



Rochdale BSF

BIODIVERSITY NET GAIN REPORT

October 2023

FPCR Environment and Design Ltd

Registered Office: Lockington Hall, Lockington, Derby DE74 2RH

Company No. 07128076. [T] 01509 672772 [E] mail@fpcr.co.uk [W] www.fpcr.co.uk

This report is the property of FPCR Environment and Design Ltd and is issued on the condition it is not reproduced, retained or disclosed to any unauthorised person, either wholly or in part without the written consent of FPCR Environment and Design Ltd.

UKHab Materials: © UKHAB LTD, under licence. No onward licence implied or provided. All rights reserved
<https://ukhab.org/commercial-eula/>

Rev	Issue Status	Prepared / Date	Approved / Date
-	DRAFT	PRA / 12.10.23	JD / 23.10.2023
-	ISSUE	PRA / 12.10.23	JD / 23.10.2023

CONTENTS

1.0	INTRODUCTION	2
2.0	METHODOLOGY.....	7
3.0	BASELINE CONDITIONS.....	8
4.0	PROPOSED DESIGN.....	11
5.0	BIODIVERSITY NET GAIN (BNG) METRIC.....	17
6.0	BIODIVERSITY NET GAIN PRINCIPLES	18
7.0	CONCLUSION	20

FIGURES

Figure 1: Baseline Habitats

Figure 2: Baseline Habitat Condition / Distinctiveness

Figure 3: Habitat Retention

Figure 4: Proposed Habitats

Figure 5: Proposed Habitat Condition / Distinctiveness

APPENDIX

Appendix A: Biodiversity Metric 4.0 Calculations

1.0 INTRODUCTION

- 1.1 This report has been prepared by FPCR Environment and Design Ltd behalf of Axis Planning and relates to Land off Dig Gate Lane, Rochdale, herein referred to as 'the Site'.
- 1.2 This report has been prepared with reference to the following documents:
- Ecological Appraisal, FPCR, 2023;
 - Balance Power. Rochdale Proposed Plan (Rev. B 058 - PL - OL164NR)
 - Weddle Landscape Design. Ecological Mitigation Area Masterplan and Planting plan (Ref. 1366 – 002).

Site Location and Context

- 1.3 The Site is centred on Ordnance Survey grid ref. SD91871117 and is irregularly shaped, comprising of two fields used as horse pasture with a small pond located towards the north-east of the Site and a hedgerow located on the northern field boundary. Access is via Dig Gate Lane directly north of the Site and a small electrical substation is present adjacent to the entrance gate in the north-eastern area of the Site.
- 1.4 The Site is bound to the north by Dig Gate Lane, a narrow access road, beyond which is a large warehouse/distribution centre (operated by Amazon), with newly developed distribution warehouse to the north-west and further commercial/industrial properties to the north. To the east is Junction 21 of the M62 Motorway, beyond which is an area of mixed scrub and detached residences. To the south is the M62 Motorway, beyond which is an area of agricultural land use divided into a number of fields for livestock pasture. Directly to the west of the Site is Broadshaw Farm building which operates as a commercial premises), beyond which is a large distribution warehouse (Asda) and further west is Green Gate, a residential suburb of Rochdale.

Site Proposals

- 1.5 Proposals are for the development of a battery storage facility with ancillary buildings, associated infrastructure and access from Dig Gate Lane to the north-east.

Aims and Objectives

- 1.6 This Biodiversity Net Gain Report is based on the Chartered Institute of Ecology and Environmental Management (CIEEM) guidance¹. The scope and objectives of this report are to:
- Summarise the results of the baseline UKHab Survey undertaken on the Site and to present the results of habitat condition assessment surveys following the Defra Biodiversity Metric 4.0 Technical Guidance.
 - Provide an overview of the proposed habitats following completion of the scheme.
 - Present the results of the Defra Biodiversity Metric 4.0 assessment completed for the proposals.
 - Assess the feasibility of the proposals to achieve a net gain in biodiversity through the Defra Biodiversity metric 4.0.

¹ CIEEM (2021) Biodiversity Net Gain Report and Audit Templates Chartered institute of Ecology and Environmental Management, Winchester, UK.

- Recommendations for the proposals to maximise their biodiversity potential.

Legislative and Policy Context

- 1.7 The UK Government, as signatory to the Rio Convention on Biological Diversity, is committed to conserving and enhancing biodiversity. This commitment is further enforced in the Natural Environment and Rural Communities Act (NERC) 2006 and the Natural Environment White Paper (June 2011).
- 1.8 DEFRA's 25 Year Environment Plan (2018) seeks to embed a 'net environmental gain' principle for development to deliver environmental improvements locally and nationally. Current policy is that the planning system should provide biodiversity net gains where possible; however, this is moving towards a mandatory requirement.
- 1.9 The NPPF (2023) in particular seeks to ensure that the planning system contributes to and enhances the natural and local environment, protect and enhance biodiversity and geodiversity by:
- "174. 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;*
- 179. b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity."*

The Environment Act

- 1.10 Following the Environment Bill receiving Royal Ascent in November 2021 mandatory biodiversity net gain will be required under the Environment Act in the future.
- 1.11 Part 6 of the Environment Act 2021 is entitled 'Nature and Biodiversity'. Within this part is section 98, entitled 'Biodiversity gain as condition of planning permission'. It says that 'Schedule 14 makes provision for biodiversity gain to be a condition of planning permission in England'. Part 1 of Schedule 14 contains the requirement for biodiversity net gain, including the requirement for 10%.
- 1.12 Section 147(3)(s) highlights that Part 6 of the Environment Act 2021 only comes into force 'on such day as the Secretary of State may by regulations appoint'. Thus, it is not until further secondary legislation is made by the Secretary of State that Part 6 of the Environment Act come into play. This is currently anticipated as being January 2024.

