BIODIVERSITY NET GAIN DESIGN STAGE ASSESSMENT

JULY 2024

Hogshaw Farm,
Fairfield,
Buxton,
SK17 7HN

URBAN GREEN

QUALITY MANAGEMENT

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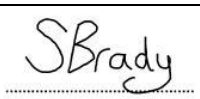
Checked By:	Shannon Brady	**Signature:**		**Qualifications:**	Biodiversity Net Gain Consultant

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02	21/03/2023	Updates to habitat classifications	SC	SB
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NON-TECHNICAL EXECUTIVE SUMMARY

Barratt Homes are proposing to develop land at Hogshaw Farm in Fairfield, Buxton (hereafter referred to as 'the site'). The proposals include the development of the site into a residential estate with associated hard and soft landscaping.

Urban Green have been appointed to complete a Biodiversity Net Gain Design Stage Assessment in order to assess the change in value to the environment provided by the proposed development.

The Assessment was conducted using the Biodiversity Metric 3.1 to calculate the pre-and post-development biodiversity habitat units of the site for the proposed development. The results of this calculation are summarised in the following table:

		Habitat Unit Change					Net change in Biodiversity	
	On-site baseline	Retained	Lost	Enhanced	Created	On-site post development	Habitat units	%
Area Habitat Units	12.71	-	-12.71	-	+23.73	23.73	+11.03	**+86.76**
Linear Hedgerow Units	0.91	0.91	-	-	+0.18	1.09	+0.18	**+19.85**
Linear River Units	0.51	0.51	-	-	-	0.51	0	**0**

Overall, the current landscape proposals for the development of the site produce an 86.76% net gain in area habitat units, a 19.85% net gain in linear hedgerow units, and no net change in river units. Overall, it demonstrates that the post-development habitats on site will provide more ecological benefit to wildlife than the habitats currently found on site and the development is in line with the relevant National Planning Policy Framework and Local Planning Policies. The proposed development also satisfies the trading rules.

To ensure habitats are maintained at the expected condition, a 30-year management plan should be implemented post-development (Urban Green, 2024a).

CONTENTS

1 Introduction

1.1 Background to the Scheme

Barratt Homes are proposing to develop land at Hogshaw Farm in Fairfield, Buxton (hereafter referred to as 'the site'). The proposals include the construction of approximately 116 residential units with associated hard and soft landscaping.

Urban Green have been appointed to complete a Biodiversity Net Gain Design Stage Assessment in order to assess the change in value to the environment provided by the proposed development.

The author of the report is Biodiversity Net Gain Consultant, Sarah Child. Sarah has experience providing consulting services in Biodiversity Net Gain for a range of development schemes, both residential and commercial, across the UK.

1.2 Site Context

The site is located at National Grid Reference SK 06584 74409 and comprises a total area of approximately 5.6ha (see Figure 1).

