

Preliminary Ecological Appraisal & Biodiversity Net Gain Report

Fenwood Estates: Proposed Construction of a New Residential Development

Cudworth Parkway, Barnsley

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Legislation	Relevance
The Wildlife & Countryside Act 1981 (as amended)	The primary piece of legislation by which biodiversity in the UK is protected.
Conservation of Habitats and Species Regulations 1994 (as amended).	This prohibits killing, injury, disturbance, damage and/or destruction of breeding sites and/or resting places and the sale of protected species. For activities that would be likely to result in a breach of species protection under the regulations to legally take place, a European Protected Species (EPS) mitigation licence must first be obtained from Natural England.
The Natural Environment and Rural Communities (NERC) Act 2006	Requires that public bodies have regard to the conservation of biodiversity. This means that Planning Authorities must consider biodiversity when reaching planning decisions. Section 41 of the Act lists habitats and species that are conservation priorities in England.
The Environment Act 2021	Introduced various methods to protect and improve the environment, including biodiversity and ensure consistent protection across the UK.
The Conservation (Natural Habitats, & c.) Regulations 1994 (as amended)	It is prohibited to capture, injure, kill, harass, or disturb bats—or any group of bats—whether in flight, in a roost, or while caring for their young. Actions that block access to roosts, damage or destroy breeding or resting sites, or cause disturbance likely to affect local bat distribution, abundance, survival, reproduction, or rearing are also forbidden. Additionally, the keeping, transport, sale, exchange, or offering for sale of any wild bat (or its parts or derivatives) obtained after 10 June 1994 is illegal.
The Protection of Badgers Act 1992	Deals solely with the protection of badgers <i>Meles meles</i> in the UK. It prohibits killing, injuring or taking badgers, damaging, destroying or otherwise interfering with a badger sett, disturbing an occupied badger sett and the sale of badgers.
National planning policy	Government policy with respect to the protection of biodiversity is laid out in the National Planning Framework 4 (NPF4). This places an onus on development to minimise impacts to biodiversity. The NPPF provides guidance to Local Authorities on how to conserve and enhance biodiversity through local Planning Policies and when assessing planning applications.
Local planning policy	the Barnsley Local Plan and emerging Local Nature Recovery Strategies for South Yorkshire identify priority habitats and species, requiring that development proposals avoid harm, deliver measurable biodiversity net gain, and incorporate mitigation such as ecological surveys, habitat retention, timing of works, and habitat enhancement measures. Consequently, any construction, refurbishment, or land-use change in Cudworth must consider potential impacts on all wildlife, ensuring compliance through appropriate assessment, mitigation, and where necessary, licensing.
Other nature conservation policy	Biodiversity Action Plans (BAPs) were the UK's response to the 1992 Convention on Biological Diversity. The UKBAP described the biodiversity of the UK and contained Action Plans for the most threatened habitats and species. It was implemented at a local level through regional and local BAPs. Whilst the UKBAP has expired, BAPs are still used at a more local level in some areas and species and habitats which were previously priorities within the UKBAP are now listed as Species of Principal Importance within Section 41 of the NERC Act 2006.

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Executive summary

The proposed housing development has the potential to result in ecological impacts both within the site boundary and across adjacent habitats located within the zone of influence of the scheme. Without appropriate mitigation, habitats surrounding the development may be subject to indirect loss or degradation through construction activities and development-related disturbance.

This Preliminary Ecological Assessment identified that the site is likely to support a range of protected and notable species. Woodland, mixed scrub and bramble habitats provide suitable nesting and breeding opportunities for birds, while the wider habitats on site offer potential foraging and commuting opportunities for badgers and hedgehogs. Several trees within the site contain features with potential suitability for roosting bats, and there is a low likelihood of protected amphibians and reptiles being present. Protected invertebrates have also been recorded in the surrounding area and should be considered through appropriate habitat enhancement measures.

To minimise ecological impacts, a range of mitigation measures is recommended prior to and during construction works. These include undertaking a breeding bird survey, a preliminary badger survey and a ground-level tree assessment to determine the suitability of trees for bat roosting potential. Where vegetation clearance is required during the bird nesting season, pre-commencement nesting bird checks should also be completed to ensure no active nests are affected.

The development also presents opportunities for biodiversity enhancement through the incorporation of native tree planting, species-rich woodland, mixed native scrub, new parcels of modified grassland and nectar-rich shrub planting to support pollinators, birds and urban wildlife. Additional measures include the enhancement of existing woodland and installation of bat boxes within the retained enhanced woodland areas and integrated bird nesting features within proposed dwellings.

Potential residual impacts associated with the development include effects on adjacent habitats from surface water runoff, dust generation and increased artificial lighting. However, with the implementation of the recommended mitigation and enhancement measures, these impacts are expected to be significantly reduced. Subject to full implementation of the recommendations, the proposed development is considered capable of complying with relevant ecological legislation and planning policy relating to biodiversity protection and enhancement.

Concerning BNG, based on the current landscaping, the BNG calculation shows a net loss in the biodiversity value of 16.25 habitat units (-72.69%) and 2.28 hedgerow units (-61.46%). The trading rules are also not satisfied. To achieve the +10% net gain and satisfy the trading rules, **18.49 habitat units and 2.66 hedgerow units** would be required in the form of off-site unit purchase. These units can be obtained by applying the recommendations provided in this report, following the dedicated landscaping scheme and utilising off-site measures. It is considered unfeasible for the mandatory +10% BNG to be achieved via onsite measures alone.

1 Introduction

1.1 Background

This document outlines the ecological impacts of the proposed construction of a new residential development, Figure 1.1. In April 2026, Encon Associates completed an ecological survey of the site to provide information regarding the site ecology and inform plans for its development.

The proposals entail constructing over 140 new residential dwellings. The proposal includes parking, landscaping, and associated works.

This document aims to assess the likely ecological effects of the proposed development. The scope of this Ecological Assessment is to:

- Identify any potential biophysical changes to the landscape due to the proposed development.
- Identify and provide a valuation of features of ecological interest on a site (such as habitats and protected species) and recommend further surveys should they be necessary.
- Assess the likely ecological effects of the development against relevant legislation and policy.
- Recommend avoidance and/or mitigation measures that are likely to be required to reduce the ecological impact of the proposals.



Figure 1.1: Site location plan

2 Methodology

2.1 *Desk Study Methodology*

Available online resources, such as the MAGIC (Multi-Agency Geographical Information for the Countryside), data provided by West Yorkshire Ecological Service and data provided by Sheffield Biological Records Centre, were interrogated for relevant information, including statutory designated sites within 5km of the site. In addition, records of protected sites and protected and/or notable species within 2km of the site were requested to inform the desktop study further.