Measurable Net Gain

- 1.13 In the absence of secondary legislation coming forward, making the requirements of the Environment Act mandatory, the term "measurable net gain" is not defined. Additionally, this term currently has no agreed definition in local or UK policy. Whilst a figure of 10% is widely viewed as best practice, it currently has no adopted policy support at either a local or national level, and is therefore considered an aspirational target, and not a mandatory requirement.

Rochdale Local Policy

- 1.14 The Site lies within the administrative area of Rochdale Metropolitan Borough Council (RMBC) and is covered by the Rochdale Local Plan Adopted Core Strategy² (adopted October 2016), and the RMBC Biodiversity and Development Supplementary Planning Document (SPD) (adopted January 2008 and updated February 2017)³ =.

- 1.15 The Core Strategy includes a set of Strategic Objectives which includes SO04 – to Promote a Greener environment which states:

To do this we will focus on: ...

5. Maximising the value of our green open areas and countryside to provide opportunities for recreation, amenity, biodiversity and flood management;”

- 1.16 The Spatial Strategy Key Diagram (Figure 6 within the Adopted Core Strategy Document) shows that the Site is located within a Strategic Employment Site – Kingsway Business Park (E2) and is located adjacent to, but not within, an area of Strategic Green Infrastructure (G6). However, the Site is not shown to be covered by any allocations (including Green Network/Corridors) within the RMBC Draft Allocations Plan⁴

- 1.17 The Rochdale Local Plan Adopted Core Strategy includes Policy G6 – Enhancing Green Infrastructure. Relevant policy points are provided below;

“We will sustain and enhance a green network to support growth and regeneration in the borough and provide a high quality environment that meets the needs of our community and visitors to the borough. We will protect and improve green spaces and water bodies and ensure that their value to sustainable development and regeneration is maximised. Our priorities are to improve opportunities for recreation in urban areas and the countryside, improve opportunities for healthy lifestyles, and to help manage and respond to environmental risks such as flooding and the impacts of climate change. We will also ensure that the network supports the sustainable growth of the Greater Manchester city region and links with a wider Greater Manchester strategic green infrastructure network.” ...

5. Other Water bodies (lakes, streams, reservoirs, ponds etc.) where the focus will be on celebrating water and promoting water features as a key characteristic of the local landscape, to improve their recreational and biodiversity value, maximise their potential for flood risk management and to incorporate water features (existing and new) as part of new developments, public realm initiatives, town centre design and neighbourhood regeneration initiatives where practicable. Policy SS1: Sustainable Development in the Local Plan states;

“In order to contribute to sustainable development in Bolsover District, development proposals should: ...

i) Protect, create and / or enhance the character, quality and diversity of the District’s green infrastructure and local landscapes, the wider countryside and ecological and biodiversity assets...”

² Rochdale Local Plan Adopted Core Strategy Rochdale Metropolitan Borough Council 2016. Available at: <https://www.rochdale.gov.uk/downloads/file/405/core-strategy>

³ RMBC Local Development Framework Biodiversity and Development Supplementary Planning Document 2008, updated 2017. Available at: <https://www.rochdale.gov.uk/downloads/file/549/biodiversity-and-development-spd>

⁴ RMBC Rochdale township Draft Allocations Plan – All Open Spaces Available at: <https://www.rochdale.gov.uk/downloads/file/1377/rochdale-proposed-environments-sites-and-designations>

- 1.18 Policy G7 – Increasing the Value of Biodiversity and Geodiversity includes the following relevant points;

*“We will ensure that sites and features of biodiversity and geodiversity importance are given full and appropriate recognition and protection. Opportunities for enhancing biodiversity and geodiversity, creating new sites and features of interest and improving opportunities for public enjoyment will be supported. **No development should result in a net loss of biodiversity or geodiversity interest in the borough and overall development in the borough should result in a net gain. ...***

Opportunities to protect, enhance and create features of biodiversity or geodiversity interest should be informed by the detail of any formal designation of a site or area and supporting plans and guidance such as Local Biodiversity Action Plans, Green Infrastructure Strategies and Action Plans and the Council's Biodiversity and Development SPD.

