



# Ecological Appraisal

## Executive Summary

Ostara Ecological Services were commissioned by Bernard Taylor Partnership Ltd to undertake an Ecological Appraisal and Biodiversity Net Gain (BNG) of land off Dowker Street, Milnsbridge. This comprised an online desk study, Phase 1 Habitat Survey and an ecological scoping survey which assessed the potential of the site to support species of conservation concern or other species which could present a constraint to the development of the site.

The proposals include the removal of opportunistic vegetation on site to facilitate the construction of c.38 residential buildings with associated hardstanding and landscaping.

The site was approximately c.0.5ha in size and comprises 0.21ha of dense (inaccessible *Buddleia* scrub and saplings), 0.31ha of hard standing with chipped vegetation and scattered scrub. Remaining building foundations were present on the southern aspect, while on the northern aspect a rubble / brick pile wall had been created.

Nesting birds were noted on site to the north within the dense scrub.

No significant impacts upon designated sites are anticipated. The site does not meet the criteria for Sites of Special Scientific Interest (SSSI) Impact Risk Zones (IRZs).

Outline recommendations include:

- ★ Due to the presence of nesting birds, limited lighting on site and dense vegetation, a Construction and Environmental Management Plan (CEMP) should be conditioned and produced. The CEMP will detail protection measures, and pre/during clearance ecology checks for protected species.
- ★ Lighting Strategy to avoid impacts to foraging and commuting species.
- ★ Site is considered suitable for small mammals such as hedgehogs *Erinaceus europaeus*, reptiles and nesting birds. The risk of injury to these species should be minimised during any works on site. Precautionary Methods of Works during construction are required and detailed within the report.
- ★ BNG results in a 73% net gain, which satisfies the trading rules.
- ★ Enhancements are easily achievable within the development where the incorporation of native planting, bat, bird and hedgehog nesting boxes are recommended. Inclusion of hedgehog highways and residential information of artificial boxes and hedgehogs are also recommended.



## Introduction

### Site name

Dowker Street, Milnsbridge

### Purpose of report

To undertake an initial assessment of the potential ecological impact of the proposals, an online desk study, Phase 1 Habitat Survey and protected species assessment were carried out. This is termed as a Preliminary Ecological Appraisal Report (PEAR) in accordance with CIEEM (2017). However, to complete an EclA of the proposals, the above is undertaken and no further surveys are required. This report is a stand-alone EclA which has been prepared following current guidance (CIEEM, 2018) and can be used to lawfully determine a planning application in line with current planning policy<sup>1</sup>. This report does not form part of a wider discipline Environmental Impact Assessment (EIA) or Environmental Statement (ES), nor does it confer the need for any such documentation.

The purpose of the BNG Assessment is to gather data on existing habitats at the Site and the value assigned to these habitats using Natural England's Biodiversity Metric 4.0 - Calculation Tool (Natural England Joint Publication, 2022) as well as assessing the habitats post intervention from development activity. The report also includes data relating to habitats lost, retained, created or enhanced.

The report will also provide an overview of the Biodiversity Net Gain Good Practice Principles (Baker, Hoskin & Butterworth, 2019) and legislation and planning policy.

### Aim(s)

- ★ Undertake a desk-based review of designated sites and records of protected species and other species that could present a constraint;
- ★ Map and assess the habitats present on site;
- ★ Assess the site for potential to support protected species or other species that could present a constraint, and make appropriate recommendations for further survey work if necessary;
- ★ Baseline of survey data to analyse;
- ★ Provide outline options for mitigation measures as appropriate; and
- ★ Make recommendations for appropriate biodiversity enhancements in line with national and local planning policy.

### Proposals

Development of c.38 residential buildings with associated infrastructure and soft landscaping.

<sup>1</sup> Office of the Deputy Prime Minister Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within The Planning System



## Introduction

### Location

Land at Dowker Street, Quarmby, Milnsbridge, Kirklees, West Yorkshire, England, HD3. Ordnance Survey Grid Reference SE 11615 16068.

### Map



(screen shot from: <https://gridreferencefinder.com/> on 31.03.2023)

### Zone of Influence

The term Zone of Influence is used to describe the geographic extent of potential impacts of a proposed development. The Zone of Influence is determined by the nature of the development and also in relation to designated sites, habitats or species which might be affected by the proposals. For this site the Zone of Influence is considered to be the site boundary only due to the residential and commercial developments surrounding the site boundary.