2.2 *Field Study Methodology*

The site survey was carried out by Dean Fisher, BSc (Hons), on behalf of Encon Associates Ltd on 02nd April 2026. The survey followed CIEEM's Preliminary Ecological Appraisal guidance. The survey consisted of a site walkover (loosely based on the "Phase 1" methodology) with all accessible areas of the site and adjacent land (where relevant) covered. The habitats present were described, with attention paid to their potential to support protected species. A general search for evidence of protected and invasive species was also undertaken.

2.3 *Assessment methodology*

2.3.1 *Introduction*

The methodology for assessing the likely ecological effects of the proposed development is based on the principles of CIEEM's Guidelines for Ecological Assessment in the UK, 2nd Edition. Although this assessment does not constitute a formal Ecological/ Environmental Impact Assessment, the CIEEM guidelines provide a useful framework for assessing ecological impacts at any level.

2.3.2 *Valuation*

Features of ecological interest are valued on a geographic scale. Value is assigned based on legal protection, national and local biodiversity policy and cultural and/or social significance.

2.3.1 *Identification of Potential Ecological Impacts in Absence of Mitigation*

A development may have ecological effects beyond its site boundaries; therefore, the CIEEM guidelines require that the 'zone of influence' be identified.

Without mitigation, the proposed development may result in the following biophysical changes during construction and/or operation:

- Loss of and damage to habitats within or adjacent to the footprint of the development and construction zone.
- Any loss or damage to habitats that could result in death and/or injury to protected species should they be present.

- Disturbance of immediately adjacent habitats and any wildlife using them during construction.

2.4 *Limitations*

This survey comprised a single walkover. As such, it is only possible to gain a snapshot of the ecology of the site, and it is possible that some seasonal species could be missed.

The ecology of a site can change quickly over time. Therefore, this survey is considered valid for two years from the date of the report.

3 Ecological Baseline

3.1 *Site Context*

The site is located at the northern edge of Cudworth, Barnsley, in South Yorkshire (see Figure 1.1 for location). Although Barnsley is a metropolitan borough with mixed housing developments, the green belt and regenerated colliery provide a variety of habitats and a high potential for protected species. These habitats include deciduous woodlands, semi-improved grassland and varied patches of open ground.

The site itself lies on a set of three amenity grassland fields primarily used for dog walking alongside a small woodland to the east of the site. Occasional areas of bare ground and pathways are also present throughout the site, interspersed within dense scrubland areas encompassing just below half of the eastern side of the site. There is a fragmented A-road, north of the site, and a residential area/school zone, south of the site, with respective gardens and amenity grasslands. These habitats collectively contribute to the ecological character of the locality and support a range of wildlife typical of urban, semi-rural residential areas in Yorkshire.

3.2 *Protected sites*

3.2.1 *Statutory and non-statutory sites*

There are seven statutory and three non-statutory sites recorded 5 km from the site. A full map of these sites and their distributions can be found in Appendix 1. These sites include:

- Dearne Valley wetlands, a statutory designated biological SSSI and local nature reserve, is also a non-statutory designated RSPB reserve situated approximately 0.67km west of the site boundary. This site requires consultation with Natural England to be appended to this report.
- Dearne Valley Park, a statutory designated Local nature reserve situated approximately 4.7km north-west of the site boundary.
- Chevet branch Line, a statutory designated Local nature reserve situated approximately 4.7km north-west of the site boundary.
- Haw Park Wood, a statutory designated Local nature reserve situated approximately 4.85km North of the site boundary.
- Carlton Marsh, a statutory designated Local Nature Reserve associated with the Dearne Valley wetlands SSSI, situated approximately 0.62km west of the site boundary.
- Notton Wood, a statutory designated Local Nature Reserve situated approximately 4.42km west of the site boundary.
- West Haigh Wood, a statutory designated Local nature reserve situated approximately 3.49km south east of the site boundary.

- Rabbit Ings, a non-statutory local wildlife site situated approximately 1.34km north-west of the site boundary
- South Hiendley Common, a non-statutory local wildlife site situated approximately 1.72km north of the site boundary

3.2.3 *Priority habitats*

There are 56 parcels of priority habitat adjacent to the site; some parcels of woodland are a part of the Carlton Marsh Nature Reserve SSSI. The grassland and patches of woodland are a part of the network enhancement, with sections of ancient semi-natural woodland. Development may have an impact on directly adjacent habitats, though anything further within a 2km radius is unlikely to be affected due to the distance from the proposed development site. These habitats are Habitats of Principal Importance listed in Section 41 of the NERC Act.

Priority Habitat Type	Number of Land Parcels
Open Mosaic	3
Traditional Orchards	2
National Forest Inventory	27
Deciduous Woodland	29
Good quality semi-improved grassland	1

3.2.4 *Protected sites within the Zone of Influence*

Ecologically sensitive sites can be affected by development in their vicinity.

Dearne Valley Wetlands SSSI hold 7 aggregations of protected breeding birds (Bittern *Botaurus stellaris*, Black-headed gull *Larus ridibundus*, Gadwall *Mareca strepera*, Garganey *Anas querquedula*, Pochard *Aythya farina*, Shoveler *Anas clypeata*, Willow tit *Poecile montanus*), 2 non-breeding (Gadwall, Shoveler), and 3 breeding birds habitats (lowland damp grasslands, mixed, and scrub). All of which in favourable condition. The site development may interfere with the migration flight path of Common Pochard (migrationatlas); however this is not likely, particularly if development is undertaken out of the bird migration season. To prevent any damage to the habitats or disturbance of the species present, mitigation measures should be implemented as outlined within this report, alongside pending consultation with Natural England to indicate any further requirements. All other priority habitats within 2km of the site boundary are not considered likely to be affected by the proposed works due to the relatively small size of the development.

3.3 *Description of Habitats Within the Zone of Influence*

Dearne Valley Wetlands is a SSSI located north west of the proposed development neighbouring Carlton Marsh (LNR), divided by Shaw Lane. This SSSI falls within the zone of influence of the proposed development. It hosts improved neutral grassland, deciduous woodland, fen/marsh/swamp, and unimproved grassland. This mosaic of habitats provides valuable resources for a range of wildlife, including pollinators, birds, and bats.

This site is maintained for biological research for Natural England and has no current pressures, 12 active features and 22 live units for this site. As it's connected to an LNR, this

provides connectivity between the sites and improves the ecological value of the site. Potential indirect effects from the proposed works, such as dust deposition, surface run-off, or increased lighting, should be carefully managed to avoid degradation of this habitat.

No other priority habitats or designated sites occur adjacent to the development, and no significant impacts are anticipated beyond the immediate site boundary due to the limited scale and nature of the proposed works.

3.3.1 Habitats

The site comprises mixed deciduous woodland, built-up areas of developed land, modified grassland, varied designations of scrub and bare ground; the majority of the site is amenity modified grassland, with the woodland situated on the east side of the site boundary. Built-up areas surround the south of the site; land is used for residential development. This development proposal is entirely on slowly permeable, seasonally wet, acid loamy and clayey soils.