We will expect development proposals and improvements to:

- a. Protect and include existing biodiversity (including established biodiversity interest on brownfield land) within new developments, public realm and open spaces and meet the requirements of the Biodiversity and Development SPD, Greater Manchester and Local Biodiversity Action Plans;*
- b. Protect and enhance existing features such as peatland, ponds, wetlands, reservoirs, mill lodges, trees, hedges, wooded areas, meadows, flora and fauna;*
- c. Take opportunities to promote biodiversity and create new habitats through new development using landscaping and building and construction features wherever possible (e.g. ponds, species of vegetation, green roofs and walls, bat boxes, roof space, appropriate nest boxes and landscaping);*
- d. Enhance strategic wildlife corridors and the most natural areas and ensure that habitats and corridors are not fragmented by development;*
- e. Improve access where appropriate to new or existing biodiversity interest for public enjoyment; and*
- f. Protect important geology and take opportunities to increase interest and accessibility.”*

- 1.19 RMBC's Local Development Framework Biodiversity and Development SPD provides additional detail to the policies within the Local Plan Core Strategy. The relevant objectives within the SPD include;

*“To enhance the biodiversity interest of Rochdale district and **ensure no net loss of ecological interest or assets;***

To ensure that development proposals support a sustainable ecological framework for Rochdale as a component of its essential green infrastructure; ...

To safeguard protected and priority species and habitats;

To support the delivery of relevant BAP targets through development proposals;

To protect and improve wildlife corridors and steppingstones and the distribution and habitat resource for key species; ...”

- 1.20 The SPD also sets out good practice which should inform Site design including;

- *“Conserve greenspaces, water spaces and natural features within development and wherever possible incorporating new wildlife habitat, natural features landscaping and built features which attract wildlife*
- *Maintaining and enhancing biodiversity to help achieve targets in national, regional and local Biodiversity Action Plans*
- *Contributing to local distinctiveness i.e. locally characteristic ecosystems and landscape character*
- *Protecting and enhancing wildlife corridors and stepping stones*
- *Improving quality of life through public access to and enjoyment of the natural environment for health, well-being and education*
- *Enhancing environmental management e.g. cooling and shading, flood risk management, improving water quality, pollution control.”*

2.0 METHODOLOGY

Baseline Habitat Assessment

- 2.1 A survey of the Site was undertaken on the 16th May 2023. The Site was assessed using the Phase 1 Habitat Survey Methodology (JNCC, 2010) and the UKHab Classification Methodology v2.0⁵ as recommended by Natural England⁶ and the Chartered Institute of Ecology and Environmental Management⁷. Condition assessments for each habitat following the stated criteria within the Biodiversity Metric v4.0 technical supplement⁸. A desk study was undertaken using free publicly available resources. Detailed results are provided in the Ecological Appraisal Report (FPCR 2023).
- 2.2 The above information was used to inform this Biodiversity Net Gain Assessment, utilising Natural England's Biodiversity Metric 4.0.

The Biodiversity Metric 4.0

- 2.3 Natural England's published biodiversity net gain metric is an MS Excel spreadsheet that is used to quantify the predicted net-change in biodiversity value ("biodiversity units") of a proposed development site before and after development. It treats the flat "habitats" and linear features "hedgerows" separately, and is based on pre-determined values, along with published written guidance, set by a Natural England-led team of experts. The latest version of this metric is 4.0, published in March 2023.
- 2.4 To facilitate this, the Site has been mapped and digitised using the Biodiversity Metric QGIS Template, with the existing habitats identified and areas automatically generated. In accordance with the 4.0 Metric User Guide, habitats have been defined under UK Habitat Classification. The detailed landscaping proposals for the Site were then uploaded into the QGIS template, and the proposed habitats mapped and digitised to generate areas for each of the habitats proposed for creation.
- 2.5 These pre- and post-development habitat areas were then inputted into the 4.0 Metric Calculation tool. Pre-development habitats were grouped into their habitat type and condition based on the results of the UKHab and condition assessment surveys, while post-developments were classified into their UKHab type as identified through the classification of proposed habitats within landscaping plans into appropriate UKHab types and their target condition scores. The metric then provides a habitat distinctiveness score for each of the baseline and proposed habitats which are pre-assigned scores based on the habitat type.
- 2.6 The strategic significance of the habitats was also assessed for both the pre- and post-development habitats based on the location of the Site, its proximity to existing areas of biodiversity interest and its setting within wider habitat corridors.
- 2.7 The metric then assigns a range of pre-assigned factors to each of the proposed habitats. These have been advised by subject knowledge experts and are universal multipliers generated by the

⁵ UK Habitat Classification Working Group. (2023). UK Habitat Classification. Available at: <https://ukhab.org/> [Accessed 25/09/2023].

⁶ Natural England, 2014. Protected species and development: advice for local planning authorities. (updated 2022) [online] Available at: <https://www.gov.uk/guidance/protected-species-how-to-review-planning-applications> [Accessed 25/09/2023]

⁷ CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester

⁸ Natural England, The biodiversity metric 4.0 Technical Supplement (2022) Available at: <http://publications.naturalengland.org.uk/publication/6049804846366720>

metric itself for the following variables relevant to habitat creation, enhancement or restoration proposals:

- Difficult of creating or restoring/enhancing a habitat: This pre-assigned score is based on how difficult a particular habitat type is to create or restore/enhance
- Temporal risk: This is the 'time to target condition' for any particular habitat and determines how long a particular habitat type is likely to take to reach the condition score that the desired condition score assigned to it.
- Spatial risk: This score is based on the distance between the site of habitat loss and any habitats creation or enhancement proposals at any offsite offsetting solutions.