## Methodology

### Desk Study

The ecological records obtained as part of this assessment within a 2 km radius of the site were analysed, using online records. The analysis of data requests was limited to records for protected species recorded within the last ten years and sites of nature conservation interest within 2 km of the site. This included a review of existing statutory sites of nature conservation interest, such as Sites of Special Scientific Interest (SSSIs), Special Protection Areas (SPAs), Special Area of Conservation (SACs) and National Nature Reserves (NNRs).

A 1:25,000 OS map was used to identify nearby features such as ponds or green corridors that could provide habitat or connectivity to other areas.

Natural England's bat and great crested newt (GCN) *Triturus cristatus* class licence return data.

### Phase 1 Habitat Survey

The Phase 1 Habitat surveys followed the standard methodology (JNCC, 2010), and as described in the Guidelines for Preliminary Ecological Assessment (CIEEM, 2017). In summary, this comprised walking over the survey area and recording the habitat types and boundary features present.

### Habitat Condition Assessment

During this survey the habitats were assessed against the Natural England habitat condition assessment criteria (Natural England Joint Publication, 2022). The condition assessment criteria are dependent on the habitats present on-Site, with each assessment containing sets of criteria which are either passed or failed. Criteria include things such as species composition, presence of undesirable species and percentage cover.

### The Biodiversity Metric Calculator

The Biodiversity Metric 4.0 calculator (Natural England Joint Publication, 2022) was used to calculate the ecological baseline of the Site. These habitat types, conditions and areas were inputted into the metric to form the habitat baseline. Additionally, the biodiversity metric calculation tool collects information on distinctiveness and strategic significance. These categories are described in more detail below.

Habitats are assigned distinctiveness bands. These are based on an assessment of the distinguishing features of a habitat, including consideration of species richness, rarity (at local, regional, national and international scales), and the degree to which a habitat supports species rarely found in other habitats. The distinctiveness band of each habitat is preassigned in the Biodiversity Metric 4.0 and are based on the UK Habitat Classification system.

Biodiversity Metric 4.0 assesses terrestrial habitats under two broad but separate groups including Habitat Biodiversity Units (habitat area such as grassland, woodland or other areas of habitats which are measured in hectares); and hedgerow Biodiversity Units (Linear features such as hedgerows or lines of trees which are measured in kilometres).

### Strategic Significance

The Biodiversity Metric 4.0 considers Strategic Significance. Strategic Significance is defined as the spatial location of a habitat in relation to preferred locations for biodiversity.



## Methodology

This is broken down into three categories for input into the Biodiversity Metric 4.0 as described below:

- ★ Within area formally identified in local strategy – the Site or habitat type is within the local planning documents or frameworks;
- ★ Location ecologically desirable but not in local strategy; and
- ★ Area/compensation not in local strategy/no local strategy.

The following data sources were searched to gather information on the strategic significance of the Site and its habitats:

- ★ KC Ecology Dowker comments; and
- ★ Multi-Agency Geographic Information for the Countryside (MAGIC).

### Protected Species Assessment

A protected species scoping survey was carried out in conjunction with the Phase 1 Habitat survey. The site was assessed for its suitability to support protected species, in particular bats, birds, otters, reptiles, badgers, and other species of conservation importance that could pose a planning constraint.

### Impact Assessment

The ecological impact assessment is based on the standard best practice methodology provided by the Guidelines for Ecological impact Assessment (CIEEM, 2018). The assessment identifies important sites, habitats, species and other ecological features that are of conservation value based on factors such as legal protection, statutory or local site designations such as Sites of Special Scientific Interest (SSSI) or Local Wildlife Sites (LWS) or inclusion on Red Data Book Lists or Local Biodiversity Action Plans. The importance of an ecological feature is considered within a defined geographical context. The following frame of reference is used, or adapted to suit local circumstances:

- ★ International and European
- ★ National (England)
- ★ Regional (West Yorkshire)
- ★ County (Kirklees)
- ★ District (Milnsbridge)
- ★ Local (Quarmby)
- ★ Below Local Level: Site Level Only.

