



Roslyn Avenue, Netherton

Ecological Impact Assessment

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SLR Project No.: 424.064759.00001

4 March 2024

Version: 3

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
1	10 November 2023	Aaron Bailey	Gary Oliver	Gary Oliver
2	13 November 2023	Aaron Bailey	Gary Oliver	Gary Oliver
3	4 March 2024	Aaron Bailey	Gary Oliver	Gary Oliver

Basis of Report

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Table of Contents

Basis of Report	i
1.0 Introduction	1
1.1 Background	1
1.2 Site Description	1
1.3 Details of the Proposed Development	1
1.4 Purpose of this Report.....	1
1.5 Evidence of Technical Competence and Experience	2
2.0 Relevant Legislation and Planning Policy	2
2.1 Relevant Legislation and Policy	2
2.1.1 Conservation of Habitats and Species Regulations 2017	2
2.1.2 Wildlife & Countryside Act 1981 (as amended).....	2
2.1.3 Protection of Badgers Act 1992	3
2.1.4 Natural Environment & Rural Communities (NERC) Act 2006	3
2.2 Relevant Planning Policy	3
2.2.1 National Planning Policy	3
2.2.2 Local Planning Policy	5
3.0 Methodology	6
3.1 Scope	6
3.2 Baseline Data Collection	6
3.2.1 Desk Study	6
3.2.2 UK Habitat Survey	7
3.2.3 Fauna	7
3.3 Limitations	7
3.3.1 Desk Study	7
3.3.2 Accessibility and Survey Timing	7
3.4 Assessment Methodology	8
3.4.1 Determining Importance	8
3.4.2 Impact Assessment	9
3.4.3 Significant Effects	9
3.4.4 Avoidance, Mitigation, Compensation and Enhancement	9
4.0 Baseline Ecological Conditions	10
4.1 Statutory and Non-Statutory Designated Sites	10
4.1.1 Statutory Designated Sites	10
4.1.2 Non-Statutory Designated Sites	10
4.2 Habitats	11



4.2.1 Modified grassland (g4)	11
4.2.2 Gardens (u1d 827)	13
4.2.3 Non-native and ornamental hedgerow (h2b).....	13
4.2.4 Line of trees (w1g 33).....	14
4.2.5 Woodland and semi-natural ancient woodland (w1g)	15
4.2.6 Individual trees	16
4.3 Protected and Notable Species	17
4.3.1 Invertebrates	17
4.3.2 Bluebell	17
4.3.3 Amphibians (including Great Crested Newt)	17
4.3.4 Reptiles	17
4.3.5 Nesting Birds.....	17
4.3.6 Mammals.....	18
4.4 Summary of Important Ecological Features	20
5.0 Assessment of Effects, including Mitigation Measures and Proposed Biodiversity Enhancements.....	21
5.1 Embedded Mitigation and Good Practice Measures	21
5.2 Habitats	21
5.2.1 Ancient woodland and adjacent woodland.....	21
5.2.2 Grassland creation	22
5.2.3 Tree planting	23
5.2.4 Traditional orchard	23
5.2.5 Hedgerow planting	23
5.2.6 Scrub planting	24
5.2.7 Predicted ecological conditions	24
5.3 Species	24
5.3.1 Nesting birds	24
5.3.2 Bats.....	26
5.3.3 Badger	27
5.3.4 Hedgehog.....	28
5.4 Biodiversity Net Gain.....	29
6.0 Summary of Ecological Effects	29

Tables in Text

Table 4-1 Non-Statutory Designated Areas within 2 km of the Site	10
Table 4-2 Summary of Important Ecological Features Subject to Detailed Assessment.....	20
Table 5-1 Predicted ecological conditions of proposed habitats.....	24



Table 5-2 Bird boxes integrated into buildings, specification and mounting instructions..... 25

Table 5-3 Bat boxes integrated into buildings, specification and mounting instructions..... 27

Table 6-1 Net Impact Upon Important Ecological Features (including Site Enhancement). 30

Drawings

Drawing 1 UK Habitat Survey

Appendices

Appendix A Proposed Site Layout

Appendix B Landscape Plan

Appendix C Desk Study Data

Appendix D Biodiversity Net Gain Metric 4.0 Calculations (supplied separately)



1.0 Introduction

1.1 Background

SLR Consulting Ltd was commissioned by KCS Development Ltd. to undertake an Ecological Impact Assessment (EclA) for a residential development to be located off Roslyn Avenue, Netherton, Huddersfield, HD4 7EW (approximate central OS grid reference SE 11981 13050). This application site (hereafter referred to as the 'Site') is 3.51 ha in area and lies to the west of the village of Netherton, Kirklees.

1.2 Site Description

The Site predominantly comprises a grassland field, currently used for sheep grazing, with dry stone walls surrounding marking many of the field boundaries. A line of native trees and a non-native hedgerow are present along part of the east boundary. A semi-natural ancient woodland, forming part of Dean Wood Local Wildlife Site (LWS) borders the northern boundary, and a non-ancient woodland borders the northeastern boundary.

1.3 Details of the Proposed Development

The proposed development (refer to Appendix A) comprises 82 dwellings with associated roads, gardens, driveways, and drainage systems. It also includes a number of street trees and areas of Public Open Space (POS).

Access would be achieved via Roslyn Avenue, immediately east of the Site.

Enhancements (illustrated in Appendix B) would include:

- Planting of 709 m of new species-rich native hedgerow across the Site;
- Planting of trees across the Site, including 49 native trees and 26 non-native/ cultivar trees within shared spaces;
- Creating a vegetated buffer between the Site and Dean Wood LWS, grading from tussocky grassland to scrub;
- Creating a wildlife corridor of hedgerow, trees and tussocky grassland, along the western boundary of the Site;
- Creation of species rich grassland and meadow areas in POS area in the south of the Site;
- Creating a traditional/ community orchard;
- Integration of bird boxes into 10% of dwellings; and
- Integration of bat boxes into 10% of dwellings.

1.4 Purpose of this Report

The purpose of this report is:

- To describe the baseline data collection and assessment methodologies used;
- To summarise the baseline ecological conditions and identify any important receptors (if present);
- To set out the mitigation and compensation measures required to ensure compliance with nature conservation legislation and to address any potentially significant ecological effects (if relevant); and
- To describe proposed enhancement measures.



1.5 Evidence of Technical Competence and Experience

The field work was conducted by SLR Ecologist Mr Aaron Bailey, with the follow-up badger survey conducted by SLR Principal Ecologist Mr Gary Oliver.

Mr Bailey is a Qualifying member of the Chartered Institute of Ecology and Environmental Management (CIEEM), a competent botanist, and is experienced in protected species surveys.

Mr Oliver is a full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM) and is a Chartered Environmentalist (SocEnv), with over 27 years' relevant experience within ecological consultancy. He is a competent ornithologist and botanist, holds a Class 2 survey licence for great crested newt (also a Registered Consultant under the Low Impact GCN Class Licence), as well as a Class 2 survey licence for bats.

This report has been produced by Mr Aaron Bailey and reviewed by Mr Gary Oliver.

2.0 Relevant Legislation and Planning Policy

2.1 Relevant Legislation and Policy¹

2.1.1 Conservation of Habitats and Species Regulations 2017

The Conservation of Habitats and Species Regulations 2017 (as amended) (the Habitats Regulations) transpose Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna (Habitats Directive) into English law, making it an offence to deliberately capture, kill or disturb² wild animals listed under Schedule 2 of the Regulations. It is also an offence to damage or destroy a breeding site or resting place of such an animal (even if the animal is not present at the time). From 1st January 2021, the 2017 Regulations are one of the pieces of domestic law that transposed the land and marine aspects of the Directive. Most of the changes involved transferring functions from the European Commission to the appropriate authorities in England and Wales, all other processes or terms in the 2017 Regulations remain unchanged and existing guidance is still relevant.

2.1.2 Wildlife & Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act (CRoW) 2000 and the Natural Environment and Rural Communities Act (NERC) 2006, consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive), making it an offence to:

Intentionally kill, injure or take any wild bird or their eggs or nests (with certain exceptions) and disturb any bird species listed under Schedule 1 to the Act, or its dependent young while it is nesting;

Intentionally kill, injure or take any wild animal listed under Schedule 5 to the Act;

intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any wild animal listed under Schedule 5 to the Act;

¹ Please note that the summary of relevant legislation provided here is intended for general guidance only. The original legislation should be consulted for definitive information.

² Disturbance, as defined by the Conservation of Habitats and Species Regulations 2010, includes in particular any action which impairs the ability of animals to survive, breed, rear their young, hibernate or migrate (where relevant); or which affects significantly the local distribution or abundance of the species.



intentionally or recklessly disturb certain Schedule 5 animal species while they occupy a place used for shelter or protection;

Pick or uproot any wild plant listed under Schedule 8 of the Act; or

Plant or cause to grow in the wild any plant species listed under Schedule 9 of the Act.