- 2.8 Full details of the calculation methodology used is provided in the Biodiversity Metric 4.0 – User Guide⁹.

Limitations

- 2.9 The UKHab habitat map has been produced from detailed field notes and informed by aerial imagery, OS mapping and previous reports provided by the client. The accuracy of this figure is ultimately guided by the accuracy of these sources and can only be relied upon to a certain degree of resolution.
- 2.10 Natural ecological communities are susceptible to change; at times this change can be rapid as a result of internal and external environmental factors. The biodiversity offsetting calculations are based on ecological assessments of habitats carried out in 2023; as a result, changes which may affect the conclusions of this report may occur, if a prolonged period of time elapses prior to the commencement of the project.
- 2.11 No other limitations are considered to have influenced this assessment.

3.0 BASELINE CONDITIONS

Desktop Study

- 3.1 Full details of the desktop study are provided in the Ecological Appraisal report (FPCR 2023).

Internationally Designated Sites of Nature Conservation Importance

- 3.2 There are two sites of International Importance within 15km of the site boundary, Rochdale Canal Special Area of Conservation (SAC) and Special Site of Scientific Interest (SSSI), approximately 1.4km north-west of the Site, and the South Pennine Moors SAC, Special Protection Area (SPA) and SSSI, located approximately 4.7km north-east of the Site.

Nationally Designated Statutory Sites of Nature Conservation Importance

- 3.3 One nationally designated statutory site of nature conservation importance was recorded within 2km, Rochdale Canal SPA (as above) is also designated as a SSSI located 1.4km north-west of the Site.

⁹ Natural England, The biodiversity metric 4.0 User Guide (2023) Available at: <http://publications.naturalengland.org.uk/publication/6049804846366720>

Non-Statutory Sites

- 3.4 Three non-statutory sites are situated within 1km of the site boundary. These are all Sites of Biological Interest (SBI). Details of these sites are provided in Table 1 below.

Table 1. Non-Statutory Sites

Non-Statutory Designated Site	Location	Habitats/Description
Marsh Near Turf Hill SBI	600m north-west	Remnant of marsh and open water which supports water vole and important populations of invertebrates including Mud Pond Snail <i>Omphiscola glabra</i>
Stanney Brook SBI	630m north	No information provided
Sudden Brook (west) SBI	803m south-west	No information provided

Strategic Significance

- 3.5 The Site consists predominately modified grassland used as arable pasture, with little intrinsic ecological value.
- 3.6 The area to the east of the Site is shown as an area of Strategic Green Infrastructure within the Local Plan. However, the Site itself is outside of this area and provides limited connectivity to other off-site habitats, therefore is not considered to be ecologically significant in this context.

Habitats

Ecological Appraisal (FPCR 2023)

Grassland

- 3.7 The majority of the Site comprises grassland, in use as a horse paddock, split into two fields. Both fields were noted to have similar species composition and were affected by poaching from the movement of the horses in places, with patches of bare ground common. The sward of the grassland was noted to be very short (<5cm) from grazing by the livestock. These areas are considered to be representative of Modified Grassland g4 and were assessed to be in poor condition due the relatively low average species diversity.
- 3.8 A small grass verge is present in the north of the Site, adjacent to the south of Dig Gate Lane. This area appeared to have been heavily managed previously and some areas of the grass had been stripped with bare ground and aggregate substrate exposed adjacent to the kerb. Species diversity was notably poor with only a few grasses present and an extensive bed of moss. As such, this area was classified as best fitting Modified grassland g4 in poor condition.

Ruderal Vegetation

- 3.9 Tall ruderal vegetation was noted to be present within a fenced area adjacent to a small pond within the central/northern area of the Site. The vegetation comprises abundant common nettle *Urtica dioica* with frequent willowherbs and a few other species encountered only occasionally or rarely. The habitat is representative of ruderal vegetation which within UKHab classification is a secondary code (81) to be added to the primary habitat classification and within Metric 4.0 is included within

the category of Sparsely vegetated land). The condition of the habitat was assessed using the Urban condition assessment (as per Metric 4.0 technical annex 1) and was assessed as being in good condition due to some diversity in structure and composition and no evidence of invasive species present.

Pond (Priority Habitat)

- 3.10 The small pond in the central/northern area of the Site was noted to be very shallow and choked with vegetation with only a few small areas of open water which were covered by duckweed *Lemna minor*. The pond is a priority habitat as it supports pond mud snail which is a species of principle importance. Within UKHab the pond is classified as r1g40 and was assessed as moderate, passing six of nine criteria in the condition assessment.

Introduced Shrub

- 3.11 In the north of the Site there is a small area of introduced Chinese bramble

Developed Land (Buildings)

- 3.12 In the north-eastern area of the Site was a small electricity substation, likely concrete block construction with stone façade and concrete slab roof.
- 3.13 In the north-eastern area of the Site was a small wooden stable block comprising two adjoining open fronted stable/pen areas of a wooden frame construction clad with wooden boards and profile corrugated sheet metal on the walls and corrugated bitumen sheet to the roof.