All habitats were condition assessed utilising a BNG condition assessment criterion for the relevant habitat type. DAFOR was utilised throughout the condition assessment to signify the species biodiversity within each habitat where relevant.

The modified grassland was limited in sward height and species composition, consisting mostly of areas heavily disturbed with tracks where people have crossed the site. The habitat was dominated by Perennial rye *Lolium perenne* with an abundance of Yorkshire fog *Holcus lanatus*, and cocks foot *Dactylis glomerata*. Other species present included creeping thistle *Cirsium arvense*, false oat *Arrhenatherum elatius*, Birdseye speedwell *Veronica persica*, creeping buttercup *Ranunculus repens*, birds foot trefoil *Lotus corniculatus*, Mouse ear chickweed *Cerastium glomeratum*, Primrose *Primula vulgaris*, lesser knapweed *Centaurea nigra* and immature bramble *Rubus fruticosus*. These three areas of grassland are all considered to be in moderate to poor condition, with the westernmost grassland area being in moderate condition and the other two grasslands being in poor condition. This is due to the grassland's high disturbance, low species composition and monoculture of sward heights.

The bramble scrub intersected all the grassland within the site, with scrubland, both bramble and mixed, occupying approximately 43% of the site's extent. See photos at the end of this section for more information. A small section of dense 95% composition bracken grassland was also located towards the north-west of the site.

Tall herb areas intersected between some of the bramble and mixed scrubland patches, isolated from the other grassland patches via sections of bare ground utilised for pedestrian access. The tall forbs were dominated by spear thistle *Cirsium vulgare*, and creeping thistle, with abundant rosebay willowherb *Chamaenerion angustifolium* and occasional bramble.

A small section of other mixed woodland bordered the site to the north, encompassing only 0.59% of the site extent. The tree composition of this woodland was dominated by Beech *Fagus sylvatica* and silver birch *Betula pendula* with occasional occurrences of holly *Ilex aquifolium*, hawthorn *Crataegus monogyna*, Scotts pine *Pinus sylvestris*, blackthorn *Prunus spinosa* and dog rose *Rosa canina*. This woodland has a significantly reduced herb layer, dominated by English ivy *Hedera helix* covering the woodland floor with occasional non-

native Oregon grape *Berberis aquifolium* and common nettles *Urtica dioica* found throughout.

Two hedgerows were identified, one being a native hedgerow with low species abundance and the other being a native hedgerow with moderate species abundance and associated trees. Species associated with these hedgerows included buddleia *buddleja davidii*, Broom *Cytisus scoparius*, common privet *Ligustrum vulgare*, Hawthorn, gorse *Ulex europaeus*, dogwood *Cornus sanguinea* and green alkanet *Pentaglottis sempervirens*.

11 individual trees were scattered throughout the grassland habitats and interspersed into areas of bramble scrub and included species such as grey willow *Salix cinerea*, silver birch, ash *Fraxinus excelsior*, hazel *Corylus avellana*, and hawthorn.

A large patch of bare ground was identified, interspersed within the central area of the scrub within the eastern half of the site boundary. This area of habitat was keyed out as bare ground rather than open mosaic habitat, as this parcel did not indicate four early successional groups within the condition assessment of the habitat. The species composition of this habitat parcel included common ragwort *Jacobaea vulgaris*, Ribwort plantain *Plantago lanceolata*, Mouse-eared chickweed, Rosebay willowherb *Chamaenerion angustifolium*, hairy bittercress *Cardamine hirsuta* and broad-leaved dock *Rumex obtusifolius*.

The remainder of the site consists of three distinct mixed scrub areas encompassing the bare ground within the site boundary and bordering the mixed woodland to the east. The species composition of the scrub included hawthorn, immature ash, sessile oak *Quercus petraea*, grey willow, teasel *Dipsacus fullonum*, common nettles, bramble, sycamore *Acer pseudoplatanus* and flowering currant *Ribes sanguineum*.

3.3.2 Context Photos of the site



Photo 1: Modified Grassland area 1, the largest grassland area to the west of the site. One of 10 quadrats taken.



Photo 2: Modified Grassland area 2, a medium grassland area in the centre of the site. One of 8 quadrats taken.



Photo 3: *Modified Grassland area 3, the smallest grassland area to the centre of the site. One of 5 quadrats taken.*



Photo 4: *Mature rockpiles and flytip found all over the site. Provides suitable refugia for small mammals, invertebrates, reptiles and amphibians.*



Photo 5: *Bareground found in the eastern half of the site, separated from the open mosaic via the land's total species composition.*



Photo 6: *Mixed scrubland found within the eastern mixed scrub parcel of the site.*



Photo 7: *Bracken area found adjacent to grassland area 2*



Photo 8: *mature hedgerow with trees surrounding the western parcel of the site.*



Photo 9: *Poor condition mixed woodland found to the east, adjacent to the site boundary*



Photo 10: *Parcels of tall forbs habitat dominated by willowherb situated within the mixed scrubland areas.*

3.3.3 UKHabs definitions

Habitats present on the site have been classified in accordance with UKHabs. This system is used to evaluate habitats for BNG calculations using the Natural England/Defra methodology.

Much of the site was classified as modified grassland (g4). The remaining areas of the site were comprised of bracken (g1c), bramble scrub (h3d), Other developed land (u1b6), Mixed scrub (h3h), Other woodland mixed – Mainly broadleaved (w1h5), tall forbs (g16) and bare ground (g510).

3.4 *Protected or notable species*

3.4.1 *Introduction*

Sheffield Biological Records Centre, and West Yorkshire Ecological Service, including the West Yorkshire Bat Group, returned many records of protected or notable species from within the search area. Due to the nature of the habitats present, there is some potential for protected species to be present on the site. A collection of 3 maps detailing the data received by these records centres can be found in Appendix 2. Species which could be found within the zone of influence are considered below.

3.4.2 *Bats*

Sheffield Biological Records Centre and West Yorkshire Ecological Service returned four records of three different bat species present within 2km of the site boundary. These records included records of common pipistrelle *Pipistrellus pipistrellus*, Noctule *Nyctalus noctula* and Daubenton's *Myotis daubentonii*. Species records beyond 10 years were also considered for the context of this report; however, no notable findings were recorded.

The majority of trees present were too young and small to develop suitable roost features. There were three trees identified within the site that were considered medium-sized, but even under this classification, these trees housed no immediate suitable features for roosting bats. Most other trees on site are of low, but still suitable, potential where roost features were present.

Habitats on the site are of some potential for foraging and commuting bats. The small area of woodland encompassing the perimeter of the site could be used by bats for resting between forage efforts and alongside denser areas of mixed scrubland to the east of the site. Due to the low volume of bat records from within 2km of the site and the low immediate presence of roost features, the likelihood of the site being utilised by bats remains low but still plausible.

