# Lower Blacup Farm, Cleckheaton BNG

## Biodiversity Net Gain Report

### Newett Homes Limited

Prepared by:

**SLR Consulting Limited**

Unit 2, Newton Business Centre, Thorncliffe Park Estate, Newton Chambers Road, Chapeltown, Sheffield, S35 2PH

SLR Project No.: 424.065278.00001

5 September 2024

Revision: 1

Making Sustainability Happen

## Revision Record

| Revision | Date | Prepared By | Checked By | Authorised By |
|---|---|---|---|---|
| 1 | 5 September 2024 | Ellie Tew<br>Lucy Sumner | Hazel Douglas | Hazel Douglas |

# Basis of Report

This document has been prepared by SLR Consulting Limited (SLR) with reasonable skill, care and diligence, and taking account of the timescales and resources devoted to it by agreement with Newett HomesNewett Homes Limited Limited (the Client) as part or all of the services it has been appointed by the Client to carry out. It is subject to the terms and conditions of that appointment.

SLR shall not be liable for the use of or reliance on any information, advice, recommendations and opinions in this document for any purpose by any person other than the Client. Reliance may be granted to a third party only in the event that SLR and the third party have executed a reliance agreement or collateral warranty.

Information reported herein may be based on the interpretation of public domain data collected by SLR, and/or information supplied by the Client and/or its other advisors and associates. These data have been accepted in good faith as being accurate and valid.

The copyright and intellectual property in all drawings, reports, specifications, bills of quantities, calculations and other information set out in this report remain vested in SLR unless the terms of appointment state otherwise.

This document may contain information of a specialised and/or highly technical nature and the Client is advised to seek clarification on any elements which may be unclear to it.

Information, advice, recommendations and opinions in this document should only be relied upon in the context of the whole document and any documents referenced explicitly herein and should then only be used within the context of the appointment.

# Table of Contents

**Basis of Report** ..... **i**

**Acronyms and Abbreviations** ..... **iii**

**1.0 Introduction** ..... **4**

1.1 Statement of Intent ..... 4

1.2 Site Description ..... 4

1.3 Details of the Proposed Development ..... 4

**2.0 Relevant Legislation and Policy** ..... **5**

2.1 Environment Act 2021 ..... 5

2.2 National Planning Policy Framework (NPPF) 2023 ..... 5

2.3 Kirklees Local Plan ..... 6

2.3.1 Policy LP30 Biodiversity and Geodiversity ..... 6

2.3.2 Policy LP31 Strategic Green Infrastructure Network ..... 7

2.4 Kirklees Biodiversity Action Plan ..... 8

**3.0 Methodology** ..... **9**

3.1 BNG Baseline Data Collection ..... 9

3.1.1 River Condition Assessment ..... 9

3.1.2 Limitations ..... 10

3.2 BNG Post-Intervention ..... 10

**4.0 Results** ..... **11**

4.1 Irreplaceable habitats ..... 11

4.2 On-Site BNG Baseline Habitats and Value ..... 11

4.3 On-Site Predicted Post-Development Habitats and Value ..... 14

4.3.1 Baseline Habitats Retained ..... 14

4.3.2 Baseline Habitats Enhanced ..... 14

4.3.3 Post-development Habitats Created ..... 16

4.4 BNG Summary ..... 20

# Tables in Text

Table 4-1: Summary of area habitat units on Site ..... 12

Table 4-2: Summary of linear hedgerow units ..... 12

Table 4-3: Summary of linear watercourse units ..... 13

Table 4-4: Enhanced baseline habitats, showing habitat type and condition post-enhancement ..... 15

Table 4-5: Created habitats and hedgerows ..... 19

Table 4-6: On-Site biodiversity net gain ..... 20

# Figures

**Figure 1** **UK Habitat Survey**

# Appendices

**Appendix A** **Landscape Masterplan**

**Appendix B** **Statutory Biodiversity Metric (supplied separately in Excel format)**

**Appendix C** **Habitat Condition Assessments**

**Appendix D** **RCA Results**

# Acronyms and Abbreviations

| | |
|---|---|
| BNG | Biodiversity Net Gain |
| DEFRA | Department for Environment, Food & Rural Affairs |
| NPPF | National Planning Policy Framework |
| OEP | Office for Environmental Protection |
| PEA | Preliminary Ecological Appraisal |
| RCA | River Condition Assessment |
| SLR | SLR Consulting Ltd |
| UKHab | UK Habitat |

# 1.0 Introduction

SLR Consulting Limited (SLR) was commissioned by Newett Homes Limited to undertake a Biodiversity Net Gain (BNG) assessment of a site located at Lower Blacup Farm, Cleckheaton, Kirklees, West Yorkshire, BD19 5JE (approximate central OS grid reference SE 18615 24799), to inform a planning application for a proposed residential development.

An Ecological Impact Assessment (EcIA) has also been completed, which is provided in a separate report[1].

## 1.1 Statement of Intent

The Site is subject to the statutory BNG requirements, and as such a minimum of 10% BNG is required.

This report outlines the BNG gain that will be achieved at the Site, based on the Landscape Masterplan (Appendix A). Based on the Landscape Masterplan and details provided by the client, proposed created and/or enhanced habitats which would form part of the Project, and their target conditions are outlined within this report and associated drawings.

Overall, the Project is predicted to achieve a **10.12% net gain in area habitat units**, a **12.76% net gain in hedgerow units** and a **20.80% net gain in watercourse units**, through on-Site habitat creation and enhancement.

It is acknowledged that, in order to comply with the statutory BNG requirements, detailed management prescriptions describing how each habitat would be managed to reach target condition, as well as monitoring details, would need to be provided as part of a Habitat Management and Monitoring Plan and Biodiversity Gain Plan, post-consent, to discharge the new standard biodiversity gain planning condition, which is applied to all new planning applications after February 2024.

## 1.2 Site Description

The application site (herein referred to as the 'Site') is 2.37 hectares (ha) in extent and comprises several fields of modified grassland, several of which were grazed by livestock at the time of survey. An unsealed track runs east to west across the centre of the Site, along which also runs a Public Right of Way (PRoW). The northern side of this track is planted with a native hedgerow, while on the southern side of the track a shorter line of trees is present. A further hedgerow is located on the southern boundary of the Site, and two further lines of trees are located running east to west across the middle of the Site, and north to south, extending from the southern boundary. Blacup Beck is present on the northern boundary of the Site, flowing west to east.

The Site is located on the western edge of the town of Cleckheaton, and approximately 8 km south of the centre of Bradford. Residential developments are located immediately to the south and east of the Site, while further agricultural land is present to the west. An industrial estate is present to the north of the Site, on the far side of Blacup Beck. Immediately surrounding the Site is further agricultural land, used both for arable and livestock grazing.

## 1.3 Details of the Proposed Development

The proposed development (Appendix A) involves the construction of a residential area with 67 dwellings, associated gardens and roads. The development also includes an area of Public Open Space (POS) in the centre of the Site and in the north of the Site. A Sustainable

[1] SLR (2024) Lower Blacup Farm, Cleckheaton. Ecological Impact Assessment Report. 424.065278.00001

Drainage System (SuDS) basin will also be constructed in this northern POS. Access to the proposed development will be gained from Ashbourne View and Ashbourne Drive on the east of the Site. The track through the centre of the Site will be retained, including the current PRoW.

# 2.0 Relevant Legislation and Policy

## 2.1 Environment Act 2021

The Environment Act (the Act) gained Royal Assent on 9 November 2021 and is now enshrined within UK law. The Act provides a mechanism for implementing Government's ambitions for 'improving the natural environment', which were previously set out in publications including the 25 Year Environment Plan. The Act provides recognition of the 25 Year Environment Plan as the first "environmental improvement plan" which will, once the relevant regulations come into force, be used as the basis for understanding the steps Government intends to take to improve the natural environment.

The Act implements the ambitions for an improved natural environment, by setting out statutory or legal requirements which mandate action, under the oversight of the newly formed Office for Environmental Protection (OEP). The focus of the Act is the "…*provision [of] targets, plans and policies for improving the natural environment*…" and its requirements are structured around a number of broad themes.

Part 6 of the Act sets out provisions for 'Biodiversity gain as condition of planning permission'. Enacted on February 12th 2024, amendments to the Town and Country Planning Act 1990 require planning applications to be supported with additional information on the change in the biodiversity value attributed to a project, with biodiversity metric calculations, and with biodiversity gain plans using metrics, guidance and templates provided by government. Planning authorities will be required to consider these submissions in the exercise of their planning functions, to ensure that they are secured, approved and where relevant registered.

## 2.2 National Planning Policy Framework (NPPF) 2023

The National Planning Policy Framework (NPPF)[2] sets out guidance for local planning authorities and decision makers on how to apply planning policies when drawing up plans and making decisions about planning applications. Along with Government Circular 06/05[3], 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 Section 15, from paragraph 180, those sections of particular relevance to this report are extracted below:

Paragraph 180 states that*: "Planning policies and decisions should contribute to and enhance the natural and local environment by:*

*Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan); …*

*d. Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures; …"*

[2] Ministry of Housing, Communities & Local Government (2023). National Planning Policy Framework.

[3] Office of the Deputy Prime Minister (2005). ODPM Circular 06/2005. Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System.

Paragraph 186 states that*: "When determining planning applications, local planning authorities should apply the following principles:*

*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; …*

*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."*

National Policy Statement EN-1 (the Overarching National Policy Statement for Energy) includes several references to BNG and Section 4.5.5 states "*Applicants are encouraged to use the most current version of the Defra biodiversity metric to calculate their biodiversity baseline and inform their biodiversity net gain outcomes and to present this data as part of their application.*"

## 2.3 Kirklees Local Plan[4]

The Kirklees Local Plan was adopted in 2019, and sets out the vision, objectives and strategy for future development of Kirklees, from 2013-2031. Relevant policies are outlined below.