Hedgerows

- 3.14 Two hedgerows were noted within the Site boundary, located on the northern boundary of the Site, Hedgerow H1 is present on in the north-west and Hedgerow H2 is present in the north-east of the Site, divided by the electrical substation, and a small section of post and rail fence with a gate. Both hedgerows were of similar composition noted to be dominated by hawthorn *Crataegus monogyna* but with occasional trees noted to be established but not yet mature. The hedgerows were both classified as native hedge with trees h2NE4 and assessed to be in good condition.

4.0 PROPOSED DESIGN

- 4.1 Habitat proposals have been informed by the Rochdale Proposed Plan (Balance Power Proposed Plan Rev. C 058 - PL - OL164NR), the Ecology Implementation Plan (3451-01-L-001) and Landscape Masterplan (3451-01-L-001 Rev C). Proposals aim to create habitats appropriate to the local area, with conditions targeted to be realistically achievable. The ecological mitigation area will create new habitats and provide compensation for the loss of the on-site pond as well as habitat for the translocation of mud pond snail.

Retained Habitats

- 4.2 Habitat retention is illustrated in Figure 3.
- 4.3 The entire central area of the Site will be cleared prior to development and there may be movement of earth and materials to facilitate the levelling of the development areas.
- 4.4 The road verge adjacent to Dig Gate Lane and the hedgerows (H1 and H2) will be generally retained with the exception of a small area which will be lost to the proposed access.
- 4.5 The electricity substation is will be retained.

Habitat Enhancement

- 4.6 No habitats are proposed to be enhanced. The majority of habitats within the Site (with the exception of those retained without enhancement) will be lost to Site clearance and earthworks.

Habitat Creation

- 4.7 Post-development habitats are shown in Figure 3. Habitat creation proposals include the creation of species rich grassland adjacent to the development areas, a new hedgerow planted on the southern Site boundary and a small hedgerow dividing the development from the Ecological Mitigation Area, and the creation of the Ecological Mitigation Area which will include a compensatory pond, grassland and individual tree planting. Full details are provided in Weddle Landscape Design Replacement Pond Strategy and Ecological Management Plan (August 2022).
- 4.8 It should be noted that the design shown on the Ecology Implementation Plan and Landscape Masterplan and referred to within the Replacement Pond Strategy has altered slightly following initial calculations of Biodiversity Net Gain and feedback into the design process. The proposed pond has increased slightly in extent in order to meet the Metric 4.0 trading rules to compensate for the loss of the existing pond. This increase in size will not change the method of creation or management proposed for this area.

Biodiversity Units

- 4.9 The biodiversity units for each habitat on the Site have been calculated and are presented in Table 2, along with a description of the management recommendations which will be employed to achieve the target conditions for each habitat type.

Table 2: Summary of Proposed Habitat Management

Habitat (Proposed Site Plan)	Habitat (UKHab Type)	Targets for Creation/Management	Area / Length	Target Condition	Distinctiveness	Biodiversity Units
Proposed urban trees	Urban tree	7 small-sized trees will be planted within the Ecological Mitigation Area. (1x Alder <i>Alnus glutinosa</i>, 1x Silver birch <i>Betula pendula</i>, 2x Small leaved lime <i>Tilia cordata</i>, 2x European aspen <i>Populus tremula</i>, and 1x Field maple <i>Acer campestre</i>). Urban trees will provide additional ecological value to the mitigation area as well as habitat for wildlife. Trees will be managed to achieve moderate condition. • Area beneath trees maintained as vegetation (not paved/gravelled over) • Avoid herbicide use in close proximity to trees (<1m). • Replace any failed specimens.	0.0285ha	Moderate	Medium	0.09
Road verge	Modified grassland (Retained)	The road verge in the north of the Site will be mostly retained. No change in management is proposed and the verge is assumed to remain in poor condition.	0.0626ha	Poor	Low	0.13
Native Scrub Planting	Mixed scrub	Scrub will be planted on the outer periphery of the Ecological Mitigation Area. The scrub will be managed so that there is a diversity in structure and that the habitat grades from taller shrubs to shorter shrubs becoming scattered with tall grass at the edge of the grassland areas. Trees and shrubs will include both standard and feathered specimens to provide diversity in structure.	0.196ha	Moderate	Medium	0.13

		The following management prescriptions should be adopted to achieve moderate condition: • Planting mix to use a diverse range of native species, with no one species compromising more than 50% of the mix. • Replace any failed woody specimens. • Targeted weeding/treatment to limit/remove invasive/undesirable species to below 5% ground cover (typical species include but are not limited to- Creeping thistle <i>Cirsium arvense</i>, Cleavers <i>Gallium aparine</i>, and common nettle <i>Urtica dioica</i>). • Allow a graduated edge to form with scattered scrub and tall grassland along the periphery. • Rotational clearance/coppicing of selected areas to allow opportunities for natural regeneration.				
Species Rich Tussocky Grassland / Proposed Planting Scheme	Other-neutral grassland	Areas of grassland will be managed as neutral grassland and seeded with a species rich seed mix which will provide at least 10 species per m² (a mix of Emorsgate EG1 grass mix and EM3F wildflower meadow mix or similar combination is recommended). Within the Ecological Mitigation Area a mix to provide tussocky grassland will be provided. Areas that fail or are subject to deterioration should be resown to prevent more than 5% bare ground occurring. Gravel banks will provide small areas (1-5%) of bare ground promoting diversity in structure and for fauna. These grassland areas will be managed to attain moderate condition and annual management would include management of the scrub boundary to prevent excess encroachment, removal of undesirable species including tall herb, weeds, and invasive species, and an annual cut in late	0.3013ha	Moderate	Medium	2.02

