PROPOSED DEVELOPMENT AT PHOENIX PARK, GOLDTHORPE

ECOLOGICAL APPRAISAL

JULY 2024

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PROPOSED DEVELOPMENT AT PHOENIX PARK, GOLDTHORPE

ECOLOGY APPRAISAL

PREPARED BY:

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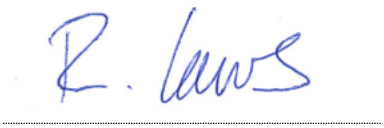


CONTENTS

APPENDICES

1 INTRODUCTION

1.1.1 Evergreen Ecology Ltd was commissioned by Groundwork Yorkshire to undertake an Ecological Appraisal of an area of land at Phoenix Park, Goldthorpe, hereafter referred to as "the Site". The Ecological Appraisal includes detailed survey results for an extended UK Habitat Classification Survey and Biodiversity Net Gain (BNG) assessment. This report has been produced to support a planning application for the construction of a café, playground and associated parking.

1.1.2 This Ecological Appraisal Report has been produced with reference to current guidelines (Chartered Institute of Ecology and Environmental Management (CIEEM 2017)) and British Standard BS 42020:2013 (BSI 2013) which involves the evaluation of the potential presence of ecological receptors and adverse effects thereon, based on Extended Phase I (Joint Nature Conservation Committee (JNCC 2010)) survey data and background desk study. Habitats were recorded in accordance with the UK Habitat Classification System (UK Hab Ltd. 2023).

1.1.3 The purpose of the report is to satisfy the requirements of the National Planning Policy Framework (NPPF), identifying the likely presence of ecological receptors within or near the application site that could be subject to adverse effects arising from the proposed development. Where required further ecological surveys will be recommended to inform the baseline conditions and inform any mitigation requirements. An assessment of potential adverse effects is provided, although this is not a substitute for full Ecological Impact Assessment (CIEEM 2015), as well as any mitigation and enhancement opportunities where appropriate.

1.2 Site Description

1.2.1 The Site covers approximately 0.47 ha and is located off Barrowfield Road within Phoenix Park, South Yorkshire (central Ordnance Survey Reference SE 4615 0522). It comprises a parcel of land supporting Grassland – Modified (g4) and Woodland and forest – Other broadleaved woodland adjacent to an existing access and car park consisting of Urban – Artificial unvegetated, unsealed surface. The Site is located between the urban settlements of Goldthorpe and Thurnscoe. The wider landscape is dominated by the residential development of the adjacent towns, agricultural land and woodland.

1.3 Site Location

1.3.1 Figure 1 below displays the location of the Site within the wider landscape, as well as the boundary discussed in para. 1.1.2.

Figure 1 Site boundary in the wider landscape[1]

[1] Aerial mapping taken from MAGIC website, Magic Map Application (defra.gov.uk) (Accessed 03/07/24)

2 METHODOLOGY

2.1 Surveyor Information

2.1.1 The desk study and site surveys were undertaken by Richard Laws (Principal Ecologist), who is an Ecologist with over 10 years' experience and a Full member of CIEEM. Richard has undertaken formal training on UK Habs Classification and its use within BNG assessment with experience of implementing on numerous projects.

2.2 Desk Study

2.2.1 A desk study was undertaken to review all the available existing ecological data for the Site and the surrounding area. This includes identifying any statutory designations and non-statutory sites within 2km of the site and 5km of the site for European designated sites.

2.2.2 The Barnsley Biological Records Centre (BBRC) were not contacted for ecological records for the site. It was deemed the results of the search would not influence the recommendations or conclusions reached within this report when considering the size of the site, its location, scale of development, habitats present, and detailed site surveys being undertaken.

2.2.3 A number of internet-based resources were used to locate the presence of NERC S.41 Priority and Local BAP Habitats and European Protected Species Licences.