### 2.3.1 Policy LP30 Biodiversity and 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.*

**South Pennine Moors**

*Proposals which may directly or indirectly compromise achieving the conservation objectives of a designated or candidate European protected site will not be permitted unless the proposal meets the conditions specified in Article 6 (3) - (4) of the Habitats Directive.*

**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 (SSSI), 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 SSSI, 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.*

[4] Kirklees Local Plan Strategy and Policies

**The Dark Peak Nature Improvement Area**

*Proposals that contribute to the aims and objectives of the Dark Peak Nature Improvement Area (NIA) will in principle be supported, subject to other policies in this plan. Development likely to have an adverse impact on the aims and objectives of the NIA will not be permitted.*

**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*

*v) (iv) incorporate biodiversity enhancement measures to reflect the priority habitats and species identified for the relevant Kirklees Biodiversity Opportunity Zone."*

### 2.3.2 Policy LP31 Strategic Green Infrastructure Network

*"Within the Strategic Green Infrastructure Network identified on the Policies Map, priority will be given to safeguarding and enhancing green infrastructure networks, green infrastructure assets and the range of functions they provide.*

*Development proposals within and adjacent to the Strategic Green Infrastructure Network should ensure:-*

*(i) the function and connectivity of green infrastructure networks and assets are retained or replaced;*

*(ii) new or enhanced green infrastructure is designed and integrated into the development scheme where appropriate, including natural greenspace, woodland and street trees;*

*(iii) the scheme integrates into existing and proposed cycling, bridleway and walking routes, particularly the Core Walking and Cycling Network, by providing new connecting links where opportunities exist;*

*(iv) the protection and enhancement of biodiversity and ecological links, particularly within and connecting to the Kirklees Wildlife Habitat Network.*

*The council will support proposals for the creation of new or enhanced green infrastructure provided these do not conflict with other Local Plan policies."*

**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."*

**Biodiversity Net Gain**

*"All development in Kirklees, as set out in national policy and the policies described in this document, will be expected to not result in significant loss or harm to biodiversity through avoidance, mitigation and compensatory measures and seek opportunities to enhance biodiversity value and ecological links. Opportunities to achieve net gains in biodiversity within development proposals will be sought through good design, including specific habitat creation and biodiversity enhancements. Regard will need to be given to the relevant Biodiversity Opportunity Zone in which the proposed development is located and biodiversity enhancement measures will be sought which reflect the priority habitats and species identified for each zone."*

## 2.4 Kirklees Biodiversity Action Plan[5]

The Kirklees Biodiversity Action Plan includes habitat action plans, the following of which may be of relevance to the Site: semi-natural pasture, lowland and upland meadows, lowland deciduous and other woodland, wet woodland, arable field margins, hedgerows, rivers, riverine corridors and associated habitats and reedbeds. Relevant species action plans for this Site also include: great crested newt (*Triturus cristatus*), water vole (*Arvicola amphibius*) and white-clawed crayfish (*Austropotamobius pallipes*).

[5] Kirklees Council (2024) Kirklees Biodiversity Action Plan. Available at: https://www.kirklees.gov.uk/beta/delivering-services/policies-and-strategies.aspx [Accessed: 27/8/24].

# 3.0 Methodology

## 3.1 BNG Baseline Data Collection

The BNG baseline was informed by the ecological survey of the Site for the EcIA undertaken by Lucy Sumner, SLR Ecologist, on the 3rd July 2024[1]. The ecological survey identified the broad habitat types on Site in accordance with the UK Habitat (UKHab) survey methodology[6]. The 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. This included a search for irreplaceable habitats such as ancient or veteran trees.

Condition assessments of these habitats were also completed during the UKHab survey, in line with the Department for Environment, Food & Rural Affairs (DEFRA) Statutory Biodiversity Metric guidance[7].

The areas of habitats identified on Site were mapped (see Figure 1), with each habitat type assigned a unique reference code (e.g. B1, B2, B3 etc. and linear habitats LB1, LB2 etc.)

Habitats were measured in ArcGIS software in ha or kilometres for linear features (i.e. hedgerows) and input into the Statutory Biodiversity Metric (Appendix B) along with the Habitat Condition Assessments (Appendix C).

The Statutory Biodiversity Metric follows similar principles to previous biodiversity metrics, using habitat as a proxy for biodiversity and its primary application is to provide planners and developers with a method of establishing how much and what type of habitats should be created or enhanced in order to ensure that the impacts of a development do not result in a net loss of biodiversity. Habitats are assigned the following ‘multiplier’ scores:

- **Distinctiveness**: A measure of the type and importance of a habitat;
- **Condition**: A measure of the present or predicted condition of a habitat type; and
- **Strategic significance**: How a habitat is regarded within Local Planning Policy.

### 3.1.1 River Condition Assessment

A River Condition Assessment (RCA) survey is used to assess the type and condition of watercourses present on a site. RCA surveys involve a field survey element and a desk study element. The field surveys are carried out using the “MoRPH” survey methodology[8,9] in which field information for subreaches of a stream or river are collected across at least 20% of the total stream length within the area of proposed development.

A desk-based study also classifies the stream into one of thirteen river “types” based on geomorphological characteristics. The results of the MoRPH field surveys are combined with the desk-based study of river type to present a final condition result for the watercourse.

River condition is assessed using 32 condition indicators that are automatically extracted from MoRPh5 field surveys. Each river condition indicator is assigned a score of 0 to +4 (positive indicators) or 0 to -4 (negative indicators). Positive indicators represent the diversity

[6] https://ukhab.org

[7] https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides

[8] Shuker, L. and Gurnell, A. (2022) The MoRPH Survey Technical Reference Manual 2022 version. Available at: https://docs.modularriversurvey.org/pro [Accessed: 18/8/24].

[9] Gurnell, A. et al., (2024) A GUIDE TO ASSESSING RIVER CONDITION Part of the Rivers and Streams Component of the Biodiversity Metric Watercourse Module for calculating Biodiversity Net Gain. Available at: https://docs.modularriversurvey.org/pro [Accessed: 18/8/24].

and abundance of physical habitats offered by vegetation, sediment, vegetation-sediment-related physical features, and hydraulic habitats that can be observed at low flow. Negative indicators represent the extent and severity of local human interventions or pressures.

The Preliminary Condition Score for each MoRPh5 subreach is calculated as the sum of the average of the positive condition indicator scores and the average of the negative condition indicator scores for the subreach. The Preliminary Condition Score is translated into a Final Condition Score (5-good, 4- fairly good, 3-moderate, 2-fairly poor, 1-poor) based upon the River Type.

In addition, the “shape” factor is considered in the condition assessment, this indicates the degree to which a river is hydrologically/ecologically connected to its flood plain – if a channel is too deep relative to its width to be hydrologically connected, then the final condition score is downgraded.

**Field Survey – MoRPH surveys**

The field survey was undertaken on 3rd July 2024 by RCA accredited Senior Ecologist Lucy Sumner. The field survey covered 20% of the full reach length onsite, in accordance with guidelines, and MoRPH surveys were spaced across the full reach extent to cover any variations and features in the watercourse. Where possible, both banks were accessed for the assessment, and any limitations with regards to the surveys were noted.

**Desk Study – River Type**

The River Type calculation is a desk-based exercise used to classify the river into a type, in order to provide a baseline against which to assess the river’s condition. This desk study was completed by Lucy Sumner on 5th July 2024 and used Google Earth and information from Environment Agency’s Catchment Data Explorer to inform the study.

The results of the RCA are provided in Appendix D.

### 3.1.2 Limitations

Access to Blacup Beck was hindered by the presence of giant hogweed and dense vegetation; however, it was possible to access the banks at distinct points to view upstream and downstream to ensure sufficient coverage of this homogenous watercourse. As such, no significant limitations have been identified.

## 3.2 BNG Post-Intervention

The predicted future biodiversity value of the Site was calculated from the Landscape Masterplan (Appendix A) which were transposed into a post-development UKHab types within the Statutory Biodiversity Metric along with predicted condition assessments. Areas for the post-development habitat types were provided by Newett Homes Limited.

# 4.0 Results

## 4.1 Irreplaceable habitats

No irreplaceable habitats were identified on Site.

## 4.2 On-Site BNG Baseline Habitats and Value

**A summary of the existing habitats, their extent and condition on-Site is provided in Table 4-1, Table 4-2: Summary of linear hedgerow units**

| Habitat reference | Baseline Habitat (UKHab Code) | BNG Habitat Type | Length (km) | Distinctiveness | Condition | Strategic significance | Hedgerow units value |
|---|---|---|---|---|---|---|---|
| LB2 | Line of trees – Broadleaved mixed and Yew woodland (w1 33) | Line of trees | 0.025 | Low | Moderate | Low | 0.10 |
| LB3 | | Line of trees | 0.075 | Low | Moderate | Low | 0.30 |
| LB5 | | Line of trees | 0.082 | Low | Moderate | Low | 0.33 |
| LB1 | Other Native hedgerow (h2a6) | Native hedgerow | 0.061 | Low | Good | Low | 0.37 |
| LB6 | | Native hedgerow | 0.018 | Low | Good | Low | 0.11 |
| LB7 | | Native hedgerow | 0.042 | Low | Good | Low | 0.25 |
| LB9 | | Native hedgerow | 0.03 | Low | Good | Low | 0.18 |
| **Total length:** | | | **0.33** | **Total hedgerow units:** | | | **1.63** |

Table 4-3 and Table 4-3, and mapped in Figure 1. The Statutory Biodiversity Metric (Appendix B) provides full details of the BNG baseline along with the Habitat Condition Assessments (Appendix C). The results of the RCA for the on-Site baseline watercourse are provided in Table D-1, Appendix D. Further details on habitat descriptions including species identified is outlined in the EcIA report[1]. Overall, the BNG baseline on-Site was calculated to comprise **4.69 area habitat units**, **1.63 linear hedgerow units** and **0.34 linear watercourse units.**

**Table 4-1: Summary of area habitat units on Site**

| Habitat reference | Baseline Habitat (UKHab Code) | BNG Habitat Type | Extent (ha) | Distinctiveness | Condition | Strategic significance | Habitat units value |
|---|---|---|---|---|---|---|---|
| B3 | Artificial unvegetated, unsealed surface (u1c) | Artificial unvegetated, unsealed surface | 0.027 | V. Low | N/A | Low | 0.00 |
| B1 | Modified grassland (g4) | Modified grassland | 0.205 | Low | Poor | Low | 0.41 |
| B2 | Modified grassland (g4)) | Modified grassland | 0.546 | Low | Poor | Low | 1.09 |
| B4 | Modified grassland (g4) | Modified grassland | 0.463 | Low | Poor | Low | 0.93 |
| B5 | Modified grassland (g4) | Modified grassland | 0.538 | Low | Poor | Low | 1.08 |
| B6 | Modified grassland (g4) | Modified grassland | 0.591 | Low | Poor | Low | 1.18 |
| | | **Total habitat area:** | **2.37** | | | **Total area habitat units:** | **4.69** |