		summer with arisings being removed from the grassland area.				
Pond	Pond (Priority Habitat)	A single pond will be created in the Ecological Mitigation Area within the north-east of the Site to compensate for the pond to be lost on-site. This pond will be created prior to the loss of the existing pond and pond snails and mud from the existing pond will be translocated to the new pond to translocate the species and ensure the survival of this local population, which is required for the pond to remain a Priority Habitat supporting a Species of Principal Importance. Management of the pond will aim to provide moderate condition through the following prescriptions: • Margins to be seeded/plugged with species as per the management plan/masterplan • Planting of plugs of emergent vegetation in shallow pond edges. Avoid the planting of reedmace <i>Typha latifolia</i> as this can become invasive. • In deeper area provision of submerged vegetation such as native pondweed (<i>Potamogeton</i>) species would be appropriate. • Annual management to limit pond shading. • Treatment to remove any invasive non-native species should they arise. • Management to reduce nutrient load to be undertaken should filamentous algae/duckweed become dominant. • No fish to be stocked. • Aspirational goal for planting to achieve 50% of cover of pond areas less than 3m deep.	0.012ha	Moderate	High	0.09
Proposed Hedgerow	Species Rich Native hedgerows	New native hedgerow will be provided to bound the south of Site and the Ecological Mitigation Area. Newly created	292m	Moderate	Low	0.26

	(Created)	hedgerows will have a mix of species and will aspire to become species rich (>5 woody species per 30m). The following management prescriptions should be adopted to increase achieve moderate condition: • Planting will ensure a diversity of native species allowing for 5 native woody species per 30m. • The borders of the hedgerow (where appropriate) will be subject to relaxed management to encourage a diverse interface between habitats. • Treatment to remove any invasive non-native species and undesirable species (e.g. common nettle). • Replacement planting to compensate for failed specimens during establishment period. • Canopy height allowed to reach and be maintained above 1.5m.				
Proposed Hedgerow	Native hedgerows with trees (Created)	Small areas of the existing hedgerow bounding the north of the Site will have gaps infilled where current fences or gates are located. These areas will be managed towards good condition as per the existing hedgerows.	60m	Good	Medium	0.04
Existing Hedgerow	Native hedgerows with trees (Retained)	Areas of native hedgerow bounding the north of the Site will be retained where possible and managed to maintain their existing habitat condition.	110m	Good	Medium	1.26

Please note there may be minor discrepancies (rounding errors) between the columns and the totals, however, the numbers duplicate those presented within the matrix calculator.

Additional Enhancements

- 4.10 In line with the recommendations from the Weddle Landscape Design Pond Replacement Strategy and Ecological Management Plan (August 2022), additional mitigation measures will be implemented to contribute to a biodiversity net gain across the Site. This will focus on the provision of faunal enhancements within the Ecological Mitigation Area in the north-east of the Site.
- 4.11 The mitigation area will include a refugia/hibernacula feature (amphibians and reptiles), gravel basking banks (reptiles and invertebrates), scrapes (amphibians and reptiles)

5.0 BIODIVERSITY NET GAIN (BNG) METRIC

- 5.1 The habitat retention, enhancement, and creation proposals detailed within this report have all been inputted into the Biodiversity Metric 4.0. Table 3 provides a summary of the headline results of the Biodiversity Metric 4.0 assessment completed for the proposals. The full metric has been provided in Appendix A.

Table 3: Biodiversity Metric 3.1 Headline Results

Baseline	Habitat Units	1.82
	Hedgerow Units	1.33
	Watercourse Units	0.00
Post-Intervention	Habitat Units	2.45
	Hedgerow Units	1.55
	Watercourse Units	0.00
Total Net Unit Change	Habitat Units	+0.63
	Hedgerow Units	+0.22
	Watercourse Units	+0.00
Total Net Percentage Change	Habitat Units	+34.82%
	Hedgerow Units	+16.44%
	Watercourse Units	+0.00

Please note there may be minor discrepancies (rounding errors) between the columns and the totals, however, the numbers duplicate those presented within the matrix calculator.

- 5.2 As shown in Table 3, assessment has demonstrated proposals will lead to a gain in area-based habitat and hedgerow units above the aspirational 10% target. Watercourses were not applicable to the habitats present at the Site.

Habitat Trading

Trading Summary

- 5.3 The proposals satisfy the trading rules as set out within the Biodiversity Metric 4.0 and Table 4 summarises the habitat trading summaries across the site.