3.4.3 *Birds*

Sheffield Biological Records Centre and West Yorkshire Ecological Service returned 60 records of birds present within 2km of the site boundary. Due to multiple wetland sites being located within 2km of the site boundary, this significantly increases the diversity of the bird records obtained for the area. This included wading birds and waterfowl such as avocets *Recurvirostra avosetta*, green sandpipers *Tringa ochropus*, oyster catchers, *Haematopus ostralegus* and pintails *Anas acuta*, all of which are unlikely to occur within the site boundary within its current condition. Despite this, an open SUDS scheme with swale ponds is proposed for the development, which could result in this species visiting the site more regularly for passage between wetland areas. Records for other suitable species for the context of this site include Cuckoo *Cuculus canorus*, Linnet *Linaria cannabina*, spotted flycatcher *Muscicapa striata*, swifts *Apus apus*, house martins *Delichon urbicum* grey partridge *Perdix perdix*, and yellow hammer *Emberiza citrinella*, all of which were present within the vicinity of the site. Species records beyond 10 years were also considered for the context of this report; however, no notable findings were recorded.

The mixed scrub and woodland on site provides a variety of suitable nesting and breeding habitats for birds within the area. The Trees and scrub within these habitat parcels could be used by a variety of bird species, within the previously mentioned species present within the site vicinity. The bare ground within the site also provides suitable smaller tussocked scrub habitat for Grey partridge to nest within the site boundary. This site is deemed to provide high value to breeding and nesting birds.

3.4.4 *Terrestrial mammals*

Sheffield Biological Records Centre and West Yorkshire Ecological Service returned 5 records of protected terrestrial mammals within 2km of the site, including Brown hare, *Lepus europaeus*, water vole *Arvicola amphibius*, hedgehog *Erinaceus europaeus* and badger. All records found were associated with the Dearne Valley wetlands west of the site and were situated over 1km from the site boundary. Species records beyond 10 years were also considered for the context of this report; however, no notable findings were recorded.

The habitats on site are highly suitable for hedgehogs and brown hares, as the dense mixed scrubland areas and debris piles on site provide suitable translocation areas and refuge. There was no evidence or tracking signs of any of the aforementioned protected mammals using the site found during the survey; however, the site does provide some limited suitable habitat for the excavation of badger setts and foraging. As no watercourses are present within the site, water vole is considered highly unlikely to occur within the site boundary.

3.4.5 *Amphibians*

Sheffield Biological Records Centre and West Yorkshire Ecological Service returned 5 records of 3 different amphibian species within 2km of the site boundary. These species included Great Crested Newt *Triturus cristatus*, Smooth Newt *Lissotriton vulgaris*, and the common toad *Bufo bufo*. All records found were associated with the Carlton Marsh local nature reserve situated west of the site boundary. Species records beyond 10 years were also considered for the context of this report; however, no notable findings were recorded.

The site is deemed to have low suitability for amphibians in its current condition as there are no receptors for water or wet ground. Furthermore, a much higher suitability habitat is present within the surrounding 2km, which reduces the likelihood of species being present within the site boundary. The site is also bordered by Cudworth Parkway Road, which is a highly utilised road acting as a barrier to translocation to the site.

Despite the above limiting factors, the site does host large rubble piles and areas of fly tip and metal sheeting that can provide suitable refugia for these species alongside the allotment gardens directly bordering the site boundary to the southwest, which could host smaller ponds suitable for amphibians, allowing easy access for amphibians to a small portion of the site.

3.4.6 *Reptiles*

Sheffield Biological Records Centre and West Yorkshire Ecological Service returned 2 records of reptiles within 2km of the site boundary. Both of these records were grass snake *Natrix helvetica*, and both were associated with the Carlton Marsh local nature reserve situated

west of the site boundary. Species records beyond 10 years were also considered for the context of this report; however, no notable findings were recorded.

The site is in current condition and is deemed of low suitability for grass snakes in its current condition as there are no receptors for water or wet ground. Furthermore, a much higher suitability habitat is present within the surrounding 2km, which reduces the likelihood of species being present within the site boundary. The site is also bordered by Cudworth Parkway Road, which is a highly utilised road acting as a potential barrier to translocation to the site.

Despite the above limiting factors, the site does host large rubble piles and areas of fly tip and metal sheeting that can provide suitable refugia for these species. A low volume of records from local records centres can also indicate a research gap referring to reptiles being underrecorded for the area, as indicated via iNaturalist records within 2km of the site boundary when compared to the species data received by the local record centres. This means a higher volume of reptiles could be present within the site boundary, but have been underrecorded within the region.

3.4.7 *Invasive species*

Sheffield Biological Records Centre and West Yorkshire Ecological Service returned 3 records of 2 invasive species relevant to the site context within 2km of the site boundary. These species included Himalayan Balsam *Impatiens glandulifera*, and American Mink *Neovison vison*. Species records beyond 10 years were also considered for the context of this report; however, no notable findings were recorded.

During the site visit, no invasive species were identified within the site boundary. Due to the low density of invasive species records within 2km of the site boundary, the likelihood of invasive species within the site boundary is deemed highly unlikely.

3.4.8 *Invertebrates*

Sheffield Biological Records Centre and West Yorkshire Ecological Service returned 17 records of invertebrates within 2km of the site. These included species such as Cinnabar moth *Tyria jacobaeae* and small heath *Coenonympha pamphilus*, which are listed as species of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. Species records beyond 10 years were also considered for the context of this report; however, no notable findings were recorded.

The presence of NERC species indicates that the local area supports habitats of value for invertebrates, particularly unimproved or semi-improved grassland and areas with a mosaic of sward heights. The site itself provides low suitability for invertebrates in the grasslands on site due to its limited quality and diversity. Despite this limiting factor, the scrub; and woodlands within the site held high volumes of pollination opportunities to the east of the site, increasing the site's suitability to moderate for high invertebrate diversity.

3.5 *Ecological Valuation*

The habitats present within the site are generally of moderate ecological value. The ground conditions were suitable for supporting modified grassland, which covers the majority of the

site and was found to be in poor to moderate condition. This habitat offers limited ecological value but could be utilised for foraging by smaller fauna. Areas of bramble and mixed scrub provide valuable cover and are particularly suitable for protected terrestrial mammals and nesting/breeding birds. The woodland areas along the site boundary to the east add further ecological value, offering potential nesting sites and suitable roosting habitat. The site also offers suitable conditions for bats' foraging and commuting activity. Mitigation measures and further surveys are anticipated to be necessary to prevent onsite and cross-site disturbance and contamination.

4 Assessment of Likely Impacts in Absence of Mitigation

4.1 *Introduction*

The CIEEM guidelines require that the potential impacts of the proposals be considered in the absence of mitigation. For a significant adverse effect to occur, the feature being affected must be at least a local value. However, in some cases, features of less than local value may be protected by legislation and/or policy, and these are also considered within the assessment. Although significant effects may be identified at this stage of the assessment, it is often possible to provide appropriate mitigation.