Consideration of impacts at all scales is important, and essential if objectives for no net loss of biodiversity and maintenance of healthy ecosystems are to be achieved. In identifying impacts, the review considers the Client's Site proposals and any subsequent recommendations made are proportionate / appropriate to the site and have considered the Mitigation Hierarchy as identified below:



## Methodology

- ★ Avoid: Provide advice on how the development may proceed by avoiding impacts to any species or sites by either consideration of site design or identification of an alternative option.
- ★ Mitigate: Where avoidance cannot be implemented mitigation proposals are put forward to minimise impacts to species or sites as a result of the proposals. Mitigation put forward is proportionate to the site.
- ★ Compensate: Where avoidance cannot be achieved any mitigation strategy will consider the requirements for site compensatory measures.
- ★ Enhance: The assessment refers to planning policy guidance (e.g. NPPF) to relate the ecological value of the site and identify appropriate and proportionate ecological enhancement in line with both national and local policy.

Effects are considered significant at the range of scales from international to local. A significant effect is an effect that is sufficiently important to require assessment and reporting so that the ecological consequences of the project are understood. In broad terms, significant effects encompass impacts on structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species (including extent, abundance and distribution).

The surveys and assessments have been overseen, led and verified by full members of CIEEM who are bound by its code of professional conduct. All surveys and assessments have been undertaken with reference to the recommendations given in British Standard BS 42020, and as stated within specialist guidance, as appropriate, and are referenced separately. On site surveys have been undertaken by:

Ceridwyn Adkins BSc (Hons) who has been an ecologist for 14 years, and who also holds Natural England Licences for bats and great crested newts (Level 2).

The report and calculator have been reviewed by:

Kari Bettoney BSc (Hons) ACIEEM, an ecologist with nine years of professional experience. Kari Bettoney holds a Level 2 Class Licence in relation to bats and a Level 1 dormouse licence.

**Due to the sensitive nature of the licence numbers, these can be supplied separately and should not be available in the public domain.**

Survey was undertaken on 5th April 2023. 8/8 CC, 9 degrees Celsius, survey started with rain and stopped shortly after.

Surveyors

Survey  
Date(s) &  
Weather



## Limitations

### Desk Study Records

A biological records data search has not been undertaken. However, given the location of the site, the nature of the habitats present, and the assessed suitability of the site for protected or notable species, it is not anticipated that the purchase of biological records data will add any significant weight or alter the conclusions and recommendations outlined in this report.

### Phase 1 Survey & Building assessment

Ecological surveys are limited by factors that affect the presence of plants and animals such as time of year, weather, migration patterns and behaviour. The survey was undertaken in April, within the optimal survey season.

Dense vegetation was present along the northern aspect which restricted access. Urban debris in the form of broken glass, cut vegetation, brick and rubble piles along with numerous appliances and sofas were present.

The report is not designed, nor is it required to present a complete inventory of flora and fauna or NVC surveys. The survey team comprised suitably qualified ecologists with good plant identification skills, these ecologists were not skilled in bryophyte or fungal identification; therefore, these elements were not included within the Phase 1 Habitat Survey.

### Valid

The results and recommendations within this report are valid for up to two years from the date of survey, assuming there are no significant changes to the Site or its immediate surroundings.

## Desk Study Results (2km)

### Statutory Protected Sites

- ★ Local Nature Reserve: Gledholt Woods 1.3km East
- ★ SSSI Impact Risk Zones: No criteria that matches the IRZ

### Non-Statutory Protected Sites

The site is centrally located within the Milnsbridge Conservation Area, which states "*When considering whether to grant planning permission for development affecting a listed building and its setting special regard should be had to preserving the building or its setting. The site is also located within the Milnsbridge Conservation Area. It is therefore necessary to pay special attention to the desirability of preserving or enhancing the character or appearance of the surroundings when considering whether to grant planning permission or listed building consent for development or works within them*".

The site lies within close proximity to the Kirklees Wildlife Habitat Network (KWHN).

### Granted Licence(s)

- ★ 2014-1010-EPS-MIT for destruction and damage of a resting place for C-PIP 2014-2015. Located 1 km south east



## Desk Study Results (2km)

- ★ EPSM2009-1162 for destruction of a resting place for C-PIP 2009-2011. Located 1.53km north
- ★ EPSM 2012-5292 for destruction of a resting place for C-PIP 2013-2014. Located 1.55km north
- ★ The site lies within the bat alert zone.