Table 4: Habitat Trading Summary

Trading Summary		
Distinctiveness Group	Trading Rule	Trading Satisfied?
Very High	Bespoke compensation likely to be required	Yes
High	Same habitat required	Yes
Medium	Same broad habitat or a higher distinctiveness habitat required	Yes
Low	Same distinctiveness or better habitat required	Yes

6.0 BIODIVERSITY NET GAIN PRINCIPLES

- 6.1 The above have been guided by the Biodiversity Net Gain Principles as set out by Natural England in the Biodiversity Metric 4.0 User Guide. Table 5 lists all of the principles along with a description of how the principles has been applied to this assessment.

Table 5: Application of the Biodiversity Net Gain Principles to the Proposals

Principle	Indicators
Principle 1: Apply the Mitigation Hierarchy	The Site location is within an area of existing agricultural land-use (pasture) and does not hold any strategic significance. Habitats within the Site are predominately low distinctiveness and low ecological value with the exception of the pond which supports a Species of Principal Importance (pond mud snail). The proposals cannot avoid the loss of the existing pond but will replace the pond with a pond of greater area and diversity of structure and species.
Principle 2: Avoid losing biodiversity that cannot be offset by gains elsewhere	The proposals have sought to retain boundary hedgerows. Other habitats will be offset through gains on-site.
Principle 3: Be inclusive and equitable	Preliminary biodiversity net gain calculations were provided during the design stage to inform the proposals completed using the 4.0 metric. The preliminary calculations led to agreement to increase the area of the proposed pond.
Principle 4: Address risks	The habitats recommended for creation include those that would be suitable for establishment in the urban setting. The condition scores have been set at achievable levels, though management will ultimately strive to improve the condition scores above those stated above where possible. The Site is relatively isolate from public access and proposed hedgerows and fences will protect the mitigation area from disturbance.
Principle 5: Make a measurable Net Gain contribution	This assessment has demonstrated that a net gain will be achieved on-site. The existing pond will be lost but a new, larger pond will be created with a more structured profile and more diverse botanical species. The area around the pond will be managed for ecological enhancement. Additional biodiversity enhancements are incorporated in the scheme to provide further benefits for faunal species. Pond mud snails present within the existing pond will be translocated to the new pond and habitats managed to support the species.
Principle 6: Achieve the best outcomes for biodiversity	
Principle 7: Be additional	

Principle	Indicators
Principle 8: Create a Net Gain legacy	This document will inform future management provision for the Site. Management should be secured in the long-term via an appropriate legal agreement to ensure that the target conditions can be achieved. It is recommended that a specific Landscape Environmental Management Plan (LEMP) is also produced to document detailed management of the proposed habitat creation areas.
Principle 9: Optimise sustainability	A net gain has been prioritised on-site. The new hedgerow on the southern boundary will create some additional connectivity to off-site habitats. The new pond will provide an increase in this habitat type locally and secure the local population of pond mud snails.
Principle 10: Be transparent	All assumptions have been set out within this report and its appendices to ensure that the information used to inform the Biodiversity Metric 4.0 calculations can be reviewed.

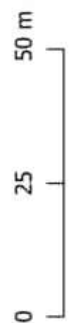
7.0 CONCLUSION

- 7.1 The approach to habitat creation has aimed to maximise biodiversity value within the space made available within the proposals for habitat creation. Biodiversity Net Gain has then been used to inform the habitat creation and enhancement proposals for the scheme and to guide decisions around additional habitat provision.
- 7.2 The results of the assessment demonstrate that the scheme currently will lead to an overall gain of area-habitat biodiversity units and hedgerow units within the Site.

The drawing is the property of fPCR Environment and Design Ltd and is issued on the condition that it is not to be used for any other project or purpose without the written consent of fPCR Environment and Design Ltd.
Aerial Imagery © 2021 Bluesky, Geomapping plc, Infiderra Ltd and Bluesky, Masar Technologies, Map data © 2021 Google

Key

- Site Boundary
- Baseline Habitats
 - Developed land; sealed surface
 - Introduced shrub
 - Modified grassland
 - Ponds (priority habitat)
 - Ruderal/Ephemeral
 - Hedgerow Baseline
 - Native hedgerow with trees (h2NE4)



The drawing is the property of fPCR Environment and Design Ltd and is issued on the condition that it is not to be used for any other project or purpose without the written consent of fPCR Environment and Design Ltd.
Aerial Imagery © 2021 Bluesky, Geomapping plc, Infoderra Ltd and Bluesky, Masar Technologies, Map data © 2021 Google