2.1.3 Protection of Badgers Act 1992

Badgers are protected in England under the Protection of Badgers Act (1992)³. In summary it is an offence to intentionally or recklessly:

Kill, injure or take a badger;

Damage a sett or any part of it;

Destroy a sett;

Obstruct access to, or any entrance of, a sett;

Cause a dog to enter a sett; or

Disturb a badger when it is occupying a sett.

A sett is defined legally as any structure or place which displays signs indicating current use by a badger (Natural England, 2009⁴).

2.1.4 Natural Environment & Rural Communities (NERC) Act 2006

The NERC Act 2006 places a duty on authorities to have due regard for biodiversity and nature conservation during the course of their operations. Section 41 of the Act requires the publication of a list of habitats and species publish which are of principal importance for the purpose of conserving biodiversity. The Section 41 list is used to guide authorities in implementing their duty to have regard to the conservation of biodiversity.

2.2 Relevant Planning Policy

2.2.1 National Planning Policy

The National Planning Policy Framework (NPPF)⁵ sets out guidance for local planning authorities and decisionmakers in how to apply planning policies when drawing up plans and making decisions about planning applications. Along with Government Circular 06/053, the broad policy objectives in relation to the protection of biodiversity and geological conservation in England through the planning system are set out. Specific policies relating to habitats and biodiversity are set out in paragraphs 131, 174 and 179-182 of the NPPF.

Paragraph 131 states that:

“Trees make an important contribution to the character and quality of urban environments and can also help mitigate and adapt to climate change. Planning policies and decisions should ensure that new streets are treelined, that opportunities are taken to incorporate trees

³ <https://www.legislation.gov.uk/ukpga/1992/51/contents>

⁴ Natural England (2009) *Guidance on ‘Current Use’ in the definition of a Badger Sett*. Natural England: Peterborough.

⁵ Department for Levelling Up, Housing and Communities (2023) *National Planning Policy Framework* <https://www.gov.uk/government/publications/national-planning-policy-framework--2>



elsewhere in developments (such as parks and community orchards), that appropriate measures are in place to secure the long-term maintenance of newly planted trees, and that existing trees are retained wherever possible. Applicants and local planning authorities should work with highways officers and tree officers to ensure that the right trees are planted in the right places, and solutions are found that are compatible with highways standards and the needs of different users”

Paragraph 179 states that:

“To protect and enhance biodiversity and geodiversity, plans should:

a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and

b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.”

Paragraph 180 states that:

“When determining planning applications, local planning authorities should apply the following principles:

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.”

Paragraphs 181-182 relate to European sites (referred to as habitats sites) and state:

“The following should be given the same protection as habitats sites:

a) potential Special Protection Areas and possible Special Areas of Conservation;

b) listed or proposed Ramsar sites; and



c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.”

2.2.2 Local Planning Policy

The Kirklees Local Plan was adopted on 27 February 2019 and is used to guide planning decisions. Relevant passages are as follows:

Policy LP30: Biodiversity & Geodiversity

“The council will seek to protect and enhance the biodiversity and geodiversity of Kirklees, including the range of international, national and locally designated wildlife and geological sites, Habitats and Species of Principal Importance and the Kirklees Wildlife Habitat Network.”

Statutory Designated Sites

“Statutory designated sites, including the South Pennine Moors Special Protection Area (SPA) and Special Area for Conservation (SAC) and Sites of Special Scientific Interest, are already highly protected through existing laws and legislation. In accordance with legislation, the Council will seek to ensure that harmful impacts to these areas as a result of development proposals are avoided.

Development proposed within or outside a designated Site of Special Scientific Interest, likely to have an adverse effect on the site’s special nature conservation features, will not normally be permitted. Exceptionally development will be allowed where the benefits of the development clearly outweigh the impacts on the site’s special conservation features and measures are provided to mitigate harmful impacts.”

Local Designated Sites & Important Local Ecological Features

“Proposals having a direct or indirect adverse effect on a Local Wildlife Site or Local Geological Site, Ancient Woodland, Veteran Tree or other important tree, will not be permitted unless the benefits of the development can be clearly shown to outweigh the need to safeguard the local conservation value of the site or feature and there is no alternative means to deliver the proposal. In all cases, full compensatory measures would be required and secured in the long term.”

Habitats and Species of Principal Importance

“Proposals will be required to protect Habitats and Species of Principal Importance unless the benefits of the development clearly outweigh the importance of the biodiversity interest, in which case long term compensatory measures will need to be secured.”

Biodiversity and Development

“Development proposals will be required to: -

(i) result in no significant loss or harm to biodiversity in Kirklees through avoidance, adequate mitigation or, as a last resort, compensatory measures secured through the establishment of a legally binding agreement;



- (ii) minimise impact on biodiversity and provide net biodiversity gains through good design by incorporating biodiversity enhancements and habitat creation where opportunities exist;*
- (iii) safeguard and enhance the function and connectivity of the Kirklees Wildlife Habitat Network at a local and wider landscape-scale unless the loss of the site and its functional role within the network can be fully maintained or compensated for in the long term;*
- (iv) establish additional ecological links to the Kirklees Wildlife Habitat Network where opportunities exist; and*
- (iv) incorporate biodiversity enhancement measures to reflect the priority habitats and species identified for the relevant Kirklees Biodiversity Opportunity Zone.”*

Policy LP33: Trees

“The Council will not grant planning permission for developments which directly or indirectly threaten trees or woodlands of significant amenity.

Proposals should normally retain any valuable or important trees where they make a contribution to public amenity, the distinctiveness of a specific location or contribute to the environment, including the Wildlife Habitat Network and green infrastructure networks.

Proposals will need to comply with relevant national standards regarding the protection of trees in relation to design, demolition and construction. Where tree loss is deemed to be acceptable, developers will be required to submit a detailed mitigation scheme.”

3.0 Methodology

3.1 Scope

The scope of this EclA, i.e. the collection of baseline data, evaluation of ecological receptors, and assessment of impacts, follows guidelines set out by the Chartered Institute of Ecology and Environmental Management (CIEEM)⁶ and references therein. Ecological features considered within the impact assessment include designated sites, habitats, protected species and relevant species of principal importance for nature conservation.

3.2 Baseline Data Collection

3.2.1 Desk Study

An ecological data search was requested from the West Yorkshire Ecology Service (WYES) to obtain records of protected and otherwise notable species, and statutory and non-statutory protected sites, for the Site and land within a 2 km radius of its centre. These data were supplied on 28th February 2023 and are available in Appendix C.

An internet-based desk study was also undertaken, whereby the MAGIC website⁷ managed by Natural England was searched for statutory designated sites (such as Sites of Special Scientific Interest) for the Site and a 2 km radius; this search was undertaken on 5th March 2023.

⁶ CIEEM (2016) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal*, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester

⁷ Natural England (2023). Multi-Agency Geographic Information for the Countryside. www.magic.defra.gov.uk



3.2.2 UK Habitat Survey

An ecological walkover of the Site and surrounding areas was undertaken by SLR Consulting Ecologist Mr Aaron Bailey on 1st March 2023.

The survey was carried out on a cloudy, partially sunny, mostly dry day, with a gentle to moderate breeze and an ambient temperature of 5-7°C.

The Site was surveyed to identify the broad habitat types present in accordance with the UK Habitat Survey (UKHab v.2.01) methodology⁸.

The UK Habitat Classification (UKHab) system comprises a principal hierarchy (the Primary Habitats) which involves the identification of broad habitats and Priority habitats, as well as the use of non-hierarchical secondary codes.

Habitats were classified to Level 5 of the Primary Hierarchy where possible, and all mandatory secondary codes were used, along with optional secondary codes where relevant. The methodology was extended to include searches for features of interest, such as notable or protected species of flora and fauna, as well as habitats capable of supporting such species.

In addition, invasive non-native plant species listed in Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), such as Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*) and giant hogweed (*Heracleum mantegazzianum*) were searched for.

3.3 Limitations

3.3.1 Desk Study

Desk study data is unlikely to be exhaustive, especially in respect of species, and is intended mainly to set a context for the study. It is therefore possible that protected species not identified during the data search do in fact occur within the vicinity of the Site. Interpretation of maps and aerial photography has been conducted in good faith, using recent imagery, but it has not been possible to verify the accuracy of any statements relating to land use and habitat context outside of the field study area.

3.3.2 Accessibility and Survey Timing

The Site, and immediate surrounding area, were fully accessible, and whilst the survey was undertaken at sub-optimal time of year (early March) the range of habitats present are common and widespread, allowing a robust assessment of their ecological importance to be made. As such, no survey limitations apply.

⁸ <https://ukhab.org>



3.4 Assessment Methodology

The ecological evaluation and impact assessment approach used in this report is based on Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland (“CIEEM guidelines”)⁹.