2.3 Ecological Walkover Survey

2.3.1 The Site was surveyed on the 7th June 2024 with reference to best practice guidelines, 'UK Habitat Classification Version 2.01' (UKHab Ltd., 2023). The survey method aims to define the habitat types present and is not intended to provide a complete list of all plants occurring across the Site.

2.3.2 Habitats and vegetation types present at the Site were recorded on to a field map and notable, rare or scarce plant species, including other features of ecological interest, were highlighted and marked using Target Notes (TN).

2.3.3 Habitats present that are listed under Section 41 of the NERC Act (2006) or on the Barnsley Local Biodiversity Action Plan (LBAP) were recorded. Survey findings and TN are detailed in Section 3 below and are annotated on the UK Habitat Classification Plan, see Appendix 1. Site photographs are provided in Appendix 3.

Protected and key species

2.3.4 Any evidence of protected species or groups encountered during the survey was recorded. This included observations of field signs and an assessment of the suitability of the habitats present to support protected species. For full details of legislation relating to all habitats and species discussed within this report visit http://www.legislation.gov.uk.

2.4 Biodiversity Net Gain (BNG) Assessment

2.4.1 The Site was surveyed using UK Habitats Classification to be in line with DEFRA metric calculator 4.0 to ascertain biodiversity baseline; following the industry recognised best practice methodology within the Biodiversity Metric 4.0 User Guide (Natural England, 2023) (BM4.0).

Biodiversity Metric Inputs for Baseline

Habitat Type and Area

2.4.2 The BM4.0 uses habitat features as a proxy measure for the value and importance of nature. The following information on each habitat are the required metric inputs:

- Type;
- Area;
- Condition; and,
- Strategic significance.

2.4.3 The BM4.0 uses a classification system based mainly on the UKHab System (UKHab Ltd., 2023), with input from other systems including the Water Framework Directive (WFD) Lakes Typology (UKTAG, 2003), the European Nature Information System (EUNIS) habitat definitions (European Environment Agency, 2022), Habitats Directive Annex 1 definitions (JNCC, 2019) and habitats specific to the BM4.0 defined in the 'User Guide' (Natural England, 2023) and/or 'Technical Annex 2' (Natural England, 2023).

2.4.4 Habitat measurements have been calculated using digital mapping software QGIS.

Habitat Condition

2.4.5 The condition of a habitat is a measure of the biological 'working-order' of a habitat type judged against the perceived ecological optimum state for that particular habitat.

2.4.6 Following the UKHab ecological walkover survey at the Park, the condition of each habitat type was assessed and categorised as either Good, Moderate or Poor. The assessment was made using the UKHab survey descriptions and criteria within the

BM4.0 'Technical Supplement' (Natural England, 2023), with specific assessment criteria for each broad habitat type.

2.4.7 If a habitat type varied in condition within the Site this was recorded and mapped.

Habitat Strategic Significance

2.4.8 The BM4.0 accounts for whether habitat is situated in an area identified as locally significant for nature. Data on areas and habitats identified as locally significant for nature were obtained from the following:

- Multi-Agency Geographical Information for the Countryside (MAGIC) website for statutory designated sites for nature conservation; and,
- Habitats listed within the Biodiversity Action Plan for Barnsley.

Biodiversity Metric Calculations

2.4.9 Biodiversity metric calculations provide a numerical score for the current value in Habitat Units (HU), Hedgerow Units (HeU) and Watercourse Units (WU), of the habitats at the Site (where applicable) in order for the baseline to be quantitatively valued for biodiversity. This will allow for post enhancement or habitat creation works to be effectively measured for gains in biodiversity.

2.4.10 Using the BM4.0 tool, habitat values are calculated based on their abundance, area (ha) or length (km) for linear features such as hedgerows, condition, and importance within the local area, usually identified from local relevant planning policies or documents. This gives individual baseline HU, HeU and WU for area habitats, linear habitats and aquatic habitats respectively. Units for each type are treated separately.