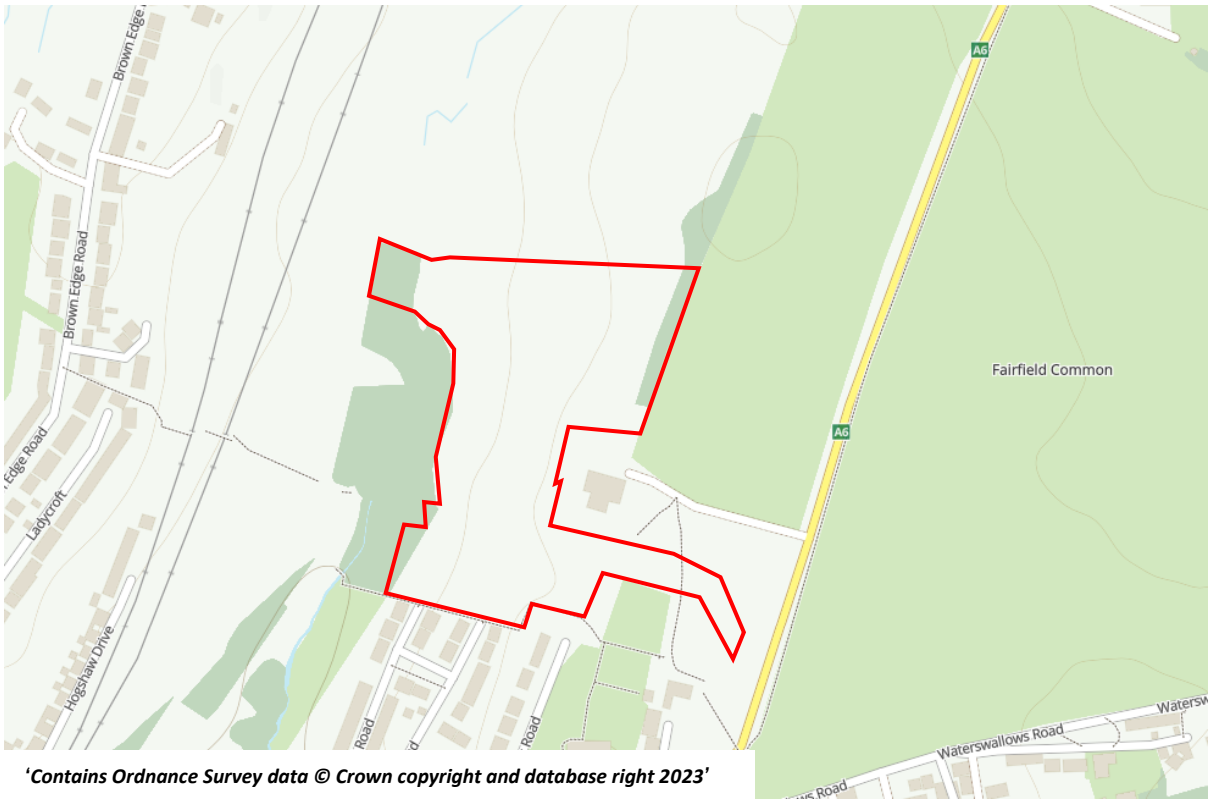

Figure 1 – Site Extent

The site is located in the rural-urban fringe of Buxton, approximately 1.5km north-east of the town centre. The A6 lies approximately 50m east of the site, with Nun Brook approximately 20m west of the site. Residential housing lies immediately south of the site, with areas of recreational green space to the east and west and agricultural land to the north. An industrial unit is present along the central aspect of the eastern boundary of the site.

1.3 Purpose of this Report

This report has been produced to document the methods, results and conclusions of a BNG Design Stage Assessment that was undertaken on site. The advice herein is based on both desk and field-based studies and intends to fulfil the following purposes:

- Ensure the core principles of Biodiversity Net Gain including the mitigation hierarchy are applied;
- Identify the baseline habitats present on site (pre-development), assess the condition and provide an indication of the ecological value of those habitats;
- Identify the post-development habitats present on site, assess the possible target condition and provide an indication of the likely importance of those habitats;
- Calculate the overall change in biodiversity score from pre- to post-development habitats (measured as habitat units).

1.4 Planning Context

BNG means leaving biodiversity in a better state than it was before. As part of the Government's 25 Year Environment Plan, this requirement is being introduced and mandated for all developments. National planning policy and several Local Plans already require developments to deliver BNG.

Currently the National Planning Policy Framework (NPPF, 2021) details:

Paragraph 174 of the NPPF states:

Planning policies and decisions should contribute to and enhance the natural and local environment by:

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;

The High Peak Borough Local Plan was adopted in 2016. Biodiversity Net Gain is not directly mentioned within the documents, however, there are references to biodiversity and conservation throughout and discussed more specifically the local plan under Policy S1:

- Minimising the risk of damage to areas of importance for nature conservation and/or landscape value, both directly and indirectly and ensuring that there is suitable mitigation for a net gain in biodiversity and the creation of ecological networks.

Policy EQ 5 (Biodiversity) also discusses the following:

The biodiversity and geological resources of the Plan Area and its surroundings will be conserved and where possible enhanced by ensuring that development proposals will not result in significant harm to biodiversity or geodiversity interests.

- Conserving and enhancing regionally and locally designated sites. On these sites the Council will not permit any development proposal which would directly or indirectly result in significant harm to geological and biodiversity conservation interests, unless it can be demonstrated that:
    - there is no appropriate alternative site available; and

- all statutory and regulatory requirements relating to any such proposal have been satisfied; and
- appropriate conservation and mitigation measures are provided, such mitigation measures should ensure as a minimum no net loss and wherever possible net gain for biodiversity;
- or if it is demonstrated that this is not possible;
- the need for, and benefit of, the development is demonstrated to clearly outweigh the need to safeguard the intrinsic nature conservation value of the site and compensatory measures are implemented

1.5 Hogshaw Railway Local Wildlife Site (LWS)

The Hogshaw Railway Local Wildlife Site is a 7-hectare non-statutory designated site along a railway line comprising semi-natural grassland and open mosaic habitat, some of which is within the red line boundary of the site. While Local Wildlife Sites have no direct legal protection, they should receive protection through the planning system.

