to south on west side



NVA southwest, end of survey



NVA northwest, end of survey



NVA northeast, end of survey

Dusk emergence 3

Site	Holt Village Hall	Date	17 May 2024
Surveyors	Fiona Sharpe + NVA (1) Fergus Henderson + NVA (2) Standalone NVA (3)	Surveyor Position	1 – Southwest 2 – Northeast 3 - Southeast
Survey Type	Dusk emergence	Detectors Used	Pettersson D240x; EM Touch, Anabat Express, Anabat Walkabout
Weather	Dry, light breeze, 5% cloud cover		
Temperature	12.2°C – 10.1°C	Humidity	71.1% - 80.1%
Sunset	21.25	Sunrise	
Start	21.10	Finish	22.55
Time	Surveyor	Species	Activity
21.53	1 & 2	45kHz pipistrelle	Pass – audio only, louder on east side
21.59	2	55kHz pipistrelle	Single bat picked up between north end of building & conifers, but did not come from building
22.01	1 & 2	45kHz pipistrelle	Loud pass on northeast side & second bat flew onto site from west, then flew north at building
22.03 – 22.54	1 & 2	45kHz pipistrelle	Very intermittent foraging passes by single bat
22.18 – 22.45	1	55kHz pipistrelle	Four foraging passes on west/south side with bat coming onto side from west



NVA southwest, end of survey



NVA southeast, end of survey



NVA northeast, end of survey

Appendix D Condition assessment sheets

Modified grassland

Condition Sheet: GRASSLAND Habitat Type (low distinctiveness)			
UK Habitat Classification (UKHab) Habitat Type			
Grassland - Modified grassland			
On-site or off-site, site name and location	Holt Village Hall	Survey date and Surveyor name	4 June 2024, Dr Fiona Sharpe MCIEEM
Limitations (if applicable)		Survey reference (if relating to a wider survey)	
Grid reference	SO 81739 63142	Habitat parcel reference	Modified grassland
Habitat Description			
ukhab – UK Habitat Classification			
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	There are 6-8 vascular plant species per m ² present, including at least 2 forbs (these may include those listed in Footnote 1). Note - this criterion is essential for achieving Moderate or Good condition. Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m ² (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.	no	
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	no	
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	yes	
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	no	
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) ² .	no	
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	yes	
G	There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴).	yes	
Essential criterion achieved (Yes or No)			No
Number of criteria passed			3
Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved w/✓	
Passes 6 or 7 criteria including passing essential criterion A	Good (3)		
Passes 4 or 5 criteria including passing essential criterion A	Moderate (2)		
Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A)	Poor (1)	X	

Urban trees

Condition Sheet: INDIVIDUAL TREES Habitat Type												
Habitat Types												
Individual trees – Urban trees Individual trees – Rural trees Complete a condition sheet for each tree or block of trees. Please see the separate Line of trees condition sheet for a line of rural trees. You should only use the Line of trees condition assessment and record that habitat type in rural locations.												
Habitat Description												
Individual trees (description applied to the urban or rural environment): Young trees over 7.5 cm in diameter at breast height whose canopies are not touching. Urban Perimeter / Linear Blocks and Groups (description applied to the urban environment only): Groups or stands of trees (size requirement as defined above) within and around the perimeter of urban land. This includes those along urban streets, highways, railways and canals, and also former field boundary trees incorporated into developments. Canopies should predominantly overlap continuously. Groups of urban trees that don't match the descriptions for woodland may be assessed within this category.												
On-site or off-site, site name and location	Holt Village Hall				Survey date and Surveyor name		4 June 2024, Dr Fiona Sharpe MCIEEM					
					Survey reference (if relating to a wider survey)							
Limitations (if applicable)					Habitat parcel reference							
					Walnut	Oak						
Condition Assessment Criteria					Grid reference							Notes (such as justification)
					SO81	SO81						
				7631	7631							
Criterion passed (Yes or No)												
A	The tree is a native species (or at least 70% within the block are native species).				no	yes						
B	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).				yes	yes						
C	The tree is mature (or more than 50% within the block are mature) ¹ .				no	no						
D	There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.				yes	yes						
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.				no	no						
F	More than 20% of the tree canopy area is oversailing vegetation beneath.				yes	yes						
Number of criteria passed												
Condition Assessment Result (out of 6 criteria)	Condition Assessment Score				Score Achieved \times/\checkmark							
Passes 5 or 6 criteria	Good (3)											
Passes 3 or 4 criteria	Moderate (2)				3	4						
Passes 2 or fewer criteria	Poor (1)											

Note that 'Fairly Good and Fairly Poor' condition categories are not available for this broad habitat type.