## Baseline Field Survey Results

Confirmed Presence CP Potentially Present PP Unlikely Presence UP No Possibility NP	Code	Consider Further	Risk to Project (H/M/L/N) <sup>2</sup>	Reason/Notes (e.g. field signs present or desk study revealed presence in area and/or suitable habitat present)
Biological Important Hedgerow	NP	N	N	None present
S41 (only) Habitats <sup>3</sup>	NP	N	N	None present.
Trees on, or within 15m of site	NP	N	N	None present.
Protected Plants (WCA Sch.8 <sup>4</sup> , CHSR Sch.5 <sup>5</sup> )	NP	N	N	None present.
Invasive Plants <sup>6</sup>	NP	N	N	None present.
Phase 1 habitats				The majority of habitats on site were generally of limited botanical interest and poor species diversity. The majority of the site was either hard standing with scattered Buddleia scrub and urban debris or dense Buddleia vegetation with restricted access.

<sup>2</sup>: **High**: Further surveys required prior to the commencement of works / **Medium**: Precautionary measures and/or further surveys may be required, particularly if the recommended avoidance or mitigation measures cannot be implemented / **Low**: A low risk to the project. No further surveys are deemed to be required unless the scope of works differ to those anticipated and described above / **Negligible**: Negligible foreseeable risk to the project.

<sup>3</sup> Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006 published lists of habitats and species of principal importance for biodiversity conservation in England (succeeded the UK Biodiversity Action Plan (BAP).

<sup>4</sup> Wildlife & Countryside Act 1981 (as amended)

<sup>5</sup> Conservation of Habitats and Species (Amendment) Regulations 2019

<sup>6</sup> Wildlife & Countryside Act 1981 (as amended) Schedule .9, Injurious weeds (Weeds Act 1959)



## Baseline Field Survey Results

Confirmed Presence Potentially Present Unlikely Presence No Possibility	CP PP UP NP	Code	Consider Further	Risk to Project (H/M/L/N) <sup>2</sup>	Reason/Notes (e.g. field signs present or desk study revealed presence in area and/or suitable habitat present)
					Ash <i>Fraxinus excelsior</i> , willow <i>Salix sp</i> , sycamore <i>Acer pseudoplatanus</i> saplings were present only. No trees were present.
	<b>Bats</b>	UP	N	N	None of the saplings on site were considered suitable to support roosting bats with no obvious features noted. The southern and eastern boundary had street lighting present, the surrounding residential and commercial properties offered suitable roosting features for bats. The site was considered to offer low potential for foraging and commuting bats.
	<b>Reptiles</b>	PP	N	L	The terrestrial habitats on site although were considered to be suitable for reptiles, with small areas of rubble and scrub providing suitable refuge and hibernation sites, the urban context of the site and debris present reduces the likelihood of reptiles being present.
	<b>Riparian species</b>	NP	N	N	No suitable habitats present on site.
	<b>Nesting Birds</b>	CP	N	M	Suitable habitat within the trees saplings and pigeons <i>Columba livia</i> and blackbirds <i>Turdus merula</i> were noted nesting on site.
	<b>Other Species</b>	PP	N	L	The habitats on Site and in the wider landscape were suitable for hedgehogs which is UK BAP Priority Biodiversity Species.

## BNG Results

### Dense vegetation

- ★ 0.21ha of non-native of dense scrub comprising dominant Buddleia and occasional saplings were present to the north of the site.
- ★ To the south scattered buddleia and saplings were present between the compacted rubble and urban debris.



### BNG Results

★ The site currently only consists of regenerating Buddleia and there are no trees of any value to be removed to facilitate the proposal.

Developed Land/ Sealed Surface

Present on-Site, the majority of the site was demolished land with sealed surfaces, consisting of demolished buildings and compacted rubble. In accordance with best practice no condition assessment is required for this habitat and is assigned N/A within the Biodiversity Metric under condition.

The Table below provides a summary of the impacts to the baseline habitats as a result of development. For full details see the associated Biodiversity Metric 4.0 Calculation.

Habitat	Impact of Proposal	ha
Dense scrub	Lost to facilitate development.	0.21
u1b - Developed Land/Sealed Surface	Lost to facilitate development.	0.16
u1d - Suburban /mosaic of developed / natural surface with 48 non native dominant buddleia and saplings	Lost to facilitate development.	0.15
u1e- built linear (brick wall)	Lost to facilitate development.	174.2m

Baseline Habitat Impacts

The site is not located within a Strategic or Semi-Strategic Grassland or Woodland area as, nor is the site subject to any statutory or non-statutory nature conservation designations. Therefore, all habitats were assessed as having a Low Strategic Significance.