**Table 4-2: Summary of linear hedgerow units**

| Habitat reference | Baseline Habitat (UKHab Code) | BNG Habitat Type | Length (km) | Distinctiveness | Condition | Strategic significance | Hedgerow units value |
|---|---|---|---|---|---|---|---|
| LB2 | Line of trees – Broadleaved mixed and Yew woodland (w1 33) | Line of trees | 0.025 | Low | Moderate | Low | 0.10 |
| LB3 | | Line of trees | 0.075 | Low | Moderate | Low | 0.30 |
| LB5 | | Line of trees | 0.082 | Low | Moderate | Low | 0.33 |
| LB1 | Other Native hedgerow (h2a6) | Native hedgerow | 0.061 | Low | Good | Low | 0.37 |
| LB6 | | Native hedgerow | 0.018 | Low | Good | Low | 0.11 |
| LB7 | | Native hedgerow | 0.042 | Low | Good | Low | 0.25 |
| LB9 | | Native hedgerow | 0.03 | Low | Good | Low | 0.18 |
| | | **Total length:** | **0.33** | | | **Total hedgerow units:** | **1.63** |

**Table 4-3: Summary of linear watercourse units**

| Habitat reference | Baseline Habitat (UKHab Code) | BNG Habitat Type | Length (km) | Distinctiveness | Condition | Strategic significance | Watercourse encroachment | Riparian encroachment | Watercourse units value |
|---|---|---|---|---|---|---|---|---|---|
| WB1 | Other rivers and streams (r2b) | Other rivers and streams | 0.043 | High | Fairly Poor | Low | No Encroachment | Major/No Encroachment | 0.34 |
| | **Total length:** | | **0.043** | **Total watercourse units:** | | | | | **0.34** |

## 4.3 On-Site Predicted Post-Development Habitats and Value

As described in Section 3.1.1, the post-development habitats and their value were calculated based on the areas shown in the Landscape Masterplan (Appendix A).

### 4.3.1 Baseline Habitats Retained

Of the on-Site baseline area habitats outlined in Table 4-1, the artificial unvegetated, unsealed surface (B3 in Figure 1) will be retained, and 0.1407 ha of modified grassland (B1 in Figure 1) will be retained. Of the on-Site baseline linear hedgerows outlined in Table 4-3, the line of trees (LB3 in Figure 1) will be retained in full, and 0.051 km of the native hedgerow (LB1 in Figure 1) will be retained.

The remaining on-Site habitats and hedgerows will be lost as part of the residential development, apart from those outlined below in Section 4.3.2 which will be enhanced.

### 4.3.2 Baseline Habitats Enhanced

Two areas of on-Site modified grasslands (B1 and B2 in Figure 1) and the on-Site watercourse will be enhanced as outlined in Table 4-4, with further details on enhancement proposed in Section 1.1.1.1 and 4.3.2.2.

**Table 4-4: Enhanced baseline habitats, showing habitat type and condition post-enhancement**

| Habitat Reference | BNG Baseline Habitat Type | BNG Post-development Habitat Type | Distinctiveness change | Condition change | Strategic significance | Extent enhanced | Units Delivered |
|---|---|---|---|---|---|---|---|
| **Area habitat units** | | | | | | | |
| B1 | Modified grassland | Other neutral grassland | Low – Medium | Poor – Moderate | Low | 0.0643 | 0.4 |
| B2 | Modified grassland | Other neutral grassland | Low – Medium | Poor – Moderate | Low | 0.0361 | 0.22 |
| | | | | | | **Total area habitat units:** | **0.62** |
| **Watercourse units** | | | | | | | |
| WB1 | Other rivers and streams | Other rivers and streams | N/A | Fairly Poor – Moderate | Low | 0.043 | 0.41 |

#### 4.3.2.1 Modified grassland enhancement

The existing modified grasslands (B1 and B2 in Figure 1) are species poor and shall be enhanced to other neutral grassland by overseeding with a pollen and nectar mix or wildflower mix, such as Emorsgate EH1F Wild Flowers for Hedgerows[10] or similar. Both areas for enhancement have potential to be shaded by existing hedgerows or woodland; therefore, a shade tolerant mix shall be used to increase species diversity, adjacent to hedgerows and woodland.

In late summer, the existing grassland shall be cut and gaps created either by harrowing or raking, aiming to create 50% bare soil. The seed mix can then be sown in the autumn either by machine or broadcast by hand and continued mowing will be required through winter and early spring to keep the grass short (30-50 mm). The grassland can then be left unmanaged April to July/August and managed in zones working out from the existing woodland or hedgerow. For example, in a 6 m sown margin the 2-3 m against the boundary could be left uncut, the next 3-4 m cut once or twice a year.

To control scrub and bramble development, areas may need cutting every 2-3 years between October and February. This should be done on a rotational basis so that no more than half the area is cut in any one year leaving part as an undisturbed refuge for wildlife. Any arising from the ongoing management of the grassland shall be removed from Site to avoid nutrient enhancement of the ground, which would encourage docks and thistles.

**Predicted ecological condition**: Moderate.

The grassland is predicted to pass all criteria except for criteria B – sward height and F – species diversity, as it is unlikely that the management regime of these enhanced areas will create the variety in sward height, and enhancement of modified grassland is unlikely to achieve good condition with high species diversity due to the small extent of these enhanced areas (Appendix C).

#### 4.3.2.2 Watercourse enhancement

The existing watercourse would be enhanced through the management of developing scrub edges and woodland to open up the watercourse as it is heavily overshadowed by the trees on the left bank. This would allow greater species diversity on the bank face and tops, allowing long grasses and shrubs to establish. The removal of INNS (giant hogweed and Himalayan balsam), and the removal of large trash, is also proposed.

**Predicted ecological condition**: Moderate.

The results of the enhancement scenario on the watercourse are provided in Table D-2, Appendix D.

### 4.3.3 Post-development Habitats Created

The following habitats will be created on-Site with the corresponding descriptions from the Landscape Masterplan also provided in the bullets below:

- Vegetated (residential) gardens – proposed turf (front gardens), rear gardens and proposed ornamental shrub;
- Developed land; sealed surfaces – residential properties, driveways, footpaths and roads);
- Mixed scrub – proposed native shrub mix;

[10] https://wildseed.co.uk/product/mixtures/wild-flower-only-mixtures/wild-flowers-for-hedgerows/

- Other neutral grassland – species rich grassland, spring flowering bulbs and wildflower meadows;
- Sustainable drainage system – SuDS;
- Urban trees – POS trees, street trees and feature trees (trees within private gardens are excluded from the calculation); and
- Species-rich native hedgerow.

Further details on the predicted condition each habitat type will achieve is outlined below; this does not include those habitats which do not require condition assessment. Appendix C provides full condition assessment scores for the predicted post-development habitats and outlines the criteria each habitat type must meet to achieve the predicted condition post-development. Table 4-5 summarises the habitats which will be created on-Site and the associated units.

#### 4.3.3.1 Mixed scrub

A native scrub mix is proposed along the retained tree line (LB3) and on the eastern Site boundary. Species are provided in the Landscape Masterplan (Appendix A), which includes species present on-Site[1] and could be supplemented with those listed in the Kirklees Biodiversity Action Plan: hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*), dog rose (*Rosa canina*) and gorse (*Ulex europaeus*).

**Predicted ecological condition**: Moderate.

The mixed scrub is predicted to pass all criteria except for criterion E – presence of clearings, glades or rides as the management of these smaller areas is unlikely to creates these features.

#### 4.3.3.2 Other neutral grassland

Species rich grassland will be created across the Site to the north in areas surrounding the SuDS basin and to the centre of the Site in the POS. This would be created using a mix such as Emorsgate EM3[11] or similar combined with a relaxed mowing regime.

The grassland shall not be sown on high fertile ground. The seed mix shall be sown in autumn or spring by machine or broadcast by hand and firm in with a roll or by treading. As the grassland establishes annual weeds will arise initially but should not be cut until mid to late summer, remove the arising and compost. The establishing grassland can then be kept short until the end of March the following year and perennial weeds should be removed by hand. Once established the grassland shall not be cut or grazed from spring through to late July/August to allow the sown species to flower. After flowering in July/August take a ‘hay cut’: cut back with a scythe, petrol strimmer or tractor mower to c 50mm. Leave the ‘hay’ to dry and shed seed for 1-7 days then remove from site. The re-growth can be cut through to late autumn/winter to c 50mm and again in spring if needed.

**Predicted ecological condition**: Good.

This grassland would pass all criteria except for criterion B – sward height, as the management regime is unlikely to create the variety in sward height.

[11] https://wildseed.co.uk/product/mixtures/complete-mixtures/general-purpose-meadow-mixtures/special-general-purpose-meadow-mixture/

#### 4.3.3.3 Sustainable drainage system

A SuDS basin will be created to the north of the Site; which will be planted with two seed mixes to provide variety in the habitat types of this sustainable drainage system. This would include similar mixes to EM8 Meadow Mixture for Wetlands[12] and EP1 Pond Edge Mixture[13] / EM10 Tussock Meadow Mixture[14].

**Predicted ecological condition**: Good.

The SuDS is predicted to therefore pass all criteria for this urban habitat type.

#### 4.3.3.4 Urban tree

A total of 55 new native trees will be planted within the public realm and along the streets of the proposed residential development, which are anticipated to fall within the small tree size category for the Statutory Biodiversity Metric. Native broadleaved species shall be planted including species similar to those present on-Site and within close proximity to the Site including oak (*Quercus robur*), hawthorn, elder (*Sambucus nigra*), holly (*Ilex aquifolium*) and ash (*Fraxinus excelsior*)[1].

**Predicted ecological condition**: Moderate.

The newly planted trees are anticipated to pass all criteria except for criteria C – tree maturity and E – natural ecological niches as the newly planted trees are unlikely to be mature and natural ecological niches are unlikely to be present.

This habitat is predicted to pass two criteria, Criterion A as the appearance and composition of vegetation will closely match the UKHab definition and Criterion C with an absence of invasive non-native plant species and species indicative of suboptimal condition. As this habitat will be created it is unlikely to pass Criterion B whereby seedlings, saplings, young shrubs and mature (or ancient or veteran) shrubs are all present. Additionally, this habitat is unlikely to have a well-developed edge with scattered scrub and tall grassland (Criterion D – fail) as it will be closely associated with woodland areas and clearings, glades or rides within the scrub are unlikely to be present (Criterion E – fail).