Trading Rules

2.4.11 The BM4.0 considers distinctiveness as described earlier and using this data, BM4.0 applies trading rules that require that any habitat loss is replaced on a 'like for like' or 'like for better' basis. The trading rules are detailed below in Table 1.

Table 1. Trading Rules within BM4.0

Distinctiveness Group	Trading Rules
Very High	Bespoke compensation likely to be required
High	Same habitat required

Medium	Same broad habitat or a higher distinctiveness habitat required
Low	Same distinctiveness or better habitat required
Very Low	Compensation not required

2.5 Assumptions and Limitations

2.5.1 Ecological surveys are limited by factors that affect the presence of plants and animals such as time of year, weather, migration patterns and behaviour. The survey was undertaken in June and therefore represents a valid sample of ecological evidence present on that date/season. The report is not designed, nor is it required to present a complete inventory of flora/fauna.

2.5.2 The condition of post-development habitats has been estimated based on the criteria within the BM4.0 'Technical Annex 1 - Condition Assessment Sheets and Methodology' (Natural England, 2023) and based on reasonable assumptions for the habitat types taking into account feasibility, the locality and their extent within the Site.

2.5.3 Strategic significance has been considered as 'Area/compensation not in local strategy/ no local strategy' for all area-based habitats. These habitats have not been identified as being of local ecological significance following a review of desk study information.

3 RESULTS AND EVALUATION

3.1 Designated Sites

3.1.1 There are no statutory designated sites within 2km of the Site. The Site falls within the Dearne Valley Wetlands SSSI Risk Impact Zone however the proposed development type is not recognised as a risk to impacting the designation. There are no other European designated sites within 5km of the Site.

3.1.2 A review of the Barnsley Policies Map does not identify any non-statutory designations within close proximity which would be impacted by the proposed development at the Site.

3.2 Habitats

3.2.1 Table 2 below summarises the key characteristics of the habitats identified using UK Habitat Classification. In addition, the habitats will be identified against national (NERC Act, s41) and local importance (Barnsley Local Biodiversity Action Plan (LBAP)).

3.2.2 The likely impacts from the proposed development upon each habitat will also be assessed and where adverse effects are anticipated, they are discussed in the latter sections of this report. Any habitats which are not considered to be adversely affected by the proposed development will be excluded from further discussion.

3.2.3 For the location of each habitat please refer to Appendix 1. For site photographs refer to Appendix 3.

Table 2 – Habitats Present on Site			
Habitat and Description	**NERC S.41**	**Local Priority**	**Potential Constraint to Development**
g4 Modified grassland The dominant habitat within the Site which is subjected to regular mowing. The grassland was dominated by perennial rye grass *Lolium perenne* with the addition of common dandelion *Taraxacum officinale*, creeping buttercup *Ranunclus repens*, greater plantain *Plantago major* and common daisy *Bellis perennis* .	No	No	No – this habitat is common and widespread and not listed as a national or local priority habitat, the proposed development is unlikely to significantly impact upon the conservation status of this habitat. However, the habitat does contribute to the sites overall biodiversity value which is discussed in paragraph 3.2.
u1c artificial unvegetated unsealed surface The existing access track and car park consists of crushed stone which has no intrinsic ecological value.	No	No	No – this habitat has no intrinsic ecological value.
W1g other broadleaved woodland A strip of other broadleaved woodland to the south of the site adjacent a dry ditch. There were a mix of ornamental shrubs with early young trees. Species included rose species *Rosa spp.*, turkey oak *Quercus cerris*, hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa*, sycamore *Acer pseudoplatanas* and willow species *Salix spp.*.	Yes	Yes	No – this habitat is to be retained as part of the development.

3.3 Biodiversity Assessment

Baseline

3.3.1 The Site has been assessed for its biodiversity using the DEFRA metric calculator V4.0, as provided in Appendix 5. The baseline results of the assessment identified the site habitats had a total HU of 0.81 and the results have been summarised in Table 3 below.