All habitats within the site prior to development and within the proposals are of low / poor distinctiveness or below. In line with Natural England guidance, default connectivity scores have been attributed to these habitats



## Proposed Habitats

The Table below provides a summary of the developments proposed habitats, proposed target conditions and how these conditions will be feasible/ achieved. For specific habitat creation and management prescriptions a Biodiversity Management Plan (BMP) is recommended to deliver the landscaping scheme successfully and should be secured through a planning condition.

Habitat	Difficulty to create / enhance	Target condition	Achieving target condition	ha
Urban Developed Land; Sealed Surface	Low	N/A	-	0.2343
Modified grassland / amenity grassland	Low	Poor	A22 Hard wearing low maintenance amenity grassland mix	0.05
Other neutral / Wildflower grassland	Low	Fairly Poor	EM1 Basic General purpose meadow mixture within Public Open Space	0.11
Urban Trees	Low	Fairly poor	13 trees to be included within the proposals.	13 trees x 0.005 small trees = 0.0065ha
Introduced shrubs	Low	N/A	Ornamental shrub planting	0.0091
Amenity grassland (Vegetated garden)	Low	Fairly good	Species poor regularly mown grassland	0.1395

Hedgerows are proposed on site; three areas of single species ornamental hedgerow totalling 100m in length and native hedgerow totalling 14.75m length. These have been omitted from the calculations as single species ornamental hedgerow does not meet the criteria for a native hedgerow mix and will be within the curtilage of the properties, therefore the longevity of the



## Proposed Habitats

hedgerow within private ownership is unknown. The native hedgerow is less than the required length to include within the calculation.

## Discussion and Recommendations

### Desk Study

No impacts to designated sites are anticipated due to the small scale development proposed and distance of the proposed development from such sites (where known).

### Phase 1 Habitat Survey

The majority of habitats on site were generally of limited botanical interest and poor species diversity. The value of habitats was largely noted in their potential to support a range of protected / Priority faunal species rather than for their botanical value. No protected or Priority plant species were observed and all plant species encountered were common, widespread and characteristic of the common habitat types they represent.

No impacts to any notable habitats are anticipated due to the small scale and distance of the proposed development from such habitats. Best practice measures to minimise the possibility of pollution must be implemented during construction.

### BNG

The site largely comprised habitats of low and very low distinctiveness that are common in the local area. The proposed development will result in an overall unit change of +0.31 habitat areas resulting in an overall net change of 73.09% for area habitats. This meets the minimum of 10% increase and the trading rules are satisfied. As the trading rules have been satisfied within the metric and to deliver the net gain a Biodiversity Management Plan (BMP) is recommended to provide prescriptions associated with habitat creation and long-term management secured through the planning system.

For full details and scores see the associated Biodiversity Net Gain Metric 4.0 calculation, submitted alongside this report.

### Daytime Bat Assessment

Due to the age and structure of the tree saplings, these have been assessed as having “negligible” potential to support roosting bats. The site did provide suitable foraging and commuting resources for bats. The proposals will result in the loss of minor on-site vegetation, with retention at boundaries and new landscaping proposed throughout. In assessing the site against criteria in best practice guidelines (Collins J., eds, 2016) the site was considered to offer low quality foraging and commuting habitat for bats. On this basis, a development would be of low risk to bat species foraging and commuting. Given the small size of the site and surrounding habitats and existing lighting, it is considered disproportionate to undertake bat activity surveys to assess the use of the vegetation on site by bats.

Additional lighting could affect foraging and commuting animals. As a result, it is recommended that construction works are to be undertaken in daylight hours only with no night hours work permitted.



## Discussion and Recommendations

If additional lighting is required, a sensitive lighting strategy should be implemented on site and follow the guidance set out in Bats and Lighting in the UK (BCT and ILP, 2018).

A low impact lighting strategy will be adopted for the site during and post-development, which will include the following measures:

- ★ Use narrow spectrum light sources to lower the range of species affected by lighting.
- ★ Use light sources that emit minimal ultraviolet light.
- ★ Avoid white and blue wavelengths of the light spectrum to reduce insect attraction and where white light sources are required in order to manage the blue shortwave length content they should be of a warm / neutral colour temperature <4,200 kelvin.
- ★ Not use bare bulbs and any light pointing upwards. The spread of light will be kept in line with or below the horizontal.