3.4.1 Determining Importance

In accordance with the CIEEM guidelines only ecological receptors (habitats, species, ecosystems and their functions/ processes), which are considered to be important and potentially affected by the project should be subject to detailed assessment. It is not necessary to carry out detailed assessment of features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable, although these can be included in the assessment in order to demonstrate ecological enhancements, for example.

Ecological features are considered within a defined geographical context. For this project the following geographic frame of reference is used:

- International;
- National (i.e. UK);
- Regional (i.e. Yorkshire and the Humber);
- County (i.e. West Yorkshire); and
- Local (i.e. 2 km).

For designated sites, importance should reflect the geographical context of the designation. For example, a Site of Special Scientific Interest would normally be considered nationally important.

In accordance with CIEEM guidelines the value of habitats has been measured against published selection criteria where available. Examples of relevant criteria include Annex 1 of the Habitats Directive, descriptions of priority habitats¹⁰, e.g. those included in Section 41 of NERC Act 2006, local Wildlife Site Criteria, and Habitat Action Plans (HAPs) contained within the Local Biodiversity Action Plan.

In assigning a level of value to a species, it is necessary to consider its distribution and status. Reference has therefore been made to published lists and criteria where available. Examples of relevant lists and criteria include: species of European conservation importance (as listed on Annexes II, IV and V of the Habitats Directive), and UK priority species, e.g. Section 41 species and Birds of Conservation Concern¹¹.

For the purposes of this assessment, ecological features of Local importance or greater and/or subject to legal protection have been subject to detailed assessment. Effects on other ecological features are considered unlikely to be significant in legal or policy terms.

⁹ Chartered Institute of Ecology and Environmental Management (CIEEM) (2019) Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland version 1.1. <https://cieem.net/wp-content/uploads/2018/08/ECIA-Guidelines-2018-Terrestrial-Freshwater-Coastal-and-Marine-V1.1Update.pdf>

¹⁰ i.e. Priority habitats and species as listed in the UK and devolved administrations, as listed: <http://jncc.defra.gov.uk/page-5705>

¹¹ Stanbury, A.J., Eaton, M.A., Aebischer, N.J., Balmer, D., Brown, A.F., Douse, A., Lindley, P., McCulloch, N., Noble, D.G. & Win, I. (2021) *Birds of Conservation Concern 5: the population status of birds in the UK, Channel Islands and Isle of Man*. British Birds, 114.



3.4.2 Impact Assessment

The impact assessment process involves the following steps:

- 1 Identifying and characterising impacts;
- 2 Incorporating measures to avoid and mitigate (reduce) these impacts;
- 3 Assessing the significance of any residual effects after mitigation;
- 4 Identifying appropriate compensation measures to offset significant residual effects (if required); and
- 5 Identifying opportunities for ecological enhancement.

When describing impacts, consideration has been given to the following, as appropriate:

- Positive or negative;
- Extent;
- Magnitude;
- Duration;
- Timing;
- Frequency; and
- Reversibility.

Both direct and indirect impacts. Direct ecological impacts are changes that are directly attributable to a defined action, e.g. the physical loss of habitat occupied by a species during the construction process. Indirect ecological impacts are attributable to an action, but which affect ecological resources through effects on an intermediary ecosystem, process or feature, e.g. the creation of roads which cause hydrological changes, which, in the absence of mitigation, could lead to the drying out of wet grassland.

For the purposes of this assessment, in accordance with CIEEM guidelines, a 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features or receptors'.

3.4.3 Significant Effects

The concept of ecological significance is addressed in paragraphs 5.24 through to 5.28 of CIEEM guidelines. Significance is a concept related to the weight that should be attached to effects when decisions are made. For the purpose of EclA, a 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. Conservation objectives may be specific (e.g. for a designated site) or broad (e.g. national/local nature conservation policy) or more wide-ranging (enhancement of biodiversity). Effects can be considered significant at a wide range of scales from international to local and the scale of significance of an effect may or may not be the same as the geographic context in which the feature is considered important.

3.4.4 Avoidance, Mitigation, Compensation and Enhancement

A sequential process has been adopted to avoid, mitigate and compensate for ecological impacts. This is often referred to as the 'mitigation hierarchy' (i.e. avoid, mitigate, compensate, enhance).



It is important for the EclA to clearly differentiate between avoidance, mitigation, compensation and enhancement and these terms are defined here as follows:

Avoidance is used where an impact has been avoided e.g. through changes in scheme design;

Mitigation refers to measures which reduce or remedy a specific negative impact *in situ*;

Compensation describes measures taken to offset residual effects, i.e. where mitigation *in situ* is not possible; and

Enhancement is the provision of new benefits for biodiversity that are additional to those provided as part of mitigation or compensation measures, although they can be complementary.

4.0 Baseline Ecological Conditions

4.1 Statutory and Non-Statutory Designated Sites

4.1.1 Statutory Designated Sites

The Site itself does not contain any statutory designated sites and does not lie within 2 km of any such sites; statutory sites have therefore been excluded from further assessment.

4.1.2 Non-Statutory Designated Sites

The Site itself does not contain any non-statutory designated sites, however seven such sites lie, at least partially, within a 2 km radius of the Site. All seven sites are Local Wildlife Sites (LWS). Details for these sites and the reason for their designations are listed in Table 4-1 below.

Dean Wood LWS borders a small part of the northern boundary of the Site and will therefore be discussed further.

The remaining LWS sites are considered to lie sufficiently far from the Site to not be directly or indirectly impacted by the proposals, as such, non-statutory designated sites have been excluded from further assessment.

In addition to the LWS sites, Kirklees Wildlife Habitat Network borders the Site on the north and northeast boundaries, and is present on the south side of the B6108 road, to the south of the Site (refer to Appendix C, Figure 1).

Table 4-1 Non-Statutory Designated Areas within 2 km of the Site

Grid Ref.	Site Name and Status	Reason for Designation	Distance from Site ¹²
SE119133	Dean Wood, LWS	Semi-natural ancient woodland	Directly adjacent to north
SE123138	Delves Wood, LWS	Semi-natural ancient woodland	0.57 km northeast
SE132124	Spring Wood Honley, LWS	Replanted semi-natural ancient woodland	0.68 km southeast
SE115113	Honley Wood, LWS	Semi-natural ancient woodland	0.75 km south

¹² At closest point to Site boundary, measured 'as the crow flies'.



Grid Ref.	Site Name and Status	Reason for Designation	Distance from Site ¹²
SE112123	Bank Wood, LWS	Semi-natural ancient woodland	0.76 km southwest
SE112119	Hall Heys Wood, LWS	Semi-natural ancient woodland	1.10 km southwest
SE138132	Park Wood, LWS	Replanted semi-natural ancient woodland	1.65 km east

4.2 Habitats

The 'UKHab' habitats present on the Site are illustrated in Drawing 1 and described below.

4.2.1 Modified grassland (g4)

A 3.41 ha area of grassland, which accounts for the majority of the Site area. The main body of the grassland is grazed by sheep, which are contained by an electric fence (Plate 1). A narrow border is present around the outer edges of the field, which cannot be reached by the sheep due to the electric fence (Plate 2) and there is a small area of grass with scattered trees and bracken at the northern part of the Site.

Ecological Condition: Poor (fails criteria A, B)

Main body of grassland

The main body of the field (Plate 1) is species poor, comprising a dominance of perennial ryegrass (*Lolium perenne*); with lesser amounts of cock's-foot grass (*Dactylus glomerata*) and lesser swine-cress (*Lepidium didymium*).

Field margin

The outer edges of the field (Plate 2) are used as a footpath and comprised a richer number of species, including 'garden escapees' in areas adjacent to gardens, however the species richness per m² remained low.

Grass species here comprised perennial ryegrass and cock's-foot.

Forbs comprised field speedwell (*Veronica persica*), common dandelion (*Taraxacum officinale*), cock's-foot, cleavers (*Galium aparine*), nettle (*Urtica dioica*), daffodil (*Narcissus pseudonarcissus*), green alkanet (*Pentaglottis sempervirens*), cow parsley (*Anthriscus sylvestris*), great willowherb (*Epilobium hirsutum*), common chickweed (*Stellaria media*), creeping buttercup (*Ranunculus repens*), common broom (*Cytisus scoparius*), ivy (*Hedera helix*), broad-leaved dock (*Rumex obtusifolius*), foxglove (*Digitalis purpurea*), snowdrop (*Galanthus nivalis*), common knapweed (*Centaurea nigra*), spear thistle (*Cirsium vulgare*), bramble (*Rubus fruticosus* agg.), and bracken (*Pteridium aquilinum*).

Small area to the north

A small area close to the northern boundary of the Site supported scattered trees and scattered bracken (Plate 3).

Species present included cock's-foot, broad-leaved dock, bracken, cleavers, nettle and bramble. Tree species comprised silver birch (*Betula pendula*), pedunculate oak (*Quercus robur*) and holly (*Ilex aquifolium*).





Plate 1 Main body of modified grassland



Plate 2 Margin around outside of field. Photograph taken from eastern boundary, facing north.