#### 4.3.3.5 Species-rich native hedgerow

A total of 158 m of native species-rich hedgerow will be planted to the centre of the Site, with species provided in the Landscape Masterplan (Appendix A).

**Predicted ecological condition**: Good.

The hedgerow will contain over five species and will therefore be considered species rich and is predicted to pass all criteria for this habitat type.

[12] https://wildseed.co.uk/product/mixtures/complete-mixtures/meadow-mixtures-for-specific-soils/meadow-mixture-for-wetlands/

[13] https://wildseed.co.uk/product/mixtures/complete-mixtures/special-habitat-mixtures/pond-edge-mixture/

[14] https://wildseed.co.uk/product/mixtures/complete-mixtures/meadow-mixtures-for-specific-soils/tussock-mixture/

**Table 4-5: Created habitats and hedgerows**

| Post-development Habitats | BNG Post-development Habitat Type | Extent | Distinctiveness | Condition | Strategic significance | Units Delivered |
|---|---|---|---|---|---|---|
| **Area habitat units** | | | | | | |
| Vegetated (residential) gardens – proposed turf (front gardens), rear gardens and proposed ornamental shrub | Vegetated garden | 0.753 ha | Low | N/A | Low | 1.45 |
| Residential properties, driveways, footpaths and roads | Developed land; sealed surface | 1.05 ha | V. Low | N/A | Low | 0.00 |
| Native mixed scrub | Mixed scrub | 0.0325 ha | Medium | Moderate | Low | 0.22 |
| Species rich grassland, spring flowering bulbs and wildflower meadows | Other neutral grassland | 0.2001 ha | Medium | Good | Low | 1.68 |
| Sustainable drainage system | Sustainable drainage system | 0.0652 ha | Low | Good | Low | 0.22 |
| Native trees, within public realm – 83 extra heavy standard and 101 standard trees | Urban tree | 0.2239 ha | Medium | Moderate | Low | 0.68 |
| | **Total habitat area:** | 2.32 ha | **Total area habitat units delivered:** | | | 4.26 |
| | **Total site area (excluding area of individual trees):** | 2.10 ha | | | | |
| **Hedgerow units** | | | | | | |
| Native species-rich hedgerow | Species-rich native hedgerow | 0.158 km | Medium | Good | Low | 1.24 |

## 4.4 BNG Summary

Overall, the Site has the potential to deliver a net gain in biodiversity as summarised in Table 4-6. These calculations follow the Statutory Biodiversity Metric rules and principles and the net gain in biodiversity satisfies trading rules (Appendix B).

**Table 4-6: On-Site biodiversity net gain**

| On-Site Baseline Units | Post-development units | On-Site net unit change | On-Site net percentage change |
|---|---|---|---|
| **Area habitat units** | | | |
| 4.69 | 5.16 | +0.47 | +10.12% |
| **Hedgerow units** | | | |
| 1.63 | 1.84 | +0.21 | +12.76% |
| **Watercourse units** | | | |
| 0.34 | 0.41 | +0.07 | +20.80% |

# Figure 1 UK Habitat Survey

## Lower Blacup Farm, Cleckheaton BNG

**Biodiversity Net Gain Report**

**Newett Homes Limited**

SLR Project No.: 424.065278.00001

5 September 2024

LEGEND

Site Boundary

Survey Boundary

Target Note

**Primary Habitat Classification**

*Heathland and Shrub - Hedgerows*

h2a6 - Other Native Hedgerow

*Woodland and Forest*

w1 - Broadleaved Mixed and Yew Woodland

*Rivers and Lakes - Rivers and Streams*

r2b - Other Rivers and Streams

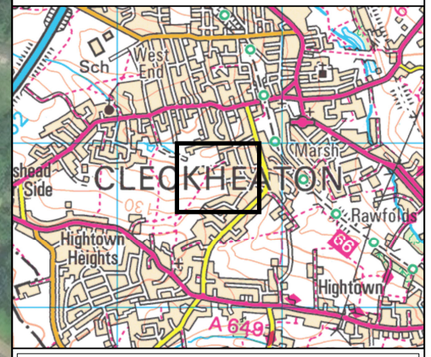
*Grassland - Modified Grassland*

g4 - Modified Grassland

*Urban - Built-up Areas and Gardens*

u1c - Artificial Unvegetated, Unsealed Surface

**Secondary Codes:**
10 - Scattered Scrub
16 - Tall Forbs
33 - Line of Trees
101 - Cattle Grazed
103 - Horse Grazed
108 - Frequently Mown
115 - Grazing and Browsing Exclosure
128 - Tall or Tussocky Sward
524 - Invasive Non-native Species
528 - Walking or Cycling Route
839 - Track




NEWETT HOMES

SLR

Lower Blacup Farm, Cleckheaton

ECOLOGICAL IMPACT ASSESSMENT

**UK HABITAT SURVEY**

**FIGURE 1**

| Scale | Date |
|---|---|
| 1:1,500 @ A3 | SEPTEMBER 2024 |

© Crown copyright [and database rights] (2024) 0100031673 OS OpenData.
Aerial Imagery (2023) Source: Maxar, Microsoft

© This drawing and its content are the copyright of SLR Consulting Ltd and may not be reproduced or amended except by prior written permission. SLR Consulting Ltd accepts no liability for any amendments made by other persons.

# Appendix A Landscape Masterplan

## Lower Blacup Farm, Cleckheaton BNG

**Biodiversity Net Gain Report**

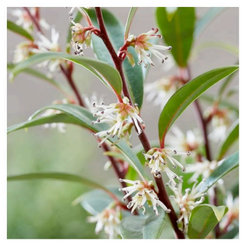
**Newett Homes Limited**

SLR Project No.: 424.065278.00001

5 September 2024

## KEY

- Site boundary
- Existing PRoW
- Existing tree/vegetation (retained)
- Proposed turf (front gardens) - 1,815m$^2$
- Rear gardens - 5,585m$^2$ (without patios)
- Proposed POS tree
- Proposed street tree
- Proposed feature tree (eg. Cherry)
- Proposed front garden tree
- Proposed native scrub mix - 325m$^2$
- Enhanced grassland (shade tolerant) - 361m$^2$
- Species rich grassland - 2,260m$^2$
- Proposed ornamental shrub - 130m$^2$
- Formal low hedgerow - 408m linear
- Native mix hedgerow - 158m linear
- Wildflower meadows - 274m$^2$
- Spring flowering bulbs - 110m$^2$
- SUDS - Wetland meadow mix - 652m$^2$
- Gravel strips



**INDICATIVE PLANTING SCHEDULE**

**TREES FOR OPEN SPACE**

| PLANT SPECIES | SIZE (GIRTH AND HEIGHT) |
|---|---|
| Betula pendula | 14-16 cm 425-600 cm ht |
| Fagus sylvatica | 14-16 cm 425-600 cm ht |
| Prunus avium 'Plena' | 14-16 cm 425-600 cm ht |
| Quercus robur | 14-16 cm 425-600 cm ht |
| Tillia cordata | 14-16 cm 425-600 cm ht |

**TREES FOR FRONT GARDENS**

| PLANT SPECIES | SIZE (GIRTH AND HEIGHT) |
|---|---|
| Carpinus betulus 'Frans Fontaine' | 12-14 cm 350-450 cm ht |
| Fagus sylvatica 'Dawyck' | 12-14 cm 350-450 cm ht |
| Malus 'Evereste' | 12-14 cm 350-450 cm ht |
| Prunus subhirtella 'Autumnalis Rosea' | 14-16 cm 450-600 cm ht |
| Sorbus cashmiriana | 14-16 cm 425-600 cm ht |

**NATIVE HEDGEROW MIX**

| PLANT SPECIES | SIZE AND AGE | % |
|---|---|---|
| Corylus avellana | B 60-80 ht 1+2 | 5 |
| Crataegus monogyna | B 60-80 ht 1+1 | 65 |
| Ilex aquifolium | B 40-60 ht 2lt | 5 |
| Ligustrum vulgare | B 60-80 ht 1+1 | 10 |
| Prunus spinosa | B 60-80 ht 1+1 | 10 |
| Viburnum opulus | B 40-60 ht 1+1 | 5 |

**ORNAMENTAL HEDGEROW**

| PLANT SPECIES | SIZE AND AGE |
|---|---|
| Fagus sylvatica | 90-120cm ht Instant Hedge |
| Carpinus betulus | 80-100cm ht Instant Hedge |
| Prunus Laurocerasus 'Otto Luyken' | 50-70cm ht (5 per linear metre) |
| Euonymus japonicus 'Jean Hugues' | 20-30cm ht (6 per linear metre) |

**NATIVE MIX**

| PLANT SPECIES | SIZE (GIRTH AND HEIGHT) | % |
|---|---|---|
| Acer campestre | B 60-90 cm ht | 20 |
| Alnus glutinosa | B 90-120 cm ht | 15 |
| Betula pendula | B 120-150 cm ht | 10 |
| Corylus avellana | B 60-90 cm ht | 15 |
| Fagus sylvatica | B 60-90 cm ht | 15 |
| Ilex aquifolium | B 40-60 cm ht | 5 |
| Viburnum opulus | B 60-90 cm ht | 15 |
| Cornus sanguinea | B 60-80 cm ht | 5 |

**ORNAMENTAL SHRUBS**

| PLANT SPECIES | SIZE | DENSITY (/m2) |
|---|---|---|
| Aucuba japonica longifolia | 5L pot 30-40 cm | 3 |
| Carex comans 'Frosted Curls' | 2L cover pot | 6 |
| Carex oshimensis 'Evergold' | 3L cover pot | 4 |
| Ceanothus 'Autumnal Blue' | 3L pot 40-60cm | 3 |
| Choisya ternata 'Aztec Pearl' | 5L pot 40-60 cm | 3 |
| Choisya x dewitteana 'Aztec Gold' | 4L pot 40-60 cm | 3 |
| Cornus alba 'Ivory Halo' | 3L pot 60-80 cm | 4 |
| Euonymous fortunei 'Emerald Gaiety' | 5L pot 30-40 cm | 4 |
| Euonymus fortunei 'Emerald 'n' Gold' | 5L pot 30-40 cm | 4 |
| Hebe albicans | 5L pot 30-40 cm | 4 |
| Lavandula angustifolia 'Hidcote' | 5L pot 20-30 cm | 4 |
| Photinia x fraseri 'Red Robin' | 5L pot 40-60 cm | 3 |
| Pieris japonica 'Little Heath' | 5L pot, 40-60cm | 4 |
| Rosmarinus officinalis | 5L pot | 4 |
| Sarcococca hookeriana 'Winter Gem' | 4.5L pot, 30-40cm | 4 |
| Skimmia japonica 'Rubella' | 3L pot 30-40 cm | 4 |
| Viburnum davidii | 5L pot | 4 |