Light spill will be reduced via the use of low-level lighting used in conjunction with hoods, cowls, louvres and shields. Lights will also be directional to ensure that light is directed to the intended areas only. External lighting will be on PIR sensors that are sensitive to large objects only (so that they are not triggered by passing bats) and will be set to the shortest time duration to reduce the amount of time the lights are on. Wall lights and security lights will be 'dimmable' and set to the lowest light intensity settings. There are several products on the market that allow the control of the light intensity and the duration that the lights are on. All lighting on the developed site will make use of the most up to date technology available.

### Reptiles

Persistence of reptiles on site is considered unlikely due to the urban context, although suitable features such as debris piles and scrub offer habitat for the species. Overall, it is considered unlikely and certainly this site will not form a core area for reptiles locally. The site retains low potential for reptiles to be present on a transient basis. Further surveys for reptiles are not considered necessary or proportionate. As precautionary measures, debris piles, where safe to do so, should be dismantled using hand tools only. In the extremely unlikely event that a reptile or other fauna is found or seen during these works, they should be allowed to escape unharmed at their own pace. Only a trained ecologist should attempt to move any wildlife by hand. If multiple reptiles are encountered, work should cease, and the methodology be re-evaluated. Removal of rubble piles, which provide suitable hibernation features for reptiles, should not be undertaken during the winter hibernation period and in temperatures above 11°C.

### Nesting Birds

The tree saplings and scattered scrub within the site provide suitable habitat for nesting birds. Pigeons and blackbirds were noted nesting on site. Due to the small scale size of the proposed development it is considered disproportionate to undertake further surveys.

All nesting birds are protected under the WCA 1981. Therefore, if any nesting bird habitat is to be lost, these areas should be cleared outside of the nesting bird season (March to August inclusive) where possible. If works on these habitats are required during the nesting bird season, then a nesting bird check / habitat inspection is required to ensure that there is no nest disturbance within the site by a Suitably Qualified Ecologist (SQE) within 24 hours prior to clearance to confirm the absence of active nests. Any active nests located during inspections will be protected with a suitable buffer of retained vegetation around the nest (of appropriate size to the species) and



## Discussion and Recommendations

monitored until the nest is no longer active/all chicks have fledged, when the ecologist will provide sign off for clearance to be undertaken.

Given the suitability of scattered scrub and overgrown vegetation on Site, it is considered that hedgehogs could use the Site for foraging. Whilst this species is not legally protected, they are a material consideration during planning and efforts should be made to minimise the risk of injury or effects on the local population status.

In order to minimise the risk of harm to other animals passing through the Site it is recommended that preventative measures are in place during construction. These precautions are:

- ★ Mammal ladders (such as a plank) or earth ramps to be placed in any open excavations at the end of each day;
- ★ Cap off any open pipes at the end of each day;
- ★ Cover any open holes, or install mammal ladders or earth ramps in any open excavations at the end of each day to prevent animals from becoming trapped;
- ★ Keep all fuel and other harmful substances in a locked area;
- ★ Ensure any spillages are treated with spill kits; and
- ★ Night work should be avoided where possible, and any flood lighting should face away from the Site boundaries.

Other(s)

## Ecological Enhancements

The National Planning Policy Framework and local development plan requires ecological enhancement of sites subject to development proposals to the extent that they provide a net biodiversity gain. Where new landscape planting is proposed species such as oak *Quercus robur*, silver birch *Betula pendula*, rowan *Sorbus aucuparia* and whitebeam *Sorbus aria* would make attractive additions to the Site. In particular rowan will provide a valuable source of berries late into the winter months and provide an important food source for native and migratory bird species. Ash and elm should currently be avoided due to the prevalence of 'Ash dieback' and 'Dutch elm disease', as stocks of these species cannot be guaranteed to be free from these afflictions. The use of native species in tree planting is also encouraged as these can harbour a high diversity of invertebrates. Other suggested planting of benefit to invertebrates includes:

- ★ Willow *Salix sp.*;
- ★ Cherry *Prunus sp.*;
- ★ Hazel *Corylus avellana*; and



## Ecological Enhancements

### ★ Birch *Betula pendula*.

Good horticultural practice should be utilised, including the use of peat-free composts, mulches and soil conditioners, native plants and avoidance of the use of invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

Additional enhancements that could easily be met within the development scope include the incorporation of bat and bird nest boxes and hedgehog highways. Boxes could be placed either on new buildings within the Site boundaries.