4.2 *Site Preparation and Construction Activities*

4.2.1 *Habitats*

The majority of the habitats onsite were considered to be of limited ecological value outside of the site's zone of influence, but they provide some moderate connectivity between other habitats in the wider landscape. They are also likely to support protected species. Therefore, there would be significant impacts as a result of their loss or damage.

4.2.2 *Bats*

Bats and their roosts are protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended). In the absence of mitigation, proposed works have the potential to result in the loss, damage or disturbance of roosting, commuting and foraging habitat, which could adversely affect bats at a local scale. Given their legal protection and the potential for significant ecological effects, bats are considered within the assessment even where habitat suitability or species value may be limited.

4.2.3 *Birds*

Scrub and trees on the site could be used by nesting birds. If clearance works occurred whilst birds were nesting (March – September), they could be disturbed, and their nests destroyed or damaged. The nests, eggs and nestlings of all wild birds are protected from disturbance, damage and destruction under the Wildlife & Countryside Act 1981, and therefore this could result in a legal offence.

4.2.4 *Terrestrial Mammals*

Protected terrestrial mammals, including species such as badgers, hedgehogs, and brown hares, are protected under relevant UK and European legislation. In the absence of mitigation, development proposals could result in habitat loss, disturbance, fragmentation of territories, or damage to resting places and breeding sites. Where present, these impacts could result in adverse effects at a local scale, and legal protection is a required consideration within the assessment, regardless of ecological value.

4.2.5 *Amphibians*

Amphibians such as great crested newt are protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended). In the absence of mitigation, works may result in the loss or fragmentation of terrestrial habitat, impacting access to breeding ponds or mortality during site clearance activities. Their protected status requires assessment of potential impacts.

4.2.6 *Reptiles*

Common reptile species receive protection under the Wildlife and Countryside Act 1981 (as amended) against intentional killing and injury. In the absence of mitigation, site clearance and vegetation removal could result in habitat loss, displacement or direct mortality of reptiles. As reptile populations are often subject to site disturbance pressures, their legal protection and policy importance require consideration within the assessment process.

4.2.7 *Invasive species*

Certain invasive non-native species are listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to cause their spread in the wild. In the absence of mitigation, construction activities and soil movement could facilitate the spread of invasive species within and beyond the site, resulting in adverse ecological and legal implications. Their presence requires assessment due to legislative obligations and the potential impact on native habitats.

4.2.8 *Invertebrates*

Habitats supporting notable or priority invertebrate species listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 may be of ecological importance at a local level or above. In the absence of mitigation, development proposals could result in the loss or degradation of habitats that support assemblages of conservation concern, including deadwood, grassland or scrubland habitats. Even where invertebrate assemblages are not considered to be of local value, their policy significance warrants consideration within the assessment.

4.3 Site Operation

The proposals will result in changes to the artificial lighting on the site. This could affect the behaviour of nocturnal wildlife, particularly bats.

5 Mitigation, Compensation and Enhancements

5.1 *Introduction*

This chapter contains recommendations for further work needed to fully assess the ecological impacts of the proposals and to mitigate any potential adverse effects. In addition, recommendations for the enhancement of nature conservation and biodiversity on the site are included.

5.2 *Further Surveys*

5.2.2 *Breeding birds*

As over 1ha of suitable breeding bird habitat is being removed in the form of Mixed scrubland to make way for a 140+ home development, breeding bird surveys should be undertaken by a suitably qualified ecologist where impacts to breeding birds are reasonably likely. Surveys should be completed following current best practice guidance (between March and July), at the appropriate time (an hour before sunrise to mid-morning) to identify the presence of breeding territories and active nests. Where breeding birds or active nests are identified, appropriate mitigation measures should be implemented, which may include the establishment of exclusion buffers, timing restrictions on works, or habitat retention, until nesting activity has ceased and any young have fledged.

5.2.3 *Ground-level tree assessment*

Prior to any works affecting trees, including pruning, felling, or limb removal, a ground-level tree assessment (GLTA) should be undertaken by a suitably qualified ecologist to identify any features with potential to support roosting bats, such as cracks, cavities, lifted bark, or dense ivy cover. The assessment should be completed in accordance with current best practice guidance prior to commencement of works. Where trees with bat roost potential are identified, further surveys may be required to determine the presence or likely absence of roosting bats before works proceed. Any trees confirmed or considered likely to support roosting bats should be subject to appropriate mitigation, licensing where necessary, and sensitive working methods to avoid offences under relevant wildlife legislation.

5.2.3 *Preliminary badger survey*

Immediately before the commencement of works, a preliminary badger survey should be undertaken by a suitably qualified ecologist to identify any evidence of badger activity within and adjacent to the site, including setts, foraging signs, paths, latrines, or snuffle holes. The survey should be completed within an appropriate timeframe prior to works commencing to ensure findings remain valid. Where evidence of badger activity or active setts is identified, appropriate mitigation measures should be implemented, which may include exclusion zones, timing restrictions, supervised works, or the requirement for further survey and licensing, in accordance with current best practice guidance and relevant wildlife legislation.

5.3 *Mitigation Measures*

5.3.1 *Nesting birds*

Vegetation clearance and demolition works should be scheduled to avoid the main bird nesting season, which typically extends from March to August inclusive. Undertaking such activities outside this period (i.e., between September and February) will minimise the risk of disturbing nesting birds, their eggs, or dependent young. If it is necessary to undertake any vegetation clearance within nesting bird season, once breeding bird surveys have been completed, any vegetation should be thoroughly checked for the presence of active nests by a suitably qualified ecologist. After this check, any vegetation should be removed within 48 hours of the check being conducted. If any nests are found, they should be retained in situ with a suitable buffer of uncleared vegetation until chicks have fully fledged.

5.3.2 *Wildlife-friendly lighting for Bats*

New lighting associated with the proposals must be designed to minimise the effects on nocturnal wildlife, particularly bats, and should follow best practice guidance. The following principles will minimise the impact of lighting on nocturnal wildlife and should be applied to the lighting design across the site:

- Use of low-level bollard lighting to minimise light spill.
- Directing lights away from the edges of the site and the use of hoods or similar measures to direct light away from important habitats.
- Restriction of UV light frequencies through the selection of suitable lighting elements or the use of filters.
- Use of warm white spectrum lighting elements.

It is noted that certain standards of lighting may be required in certain areas to allow safe working during hours of darkness. In these areas, it is not necessary to comply with the best practice guidance where it would be safe to do so. However, directional lighting, which will prevent throwing onto external areas (particularly the lines of trees and woodland adjacent to site) should be used to ensure this area remains a dark wildlife corridor.

5.3.3 *Protecting Offsite Habitats*

Standard pollution prevention measures should be implemented to prevent uncontrolled discharges from the site of both contaminated surface run-off and wind-blown dust. Detailed measures to control pollution should be contained within a Construction Ecological Management Plan. These should include:

- Measures to minimise the generation of dust during specific activities.
- Measures to prevent the spread of dust/surface run-off beyond the site boundary.
- Safe storage of materials to prevent dust generation and contaminated surface runoff.
- Safe storage of fuel and other potentially polluting substances.