Plate 3 Small area to the north. Photograph facing west.

4.2.2 Gardens (u1d 827)

The Site boundary incorporates a small 0.02 ha area of residential gardens on the eastern boundary (Plate 4). These gardens are a mosaic of developed and natural surface with areas of bare ground and vegetation.

Ecological Condition: Not applicable for this habitat type

4.2.3 Non-native and ornamental hedgerow (h2b)

A 52 m long non-native hedgerow with less than 20% cover of native species was present on the east boundary (Plate 5). Species comprised a dominance of Lawsons cypress (*Chamaecyparis lawsoniana*); with sycamore (*Acer pseudoplatanus*) and beech (*Fagus sylvatica*) also present.

Ecological Condition: Not applicable for this habitat type





Plate 4 Garden. Photograph taken from Roslyn Avenue, facing southwest.



Plate 5 Non-native hedgerow on east boundary

4.2.4 Line of trees (w1g 33)

A 47 m long line of early mature trees was present on the northeastern boundary. Species comprised an abundance of alder (*Alnus glutinosa*); frequent silver birch and pedunculate oak; and occasional sycamore and lime (*Tilia sp.*).

Ecological Condition: Moderate (fails criteria C, D)



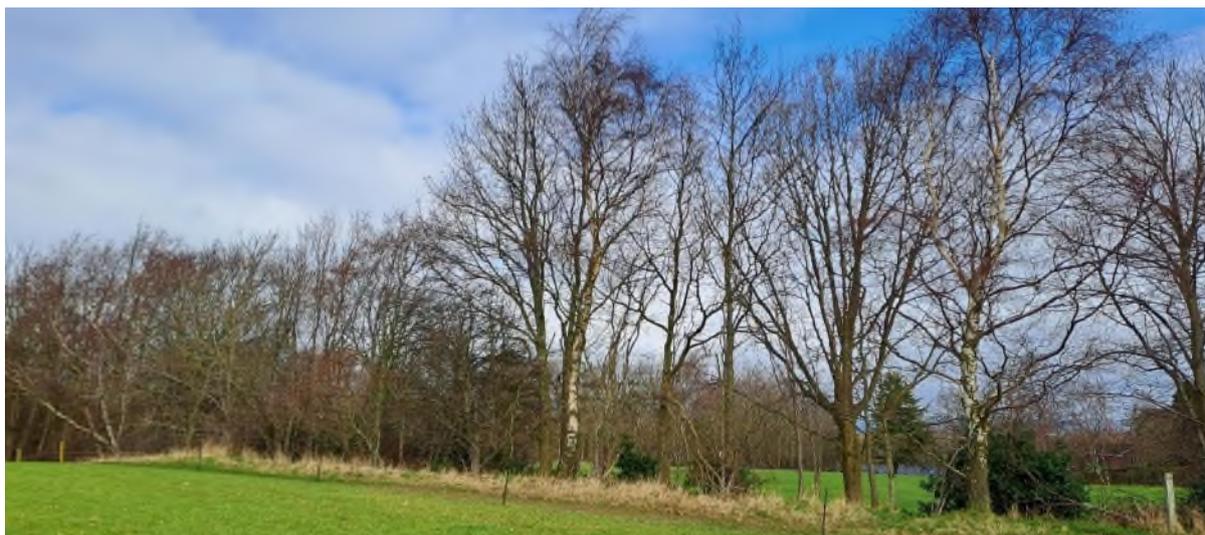


Plate 6 Line of trees on north-eastern boundary. Photograph facing northeast.

4.2.5 Woodland and semi-natural ancient woodland (w1g)

A 0.06 ha area of woodland overhangs the northern Site boundary (Plate 7), including trees overhang from Dean Wood LWS, along the western part of the northern boundary. The remainder of woodland bordering the eastern part of the northern boundary is not ancient woodland and is not within the LWS (refer to Figure 1 in Appendix C).

Species along the woodland edges comprised pedunculate oak, silver birch, alder, hazel (*Corylus avellana*), elder (*Sambucus nigra*) and holly.

Ecological Condition: Moderate (score: 29)



Plate 7 Semi-natural ancient woodland overhanging the western part of the northern boundary. Photograph taken from northwest corner, facing east-northeast.



4.2.6 Individual trees

A single cherry tree (*Prunus* sp.) was located on the southern boundary (Plate 8).

A multi-stemmed group of cherry trees (*Prunus* sp.) was located on the western boundary (Plate 9). The centre and most mature of these trees has been pruned to protect the utility lines above.

Ecological Condition: Moderate (fails C, D, E).



Plate 8 Prunus tree on the south boundary



Plate 9 Group of cherry trees on the west boundary



4.3 Protected and Notable Species

4.3.1 Invertebrates

The Site itself does not provide habitat of any significance to support populations of rare or scarce invertebrate species.

WYES data contained one record of cinnabar moth (*Tyria jacobaeae*), 1.3 km from the Site in 1999. This species is included in the West Yorkshire and UK Biodiversity Action Plan.

Overall, the Site is assessed as having less than Local importance for invertebrates, and this group has therefore been excluded from further assessment.

4.3.2 Bluebell

Bluebell (*Hyacinthoides non-scripta*) is a protected species on Schedule 8 of the Wildlife and Countryside Act 1981 (as amended) and is included within the Kirklees Biodiversity Action Plan. West Yorkshire Ecology Service (WYES) data showed the closest record was 105 m from the Site, within Dean Wood LWS. The most recent record was in 2015.

No records of bluebell are noted from within the Site area, none were found during the ecological walkover, and the Site has little potential to support this species, therefore bluebell has been omitted from further assessment.

4.3.4 Reptiles

The most recent records of reptiles were of common lizard (*Lacerta vivipara*) and Grass Snake (*Natrix natrix*) in 1914 and at a distance of *circa* 1.3 km from the Site.

The Site, mostly comprising a short, grazed modified grassland field, and lacking in field margins, has little potential to support reptiles. As a result, the Site has been assessed as having less than Local importance for reptiles and this group has been excluded from further assessment.

4.3.5 Nesting Birds

Several bird species were recorded during the Site visit, namely: carrion crow (*Corvus corone*), magpie (*Pica pica*), jackdaw (*Corvus monedula*), jay (*Garrulus glandarius*), rook (*Corvus frugilegus*), black-headed gull (*Chroicocephalus ridibundus*), goldfinch (*Carduelis carduelis*), great tit (*Parus major*), blue tit (*Cyanistes caeruleus*), robin (*Erithacus rubecula*), starling (*Sturnus vulgaris*), blackbird (*Turdus merula*), song thrush (*Turdus philomelos*), and greater-spotted woodpecker (*Dendrocopos major*).

Although trees and hedgerows may provide nesting habitat for some common bird species, the Site was unsuitable for ground-nesting bird species due to the short, heavily grazed nature of the modified grassland dominating the Site.



Species listed in the Kirklees Biodiversity Action Plan (2007) were also returned within the desk study data, namely skylark (*Alauda arvensis*), tree pipit (*Anthus trivialis*), dunlin (*Calidris alpina*), linnets (*Carduelis cannabina*), goldfinch, twite (*Carduelis flavirostris*), stock dove (*Columba oenas*), reed bunting (*Emberiza schoeniclus*), kestrel (*Falco tinnunculus*), snipe (*Gallinago gallinago*), swallow (*Hirundo rustica*), grasshopper warbler (*Locustella naevia*), corn bunting (*Miliaria calandra*), spotted flycatcher (*Muscicapa striata*), willow tit (*Parus montanus*), house sparrow (*Passer domesticus*), tree sparrow (*Passer montanus*), grey partridge (*Perdix perdix*), wood warbler (*Phylloscopus sibilatrix*), golden plover (*Pluvialis apricaria*), dunnoek (*Prunella modularis*), bullfinch (*Pyrrhula pyrrhula*), woodcock (*Scolopax rusticola*), starling, song thrush, barn owl, and lapwing (*Vanellus vanellus*).

The majority of records do not relate to the Site itself or adjacent habitat. Though, a small number of records do relate to adjacent habitats, which would remain unaffected by the proposals.

Overall, the Site is assessed as having less than Local importance for nesting and wintering birds, though given their legal protection nesting birds have been subject to further assessment.

4.3.6 Mammals

4.3.6.1 Bats

The WYES provided several records relating to bats within a 2 km radius of the Site, namely myotis bat species (*Myotis sp.*), Daubenton's bat (*Myotis daubentonii*), whiskered bat (*Myotis mystacinus*), Leisler's bat (*Nyctalus leisleri*), noctule (*Nyctalus noctula*), pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), and brown long-eared bat (*Plecotus auritus*).

None of these records appear to relate to the Site itself, or land within its immediate environment.

A single elder tree along the northern boundary of the Site was assessed as having Moderate potential to support roosting bats, with potential roosting features (PRFs) including rot holes (Plate 10). It should be noted that this tree would be retained and would be set within an ecological enhancement area.