In-cavity bat boxes located on buildings could be incorporated into the structure of the properties as they are built. These boxes would consist of Ibstock Enclosed Bat Box 'C' which is positioned at least 3 metres from the ground, facing either south, south-west or south-east (for additional warmth) and close to good foraging habitat.

The installation of a minimum of two bird boxes will provide additional nesting habitat for birds.

New boxes to be installed are Blackbird FSC Nest Box or suitable alternative.

Garden habitats will provide preferred habitats for foraging hedgehog to facilitate the movement of hedgehogs through the site post-construction, 'hedgehog highways' will be provided within all new lengths of garden (and where feasible boundary). A 13cm x 13cm hole is recommended which is too small for most pets and can be delivered by raising a fence panel per garden, installing hedgehog friendly fencing, removing a brick at the bottom of a wall or cutting a hole in fencing/walls.

It is recommended the new residents are provided with educational resources on bat and bird boxes and hedgehog conservation and how they too can get involved, especially where hedgehogs are sick or injured, targeting properties with the highways installed, but available for all residents.

## References

- ★ Baker, J., Hoskin, R. & Butterworth, T. (2019). Biodiversity Net Gain: Good Practice Principles for Development, A Practical Guide. CIEEM, IEMA, CIRIA, UK.
- ★ Baker, J. (2016). Biodiversity Net Gain: Good practice principles for development. CIEEM, IEMA, CIRIA, UK.
- ★ British Standards Institute (2013) Biodiversity – Code of Practice for Planning and Development. BS 42020:2013.
- ★ Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020). UK Habitat Classification – Habitat Definitions.
- ★ CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd Edition. Chartered Institute of Ecological and Environmental Management, Winchester.



## References

- ★ CIRIA (2015) Environmental good practice on site guide, 4th Edition. Construction Industry Research and Information Association, London.
- ★ Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn).
- ★ The Bat Conservation Trust, London. Institute of Environmental Assessment (1995) Guidelines for Baseline Ecological Assessment. First Edition. E & FN Spon, London.
- ★ JNCC Report no. 259. Joint Nature Conservation Committee, Peterborough.
- ★ Joint Nature Conservation Committee (2010) Handbook for Phase 1 Habitat Survey: A technique for Environmental Audit. JNCC, Peterborough.
- ★ Stace, C. (2019) New Flora of the British Isles. [4th Edition] C&M Floristics.
- ★ <https://magic.defra.gov.uk/MagicMap.aspx> accessed on 31.03.2023

## Legislation

Relevant legislation, policy guidance and both Local and National Biodiversity Action Plans (BAPs) are referred to throughout this report where appropriate. Their context and application is explained in the relevant sections of this report.

The relevant articles of legislation are:

- ★ The National Planning Policy Framework (NPPF, 2021);
- ★ ODPM Circular 06/2005 (retained as Technical Guidance on NPPF 2019);
- ★ Local planning policies;
- ★ The Conservation of Habitats and Species (amendment) (EU Exit) Regulations 2019;
- ★ The Wildlife and Countryside Act 1981 (as amended);
- ★ The Protection of Badgers Act 1992;
- ★ The Countryside and Rights of Way Act 2000;
- ★ The Hedgerow Regulations 1997;
- ★ The Natural Environment and Rural Communities Act 2006;
- ★ Local Biodiversity Action Plan for Kirklees.



## UK Habs Survey Plan



## Phase 1 Plant list

Not a comprehensive list, but species noted:

- ★ *Fraxinus excelsior* (r) sapling
- ★ *Salix* sp (A) sapling
- ★ *Acer* sp (A) sapling
- ★ *Sambucus nigra* (O) sapling
- ★ *Rubus fruticosus* agg. (O)
- ★ *Rumex* sp (O)
- ★ *Cirsium* sp (O)
- ★ *Buddleja* (D)

- ★ *Tussilago farfara* (F)
- ★ *Fragus* sp (O) sapling
- ★ *Betula* sp (F) sapling
- ★ *Galium aparine* (O)
- ★ *Geranium robertianum* (O)
- ★ *Lolium perenne* (I)
- ★ *Taraxacum* sp (O)
- ★ *Epilobium* (O)
- ★ *Urtica dioica* (O)
- ★ *Poa* sp (O)



Photographs



Hard standing with scattered scrub



Urban debris and brick wall



Dense vegetation and hard standing



Dense vegetation and rubble pile wall



## Photographs



open area of hardstanding to the north



Dense vegetation