The High Peak Borough Council states in Policy DS 10:

- Development will be subject to compliance with other relevant Local Plan policies, and;
- Woodland corridors within the site which provide linking habitats to the adjacent Local Wildlife Site should also be retained.

The targets for a number of policies, including Policy EQ5 Biodiversity, states:

- To maintain and enhance the quantity and quality of Sites of Special Scientific Interest, Sites of Importance for Nature Conservation and local wildlife sites.

The site includes an area of semi-natural grassland and broadleaved woodland which is part of the Local Wildlife Site (Figure 2).

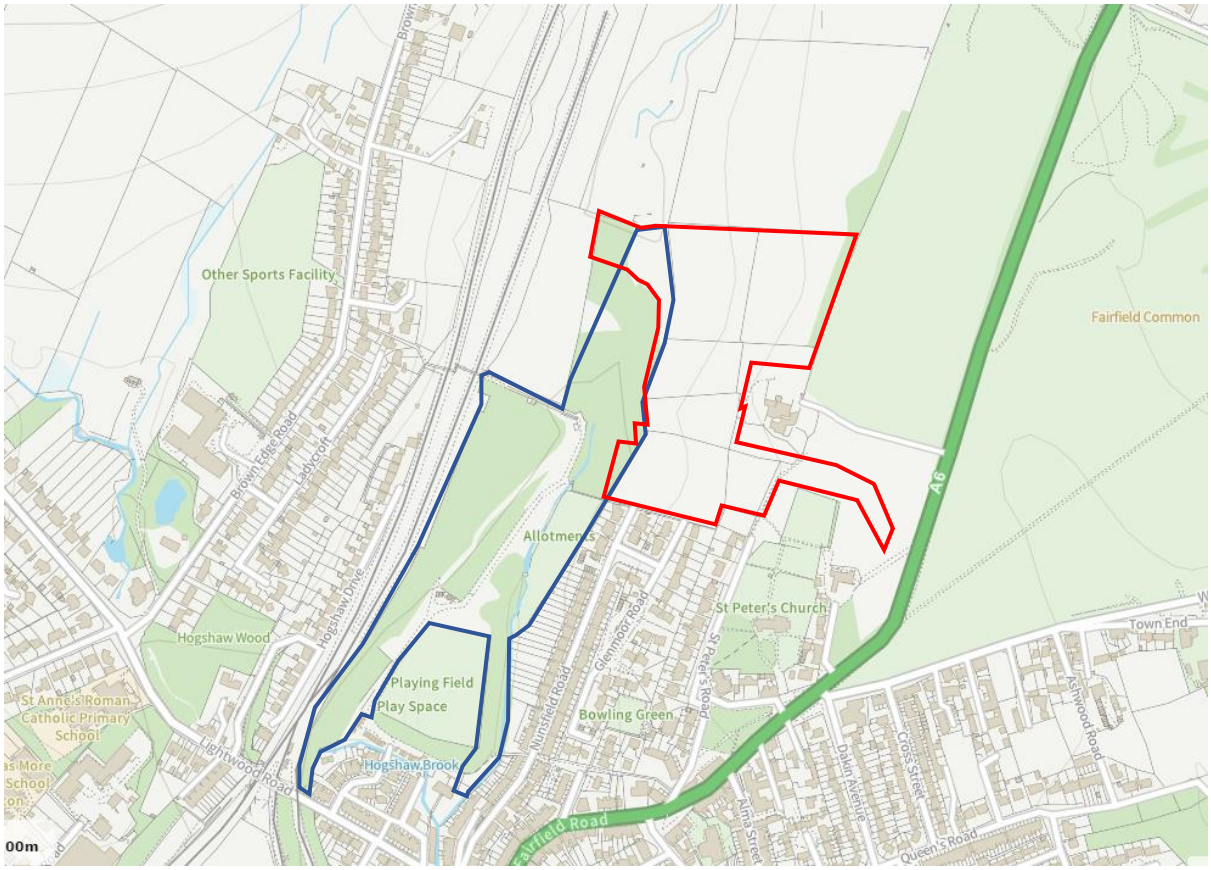

Figure 2 – Site boundary (red polygon) and the Railway Land Hogshaw Local Wildlife Site (LWS) (blue polygon) (Derbyshire Biological Records Centre, 2022)