**SPECIMEN SHRUBS**

| PLANT SPECIES | SIZE |
|---|---|
| Fatsia japonica | 20L pot 70-100 cm |
| Phormium tenax 'Purpureum' | 10L pot 80-100cm |
| Phormium tenax 'Rainbow Sunrise' | 10L pot 80-100cm |

**BULBS**

| PLANT SPECIES | SIZE (BULB GRADE) | DENSITY (/m2) |
|---|---|---|
| Crocus bicolour mix | 5-6 | 20 |
| Narcissus pseudonarcissus | 7+ | 20 |

| Rev | Date | Note |
|---|---|---|
| A | 29.08.24 | VPs added. Amended to increase BNG |

# Lower Blacup Lane, Cleckheaton

N

## Landscape Masterplan

DWG Ref. H24-0012_001A | Drwn/Chckd By: SW | Scale - 1:500 @ A1 | Date: 29/08/24 | Client: Newett Homes

NEWETT HOMES

HIGHSTONE DESIGN

Produced by Highstone Land & Planning Ltd. This drawing is copyright. All rights reserved. This drawing is for planning purposes only. Ordnance Survey (c) Crown Copyright 2024. All rights reserved. License number 100020422

# Appendix B Statutory Biodiversity Metric (supplied separately in Excel format)

## Lower Blacup Farm, Cleckheaton BNG

**Biodiversity Net Gain Report**

**Newett Homes Limited**

SLR Project No.: 424.065278.00001

5 September 2024

# Appendix C Habitat Condition Assessments

## Lower Blacup Farm, Cleckheaton BNG

**Biodiversity Net Gain Report**

**Newett Homes Limited**

SLR Project No.: 424.065278.00001

5 September 2024

| Survey Cover Sheet | | | |
|---|---|---|---|
| **Survey date/s** | 03/07/2024 | **Site name or location** | Cleckheaton |
| **Weather conditions** | Cloudy and showery day with an ambient temperature of 15°C | **Project or development name** | Cleckheaton |
| **Surveyor name** | Lucy Sumner | **On-site or off-site** | On-site |
| **Survey reference** | Baseline survey and post-development predictions | **Reason for assessment (if not baseline condition survey)** | |
| **Notes** | | | |
| | | | |

| Site or location | Condition sheets | Total number of condition sheets used, or habitat parcels | Number of parcels of each condition achieved | | | | | Notes |
|---|---|---|---|---|---|---|---|---|
| | | | Good | Fairly Good | Moderate | Fairly Poor | Poor | |
| | **Coastal** | | | | | | | |
| | **Coastal lagoons** | | | | | | | |
| | **Coastal saltmarsh** | | | | | | | |
| | **Ditches** | | | | | | | |
| | **Grassland low distinctiveness** | 5 | | | | | 5 | 2 additonal sheets used (off-site) |
| | **Grassland medium, high, very high distinctiveness** | 3 | 1 | | 2 | | | |
| | **Heathland** | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Hedgerow** | 5 | 5 | | | | | |
| | **Individual trees** | 1 | | | 1 | | | |
| | **Intertidal biogenic reefs** | | | | | | | |
| | **Intertidal hard structures** | | | | | | | |
| | **Intertidal seagrass** | | | | | | | |
| | **Intertidal sediment** | | | | | | | |
| | **Lakes** | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Limestone pavement** | | | | | | | |
| | **Line of trees** | 3 | | | 3 | | | |
| | **Orchard** | | | | | | | |
| | **Ponds** | | | | | | | |
| | **Rocky shore** | | | | | | | |
| | **Scrub** | 1 | | | 1 | | | |
| | **Sparsely vegetated land** | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Urban** | 1 | 1 | | | | | |
| | **Wetland** | | | | | | | |
| | **Woodland** | | | | | | | |
| | **Wood-pasture and parkland** | | | | | | | |

**Condition Sheet: GRASSLAND Habitat Type (low distinctiveness)**

**UK Habitat Classification (UKHab) Habitat Type**

**Grassland - Modified grassland**

**Habitat Description**

ukhab – UK Habitat Classification

| | | | |
|---|---|---|---|
| **On-site or off-site, site name and location** | On-site Cleckheaton | **Survey date and Surveyor name** | 3/7/24 Lucy Sumner |
| | | **Survey reference (if relating to a wider survey)** | |
| **Limitations (if applicable)** | | **Habitat parcel reference** | B1, B2, B4, B5, B6, B7&B8, B9 |
| | | **Grid reference** | |

| | Condition Assessment Criteria | B1 | B2 | B4 | B5 | B6 | B7&B8 | B9 | | | | Notes (such as justification) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Criterion passed (Yes or No) | | | | | | | | | | |
| A | There are 6-8 vascular plant species per $m^2$ present, including at least 2 forbs (these may include those listed in Footnote 1). **Note - this criterion is essential for achieving Moderate or Good condition.**<br><br>Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per $m^2$ (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet. | N | N | N | N | N | N | N | | | | |
| B | Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed. | N | N | N | N | N | N | N | | | | |
| C | Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble *Rubus fruticosus* agg. may be present).<br><br>Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type. | N | Y | Y | Y | Y | Y | Y | | | | |
| D | Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities. | Y | Y | N | Y | Y | Y | Y | | | | |
| E | Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens)[2]. | Y | Y | Y | Y | Y | Y | Y | | | | |
| F | Cover of bracken *Pteridium aquilinum* is less than 20%. | Y | Y | Y | Y | Y | Y | Y | | | | |
| G | There is an absence of invasive non-native plant species[3] (as listed on Schedule 9 of WCA[4]). | N | Y | Y | Y | Y | Y | Y | | | | |
| | **Essential criterion achieved (Yes or No)** | N | N | N | N | N | N | N | | | | |
| | **Number of criteria passed** | 3 | 5 | 4 | 5 | 5 | 5 | 5 | | | | |

| Condition Assessment Result (out of 7 criteria) | Condition Assessment Score | Score Achieved ×/✓ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Passes 6 or 7 criteria including passing essential criterion A | Good (3) | | | | | | | | | | |
| Passes 4 or 5 criteria including passing essential criterion A | Moderate (2) | | | | | | | | | | |
| Passes 3 or fewer criteria;<br>OR<br>Passes 4 - 6 criteria (excluding criterion A) | Poor (1) | X | X | X | X | X | X | X | | | |

**Suggested enhancement interventions to improve condition score**

**Footnotes**

**Footnote 1** – Creeping thistle *Cirsium arvense* , spear thistle *Cirsium vulgare* , curled dock *Rumex crispus* , broad-leaved dock *Rumex obtusifolius* , common nettle *Urtica dioica* , creeping buttercup *Ranunculus repens* , greater plantain *Plantago major* , white clover *Trifolium repens* and cow parsley *Anthriscus sylvestris* .

**Footnote 2** – For example, this could include small, scattered areas of bare ground allowing establishment of new species, or localised patches where not exceeding 10% cover.

**Footnote 3** – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement.

**Footnote 4** – Wildlife and Countryside Act 1981 (as amended).

**Condition Sheet: GRASSLAND Habitat Type (medium, high and very high distinctiveness)**

**UK Habitat Classification (UKHab) Habitat Types**

**Grassland - Lowland calcareous grassland**
**Grassland - Lowland dry acid grassland**
**Grassland - Lowland meadows**
**Grassland - Other lowland acid grassland**
**Grassland - Other neutral grassland**
**Grassland - Tall herb communities (H6430)** [Not to be confused with the Tall forbs secondary code – see UKHab guidance for details.]
**Grassland - Upland acid grassland**
**Grassland - Upland calcareous grassland**
**Grassland - Upland hay meadows**
**Sparsely vegetated land - Calaminarian grassland**

**Habitat Description**

ukhab – UK Habitat Classification

| | | | |
|---|---|---|---|
| **On-site or off-site, site name and location** | Cleckheaton | **Survey date and Surveyor name** | 2/9/24 Lucy Sumner |
| | | **Survey reference (if relating to a wider survey)** | |
| **Limitations (if applicable)** | Post-development predictions | **Habitat parcel reference** | |
| | | **Grid reference** | |

| | **Condition Assessment Criteria** | Species rich grassland, | B2: Enhanced grassland (shade | B1: enahnced grasslan | | | | | | | | **Notes (such as justification)** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Criterion passed (Yes or No)** | | | | | | | | | | |
| A | The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type (and relative to Footnote 3 suboptimal species which may be listed in the UKHab description).[1]<br><br>**Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.** | Y | Y | Y | | | | | | | | |
| B | Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed. | N | N | N | | | | | | | | |
| C | Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens[2]. | Y | Y | Y | | | | | | | | |
| D | Cover of bracken *Pteridium aquilinum* is less than 20% and cover of scrub (including bramble *Rubus fruticosus* agg.) is less than 5%. | Y | Y | Y | | | | | | | | |
| E | Combined cover of species indicative of suboptimal condition[3] and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area.<br><br>If any invasive non-native plant species[4] (as listed on Schedule 9 of WCA[5]) are present, this criterion is automatically failed. | Y | Y | Y | | | | | | | | |
| **Additional Criterion - must be assessed for all non-acid grassland types** | | | | | | | | | | | | |
| F | There are 10 or more vascular plant species per $m^2$ present, including forbs that are characteristic of the habitat type (species referenced in Footnote 3 and 5 cannot contribute towards this count).<br><br>**Note - this criterion is essential for achieving Good condition for non-acid grassland types only.** | Y | N | N | | | | | | | | |
| | **Essential criterion for Good condition achieved (for non-acid grassland) (Yes or No)** | Y | N | N | | | | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of criteria passed | 5 | 4 | 4 | | | | | | | | |
| **Condition Assessment Result** | **Condition Assessment Score** | **Score Achieved ×/✓** | | | | | | | | | | |
| **Acid grassland types (Result out of 5 criteria)** | | | | | | | | | | | | |
| Passes 5 criteria | Good (3) | | | | | | | | | | | |
| Passes 3 or 4 criteria | Moderate (2) | | | | | | | | | | | |
| Passes 2 or fewer criteria | Poor (1) | | | | | | | | | | | |
| **Non-acid grassland types (Result out of 6 criteria)** | | | | | | | | | | | | |
| Passes 5 or 6 criteria, including essential criterion A and additional criterion F. | Good (3) | X | | | | | | | | | | |
| Passes 3 - 5 criteria, including essential criterion A. | Moderate (2) | | X | X | | | | | | | | |
| Passes 2 or fewer criteria;<br>OR<br>Passes 3 or 4 criteria excluding criterion A and F. | Poor (1) | | | | | | | | | | | |

**Suggested enhancement interventions to improve condition score**

**Notes**

**Footnote 1** - Professional judgement should be used alongside the UKHab description.

**Footnote 2** – For example, this could include small, scattered areas of bare ground allowing for plant colonisation, or localised patches not exceeding 5% cover.