Native hedgerow

Condition sheet: HEDGEROW Habitat Types				
Habitat Type				
Native hedgerow Native hedgerow - associated with bank or ditch Native hedgerow with trees Native hedgerow with trees - associated with bank or ditch Species-rich native hedgerow Species-rich native hedgerow - associated with bank or ditch Species-rich native hedgerow with trees Species-rich native hedgerow with trees - associated with bank or ditch				
Habitat Description				
ukhab - UK Habitat Classification				
On-site or off-site, site name and location	Holt Village Hall		Survey date and Surveyor name	4 June 2024, Dr Fiona Sharpe MCIEM
Limitations (if applicable)			Survey reference (if relating to a wider survey)	
Grid reference	SO 81712 63139	Habitat parcel reference	Native hedgerow	
Condition Assessment Details				
A series of ten attributes, representing key physical characteristics are used for this assessment. Each attribute is assigned to one of five functional groups (A – E) and the condition of a hedgerow is assessed according to the number of attributes from these functional groups which pass or fail the 'favourable condition' criteria.				
This assessment is based on the Hedgerow Survey Handbook ¹ and Favourable Conservation Status document ² . For further clarification please refer to the Hedgerow Survey Handbook.				
Best practice would be to record the species, age, spacing and other key information about all trees present along a hedgerow within the 'Habitat Description' box, as well as other key features of the hedgerow.				
Hedgerow favourable condition attributes				
Attributes and functional groupings (A, B, C, D and E)	Criteria - the minimum requirements for 'favourable condition'	Criteria description	Criterion passed (Yes or No)	Notes (such as justification)
Core groups - applicable to all hedgerow types				
A1.	Height	>1.5 m average along length	The average height of woody growth estimated from base of stem to the top of the shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees. Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). A newly planted hedgerow does not pass this criterion (unless it is >1.5 m height).	yes
A2.	Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (such as blackthorn <i>Prunus spinosa</i> suckers) are only included in the width estimate when they are >0.5 m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).	yes
B1.	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length	This is the vertical 'gappiness' of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).	yes
B2.	Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	This is the horizontal 'gappiness' of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small). Access points and gates contribute to the overall 'gappiness' but are not subject to the >5 m criterion (as this is the typical size of a gate).	yes

C1.	Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: · Measured from outer edge of hedgerow; and · Is present on one side of the hedgerow (at least).	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedgerow. Undisturbed ground is present for at least 90% of the hedgerow length, greater than 1 m in width and must be present along at least one side of the hedgerow. This criterion recognises the value of the hedgerow base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches	no	
C2.	Nutrient-enriched perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	The indicator species used are nettles <i>Urtica</i> spp., cleavers <i>Galium aparine</i> and docks <i>Fumex</i> spp. Their presence, either singly or together, does not exceed the 20% cover threshold.	no	
D1.	Invasive and acophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA) and recently introduced species.	Recently introduced species refer to plants that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives. For information on archaeophytes and neophytes see the /NCC website ³ , as well as the BSI website ⁴ where the 'Online Atlas of the British and Irish Flora' ⁵ contains an up-to-date list of the status of species. For information on invasive non-native species see the GB Non-Native Secretariat website ⁶ .	no	
D2.	Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (for example, excessive hedgerow cutting).	yes	
Additional group - applicable to hedgerows with trees only					
E1.	Tree class	There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient ⁷), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow.	This criterion addresses if there are a range of age-classes or morphologies which allow for replacement of trees and provide opportunities for different species.		
E2.	Tree health	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens.		
The hedgerow condition assessment generates a weighting (score) ranging from 1 - 3, which is used within the Statutory Biodiversity Metric. The scores for each are set out in the tables below.					
Condition categories for hedgerows without trees					
Category		Category Requirements	Metric Score		
Good		No more than 2 failures in total; AND No more than 1 failure in any functional group.	3		
Moderate		No more than 4 failures in total; AND <u>Does not fail both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1 and C2 = Moderate condition).	2		
Poor		Fails a total of more than 4 attributes; OR <u>Fails both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	1		
Score achieved:			1		