The woodland edge on the north boundary, and the line of trees and hedgerow on the west boundary, provide potential habitat for foraging and commuting bats. Conversely, the 'core' of the Site, consisting of modified grassland, is only likely to support low levels of bat activity.

Overall, the Site is assessed as having Local importance for bats.

With the above considered, the potential impact of the scheme upon roosting and foraging bats has been discussed further.





Plate 10 Elder tree on north boundary with Moderate bat roosting potential, which shall be retained.

4.3.6.3 Hedgehog

The WYES provided no data for hedgehog (*Erinaceus europaeus*). However, this species has the potential to use the area and is included in the Kirklees BAP and the UK BAP.

Overall, the Site is assessed as having Local importance for hedgehog. Therefore, hedgehog has been included for further discussion.

4.3.6.4 Other Mammals

No other mammals were recorded during the survey. There are no watercourses present, and therefore no suitable habitat for otter (*Lutra lutra*) or water vole (*Arvicola amphibius*).

The WYES data included six records of brown hare (*Lepus europaeus*) between 1992 and 1999, although these records are over 0.69 km from the Site, and one record from 2012, which was 1.6 km from the Site.



The Site has less than Local importance for these mammal species, and therefore they have been omitted from further assessment.

4.4 Summary of Important Ecological Features

Ecological receptors assessed as having Local importance or greater, as well as notable or legally protected species and/ or habitats, which could potentially be affected by an unmitigated scheme are summarised in Table 4-1.

Where a receptor has been omitted from detailed assessment (due to no potential impacts arising or it having less than Local ecological importance), a rationale has been provided earlier within this report.

Table 4-2 Summary of Important Ecological Features Subject to Detailed Assessment

Important Ecological Receptor	Scale at which Feature is Important	Comments on Legal Status and/ or Importance
Nesting birds	Less than Local	Whilst the Site has potential to support a limited number of passerine species within the boundary trees and non-native hedgerows, overall, it does not have scope to support a nesting bird assemblage of importance. However, native birds, and the nests, eggs and young of native birds, are protected against killing and injury/ damage and destruction under the Wildlife and Countryside Act 1981 (as amended).
Bats	Local	European and UK protected species (Habitats Directive and Wildlife and Countryside Act 1981 (as amended)). Some species are NERC Act 2006 Section 41 species of principal importance. A single elder tree on the northern Site boundary has Moderate bat roosting potential. Boundary woodland edge and trees have potential to provide foraging and commuting habitat for bats.
Hedgehog	Local	No records in the area, however, hedgehog is a Species of Principal Importance withing the Kirklees BAP and UK BAP.



5.0 Assessment of Effects, including Mitigation Measures and Proposed Biodiversity Enhancements

5.1 Embedded Mitigation and Good Practice Measures

The following 'embedded mitigation' has been incorporated to avoid or minimise negative ecological effects:

Subject to agreement with Kirklees Council, a sensitive lighting approach would be applied to current and proposed habitats of importance to nocturnal wildlife, including bats and invertebrates (refer to section 5.3.2).

Good practice environmental and pollution control measures will be employed during construction, including dust suppression and measures to minimise any contamination of surface and groundwater from accidental spillages, silt laden runoff, etc), with regard to current best practice guidance such as, but not limited to, CIRIA C53213 and CIRIA C74114.

The following precautionary best practice measures would also be adopted during construction works:

Trenches or excavations should, if possible, be back-filled the same day. If this is not feasible, any trenches/ excavations left open overnight would be provided with a sloping end or ramp to provide a means of escape for any fauna that may fall in;

Open pipes over 120 mm in diameter would be capped off at night to prevent fauna such as hedgehog from entering; and

Works will comply with guidelines of British Standard BS 5837 to ensure adequate protection of retained trees during construction.

Further details of good practice measures to be implemented during construction would be provided in a Construction Environmental Management Plan (CEMP), to be secured via an appropriately worded planning condition.

5.2 Habitats

5.2.1 Ancient woodland and adjacent woodland

A 20 m buffer has been incorporated in the proposed layout, between the development and the outer edge of the canopy of Dean Wood LWS ancient woodland, which lies immediately beyond the western part of the northern Site boundary, in order to safeguard the protected area. This exceeds the 15 m minimum stated by Natural England¹⁵. As an agricultural field, this area has previously been subject to ploughing up to the treeline. The proposed buffer would incorporate a vegetative gradient of tussocky grassland, species-rich hedgerow, and native mixed scrub, as well as four native trees. This area will receive low intensity management to benefit wildlife.

¹³ CIRIA (2001) C532 Control of water pollution from construction sites: guidance for consultants and contractors. Available at: <https://www.ciria.org/ProductExcerpts/C532.aspx>

¹⁴ CIRIA (2015) C741 Environmental good practice on site guide. Fourth edition. Available at: <https://www.ciria.org/ItemDetail?iProductCode=C741andCategory=BOOKandWebsiteKey=3f18c87a-d62b-4eca-8ef4-9b09309c1c91>

¹⁵ <https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions>



A narrow part of a low-traffic, cul-de-sac access road falls within the 20 m buffer zone but not within 15 m of the ancient woodland or its root protection areas, as detailed in the Arboricultural Impact Assessment (AIA)¹⁶.

The remaining woodland adjacent to the northern and northeastern boundaries, which does not count as ancient woodland and does not form part of the LWS, is subject to a 15 m buffer in order to safeguard its trees. Part of this buffer zone would comprise back gardens but no dwellings. Dwellings and shared surfaces would not lie within proximity of any root protection areas, as detailed within the AIA. The remaining area of this buffer zone would comprise tussocky grassland and several native trees. An existing footpath, which links the Site with this woodland, would be retained, ensuring that any increased footfall is channelled along existing routes.

5.2.2 Grassland creation

Grassland buffers along the western boundary, as well as the ancient woodland buffer in the north of the Site will have a combined area of 0.248 ha. These will consist of tussocky grassland, sown with an appropriate wildflower mix, such as Emorsgate EM10¹⁷, or similar, to provide an enhanced habitat and greater species diversity.

Once the tussocky grassland is established, it would be allowed to grow tall and rough, and be cut in accordance with supplier instructions; once every 2-3 years between October and February, cutting on a rotational basis with no more than half of the area being cut in any single year in order to leave the remaining area as a wildlife refuge. This will encourage wildflowers and create habitat for small mammals, invertebrates and foraging birds.

The POS area to the south of the Site will be sown with grassland mixes as appropriate for the land use, as detailed below:

Within the open children's play space with amenity area (0.196 ha) - Emorsgate EG22¹⁸ strong lawn mixture;

Within the orchard (0.067 ha) and as part of 'green streets' on roadsides (0.049 ha) - Emorsgate EL1¹⁹ flowering lawn mixture; and

In the remaining area of the POS (0.217 ha) - Emorsgate EM3²⁰ special general purpose meadow mixture.

The traditional orchard grassland is discussed separately, in section 5.2.4. It should be noted that the 0.067 ha of EL1 described above has not been 'double counted' in BNG terms, but accounted for as part of the orchard area.

Once the grasslands have established, they would be cut in accordance with supplier instructions and managed appropriately to encourage biodiversity, for example, by having mown paths and recreation areas but also leaving areas of tall sward.

The flowering lawn mixture (Emorsgate EL1) can be mown relatively short like a conventional lawn for much of the year, though it should be left uncut for 4-8 weeks from late June, to facilitate flowering and setting of seed.

¹⁶ SLR Consulting (2023) Arboricultural Impact Assessment: Land off Roslyn Avenue, Netherton

¹⁷ [EM10 Tussock Meadow Mixture - Emorsgate Seeds \(wildseed.co.uk\)](https://www.wildseed.co.uk/emorsgate-em10-tussock-meadow-mixture)

¹⁸ [Strong Lawn Grass Mixture EG22 - Emorsgate Seeds \(wildseed.co.uk\)](https://www.wildseed.co.uk/emorsgate-eg22-strong-lawn-grass-mixture)

¹⁹ [EL1 Flowering Lawn Mixture - Emorsgate Seeds \(wildseed.co.uk\)](https://www.wildseed.co.uk/emorsgate-el1-flowering-lawn-mixture)

²⁰ [EM3 Special General Purpose Meadow Mixture - Emorsgate Seeds \(wildseed.co.uk\)](https://www.wildseed.co.uk/emorsgate-em3-special-general-purpose-meadow-mixture)



5.2.3 Tree planting

The existing trees on Site would be retained, including the elder tree on the northern Site boundary, which has Moderate bat roosting potential. The group of cherry trees on the west boundary would have minor pruning on the east side to reduce lateral growth and provide clearance from the proposed road.

A total of 60 native trees, comprising seven native species, would be planted, of which 49 would be within shared spaces and POS, and 11 within private areas.