**Footnote 3** - Species indicative of suboptimal condition for this habitat type include: creeping thistle *Cirsium arvense* , spear thistle *Cirsium vulgare* , curled dock *Rumex crispus* , broad-leaved dock *Rumex obtusifolius* , common nettle *Urtica dioica* , creeping buttercup *Ranunculus repens* , greater plantain *Plantago major* , white clover *Trifolium repens* and cow parsley *Anthriscus sylvestris* . There may be additional relevant species local to the region and or site.

**Footnote 4** – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, by applying professional judgement.

**Footnote 5** – Wildlife and Countryside Act 1981 (as amended).

**Condition sheet: HEDGEROW Habitat Types**

**Habitat Type**

**Native hedgerow**
**Native hedgerow - associated with bank or ditch**
**Native hedgerow with trees**
**Native hedgerow with trees - associated with bank or ditch**
**Species-rich native hedgerow**
**Species-rich native hedgerow - associated with bank or ditch**
**Species-rich native hedgerow with trees**
**Species-rich native hedgerow with trees - associated with bank or ditch**

**Habitat Description**

ukhab – UK Habitat Classification

| | | | |
|---|---|---|---|
| **On-site or off-site, site name and location** | On-site Cleckheaton | **Survey date and Surveyor name** | 3/7/24 (baseline) and 2/9/24 (post-development predictions) Lucy Sumner |
| **Limitations (if applicable)** | Post-development predictions | **Survey reference (if relating to a wider survey)** | |

**Condition Assessment Details**

A series of ten attributes, representing key physical characteristics are used for this assessment. Each attribute is assigned to one of five functional groups (A – E) and the condition of a hedgerow is assessed according to the number of attributes from these functional groups which pass or fail the 'favourable condition' criteria.

This assessment is based on the Hedgerow Survey Handbook[1] and Favourable Conservation Status document[2]. For further clarification please refer to the Hedgerow Survey Handbook.

Best practice would be to record the species, age, spacing and other key information about all trees present along a hedgerow within the 'Habitat Description' box, as well as other key features of the hedgerow.

**Hedgerow favourable condition attributes**

| **Attributes and functional groupings (A, B, C, D and E)** | | **Criteria - the minimum requirements for 'favourable condition'** | **Criteria description** | **Habitat parcel reference** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | LB1 | LB9 | LB7&8 | LB6 | Proposed | | | | | | |
| | | | | **Grid reference** | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| **Core groups - applicable to all hedgerow types** | | | | **Criterion passed (Yes or No)** | | | | | | | | | | **Notes (such as justification)** |
| A1. | Height | >1.5 m average along length | The average height of woody growth estimated from base of stem to the top of the shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees.<br><br>Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).<br><br>A newly planted hedgerow does not pass this criterion (unless it is >1.5 m height). | Y | Y | Y | Y | Y | | | | | | |
| A2. | Width | >1.5 m average along length | The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees.<br><br>Outgrowths (such as blackthorn *Prunus spinosa* suckers) are only included in the width estimate when they are >0.5 m in height.<br><br>Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). | Y | Y | Y | N | Y | | | | | | |
| B1. | Gap - hedge base | Gap between ground and base of canopy <0.5 m for >90% of length | This is the vertical 'gappiness' of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth.<br><br>Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook). | Y | Y | Y | Y | Y | | | | | | |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B2. | Gap - hedge canopy continuity | Gaps make up <10% of total length; and<br>No canopy gaps >5 m | This is the horizontal 'gappiness' of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small).<br><br>Access points and gates contribute to the overall 'gappiness' but are not subject to the >5 m criterion (as this is the typical size of a gate). | Y | Y | Y | Y | Y | | | | | | |
| C1. | Undisturbed ground and perennial vegetation | >1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length:<br>· Measured from outer edge of hedgerow; and<br>· Is present on one side of the hedgerow (at least). | This is the level of disturbance (excluding wildlife disturbance) at the base of the hedgerow.<br><br>Undisturbed ground is present for at least 90% of the hedgerow length, greater than 1 m in width and must be present along at least one side of the hedgerow.<br><br>This criterion recognises the value of the hedgerow base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches. | Y (one side only) | Y | Y | Y | Y | | | | | | |
| C2. | Nutrient-enriched perennial vegetation | Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground. | The indicator species used are nettles *Urtica* spp., cleavers *Galium aparine* and docks *Rumex* spp. Their presence, either singly or together, does not exceed the 20% cover threshold. | N | Y | Y | N | Y | | | | | | |
| D1. | Invasive and neophyte species | >90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA[3]) and recently introduced species. | Recently introduced species refer to plants that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives. For information on archaeophytes and neophytes see the JNCC website[4], as well as the BSBI website[5] where the 'Online Atlas of the British and Irish Flora'[6] contains an up-to-date list of the status of species. For information on invasive non-native species see the GB Non-Native Secretariat website[7]. | Y | Y | Y | Y | Y | | | | | | |
| D2. | Current damage | >90% of the hedgerow or undisturbed ground is free of damage caused by human activities. | This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes.<br><br>This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (for example, excessive hedgerow cutting). | Y | Y | Y | Y | Y | | | | | | |
| **Additional group - applicable to hedgerows with trees only** | | | | | | | | | | | | | | |
| E1. | Tree class | There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient[8]), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow. | This criterion addresses if there are a range of age-classes or morphologies which allow for replacement of trees and provide opportunities for different species. | | | | | | | | | | | |
| E2. | Tree health | At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity. | This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens. | | | | | | | | | | | |

The hedgerow condition assessment generates a weighting (score) ranging from 1 - 3, which is used within the Statutory Biodiversity Metric. The scores for each are set out in the tables below.

**Condition categories for hedgerows without trees**

| Category | Category Requirements | Metric Score |
|---|---|---|
| Good | No more than 2 failures in total;<br>**AND**<br>No more than 1 failure in any functional group. | 3 |
| Moderate | No more than 4 failures in total;<br>**AND**<br>Does not fail both attributes in more than one functional group (for example, fails attributes A1, A2, B1 and C2 = Moderate condition). | 2 |

| | | |
|---|---|---|
| Poor | Fails a total of more than 4 attributes;<br>**OR**<br>Fails both attributes in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition). | 1 |
| | **Score achieved:** | |

**Condition categories for hedgerows with trees**

| Category | Category Requirements | Metric score |
|---|---|---|
| Good | No more than 2 failures in total;<br>**AND**<br>No more than 1 failure in any functional group. | 3 |
| Moderate | No more than 5 failures in total;<br>**AND**<br>Does not fail both attributes in more than one functional group (for example, fails attributes A1, A2, B1, C2 and E1 = Moderate condition). | 2 |
| Poor | Fails a total of more than 5 attributes;<br>**OR**<br>Fails both attributes in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition). | 1 |
| | **Score achieved:** | |

**Suggested enhancement interventions to improve condition score**

**Condition Sheet: INDIVIDUAL TREES Habitat Type**

**Habitat Types**

**Individual trees – Urban trees**
**Individual trees – Rural trees**
Complete a condition sheet for each tree or block of trees.

***Please see the separate Line of trees condition sheet for a line of rural trees. You should only use the Line of trees condition assessment and record that habitat type in rural locations.***

**Habitat Description**

**Individual trees (description applied to the urban or rural environment):**
Young trees over 7.5 cm in diameter at breast height whose canopies are not touching.

**Urban Perimeter / Linear Blocks and Groups (description applied to the urban environment only):**
Groups or stands of trees (size requirement as defined above) within and around the perimeter of urban land. This includes those along urban streets, highways, railways and canals, and also former field boundary trees incorporated into developments. Canopies should predominantly overlap continuously. Groups of urban trees that don't match the descriptions for woodland may be assessed within this category.

| | | | |
|---|---|---|---|
| **On-site or off-site, site name and location** | On-site Cleckheaton | **Survey date and Surveyor name** | 2/9/24 Lucy Sumner |
| **Limitations (if applicable)** | Post-development predictions | **Survey reference (if relating to a wider survey)** | |
| **Grid reference** | | **Habitat parcel reference** | |

| | Condition Assessment Criteria | Criterion passed (Yes or No) | Notes (such as justification) |
|---|---|---|---|
| A | The tree is a native species (or at least 70% within the block are native species). | Y | |
| B | The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion). | Y | |
| C | The tree is mature (or more than 50% within the block are mature)[1]. | N | |
| D | There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height. | Y | |
| E | Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark. | N | |
| F | More than 20% of the tree canopy area is oversailing vegetation beneath. | Y | |
| | **Number of criteria passed** | 4 | |

| Condition Assessment Result (out of 6 criteria) | Condition Assessment Score | Score Achieved ×/✓ |
|---|---|---|
| Passes 5 or 6 criteria | Good (3) | |
| Passes 3 or 4 criteria | Moderate (2) | X |
| Passes 2 or fewer criteria | Poor (1) | |
| Note that 'Fairly Good and Fairly Poor' condition categories are not available for this broad habitat type. | | |

**Suggested enhancement interventions to improve condition score[2]**

**Condition Sheet: LINE OF TREES Habitat Type**

**Habitat Types**

**Line of trees**
**Line of trees – associated with bank or ditch**
**Ecologically valuable line of trees**
**Ecologically valuable line of trees – associated with bank or ditch**