1.6 Good Practice Principles

To ensure holistic development that makes a lasting positive change to the site's biodiversity, the Good Practice Principles as detailed in Biodiversity Net Gain: Good Practice Principles for Development (Baker *et al.*, 2019) must be followed. Key principles include:

- Following the 'Mitigation Hierarchy':
    - Avoid impacts on biodiversity
    - Minimise impacts on biodiversity
    - Compensate for biodiversity losses on site
    - Compensate for biodiversity loss off site
- Avoid irreplaceable habitats and losing biodiversity that cannot be offset elsewhere;
- Address risks including difficulty and time of habitat creation and enhancement;
- Make a measurable net gain contribution calculated with a suitable metric with limitation and assumptions clearly identified;
- Achieve the best outcome for biodiversity creating lasting long-term benefits that exceed current expectations;

2 Previous Surveys

2.1 Preliminary Ecological Appraisal (PEA)

A preliminary ecological appraisal (PEA) was conducted on the site in October 2022 by Urban Green. This constituted a desk-based study and a field survey. Key information obtained is summarised in Tables 1 and 2; full details can be found within the PEA (Urban Green, 2023). Due to the size and low impact of the proposed development, a 1km Local Data Search was conducted as it is deemed an appropriate distance for the Zone of Influence.

Table 1 – Designated Sites within the Search Areas

Designated Site	Approx. Distance from Site	Details
Statutory designated sites		
Peak District Dales Special Area of Conservation (SAC)	1.3km south-east	A large site with various features that contribute to its designation. Important habitats include Semi-natural dry grasslands and scrubland facies on calcareous substrates (Important orchid sites), Tilio-Acerion forests of slopes, screes and ravines (Priority feature). White-clawed crayfish are present and are also a primary reason for the designation.
South Pennine Moors SAC / Peak District Moors Special Protection Area (SPA)	2.6km west	A large site with a number of important habitats, including European dry heaths, Blanket bogs, Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles.
Non-statutory designated sites		
Railway Land Hogshaw Local Wildlife Site (LWS)	Onsite	A site of 7 hectares comprising a mosaic of habitats along a railway line.

The site also falls within the Impact Risk Zone of the following Statutory Sites, based on consultation with MAGIC:

- Waterswallows Quarry SSSI – Located 1.4km east of the site.
- The Wye Valley SSSI – Located 1.3km south-east of the site.
- Topley Pike and Deep Dale SSSI – Located 3.4km south-east of the site.
- Poole's Cavern and Grin Low Wood SSSI – Located 2.2km south of the site.
- Goyt Valley SSSI – Located 2.6km west of the site.
- Leek Moors SSSI – Located 3.9km south-west of the site.

Table 2 – Summary of the PEA (2023b)

Flora/Fauna	Results
Vascular plants	7 records of notable vascular plant species were returned, which are of local and national importance, including marsh cinquefoil (*Potentilla palustris*), wall whitlow grass (*Draba muralis*), and spring cinquefoil (*Potentilla tabernaemontani*). However, the site holds limited potential for vascular plants and no rare or notable plants were present on site.
Invertebrates	One record of notable invertebrate was received within the data search comprising small heath (*Coenonympha pamphilus*). Suitable habitat for invertebrate species on the site is limited and notable invertebrates are not considered present.
White-clawed crayfish (*Austropotamobius pallipes*)	There were no previous records of white-clawed crayfish returned in the desk search. The presence of Nun Brook on site may provide suitable habitat for white-clawed crayfish. White-clawed crayfish may be present.
Amphibians	Three records of great crested newt (GCN) (*Triturus cristatus*) were returned, with the closest record located approximately 600m south from 2018. GCN are a European Protected Species (EPS) protected through The Conservation of Habitats and Species Regulations (2017), the Wildlife and Countryside Act (1981), Section 41 of the NERC Act (2006) and are a Lancashire BAP species for Derbyshire. No ponds were present on site though there was one pond within 250 m, though this has a below average suitability score for GCN. GCN were not considered present on the site. No other records of amphibians were returned within the data search. The mosaic of grassland, woodland and scrub habitats, and the presence of Nun Brook on site may provide suitable conditions for other common amphibians.
Reptiles	There were no records of reptiles on the site. The majority of habitats on site lack the quality and structure required to support reptiles, however, the woodland and brook may provide suitable habitat for shelter, commuting and foraging.
Birds	A total of 11 records of protected or notable birds were returned within 1km of the site. Of these records, all are listed on either the amber or red lists of Birds of Conservation Concern 2021. The majority are on Section 41 of the NERC Act 2006 and are listed on the Lancashire BAP. The site has limited potential to support ground nesting and wintering birds. Passerine bird species are more likely to use the site, specifically the woodland and scrub. The site provides suitable foraging habitat for birds of prey and nesting potential for barn owls.
Badger (*Meles meles*)	Six records of badger within 1km of the site were returned in the data search, although the most recent record was from 2013. Badgers are protected the Protection of Badgers Act 1992 and are listed on the Lancashire BAP. No evidence of badger was found, however the site contains suitable habitats for foraging and sett creation. Badgers may be present on site.
Bats	Twenty-four records of bat roosts were returned during the data search relating to three confirmed bat species; common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), and noctule (*Nyctalus noctula*), and three unconfirmed species. Two records were related to bat roosts, the closest being approximately 500m south of the site in 1999. All species of bat are EPS protected through The Conservation of Habitats and Species Regulations (2017), the Wildlife and Countryside Act (1981), and soprano pipistrelle and noctule are also listed on Section 41 of the NERC Act (2006) and the Lancashire BAP. There were structures and trees on site which could support roosting bats and the site was considered to have moderate value for foraging and commuting bats.