Appendix E Proposed site layout



Appendix F Detailed summary of metric

Summary Figures

Net project biodiversity units (includes all on-site & off-site habitat retention & creation)	0.43
Total project biodiversity % change (including all on-site & off-site habitat retention & creation)	9.08%

Combined habitat retention and enhancement

Habitats	Wetwoodlands
Woodland	0.04
Wetland	0.00
Watercourse	0.00
Other	0.00
Total	0.04

Area habitats

Habitat group	On-site existing	On-site proposed	Off-site existing	Off-site proposed	On-site change	Off-site change
Woodland	0.00	0.00	0.00	0.00	0.00	0.00
Wetland	0.00	0.00	0.00	0.00	0.00	0.00
Watercourse	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00

Area habitats

Habitat group	On-site existing	On-site proposed	Off-site existing	Off-site proposed	On-site change	Off-site change
Woodland	0.00	0.00	0.00	0.00	0.00	0.00
Wetland	0.00	0.00	0.00	0.00	0.00	0.00
Watercourse	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00

Area habitats

Habitat group	On-site existing	On-site proposed	Off-site existing	Off-site proposed	On-site change	Off-site change
Woodland	0.00	0.00	0.00	0.00	0.00	0.00
Wetland	0.00	0.00	0.00	0.00	0.00	0.00
Watercourse	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00

Hedgerows and lines of trees

Hedgerow type	On-site change by hedgerow type		Baseline		Pre-development on-site		On-site change	
	On-site existing length	On-site existing value	On-site proposed length	On-site proposed value	On-site proposed length	On-site proposed value	On-site change length	On-site change value
Species-rich native hedgerow with trees - associated with bank or ditch	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Species-rich native hedgerow with trees	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Species-rich native hedgerow with trees - associated with bank or ditch	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Native hedgerow with trees - associated with bank or ditch	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Native hedgerow with trees	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ecologically valuable line of trees	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ecologically valuable line of trees - associated with bank or ditch	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Line of trees - associated with bank or ditch	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-native and ornamental hedgerow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hedgerow type	On-site change by hedgerow type		Baseline		Pre-development on-site		On-site change	
	On-site existing length	On-site existing value	On-site proposed length	On-site proposed value	On-site proposed length	On-site proposed value	On-site change length	On-site change value
Species-rich native hedgerow with trees - associated with bank or ditch	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Species-rich native hedgerow with trees	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Native hedgerow with trees - associated with bank or ditch	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Native hedgerow with trees	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ecologically valuable line of trees	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ecologically valuable line of trees - associated with bank or ditch	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Line of trees - associated with bank or ditch	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-native and ornamental hedgerow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hedgerow type	Combined on-site and off-site change by hedgerow type		Baseline		Pre-development on-site		On-site change	
	Combined existing length	Combined existing value	Combined proposed length	Combined proposed value	Combined proposed length	Combined proposed value	Combined change length	Combined change value
Species-rich native hedgerow with trees - associated with bank or ditch	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Species-rich native hedgerow with trees	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Native hedgerow with trees - associated with bank or ditch	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Native hedgerow with trees	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ecologically valuable line of trees	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ecologically valuable line of trees - associated with bank or ditch	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Line of trees - associated with bank or ditch	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-native and ornamental hedgerow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Combined length lost from baseline (O) by distinctiveness band		
Category	Length lost (m)	Length lost (%)
Very High	0	0
High	0	0
Medium	0	0
Low	0	0
Very Low	0	0