- Action to take if an uncontrolled discharge from the site does occur, and mitigation in the event it does occur.
- Appropriate filtration to reduce siltation from the site's groundwater.

Measures to protect the enhanced mixed woodlands to the east of the site should be taken. The area should be fenced alongside surface water run-off, and dust suppression measures to prevent polluting agents from affecting this area.

The following measures will be implemented to prevent the uncontrolled discharge of contaminated surface water from the site:

- Any potential contaminants (fuel, oils and chemicals) used during construction will be stored in designated compounds on impermeable surfaces and will be securely locked away when not in use.
- Appropriate pollution control measures will be employed in accordance with those outlined in the NetRegs document Guidance for Pollution Prevention (GPP) 5: Works and maintenance in or near water.
- A spill kit must be kept on site with sand, earth or commercial products for the containment of fuel and other material spillages. All staff will receive appropriate training in the use of these kits and will be made aware of where the kits are stored.
- In the event of a spillage of oils or chemicals resulting in contamination damage to habitats, the following procedure will be adopted:
 1. The appropriate spill kit is to be deployed immediately, and the Site Manager is to be informed.
 2. The incident will be recorded within the site log-book.
 3. In the event of significant spillage (in excess of 10 litres), the Environment Agency is to be contacted on the incident hotline 0800 80 70 60.

Measures to control surface water run-off will be implemented throughout the entire construction programme. The Developer/Main contractor will be responsible for ensuring appropriate surface water control measures are implemented.

The following measures will be implemented to minimise dust generation and prevent its discharge from the site:

- The site layout will be planned so that machinery and dust-causing activities are located away from receptors, as far as is possible.
- Solid screens or barriers will be erected that are at least as high as any stockpiles around dusty activities or the site boundary.
- Specific operations will be fully enclosed where there is a high potential for dust production.
- All site fencing, barriers and scaffolding will be kept clean using wet methods.

- Materials that have a high potential for dust will be removed as soon as possible unless being reused on site.
- Stockpiles will be covered, seeded or fenced to prevent wind whipping.
- A speed limit of 15mph on surfaced and 10mph on unsurfaced haul roads and work areas will be imposed across the site.
- Only cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques, such as water sprays or local extraction will be used e.g. suitable local exhaust ventilation systems.
- An adequate water supply on site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate, will be used.
- All chutes and conveyors will be enclosed and skips covered.
- Drop heights from conveyors, loading shovels, hoppers, and other loading or handling equipment will be minimised and fine water spray used on such equipment wherever appropriate.
- Earthworks and exposed areas/soil stockpiles will be revegetated as soon as it is practical to stabilise surfaces.
- Hessian, mulches or tackifiers will be used where it is not possible to revegetate or cover with topsoil.
- Sand and other aggregates will be stored in bunded areas and will not be allowed to dry out unless this is required for a particular process, in which case appropriate control measures will be put in place.
- Water-assisted dust sweepers will be used on access and local roads to remove, as necessary, any material tracked out of the site.
- Dry sweeping of large areas will be avoided.
- All open-bed vehicles entering and leaving the site will be covered.

The timing of individual measures will be dependent on activities. However, all appropriate measures will be always implemented where relevant. The Developer/Main contractor will be responsible for ensuring appropriate dust suppression measures are implemented.

5.3.4 *Terrestrial Mammals*

If any badger setts or signs of this species are discovered, work should be stopped immediately, and a suitably qualified ecologist contacted for further instruction. Within 30m of the discovered sett entrance should be marked so that no heavy machinery comes within this distance.

If a hedgehog is found on site, allow it to move away naturally without attempting to handle or relocate it. Keep the area clear and ensure that work does not disturb the animal. If the

hedgehog is found hibernating, do not disturb or move it, as waking a hibernating hedgehog can be harmful. Mark the area and schedule work around its location if possible, leaving it undisturbed until it naturally wakes and leaves the site. Maintain awareness of the hedgehog's presence to prevent accidental harm. In the event a hedgehog needs to be moved off-site with immediate effect, a suitably qualified ecologist must be contacted to undertake the procedure.

5.3.5 *Toolbox talks*

Toolbox talks will be provided to all site personnel before the commencement of works to ensure awareness of the potential presence of amphibians, reptiles, hedgehogs and nesting birds within the site boundary. The toolbox talks will outline the legal protections afforded to these species, the identification of suitable habitat and field signs, and the procedures to be followed should any species or active nests be encountered during works. Emphasis will be placed on avoiding harm during vegetation clearance and groundworks, maintaining vigilance during construction activities, and the requirement to stop works and seek advice from a suitably qualified ecologist where necessary. This measure will help ensure that all works are undertaken in accordance with relevant wildlife legislation and best practice guidance. Toolbox talks can be provided upon request.

5.3.6 *Invasive Species*

If any invasive species are discovered during work, all work must immediately stop, a 7m buffer must be established around the area, and a suitably qualified ecologist must be contacted immediately for further instruction.

5.4 *Recommendations for Ecological Enhancements*

5.4.1 *Introduction*

Planning policy requires developments to provide ecological enhancements. Due to the situation and existing ecological value of the site, opportunities for enhancements are considered significant within the context of this development. The following measures will provide these ecological enhancements within the context of this proposed development.

5.4.2 *Woodland enhancement*

Landscaping proposals for

5.4.3 *Native tree planting*

Landscaping proposals for the site include opportunities for planting new trees. Species which produce fruits or berries should be preferentially selected to maximise the benefit for wildlife. Suitable species include (but are not limited to) hazel *Corylus avellana*, rowan *Sorbus aucuparia*, field maple *Acer campestre*, hawthorn, and silver birch. These species planted must be native to satisfy BGN conditions for newly established trees outside designated garden areas.

5.4.4 *Planting to benefit pollinators*

Nectar-rich shrub species should be planted to provide a food source for a variety of pollinator species, including NERC invertebrates previously identified within the report. Native species are preferred as they will benefit the widest range of species.

5.4.5 *Bat boxes*

A minimum of 12 Bat boxes should be incorporated into the retained and enhanced mixed woodland to the east of the site boundary. These should be positioned at least 7m high, sheltered from strong winds and exposed to the sun for part of the day where suitable, facing southwest to southeast.

5.4.6 *Bird boxes*

Bird boxes should be incorporated into every new dwelling within the development. This will ensure that the development can provide new nesting opportunities to displace the full habitat removal of the site, besides that which is to be enhanced, which is suitable for species in the local area.

The nesting box type that is most suitable for this development is the Manthorpe Swift Brick, which can be inserted directly into newly built structures in the place of a standard brick. This bird box will provide a suitable nesting opportunity for cavity nesting species such as Swifts, House martins, House sparrows *Passer domesticus* and Starlings *Sturnus vulgaris*.