Flora/Fauna	Results
Hedgehog (*Erinaceus europaeus*)	The data search returned four records of hedgehog within 1km of the site. The broadleaved woodland and scrub and will provide suitable cover and foraging habitats, as well as provide connectivity to habitats of higher value to this species. Hedgehogs are potentially present.
Brown hare (*Lepus europaeus*)	One record of brown hare was returned within the data search located approximately 160m east of the site from 2016. Brown hare are protected through the WCA (1981) and Section 41 of the NERC Act (2006) and the Lancashire BAP. The presence of grassland and woodland edges provide suitable habitat for brown hare, though was no field evidence of their presence.
Water vole (*Arvicola amphibius*)	One record of water vole was returned within the data search located approximately 800m south of the site from 2013. Water vole are protected through the WCA (1981) and on the Lancashire BAP. The section of the brook on the site is considered unsuitable for water vole, and there was no field evidence of the species. Water vole are not considered present.
Fish	Three records of brown trout (*Salmo trutta*) were returned within the data search, all located approximately 750m south of the site with the most recent from 2015. Brown trout are listed on Section 41 of the NERC Act (2006) and the Lancashire BAP. The watercourse on site (Nun Brook) was not considered suitable for fish.
Invasive species	The data search returned records of 31 invasive, non-native plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) within 1km of the site. Species were Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*), and Canadian waterweed (*Elodea canadensis*). Himalayan balsam and Japanese knotweed were observed on site during the field survey.

3 Methods

3.1 Sources of Information

Table 3 – Desk Study Sources of Information

Source	Date Consulted	Information Sought
MAGIC website (www.magic.gov.uk)	30/09/2022	Locations of statutory designated sites within 1km of the site boundary. Locations of the designated sites within the National Site Network (Ramsar, SAC and SPA) within 5km of the site boundary. Locations of European Protected Species Licences (EPSL) and Class Licences within 1km.
Natural England (https://designatedsites/.naturalengland.org.uk/)	30/09/2022	Relevant statutory designated site citations.
JNCC (https://jncc.defra.gov.uk/	30/09/2022	Information on European wildlife sites. Details of relevant Section 41 species and habitats.
Derbyshire Biological Records Centre (DerBRC)	03/10/2022	Locally designated wildlife sites within 1km of site boundary. Records of protected and notable species within 1km of the site boundary.
Derbyshire Local Biodiversity Action Plans	03/10/2022	Species and habitats which are given special conservation status at the local level.
Main River Map (Environment Agency)	03/10/2022	The main river map shows which rivers in England are designated as 'main rivers'. Other rivers are called 'ordinary watercourses'.
Preliminary Ecological Appraisal (Urban Green, 2023)	17/10/2022	Notable species, habitats and designations identified on site and within a 1km radius.

Source	Date Consulted	Information Sought
The Biodiversity Metric 3.1 *Natural England Publications (http://nepubprod.appspot.com/publication/6049804846366720)*	19/07/2024	The Biodiversity Metric 3.1, including the tool itself, user guides and reference documentation associated with the tool.

3.2 Site Mapping

3.2.1 Existing Habitat (Baseline)

The site was subject to a field survey on the 5th of October 2022, by Jake Healy, Ecologist, and Shannon Brady, Biodiversity Net Gain Consultant. The weather conditions were 15°c, overcast (8/8 oktas), with a wind speed of 2 on the Beaufort scale and consistent rain throughout.