***Please see the separate Individual trees condition sheet for linear blocks and groups of trees in an urban setting. You should only use this Line of trees condition assessment and record this habitat type in rural locations.***

**Habitat Description**

See the Statutory Biodiversity Metric User Guide.
This assessment is based on the Hedgerow Survey Handbook[1]. For further clarifications please refer to the Handbook.
Where ancient and veteran trees are present within the line of trees, see Footnote 2 for standing advice.

| | | | |
|---|---|---|---|
| **On-site or off-site, site name and location** | On-site Cleckheaton | **Survey date and Surveyor name** | 3/7/24 Lucy Sumner |
| | | **Survey reference (if relating to a wider survey)** | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Limitations (if applicable)** | | **Habitat parcel reference** | | | | | | | | | |
| | | LB2 | LB3&4 | LB5 | | | | | | | |
| | | **Grid reference** | | | | | | | | | |
| | | | | | | | | | | | |

| | **Condition Assessment Criteria** | **Criterion passed (Yes or No)** | | | | | | | | | | **Notes (such as justification)** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | At least 70% of trees are native species. | Y | Y | Y | | | | | | | | |
| B | Tree canopy is predominantly continuous with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide. | Y | N | N | | | | | | | | |
| C | One or more trees has veteran features and or natural ecological niches for vertebrates and invertebrates, such as presence of standing and attached deadwood, cavities, ivy or loose bark. | Y | Y | Y | | | | | | | | |
| D | There is an undisturbed naturally-vegetated strip of at least 6 m on both sides to protect the line of trees from farming and other human activities (excluding grazing). Where veteran trees are present, root protection areas should follow standing advice[2]. | N | N | N | | | | | | | | |
| E | At least 95% of the trees are in a healthy condition (deadwood or veteran features valuable for wildlife are excluded from this). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity. | Y | Y | Y | | | | | | | | |
| | **Number of criteria passed** | 4 | 3 | 3 | | | | | | | | |

| **Condition Assessment Result (out of 5 criteria)** | **Condition Assessment Score** | **Score Achieved ×/✓** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Passes 5 criteria | Good (3) | | | | | | | | | | |
| Passes 3 or 4 criteria | Moderate (2) | X | X | X | | | | | | | |
| Passes 2 or fewer criteria | Poor (1) | | | | | | | | | | |

**Suggested enhancement interventions to improve condition score**

| Condition Sheet: SCRUB Habitat Type | | | |
|---|---|---|---|
| **Habitat Types** | | | |
| **Heathland and shrub - Blackthorn scrub**<br>**Heathland and shrub - Gorse scrub**<br>**Heathland and shrub - Hawthorn scrub**<br>**Heathland and shrub - Hazel scrub**<br>**Heathland and shrub - Mixed scrub**<br>**Heathland and shrub - Dunes with sea buckthorn (H2160)**<br>**Heathland and shrub - Willow scrub** | | | |
| **Habitat Description** | | | |
| | | | |
| For Dunes with sea buckthorn see: | Dunes with sea-buckthorn (Dunes with Hippophae rhamnoides) - Special Areas of Conservation (jncc.gov.uk) | | |
| For other scrub types see: | ukhab – UK Habitat Classification | | |
| **On-site or off-site, site name and location** | On-site Cleckheaton | **Survey date and Surveyor name** | 2/9/24 Lucy Sumner |
| **Limitations (if applicable)** | Post-development predictions | **Survey reference (if relating to a wider survey)** | |
| **Grid reference** | | **Habitat parcel reference** | Proposed native scrub mix |

| | Condition Assessment Criteria | Criterion passed (Yes or No) | Notes (such as justification) |
|---|---|---|---|
| A | The parcel represents a good example of its habitat type - the appearance and composition of the vegetation closely matches its UKHab description (where in its natural range).[1]<br>- At least 80% of scrub is native,<br>- There are at least three native woody species[2],<br>- No single species comprises more than 75% of the cover (except hazel *Corylus avellana* , common juniper *Juniperus communis* , sea buckthorn *Hippophae rhamnoides* (only in its restricted native range), or box *Buxus sempervirens* , which can be up to 100% cover). | Y | |
| B | Seedlings, saplings, young shrubs and mature (or ancient or veteran[3]) shrubs are all present. | Y | |
| C | There is an absence of invasive non-native plant species[4] (as listed on Schedule 9 of WCA[5]) and species indicative of suboptimal condition[6] make up less than 5% of ground cover. | Y | |
| D | The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat. | Y | |
| E | There are clearings, glades or rides present within the scrub, providing sheltered edges. | N | |
| | | **Number of criteria passed** | 4 |

| Condition Assessment Result (out of 5 criteria) | Condition Assessment Score | Score Achieved ×/✓ | |
|---|---|---|---|

| | | | |
|---|---|---|---|
| Passes 5 criteria | Good (3) | | |
| Passes 3 or 4 criteria | Moderate (2) | X | |
| Passes 2 or fewer criteria | Poor (1) | | |
| **Suggested enhancement interventions to improve condition score** | | | |
| | | | |

| Condition Sheet: URBAN Habitat Type | | | |
|---|---|---|---|
| **Habitat Types** | | | |
| **Sparsely vegetated land - Ruderal/Ephemeral**<br>**Sparsely vegetated land - Tall forbs**<br>**Urban - Allotments**<br>**Urban - Biodiverse green roof**<br>**Urban - Bioswale**<br>**Urban - Cemeteries and churchyards**<br>**Urban - Facade-bound green wall**<br>**Urban - Ground based green wall**<br>**Urban - Intensive green roof**<br>**Urban - Open mosaic habitats on previously developed land**<br>**Urban - Rain garden**<br>**Urban - Sustainable drainage system (SuDS)**<br>**Urban - Vacant or derelict land**<br>**Urban - Bare ground** | | | |
| **Habitat Description** | | | |
| | | | |
| See the Statutory Biodiversity Metric User Guide for green roofs and UK Habitat Classification (UKHab) for other habitats: | | | UKHab – UK Habitat Classification |
| **On-site or off-site, site name and location** | On-site Cleckheaton | **Survey date and Surveyor name** | 2/9/24 Lucy Sumner |
| **Limitations (if applicable)** | Post-development predictions | **Survey reference (if relating to a wider survey)** | |
| **Grid reference** | | **Habitat parcel reference** | SUDS - wetland meadow mix |

| | **Condition Assessment Criteria** | **Criterion passed (Yes or No)** | **Notes (such as justification)** |
|---|---|---|---|
| Core Criteria - must be assessed for **all urban habitat types**: | | | |
| A | Vegetation structure is varied, providing opportunities for vertebrates and invertebrates to live, eat and breed. A single structural habitat component or vegetation type does not account for more than 80% of the total habitat area. | Y | |
| B | The habitat parcel contains different plant species that are beneficial for wildlife, for example flowering species providing nectar sources for a range of invertebrates at different times of year. | Y | |
| C | Invasive non-native plant species (listed on Schedule 9 of WCA[1]) and others which are to the detriment of native wildlife (using professional judgement)[2] cover less than 5% of the total vegetated area[3].<br><br>**Note - to achieve Good condition, this criterion must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).** | Y | |
| Additional Criterion - must be assessed for **Open mosaic habitat on previously developed land** only: | | | |
| D | The parcel shows spatial variation and forms a mosaic of bare substrate PLUS:<br><br>- At least four early successional communities (a) to (i);<br><br>Communities: (a) annuals; (b) mosses/liverworts; (c) lichens; (d) ruderals; (e) inundation species; (f) open grassland; (g) flower-rich grassland; (h) heathland, (i) pools. | | |
| Additional Criteria - must be assessed for **Bioswale and SuDS** habitat types only: | | | |
| E1 | Plant species are mostly native. If non-native species are present, they should not be detrimental to the habitat or native wildlife[4]. | Y | |
| E2 | The vegetation is comprised of plant species suited to wetland or riparian situations. | Y | |
| Additional Criterion - must be assessed for **Intensive green roofs** only: | | | |

| | | | |
|---|---|---|---|
| F | The roof has a minimum of 50% native and non-native wildflowers.<br>70% of the roof area is soil and vegetation (including water features). | | |
| Additional Criterion - must be assessed for **Biodiverse green roofs** only: | | | |
| G | The roof has a varied depth of 80 – 150 mm; at least 50% is at 150 mm and is planted and seeded with wildflowers and sedums or is pre-prepared with sedums and wildflowers.<br><br>**Note – to achieve Good condition some additional habitat, such as sand piles, stones, logs etc. are present.** | | |
| | | **Essential criteria relevant for habitat type achieved (Yes or No)** | Yes |
| | | **Number of criteria passed** | 5 |

| **Condition Assessment Result** | **Condition Assessment Score** | **Score Achieved ×/✓** |
|---|---|---|
| Results for habitats requiring assessment of **3 core criteria** only **(all listed urban habitats except Open mosaic habitat on previously developed land, Bioswale, SuDS and Green roofs)**: | | |
| • Passes all 3 core criteria;<br>AND<br>• Meets the requirements for Good condition within criterion C. | Good (3) | |
| • Passes 2 of 3 core criteria;<br>OR<br>• Passes 3 of 3 core criteria but does not meet the requirements for Good condition within criterion C. | Moderate (2) | |
| • Passes 0 or 1 of 3 core criteria. | Poor (1) | |
| Results for **Green roofs** and **Open mosaic habitat on previously developed land**<br>(requiring assessment of **4 criteria** only - core criteria plus additional criterion specified for habitat type): | | |
| • Passes all 3 core criteria;<br>AND<br>• Meets the requirements for Good condition within criterion C;<br>AND<br>• Passes additional criterion relevant to specific habitat type (D, F or G). | Good (3) | |
| • Passes 2 or 3 of 4 criteria;<br>OR<br>• Passes 4 of 4 criteria but does not meet the requirements for Good condition within criterion C. | Moderate (2) | |
| • Passes 0 or 1 of 4 criteria. | Poor (1) | |
| Results for **Bioswale or SuDS** (requiring assessment of **5 criteria** - core criteria plus additional criteria specified for habitat type): | | |
| • Passes all 3 core criteria;<br>AND<br>• Meets the requirements for Good condition within criterion C;<br>AND<br>• Passes all additional criteria relevant to specific habitat type (Group E) | Good (3) | Y |
| • Passes 3 or 4 of 5 criteria;<br>OR<br>• Passes 5 of 5 criteria but does not meet the requirements for Good condition within criterion C. | Moderate (2) | |
| • Passes 2 or fewer of 5 criteria. | Poor (1) | |