6 Biodiversity Net Gain

6.1 Introduction

In accordance with advice in the Biodiversity Supplementary Planning Guidance, a Biodiversity Net Gain (BNG) calculation has been undertaken for the site, using the Natural England/Defra Statutory Biodiversity Metric. The full calculation is provided on a separate spreadsheet (Appendix 3). See Appendix 4 for BNG plans.

6.2 Calculation

6.2.1 Habitat units

The figures used in the BNG calculation for habitat units are provided in tables 6.1a, 6.1b and 6.1c. Off-site compensation is required, as a large volume of habitat is to be removed, which cannot be fully compensated for on-site. In summary:

- The existing biodiversity value of the site is 22.36 habitat units
- The post-development biodiversity value would be 6.11 habitat units, a decrease of -16.25 units (-72.69%).
- Due to the loss of bramble and mixed scrub, modified grassland, urban bare ground and tall forbs, the trading rules are not satisfied.
- To achieve +10% BNG net gain and satisfy the trading rules, 18.49 units will need to be compensated for via an off-site habitat parcel or by purchasing habitat units.

6.2.2 Hedgerow units

The figures used in the BNG calculation for hedgerow units are provided in Table 6.1d. Currently on the site, there are native hedgerows with trees and native hedgerows. In summary:

- The existing biodiversity value of the site is 3.72 hedgerow units.
- The post-development biodiversity value would be 1.43 hedgerow units, a decrease of -61.46%.
- Therefore, 2.66 hedgerow units would be required to meet the mandatory +10% BNG net gain and satisfy the trading rules. This could be achieved via an off-site habitat parcel or by purchasing hedgerow units.

6.3 Conclusion

The calculation demonstrates that proposals would result in a net loss of -16.25 habitat units and a loss of -2.28 hedgerow units. Off-site measures would be required to meet the 10% target for habitat and hedgerow measures, as well as comply with trading rules. 18.49 habitat units and 2.66 hedgerow units are required to achieve +10% net gain and satisfy the trading rules.

Recommendations to improve the BNG result onsite are outlined below, to be implemented as feasible for this development. Please note that with the current extent of the housing development, it isn't considered possible to achieve the mandatory +10% BNG result and satisfy the trading rules via onsite methods alone.

Habitats

- Retaining as much of the current habitats as possible in the proposed landscaping, especially the bramble and mixed scrub, modified grassland, urban bare ground and tall forbs. If any of these habitats could also be enhanced, this would further reduce the habitat loss result.

Hedgerows

- Retaining as many of the existing hedgerows as possible.
- From the current results, planting 688m of hedgerow with trees would achieve the +10% BNG result and satisfy the trading rules.

Offsite measures for achieving the mandatory BNG +10% include enhancing an offsite habitat parcel for BNG purposes or purchasing habitat and hedgerow units via a BNG Habitat Bank.

Table 6.1a: Habitat baseline.

Broad habitat	Habitat type	Area (ha)	Condition	Retained (ha)	Enhanced (ha)
Grassland	Bracken	0.0524	Condition Assessment N/A	0	0
Grassland	Modified Grassland	0.0032	Moderate	0	0
Grassland	Modified Grassland	2.2959	Poor	0	0
Heathland and shrub	Bramble scrub	0.7153	Condition Assessment N/A	0	0
Heathland and shrub	Mixed scrub	1.2953	Moderate	0	0
Sparsely vegetated land	Tall forbs	0.2682	Moderate	0	0
Urban	Artificial unvegetated, unsealed surface	0.0108	N/A - Other	0	0
Urban	Bare ground	0.3396	Good	0	0
Urban	Developed land, sealed surface	0.2479	N/A - Other	0	0
Woodland and forest	Other woodland, mixed	0.1949	Poor	0	0.1949
Individual trees	Urban tree	0.0041	Poor	0	0
Individual trees	Urban tree	0.0651	Moderate	0	0

Table 6.1b: Habitat creation.

Broad Habitat	Proposed habitat	Area (ha)	Condition
Grassland	Modified grassland	0.2975	Moderate
Grassland	Modified grassland	0.0054	Poor
Grassland	Other neutral grassland	0.1007	Poor
Heathland and shrub	Hawthorn scrub	0.0708	Poor
Heathland and shrub	Mixed scrub	0.1504	Moderate
Heathland and shrub	Mixed scrub	0.0118	Poor
Urban	Developed land; sealed surface	3.2011	N/A - Other
Urban	Sustainable drainage system	0.1694	Moderate
Urban	Unvegetated garden	1.1421	N/A - Other
Woodland and forest	Other woodland; Broadleaved	0.0794	Moderate
Individual trees	Urban tree	0.4112	Moderate

Table 6.1c: Habitat enhancement.

Baseline Habitat	Proposed habitat	Area (ha)	Condition
Other woodland; mixed	Other woodland; mixed	0.1949	Poor - Moderate

Table 6.1.d: Hedgerow baseline.

Habitat Type	Length (km)	Length Retained	Condition
Native hedgerow with trees	0.442	0.179	Moderate
Native hedgerow	0.045	0	Moderate

7 Summary and Conclusion

7.1 Summary

The habitats present within the zone of influence of the proposed housing development outside of the red line boundary may be subject to loss or damage because of the development spreading off-site to the surrounding designated areas. This would result in a significant ecological impact without mitigation measures implemented in the works.

The site is considered likely to support protected or notable species, particularly birds using the woodland, alongside mixed and bramble scrub on the site for breeding and nesting purposes. Potential for badgers and hedgehogs to use the habitats onsite for foraging and translocation. Potential for bats to be present within the site boundary due to specific trees holding potential roosting features, alongside a low and unlikely potential for the presence of protected amphibians and reptiles. Protected invertebrates have also been noted within the vicinity, which should have relevant tailored enhancement.

To mitigate the ecological effects of the proposals, measures are required to prevent disturbance. These include a breeding bird survey, a preliminary badger survey and a ground-level tree assessment to assess the suitability of the trees on site to hold bat potential. If works are scheduled within nesting bird season and after the breeding bird survey has been conducted, a nesting bird check will be required before any vegetation removal to ensure no risks to ground or arboreal nesting birds occur as a result of the development.

There are opportunities to enhance the ecological value of the site post-development, including enhancement of existing woodland, new native tree planting, species-rich woodland, mixed native scrub, new parcels of modified grassland and nectar-rich shrub planting to support pollinators, birds and urban wildlife. Additional enhancements include the installation of bat boxes within retained enhanced woodland areas and integrated bird nesting features within proposed dwellings.

7.2 Biodiversity Net Gain

Based on the current landscaping, the BNG calculation shows a net loss in the biodiversity value of 16.25 habitat units (-72.69%) and 2.28 hedgerow units (-61.46%). The trading rules are also not satisfied.