Habitat types were identified and recorded using the Coreo habitat mapping application (version V3.1) which utilises UKHab classifications (Butcher *et al.* 2020). Habitat types were based on the UKHab guidance provided and the assessor's best judgment while using these guidelines. These habitats were subsequently mapped using ESRI ArcGIS Pro software, and habitat areas and lengths were calculated to demonstrate habitats within the proposed development and the surrounding area. The baseline habitat map is displayed in Appendix 1. Secondary codes were also used to provide additional information which is not covered by the primary code allocated to the habitat; a full list of primary and secondary codes used within this assessment can be found in Appendix 2.

Plant species were identified and recorded and species listed as protected in the *Wildlife and Countryside Act 1981* (as amended) and those which are indicators of important and/or uncommon habitats, were searched for during the survey. Any invasive species, including those listed on the revised (April 2010) Schedule 9 of the *Wildlife and Countryside Act 1981* were also searched for during the field survey.

3.2.2 Post-Development Habitats

The planning layout as provided by Urban Green (2024b) (see Appendix 3) was provided in PDF and DWG format and used to categorise the proposed habitats and calculate the associated areas and lengths.

3.3 The Biodiversity Metric 3.1

The BNG calculation was undertaken utilising The Biodiversity Metric 3.1 from Natural England (full calculation available Urban Green, 2024c) using data obtained from the field survey.

The calculation was performed by a technically competent and experienced person as detailed in British Standard BS8683 - Suitably qualified person –definition in BS8683:2020.

The Biodiversity Metric 3.1 uses habitat features as a proxy measure for capturing the value and importance of nature. The metric considers the size, ecological condition, location and proximity to nearby 'connecting' features. The metric enables assessments to be made of the present and forecast future biodiversity value of a site.

3.4 Habitat Scoring

The Biodiversity Metric 3.1 supplies reference documents and user guides to accurately evaluate and assess the different habitats on site. The methodology for the baseline and post development calculations are demonstrated in the following sections.

3.4.1 Minimum Mapping Units (MMU)

The UKHab classification system can be applied at various levels – fine scale, suitable for smaller sites, and large scale, used for broader landscapes. The fine scale level, which acknowledges areas of minimum 25m^2 and lengths of 5m, is considered appropriate for this site.

3.4.2 Baseline Units

To assess the quality of a habitat, and therefore calculate the units scored, the Biodiversity Metric 3.1 utilises three scoring factors detailed as follows:

Condition

The condition of a habitat is assessed utilising the Condition Sheets provided for each habitat type. These list positive indicators for each habitat and indicate how many of these indicators need to be present to meet certain thresholds of condition. These condition sheets can be found in Biodiversity Metric 3.1 Technical Supplement Part 1a (Natural England, 2022). Condition sheets used within this assessment for pre- and post-development habitats are **Grassland (Low), Grassland (Medium, High, Very High), Scrub, Woodland and forest, Pond, Urban, Hedgerows, Line of trees and Other rivers and streams (MoRPh assessment)** (Table 4).

Nun Brook, which is categorised as 'other rivers and streams', was assessed using the MoRPH River Survey method (Section 3.5).

Table 4 – Conditions Sheets for Habitat Assessment

Condition Sheet	Habitats Assessed
Area Habitats	
Grassland (Medium, High, Very High)	Other neutral grassland
Grassland (Low)	Modified grassland
Pond	Pond (Non-Priority)
Scrub	Mixed Scrub
Woodland and forest	Other woodland; broadleaved
Pond	Ponds (Non-priority habitat)
Urban Tree	Urban trees
Linear Habitats	

Condition Sheet	Habitats Assessed
Line of trees	Line of trees
MoRPh River Survey	Other rivers and streams

Distinctiveness

The distinctiveness of each habitat is automatically assigned by the tool, based upon national records of the occurrence and rarity of each habitat. Table 5 provides the basis of the distinctiveness assessment for area habitats.

Table 5 – Distinctiveness Assessment

Distinctiveness Categories		
Category	**Scores**	**Description**
Very High	8	Priority habitats as defined in Section 41 of the Natural Environment and Rural Communities (NERC) Act that are highly threatened, internationally scarce and require conservation action e.g. blanket bog.
High	6	Priority habitats as defined in Section 41 of the NERC Act requiring conservation action e.g. lowland fens.
Medium	4	Semi-natural habitats not classed as a Priority Habitat.
Low	2	Habitat of low biodiversity value. Temporary grass and clover ley; intensive orchard; rhododendron scrub.
Very Low	0	Little or no biodiversity value e.g. hard standing or sealed surface.