An additional 84 ornamental and cultivar trees would be planted, of which 26 would be within shared spaces and POS, 21 would be in private front gardens, and 37 would be dwarf fruit trees in rear private gardens.

Five native trees within shared spaces, are predicted to reach medium size due to being planted as heavy standards and within favourable growing conditions.

In addition to the above noted trees, planting for the traditional orchard are discussed separately, in section 5.2.4. It should be noted that these trees have not been 'double counted' in BNG terms, but accounted for as the orchard area.

5.2.4 Traditional orchard

The traditional orchard would be planted with 10 native fruit trees, which exceeds the minimum number (5 trees) required to form a traditional orchard²¹. The orchard would cover a 0.067 ha area, with a range of cultivars historically grown in the region. These trees would be subject to formative pruning to maintain tree longevity. Once mature, the crowns of the trees shall be no more than 20 m apart, which is a requirement of the traditional orchard habitat type²⁰.

As stated in Section 5.2.2, grassland in this area would consist of a species-rich wildflower grassland, sown with appropriate wildflower mix, such as Emorsgate EL1 – flowering Lawn mixture. The grassland would be managed to have a varied sward structure, including areas of short grass and taller vegetation with seeds heads (at least 20% of each). Short areas could include a footpath, mown frequently to allow access. The grassland would be left uncut for 8 weeks from late June, to facilitate flowering and setting of seed. Arisings from mowing would be left in place for 1-7 days to shed seed before being removed and not left in-situ, to prevent soil nutrient build up. Areas of rough grass in corners, windbreaks and along hedges would be left unmown in rotation, to provide wildlife habitat whilst also preventing scrub succession.

5.2.5 Hedgerow planting

The existing hedgerow on Site would be retained.

A total of 709 m of new species-rich native hedgerow, comprising eight species, would be planted across the development, including approximately 300 m of hedgerow along the west boundary. Hedgerow would also form part of the vegetative buffer for Dean Wood LWS.

Once the hedgerows have established, the hedgerows which make up the Site boundary would be maintained at a height of 3-4 m and width of greater than 1.5 m. Other hedgerows within the Site would be maintained at 1.5 m or more in height and width. The hedgerows would be pruned in February, alternating on a two or three-year rotation. Only one side of a hedgerow cross-section would be pruned in any one year, in order to maintain suitable habitat for wildlife.

²¹ Natural England (2011) Traditional Orchard Project in England



5.2.6 Scrub planting

A 0.043 ha area of native mixed scrub would be planted along the northern boundary where Dean Wood LWS overhangs the Site, forming part of the vegetative buffer. Species composition would complement the vegetation structure of the woodland. Scrub species matching woodland species would include hazel, holly, and elder; with the addition of common dogwood (*Cornus sanguinea*) and field rose (*Rosa arvensis*).

5.2.7 Predicted ecological conditions

The predicted ecological condition of each of the habitats to be created, in relation to Biodiversity Net Gain Metric 4.0, are detailed in Table 5-1.

Table 5-1 Predicted ecological conditions of proposed habitats

Feature	Habitat Type	Extent	Expected Condition	Failing criteria
Scrub planting	Mixed scrub	0.043 ha	Fairly Poor	B, E Partially fails criterion D as only part of the scrub (east end) would pass this criterion. Hence why condition of 'Fairly Poor' has been used instead of Poor or Moderate
Tussocky grassland (Emorsgate EL10)	Other neutral grassland	0.248 ha	Moderate	F
Childrens play space and amenity area (Emorsgate EG22)	Modified grassland	0.196 ha	Poor	A, B, D
POS (Emorsgate EM3)	Other neutral grassland	0.217 ha	Moderate	B, F
Traditional orchard	Traditional orchards	0.067 ha	Moderate	A, B, F
Non-native trees in public spaces	Urban tree	0.106 ha	Moderate	A, C, E
Native trees in public spaces	Urban tree	0.362 ha	Moderate	C, E
Green Streets (Emorsgate EL1)	Modified grassland	0.049 ha	Moderate	B, D
Hedgerow, within the Site	Species-rich native hedgerow	0.300 km	Good	A2, C1
Hedgerow, west boundary	Species-rich native hedgerow	0.409 km	Good	C2

5.3 Species

5.3.1 Nesting birds

A significant amount of nut and berry rich native hedgerow, scrub and tree planting is proposed across the Site, in particular along the western, southern and northern boundaries, and within the POS area in the south.



Furthermore, 10% of dwellings would contain an integrated bird nesting feature, comprising house sparrow terraces and starling boxes (see Table 5-2 for specification). Both house sparrow and starling were recorded using the Site, are noted within the Kirklees BAP and are Red Listed bird species.

Together, these enhancements will improve the nesting and foraging opportunities available for a range of bird species within the Site.

Wherever practical, removal of vegetation suitable for nesting birds (pruning of the line of trees) would take place outside of the main nesting bird season, which extends between March and August inclusive. If works are required within this period, they would be preceded by a search for active bird nests by a suitably qualified ecologist; if active nests are found, the nest itself and a suitable 'Biodiversity Protection Zone' buffer (to be determined by the Ecological Clerk of Works (ECoW)) would be safeguarded until the young have fledged or the nesting attempt is otherwise complete.

This will ensure that relevant wildlife legislation is complied with, and the overall net impact upon nesting birds would be positive.

Table 5-2 Bird boxes integrated into buildings, specification and mounting instructions

Type	Specification
Bird boxes integrated into buildings	
<p>Starling Box - Smooth Brick</p> <p>(or similar)</p>	<div data-bbox="718 996 1069 1366" data-label="Image"> </div> <p data-bbox="526 1388 1276 1422">Available from https://www.nhbs.com/starling-box-smooth-brick</p>
	<p>Further information and installation instructions:</p> <p>This starling box model is available in various colour variations: red brick, buff brick, blue brick, and custom brick facing, which allow integration with the colouring of the building brickwork;</p> <p>The boxes should be built into the fabric of the walls as close to the eaves as possible, facing east, northeast or southeast (away from prevailing winds);</p> <p>The boxes should be installed with the entrance hole at the top, as pictured; and</p> <p>The boxes should be erected with a clear flight path below, at a minimum height of 3-4m.</p>



Type	Specification	
<p>Vivara Pro Woodstone House Sparrow Nest Box, Double Chambered</p> <p>or</p> <p>Schwegler 1sp Sparrow Terrace</p> <p>(or Similar)</p>	 <p>Available from https://www.nhbs.com/vivara-pro-woodstone-house-sparrow-nest-box</p>	 <p>Available from https://www.nhbs.com/1sp-schwegler-sparrow-terrace</p>
<p>Further information and installation instructions:</p> <p>The boxes are available in three colour variations: cream (Vivara Pro), brown brick (Schwegler) and stone (Schwegler), which allow integration with the colouring of the building brickwork;</p> <p>The boxes should be built into the fabric of the walls as close to the eaves as possible, facing east, northeast or southeast (away from prevailing winds);</p> <p>The boxes should be installed with the entrance slots at the top, as pictured; and</p> <p>The boxes should be erected with a clear flight path below, at a minimum height of 1.5 m.</p>		

5.3.2 Bats

A wildlife corridor would be created along the western Site boundary. This would comprise a native species rich hedgerow with trees, within a tussocky grassland buffer, which is likely to serve as a new and locally significant bat commuting corridor/ flight line. This corridor would help to bridge the gap between the existing woodland to the north of the Site, and suitable habitat in the south and southwest of the Site, including areas of the Kirklees Wildlife Habitat Network located to the north and south of the Site.

Subject to agreement with Kirklees Council, the new wildlife corridor along the west boundary, as well as the woodland edge in the north of the Site, would be subject to no lighting or minimal lighting, through the application of a sensitive lighting approach. The ancient woodland boundary would have no lighting. Lighting near the wildlife corridor would be restricted to highly directional LED lights, which have minimal light spill onto adjacent habitats, to allow nocturnal wildlife to benefit from these habitat corridors. Furthermore, 'blue light' should be excluded from lighting across the development, for example by using light filters, to reduce negative impacts on bats and nocturnal insects such as moths.

Furthermore, 10% of dwellings would contain an integrated bat box, to provide roosting opportunities for bats. Refer to Table 5-3 for bat box specification.

Together, these enhancements will increase roosting and foraging opportunities for bats and facilitate habitat corridors and steppingstones between areas of good-quality habitat, both existing outside of the Site and proposed within the Site.



The elder tree with Moderate bat roosting potential on the north boundary is not due to be impacted. This tree will be retained, and the surrounding area will be enhanced with the planting of scrub and hedgerow.

The overall net impact upon bats would be positive.