Key

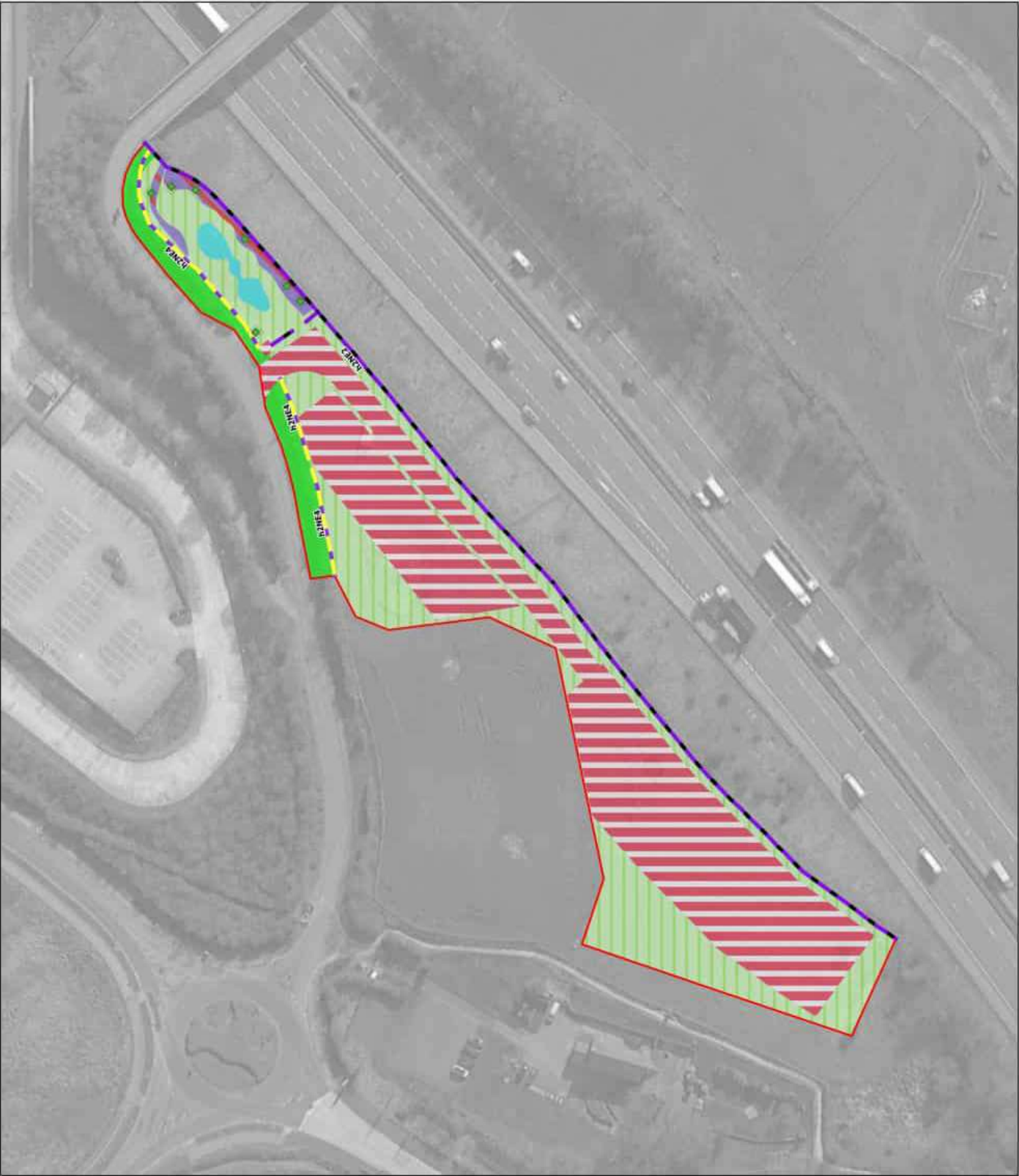
- Site Boundary
- Baseline Habitat Condition
 - Good
 - Moderate
 - Poor
- Condition assessment N/A
- Baseline Habitat Distinctiveness
 - High
 - Low
 - V.Low
- Baseline Hedgerow Condition
 - Good
 - Baseline Hedgerow Distinctiveness
 - Medium



The drawing is the property of fPCR Environment and Design Ltd and is issued on the condition that it is not to be used for any purpose other than that for which it was prepared without written consent of fPCR Environment and Design Ltd.
Aerial Imagery © 2021 Bluesky, Geomapping plc, Infiderra Ltd and Bluesky, Masar Technologies, Map data © 2021 Google

Key

- Site Boundary
- Proposed Habitats
 - Developed land; sealed surface
 - Mixed scrub
 - Modified grassland
 - Other neutral grassland
 - Ponds (priority habitat)
 - Hedgerow Proposed
 - Native hedgerow with trees
 - Species-rich native hedgerow
 - Individual Tree Proposed
 - Small urban tree



Key

- Site Boundary
- Proposed Habitat Condition
 - Moderate
 - Condition assessment N/A
 - N/A - Other
- Proposed Habitat Distinctiveness
 - High
 - Medium
 - Low
 - V.Low
- Proposed Hedgerow Condition
 - Good
 - Moderate
- Proposed Hedgerow Distinctiveness
 - Medium
- Proposed Individual Tree Condition
 - Moderate



Client
Axis PED

Location
Rochdale BSF

Drawing Title
Proposed Habitat Condition/Distinctiveness

Figure 4
Scale 1:1,000
Date 12/10/2023

The drawing is the property of FPCR Environment and Design Ltd and is issued on the condition that it is not to be used for any purpose other than that for which it was prepared, and without the written consent of FPCR Environment and Design Ltd.

Aerial Imagery © 2021 Bluesky, Getmapping plc, Infodirect Ltd and Bluesky, Masar Technologies, Map data © 2021 Google

- Key**
- Site Boundary
 - Habitat Retention
 - Retained
 - Lost
 - Hedge/row Retention
 - Retained
 - Lost
 - Individual Tree Retention
 - Created