Strategic Significance

The idea of strategic significance works at a landscape scale. It gives additional unit value to habitats that are in preferred locations for biodiversity and other environmental objectives. Strategic significance utilises published local plans and objectives to identify local priorities for targeting biodiversity and nature improvement, such Nature Recovery Areas, local biodiversity plans, National Character Area 14 objectives and green infrastructure strategies (see Table 6).

The Railway Land Hogshaw Local Wildlife Site (LWS) is considered High Strategic Significance as it is a non-statutory designated site.

Table 6 – Strategic Significance Assessment

Strategic Significance Categories	
Category	**Score**
High strategic significance High potential & within area formally identified in local policy	1.15
Medium strategic significance Good potential but not in area defined in local policy	1.1

Strategic Significance Categories	
Category	**Score**
Low Strategic Significance Low potential and not in area defined in local policy	1

3.4.3 Post-Development

Post-development habitats are subject to the same condition assessments as baseline habitats, based on information provided by the proposed landscape layout and planting proposals (Appendix 3). Two additional factors are considered within post-development landscapes which are detailed below.

Temporal Multiplier

For post development habitat creation or enhancement, a risk multiplier will be automatically applied by the tool to account for the period of diminished ecological value while the habitat reaches the targeted post development condition. This time and therefore risk multiplier differs between habitat types, if the habitat is being created or enhanced and how the habitat is to be managed. The predetermined multiplier is based on the average time to meet targeted condition assuming good practice principles and appropriate management strategies are applied.

Difficulty Multipliers

A risk multiplier will be automatically applied by the tool to account the 'difficulty' of habitat-specific enhancement or creation. There are two separate difficulty multipliers assigned to each habitat, one for creation and one for enhancement/restoration, recognising that the technical challenges will not necessarily be the same for both.

3.5 MoRPH River Survey

Condition of the linear river habitat present on site was assessed by a Modular River Physical Survey (MoRPh Survey) undertaken by a certified ecologist. Assessment of linear river habitats condition is based on the extent and diversity of a number of physical features within in both the river channel and riparian as well as the extent and type of any human modifications. This assessment is implemented in two parts:

- A field based sub-reach scale assessment that captures channel dimensions, physical features / habitats, vegetation structural features, and human interventions to assess the condition of the river at the development site, taking into account the type of river.
- A desk-based reach-scale assessment to define river type of the homogenous reach of the river to be affected by development.

The field element of the assessment included five MoRPh field surveys conducted on contiguous lengths (modules) of river. Each MoRPh module covers a river length that is approximately twice the river width (10m). These five contiguous modules covered a sub reach of the river 50m in length. Due to the small length of the river present within the redline boundary, (approximately 61m) it was not necessary to survey more than one subreach to assess the condition of the river. The subreach sampled extended outside of the red line boundary as, due to a portion of the stream being culverted, there was an

insufficient length within the boundary to produce a condition score via the MoRPh survey method. Despite this, the allocated condition score is still considered to be accurate as the physical and hydrological characteristics of the stream outside of the site boundary remained consistent with the habitat within the boundary.

The River Condition Assessment captures information on sediments, vegetation, morphological and water-related features; and the extent and severity of physical modification within the channel, channel margins, banks, and riparian zone (to 10m from the bank tops).

3.6 Constraints to the Survey

Whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment.

The conclusions and recommendations detailed in this report are based upon the site redline boundary and the development proposals as outlined by the client at the time of writing. Should there be any changes to the site redline boundary or development proposals at a later stage, this assessment should be reviewed to determine whether any amendments or additional survey work is required.

Best possible effort was made during the mapping process to ensure that the habitat map accurately represents the area of habitats present on site. Some margin of error is possible due to the continuous and difficult to define nature of habitat boundaries, however this margin of error has been minimised using professional opinion of two experienced ecologists and up to date aerial imagery. As such this is not expected to be a significant constraint and affect the overall Biodiversity Net Gain Calculation provided within this report.

4 Baseline Habitat Assessment

Baseline habitat condition was assessed following the methodology outlined in Section 3.4. Habitat descriptions and the results of this assessment are provided below. The habitats have been given reference numbers for clarity regarding in-text and the metric calculation (Urban Green, 2024c) illustrates the numerical data. Full habitat descriptions can be found in the PEA (Urban Green, 2023).