**Suggested enhancement interventions to improve condition score**

**Footnotes**

# Appendix D RCA Results

## Lower Blacup Farm, Cleckheaton BNG

**Biodiversity Net Gain Report**

**Newett Homes Limited**

SLR Project No.: 424.065278.00001

5 September 2024

**Table D-1: Summary of Baseline RCA data for the Blacup Beck.**

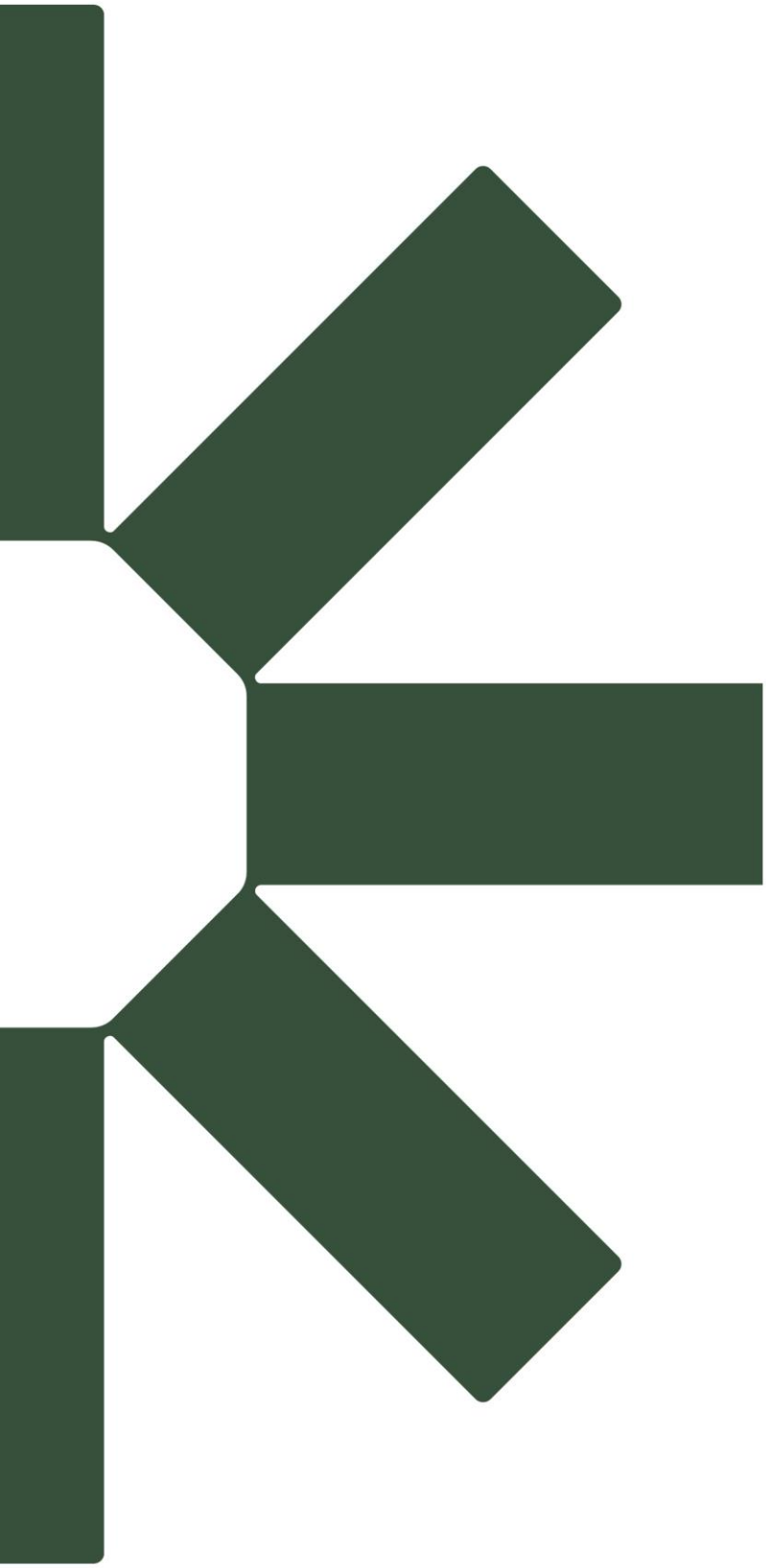
| River Name | Blacup Beck | | Modules 1-5 |
|---|---|---|---|
| Preliminary Condition Score | 0.07692308 | | |
| Condition Class | Fairly Poor | | |
| River Shape | 1.0222223 | | |
| Average river width (m) | 0.92 | | |
| Average of positive indices | 1 | | |
| Average of negative indices | -0.92308 | | |
| River Type | K | | |
| River Type indicators | A1 | Braiding index | 1 |
| | A2 | Sinuosity index | 1.25 |
| | A3 | Anabranching index | 1 |
| | A4 | Level of confinement | Confined |
| | A5 | Valley gradient | 0.0125 |
| | A6 | Bedrock reaches | FALSE |
| | A7 | Coarsest bed material size class | SI |
| | A8 | Average alluvial bed material size class | SI |
| River condition indicators: bank top | B1 | Bank top vegetation structure | 1 |
| | B2 | Bank top tree feature richness | 2 |
| | B3 | Bank top water-related features | 0 |
| | B4 | Bank top NNIPS cover | -3 |
| | B5 | Bank top managed ground cover | -4 |
| River Condition Indicators: Bank face | C1 | Bank face riparian vegetation structure | 2 |
| | C2 | Bank face tree feature richness | 1 |
| | C3 | Bank face natural bank profile extent | 3 |
| | C4 | Bank face natural bank profile richness | 2 |
| | C5 | Bank face natural bank material richness | 1 |
| | C6 | Bank face bare sediment extent | 1 |
| | C7 | Bank face artificial bank profile extent | 0 |

| River Name | Blacup Beck | | Modules 1-5 |
|---|---|---|---|
| | C8 | Bank face reinforcement extent | 0 |
| | C9 | Bank face reinforcement material severity | 0 |
| | C10 | Bank face NNIPS cover | -3 |
| River Condition Indicators: Channel-water margin | D1 | Channel margin aquatic vegetation extent | 0 |
| | D2 | Channel margin aquatic morphotype richness | 0 |
| | D3 | Channel margin physical feature extent | 0 |
| | D4 | Channel margin physical feature richness | 0 |
| | D5 | Channel margin artificial features | 0 |
| River Condition Indicators: Channel bed | E1 | Channel aquatic morphotype richness | 0 |
| | E2 | Channel bed tree features richness | 2 |
| | E3 | Channel bed hydraulic features richness | 0 |
| | E4 | Channel bed natural features extent | 1 |
| | E5 | Channel bed natural features richness | 1 |
| | E6 | Channel bed material richness | 2 |
| | E7 | Channel bed siltation | 0 |
| | E8 | Channel bed reinforcement extent | 0 |
| | E9 | Channel bed reinforcement severity | 0 |
| | E10 | Channel bed artificial features severity | -2 |
| | E11 | Channel bed NNIPS extent | 0 |
| | E12 | Channel bed filamentous algae extent | 0 |

**Table D-2: Summary of Enhancement Scenario RCA data for the Blacup Beck.**

| River Name | Blacup Beck | | Modules 1-5 |
|---|---|---|---|
| Preliminary Condition Score | 0.6923077 | | |
| Condition Class | Moderate | | |
| River Shape | 1.0222223 | | |
| Average river width (m) | 0.92 | | |
| Average of positive indices | 1 | | |
| Average of negative indices | -0.30769232 | | |
| River Type | K | | |
| River Type indicators | A1 | Braiding index | 1 |
| | A2 | Sinuosity index | 1.25 |
| | A3 | Anabranching index | 1 |
| | A4 | Level of confinement | Confined |
| | A5 | Valley gradient | 0.0125 |
| | A6 | Bedrock reaches | FALSE |
| | A7 | Coarsest bed material size class | SI |
| | A8 | Average alluvial bed material size class | SI |
| River condition indicators: bank top | B1 | Bank top vegetation structure | 1 |
| | B2 | Bank top tree feature richness | 2 |
| | B3 | Bank top water-related features | 0 |
| | B4 | Bank top NNIPS cover | 0 |
| | B5 | Bank top managed ground cover | -4 |
| River Condition Indicators: Bank face | C1 | Bank face riparian vegetation structure | 2 |
| | C2 | Bank face tree feature richness | 1 |
| | C3 | Bank face natural bank profile extent | 3 |
| | C4 | Bank face natural bank profile richness | 2 |
| | C5 | Bank face natural bank material richness | 1 |
| | C6 | Bank face bare sediment extent | 1 |
| | C7 | Bank face artificial bank profile extent | 0 |

| River Name | Blacup Beck | | Modules 1-5 |
|---|---|---|---|
| | C8 | Bank face reinforcement extent | 0 |
| | C9 | Bank face reinforcement material severity | 0 |
| | C10 | Bank face NNIPS cover | 0 |
| River Condition Indicators: Channel-water margin | D1 | Channel margin aquatic vegetation extent | 0 |
| | D2 | Channel margin aquatic morphotype richness | 0 |
| | D3 | Channel margin physical feature extent | 0 |
| | D4 | Channel margin physical feature richness | 0 |
| | D5 | Channel margin artificial features | 0 |
| River Condition Indicators: Channel bed | E1 | Channel aquatic morphotype richness | 0 |
| | E2 | Channel bed tree features richness | 2 |
| | E3 | Channel bed hydraulic features richness | 0 |
| | E4 | Channel bed natural features extent | 1 |
| | E5 | Channel bed natural features richness | 1 |
| | E6 | Channel bed material richness | 2 |
| | E7 | Channel bed siltation | 0 |
| | E8 | Channel bed reinforcement extent | 0 |
| | E9 | Channel bed reinforcement severity | 0 |
| | E10 | Channel bed artificial features severity | 0 |
| | E11 | Channel bed NNIPS extent | 0 |
| | E12 | Channel bed filamentous algae extent | 0 |



Making Sustainability Happen