To achieve the +10% net gain and satisfy the trading rules, 18.49 habitat units and 2.66 hedgerow units would be required. These units can be obtained via applying the recommendations provided in this report and utilising offsite measures.

It is considered unfeasible for the mandatory +10% BNG to be achieved via onsite measures alone. Therefore, offsite measures for achieving the mandatory BNG +10% include enhancing an offsite habitat parcel for BNG purposes or purchasing habitat and hedgerow units via a BNG Habitat Bank.

7.3 *Residual Impacts*

The proposals could result in damage to adjacent habitats due to surface water runoff, dust and additional artificial lighting. However, these impacts can be mitigated by implementing the recommended mitigation measures. Therefore, provided these are implemented in full, there would be significantly reduced residual impacts.

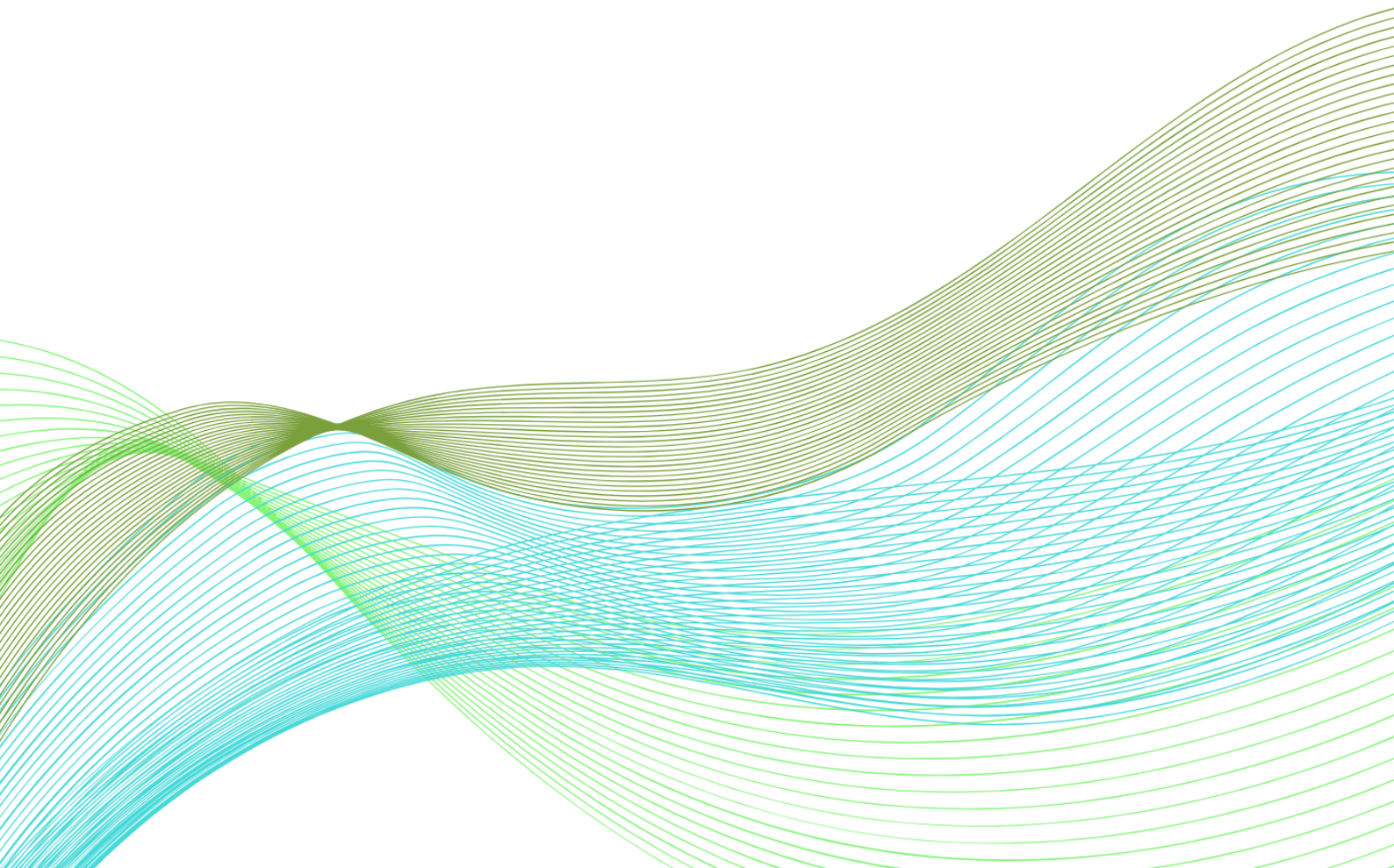
Provided the recommended ecological enhancement measures are implemented, the development would comply with all relevant nature conservation legislation and planning policy regarding ecological protection and enhancement.

8 Useful References

1. Buckinghamshire council (2022) *Biodiversity Net Gain - Supplementary Planning Document* <https://www.buckinghamshire.gov.uk/planning-and-building-control/planning-policy/local-planning-guidance/supplementary-planning-document-biodiversity-net-gain/4-appendices/>, accessed October 2025
2. CIEEM (2013). *Guidelines for Preliminary Ecological Appraisal*. Chartered Institute of Ecology and Environmental Management, Winchester.
3. Department for Communities and Local Government. (2012). *National Planning Policy Framework: Biodiversity and Geological Conservation*. TSO, Norwich.
4. IUCN. 2025. The IUCN Red List of Threatened Species. Version 2025-1. <https://www.iucnredlist.org>
5. JNCC and Defra (on behalf of the Four Countries' Biodiversity Group). (2012). *UK Post-2010 Biodiversity Framework*. July 2012. JNCC and Defra.
6. Natural England (2025). *National Character Area profile: 115. Thames Valley*. Natural England, Peterborough.
7. South Yorkshire Mayoral Combined Authority (no date) *Local Nature Recovery Strategy*. Available at: South Yorkshire MCA LNRS page
8. *The Conservation of Habitats and Species Regulations 2017*. <https://www.legislation.gov.uk/uksi/2017/1012>. Accessed October 2025.
9. *The Environment Act 2021*. <https://www.legislation.gov.uk/ukpga/2021/30>. Accessed October 2025.
10. *The Natural Environment and Rural Communities Act 2006*. <https://www.legislation.gov.uk/ukpga/2006/16>. Accessed October 2025.
11. *The Protection of Badgers Act 1992*. <https://www.legislation.gov.uk/ukpga/1992/51>. Accessed October 2025.
12. *The Wildlife & Countryside Act 1981*. <https://www.legislation.gov.uk/ukpga/1981/69>. Accessed October 2025.
13. <https://naturespaceuk.com/district-licensing-scheme/>. Accessed October 2025.
14. GOV.UK (2024). <https://www.gov.uk/guidance/biodiversity-net-gain>. Accessed March 2025.
15. Department for Environment Food & Rural Affairs (2024). *The Statutory Biodiversity Metric – User Guide*. Natural England, Peterborough.



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