4.1 Area Habitats

4.1.1 1) Grassland – Modified grassland (P1)

The majority of the site comprised various areas of modified grassland in use as agricultural grazing land separated by a number of fence lines. There were five parcels of modified grassland on site.

Parcel 1 comprised land grazed by sheep with short sward heights and contained perennial rye grass (*Lolium perenne*), with occasional cock's foot (*Dactylis glomerata*), dandelion (*Taraxacum agg.*), creeping buttercup (*Ranunculus repens*), ribwort plantain (*Plantago lanceolata*), common sorrel (*Rumex acetosa*), and creeping thistle (*Cirsium arvense*). Unmanaged areas at the edges of the fields included common nettle (*Urtica dioica*), curly dock (*Rumex crispus*), Yorkshire fog (*Holcus lanatus*) and occasional broad-leaved dock (*Rumex obtusifolius*). Stands of Japanese knotweed (*Reynoutria japonica*) and Himalayan balsam (*Impatiens glandulifera*) were also present within this parcel along its southern periphery.

Photograph 1 – Modified grassland parcel 1, grazed area

Table 7 – Condition Assessment for Modified Grassland

UK Hab Classification	Modified Grassland				
Condition Sheet	Grassland (Low)				
Condition Criteria 1.	There must be 6-8 species per m2. If a grassland has 9 or more species per m2 it should be classified as a medium distinctiveness grassland habitat type.	Fail	Condition Criteria 5.	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	Pass
Condition Criteria 2.	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,	Fail	Condition Criteria 6.	Cover of bracken less than 20%.	Pass

	birds and small mammals to live and breed.				
Condition Criteria 3.	Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area.	Pass	Condition Criteria 7.	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981).	Fail
Condition Criteria 4.	Physical damage is evident in less than 5% of total grassland area.	Pass			
Condition	Poor	Passes 4 of 7 criteria and fails essential criterion 1.			
Distinctiveness		Low			

4.1.2 2 & 3) Grassland – Modified grassland (P2 and 3)

The second and third parcels are located in the centre of the site and the south of the site and are similar to the grazed section in Parcel 1, exhibiting a short sward height with a similar species composition. These parcels had a large presence of rabbit burrows and droppings.

Photograph 2 – Modified grassland parcel 2

Photograph 3 -Modified grassland parcel 3

Table 8 – Condition Assessment for Modified Grassland

UK Hab Classification	Modified Grassland				
Condition Sheet	Grassland (Low)				
Condition Criteria 1.	There must be 6-8 species per m2. If a grassland has 9 or more species per m2 it should be classified as a medium distinctiveness grassland habitat type.	Fail	Condition Criteria 5.	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	Pass
Condition Criteria 2.	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	Fail	Condition Criteria 6.	Cover of bracken less than 20%.	Pass

	mammals to live and breed.				
Condition Criteria 3.	Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area.	Pass	Condition Criteria 7.	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981).	Pass
Condition Criteria 4.	Physical damage is evident in less than 5% of total grassland area.	Pass			
Condition	Poor	Passes 5 of 7 criteria and fails essential criterion 1.			
Distinctiveness		Low			

4.1.3 4) Grassland – Modified grassland (P4)

Parcel 4 was unmanaged with a tall sward height and contained cock's foot, creeping thistle, and Yorkshire fog were also present with occasional creeping buttercup, bramble (*Rubus fruticosus agg.*), greater plantain (*Plantago major*), and cow parsley (*Anthriscus sylvestris*). Scattered trees were also present within the parcel comprising occasional cherry (*Prunus avium*), horse chestnut (*Aesculus hippocastanum*), and spruce (*Picea* spp.). Large stands of Japanese knotweed were also present. This area of grassland also fell within the Railway Land Hogshaw LWS, therefore it has been allocated a high strategic significance.

Photograph 4 – Modified grassland parcel 4

Table 9 – Condition Assessment for Modified Grassland

UK Hab Classification	Modified Grassland				
Condition Sheet	Grassland (Low)				
Condition Criteria 1.	There must be 6-8 species per m2. If a grassland has 9 or more species per m2 it should be classified as a medium distinctiveness grassland habitat type.	Fail	Condition Criteria 5.	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	Pass
Condition Criteria 2.	Sward height is varied (at least 20% of the sward is	Fail	Condition Criteria 6.	Cover of bracken less than 20%.	Pass