Table 5-3 Bat boxes integrated into buildings, specification and mounting instructions

Type	Specification
<p>Ibstock Enclosed Bat Box C</p> <p>(or similar)</p>	<div data-bbox="683 539 1121 994" data-label="Image"> </div> <p data-bbox="544 1016 1262 1046">Available from: https://www.nhbs.com/ibstock-enclosed-bat-box-c</p> <p data-bbox="413 1064 1035 1093">Further information and installation instructions:</p> <p data-bbox="461 1106 1302 1193">The bat box model is available in two colour variations, smooth red and smooth cream which allow integration with the colouring of the building brickwork;</p> <p data-bbox="461 1207 1382 1267">Boxes should be integrated into building brickwork at a height of at least three metres and not directly above any doors or windows;</p> <p data-bbox="461 1281 1345 1341">Bat boxes should be installed upright with the entrance slot at the base (as pictured above), and facing south, southeast or southwest;</p> <p data-bbox="461 1355 1377 1415">The box is designed to only be attractive to bat species and is designed to be maintenance free.</p> <p data-bbox="461 1429 1198 1458">This box is designed for pipistrelle bats (<i>Pipistrellus spp.</i>); and</p> <p data-bbox="461 1471 1370 1559">The interior contains several roosting zones, offering different conditions, allowing bats to alter their position in accordance with the weather conditions prevalent at the time.</p>



5.3.4 Hedgehog

Hedgehog highways would be created in all proposed garden fences, comprising minimum 15 cm x 15 cm gaps at the base of fencing, to allow hedgehogs unimpeded access across the Site and between gardens. The access gaps would be appropriately labelled with signs on both sides, to deter householders from blocking the purpose made gaps. An example of a hedgehog highway gap with appropriate labelling is shown in Plate 11 below. Hedgehog highway signs can be purchased from a number of manufacturers, such as The British Hedgehog Preservation Society²².

The presence of a greater variety of habitats, including accessible vegetated gardens and an orchard, are likely to provide suitable foraging opportunities for hedgehogs across the Site.

The overall net impact upon hedgehog would be 'no net change'.

²² <https://shop.britishhedgehogs.org.uk/product/hedgehog-highway-sign/>





Plate 11 Example hedgehog highway fence gap with sign

5.4 Biodiversity Net Gain

The Statutory Biodiversity Metric²³ was used to calculate the existing baseline score for the Site and the post-development score of the scheme, considering the relevant biodiversity enhancements proposed.

The full results are provided in Appendix D (supplied separately). In summary, the Site was assessed as having a baseline value of 7.62 habitat area units, and 0.24 hedgerow units.

Post-development, and taking into account all of the biodiversity enhancements described within the report and summarised in the Landscape Plan (Appendix B), the Site is predicted to have a value of 8.67 habitat units, and 6.10 hedgerow units. This equates to a 13.81% net increase in habitat units and a 2,539.77% net increase in hedgerow units.

This indicates a positive net increase in local biodiversity, particularly relating to hedgerow habitat.

A management company for the new development would be created to implement and manage the biodiversity net gain habitat enhancements on this Site. If required, a Biodiversity Management Plan would be created as a condition of consent.

6.0 Summary of Ecological Effects

The overall net impact of the scheme upon receptors of ecological importance is illustrated in Table 6-1 below, along with the proposed biodiversity enhancements, and the precautions that will be taken to ensure legal compliance with respect to legally protected species.

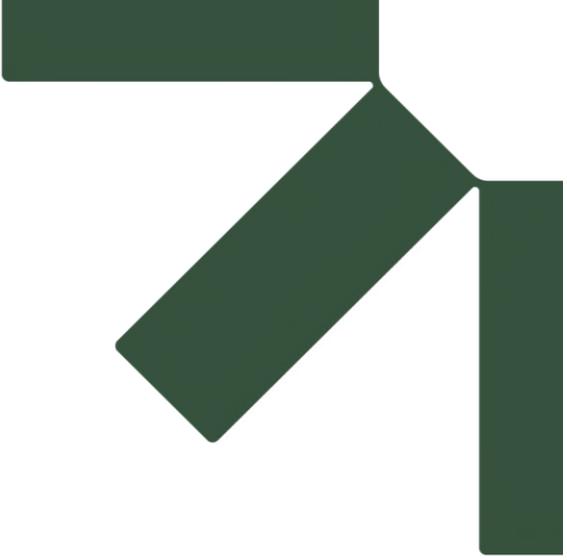
²³ DEFRA (2024) The Statutory Biodiversity Metric. <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>



Table 6-1 Net Impact Upon Important Ecological Features (including Site Enhancement)

Important Ecological Receptor	Scale at which Feature is Important	Overall Net Impact
Nesting birds	Less than Local	<p>Avoiding killing or injuring birds/ damaging or destroying their nests, by clearing the Site outside of the main bird breeding season (i.e. September to February), or immediately following a search by an ecologist.</p> <p>Planting of hedgerows and trees, the creation of a rough grassland, meadow grassland and orchard, and incorporation of integrated bird boxes into at least 10% of the dwellings as they are constructed, would enhance the Site for a range of nesting birds.</p> <p>Positive impact at less than Local level.</p>
Bats	Less than Local	<p>No damage or loss of potential bat roosts.</p> <p>Planting of hedgerows and trees, the creation of a rough grassland, meadow grassland, orchard, and wildlife corridor, and incorporation of integrated bat boxes into at least 10% of the dwellings as they are constructed, would enhance the Site for foraging and roosting bats.</p> <p>Positive impact at less than Local level.</p>
		s
Hedgehog	Less than Local	<p>Hedgehog highways would be created in all proposed garden fences, comprising minimum 15 cm x 15 cm gaps at the base of fencing with appropriate signage.</p> <p>A greater variety of habitats, including accessible vegetated gardens and an orchard, are likely to provide suitable foraging opportunities for hedgehogs across the Site.</p> <p>Positive impact at less than Local level.</p>
Biodiversity Net Gain	N/A	<p>Baseline: 7.62 habitat units and 0.24 hedgerow units; Predicted post-installation: 8.67 habitat units and 6.10 hedgerow units; Overall: 13.81% net increase in habitat units and a 2,539.77% net increase in hedgerow units.</p>





Drawing 1 UK Habitat Survey

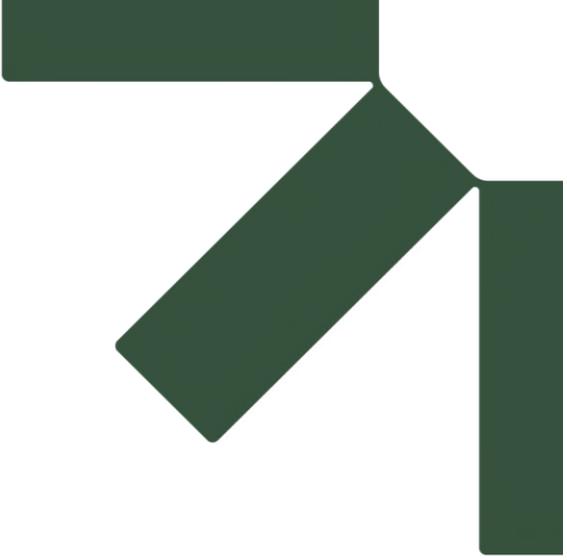
Roslyn Avenue, Netherton

Ecological Impact Assessment

KCS Development Ltd.

SLR Project No.: 424.064759.00001

4 March 2024



Appendix A Proposed Site Layout

Roslyn Avenue, Netherton

Ecological Impact Assessment

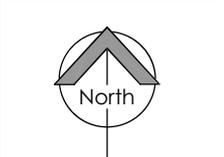
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4 March 2024

SCHEDULE OF ACCOMMODATION		
TYPE 1A - 1 BED APARTMENT - 560 SQ FT (52 sq m) (2 person) - 1 no. Off street parking spaces	6	
TYPE 2A - 2 BED SEMI-DETACHED - 775 SQ FT (72 sq m) (3 person) - Off street parking spaces - varies	28	
TYPE 2B - 2 BED TERRACE - 850 SQ FT (79 sq m) (4 person) - Off street parking spaces - varies NOTE - Integral access at ground floor level	4	
TYPE 2C - 2 bed bungalow 675 sq ft (62.7 sqm) (3 person) (1 storey) 1 no. off street parking space	1	
TYPE 3A - 3 BED SEMI-DETACHED - 931 SQ FT (86.5 sq m) (4 person) - 2no. off street parking spaces	8	
TYPE 3B - 3 BED DETACHED - 1,029 sq ft (95.8 sqm) (5 person) - 2 no. off street parking spaces	20	
TYPE 3C - 3 bed bungalow 842 sq ft (78.2 sqm) (4 person) (1 storey) 2 no. off street parking space	1	
TYPE 4A - 4 BED DETACHED - 1,076 sq ft (100 sqm) (5 person) - 3 no. off street parking spaces	14	
TOTAL	82	
21 no. visitors parking spaces		

All site dimensions shall be verified by the contractor on site prior to work commencing
Do not scale from this drawing
Only work to written dimensions
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KEY	
VP	Visitors parking
	Garden shed/cycle storage
	Bin storage
	Indicative bin presentation point
	Aspect
	Pedestrian Crossing point
	Visibility splay



Rev	Description	Date	By
Rev B	Updated to comments	27.02.24	EHPE
Rev A	Site to plot 12 and 13 and driveway layout updated	23.01.24	EHPE
Designation	Details of Revision	Date	Initials/Sign

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PLANNING

PROJECT: PROPOSED DEVELOPMENT LAND OFF ROSLYN AVENUE NETHERTON

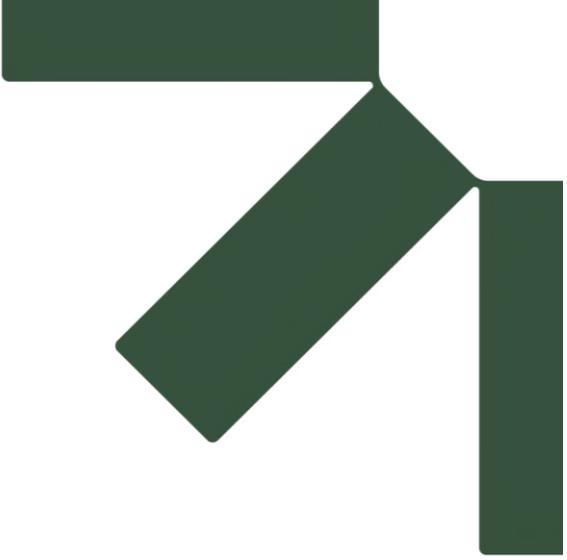
TITLE: PROPOSED SITE LAYOUT

DRAWING NO: 2246 PL 1058

BY/CHECKED: DPE DATE: NOV 2023

SCALE (SAs): 1:1250

Town: Warrick, Globe Road, Leeton, 3511 VIC
Tel: 013 3423000 E-mail: info@ellishealey.com



Appendix B Landscape Plan

Roslyn Avenue, Netherton

Ecological Impact Assessment

KCS Development Ltd.

SLR Project No.: 424.064759.00001

4 March 2024

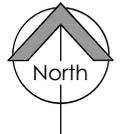
All site dimensions shall be verified by the contractor on site prior to work commencing

Do not scale from this drawing
Only work to written dimensions

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NOTES

Landscaping shown indicative



NOTE - Refer to detailed landscaping drawing for details

LANDSCAPING KEY

- New tree
- Fruit Trees
- Scrub land
- Grass - EM10 - Tussock meadow mixture
- Grass - EG22 - Strong lawn mixture
- Grass - EL1 - Flowering mixture
- Grass - EM3 - Special general purpose meadow mixture
- Native Species Hedge
- Highway/footpath - Tarmac finish to engineers details
- Shared surface - Block paving to engineers details.
- Secondary Footpath - Timber edge path with crushed gravel to eng
- 1800mm high timber fence
- 1200mm high post and mesh agricultural fen with self closing pedestrian gate at access p
- Retaining structure up to 1m
- Retaining structure between 1m - 2m
- Retaining structure over 2m

LANDSCAPING AREAS	Proposed area
Soft Landscaping - shared areas	
Scrub Land	428 SQ M
Green streets Grass - EL1 - Flowering lawn mixture	491 SQ M
Community Orchard Grass - EL1 - Flowering lawn mixture	673 SQ M
Grass - EM10 - Tussock meadow mixture	2545 SQ M
Grass - EM3 - Special general purpose meadow mixture	2170 SQ M
Grass - EG22 - Strong lawn mixture	1958 SQ M
Play area - sealed surface	220 SQ M
Native species hedge	773 M (length)
Soft Landscaping - Private areas	
Front gardens Grass - EL1 - Flowering lawn mixture	2677 SQ M
Rear gardens	8838 SQ M
Hard Landscaping - shared areas	
Standard Highways	3,132 SQ M
Highway shared /private drives	1,891 SQ M
Footpaths	2,647 SQ M
Hard Landscaping - Private areas	
Driveways and paths	3,109 SQ M
Building footprint	4,166 SQ M



Rev/A	Layout Updated	27/02/24	(DPE)
Designation	Details of Revision	Date	Initials/Sign



PLANNING

PROJECT: PROPOSED DEVELOPMENT LAND OFF ROSLYN AVENUE NETHERTON

TITLE: PROPOSED LANDSCAPING PLAN

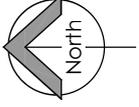
DRAWING NO: 2246 PL 110A

BY/CHECKED: DPE DATE: NOV 2023

SCALE (A3): 1:1250

Town: (Blank), Office: (Blank), Leeds, LS11 3DG
Tel: 0113 3423000 E-mail: info@ellishealey.com

All site dimensions shall be verified by the contractor on site prior to work commencing.
 Do not scale drawings for planting.
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Landscaping shown indicative

LANDSCAPING KEY

- New tree
- Fruit Trees
- Scrub land
- Grass - EM10 - Tussock meadow mixture
- Grass - EG22 - Strong lawn mixture
- Grass - EL1 - Flowering mixture
- Grass - EM3 - Special general purpose meadow mixture
- Native Species Hedge
- Highway/footpath - Tarmac finish to engineers details
- Shared surface - Block paving to engineers details.
- Secondary Footpath - Timber edge path with crushed gravel to engine
- 1800mm high timber fence
- 1200mm high post and mesh agricultural fence with self closing pedestrian gate at access point
- Retaining structure up to 1m
- Retaining structure between 1m - 2m
- Retaining structure over 2m

TREE SPECIFICATION

- AC Acer campestre 'Elsrijk'
- ACE Acer campestre 'Fastigiata'
- BP Betula pendula
- BpF Betula pendula 'Fastigiata'
- Ms Malus sylvestris
- Pa Prunus avium 'Plena'
- PaP Prunus subhirtella 'Autumnalis'
- PSA Prunus x yedoensis
- Pxy Quercus robur
- Qr Sorbus aria
- Sar Sorbus aucuparia
- Sa Sorbus aucuparia 'Asplenifolia'
- SAA Sorbus vilmosinii
- Sv



NOVA	UNIVERSITY	2024	PL1
Project Name	Client/Ref No.	Date	Version/Stage

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PLANNING

PROPOSED DEVELOPMENT:
UNIVERSITY OF SHEFFIELD
NEW BUILDING

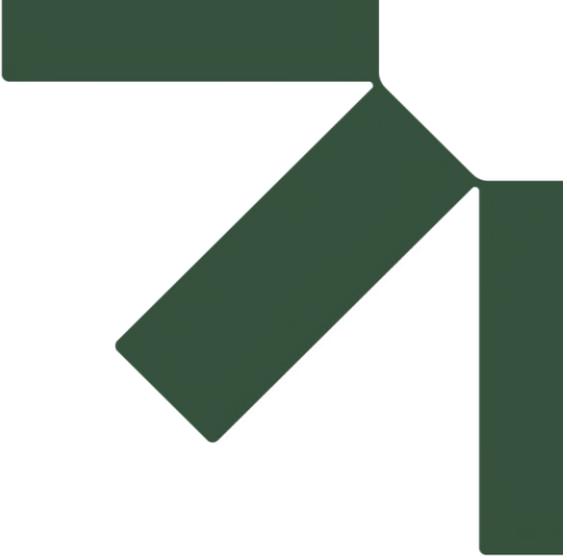
TITLE: PROPOSED LANDSCAPING
DETAIL PLAN 2

DRAWING NO: 2309 PL 112A

ISSUED: NO 1 (PE) DATE: NOV 2023

SCALE: 1:500

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Appendix C Desk Study Data

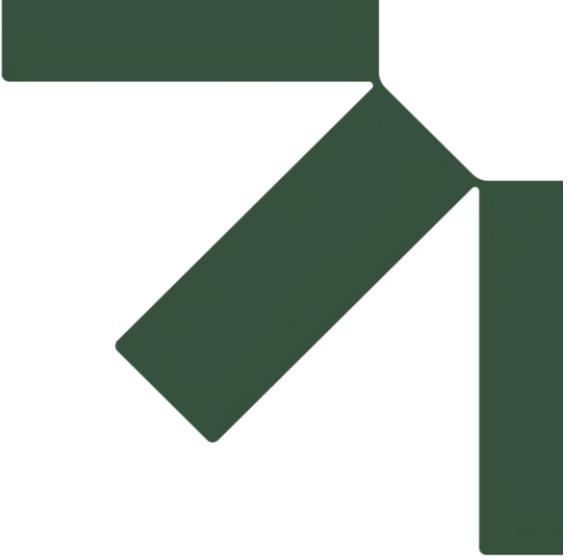
Roslyn Avenue, Netherton

Ecological Impact Assessment

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4 March 2024



Appendix D Biodiversity Net Gain Metric 4.0 Calculations (supplied separately)

Roslyn Avenue, Netherton

Ecological Impact Assessment

KCS Development Ltd.

SLR Project No.: 424.064759.00001

4 March 2024