Area Habitats

3.3.2 Baseline habitats on the Site comprised Grassland – Modified (g4), 'Woodland and forest – Other broadleaved woodland' (w1g) and Urban – Artificial unvegetated, unsealed surface (u1c).

3.3.3 A summary of the habitat condition assessment criteria passed or failed for habitats where a condition assessment is applicable in BM4.0 is provided in Appendix 4.

Table 3. The Site Baseline Habitat Areas and Biodiversity

Habitat Type	Distinctiveness	Condition	Area (ha)	Habitat Units
Grassland – Modified grassland	Low	Poor	0.3459	0.69
Urban – Artificial unvegetated, unsealed surface	V.Low	N/A-Other	0.0959	0.00
W1g – Other broadleaved woodland	Medium	Poor	0.0307	0.12
Total Habitat Area			**0.4725**	
Total Habitat Units (HU)				**0.81**

Post-Development Biodiversity

3.3.4 The following calculations present the completed biodiversity metric calculations based on the baseline values against the current site layout proposals and landscaping scheme (See Appendix 2).

Current Landscaping Proposals

3.3.5 Post-development habitat through retention and creation include 'Urban – Developed land; sealed surface', 'Urban – Artificial unvegetated, unsealed surface, 'Woodland and forest – Other broadleaved woodland' and Grassland – Other neutral grassland', as described within BM4.0. Post-development habitats are shown in Appendix 2.

3.3.6 The habitat type, distinctiveness, condition, area and HU of the post-development area habitats are provided within Table 4. Post-development, through habitat retention and creation of the area-based habitats will deliver 0.95 HU based on the current proposals as shown in Appendix 2.

Table 4. The Site Post-development Area Habitats, Condition and Habitat Units

Habitat Type	Distinctiveness	Condition	Area (ha)	Habitat Units
Retained				
Urban – artificial unvegetated, unsealed surface	V.Low	N/A- other	0.0422	0.00
Grassland – Modified grassland	Low	Poor	0.2165	0.43
W1g – Other broadleaved woodland	Medium	Poor	0.0307	0.12
Created				
Urban – developed land,	V.low	N/A - other	0.1232	0.00

Habitat Type	Distinctiveness	Condition	Area (ha)	Habitat Units
sealed surface				
Grassland – Other neutral grassland	Medium	Moderate	0.0594	0.40
Urban – Other green roof	Low	N/A	0.0005	0.00
Total Habitat Area (ha)			**0.4725**	
Total Habitat Units (HU)				**0.95**

3.3.7 A summary of the biodiversity calculations detailed above are provided in Table 5 below.

Table 5. Summary of Biodiversity Net Gain Calculations

Habitat Type	Baseline Units	Post-development Units	Change in Units	Total Net % Change	Trading Rules Satisfied
Habitat Units (HU)	0.81	0.95	+0.14	+17.16	Yes

3.4 Species Evaluation

3.4.1 The following section identifies the protected and notable species which have the potential to be present on Site. This is based upon a review of the desk study, evidence

recorded during the survey, the availability of suitable habitat on site, and ecological connectivity to suitable off-site habitats.

3.4.2 Where species are considered to be present and are likely to suffer adverse impacts as a result of the proposed development, these will be discussed further in the latter sections of the report.

Species

Bats

3.4.3 All bat species in Britain are listed under the WCA 1981 (as amended) and The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. In addition, a number of bat species are listed as a Species of Principal Importance under NERC S.41. Eight bat species are listed within the Bradford LBAP.

3.4.4 There is no suitable habitat within the Site to support roosting bats following an assessment of the trees.

3.4.5 The Site offers limited suitable habitat for foraging and commuting bats in the form of grassland and surrounding woodland with a small section within the Site being retained. Due to the location and extent of the Site, there is minimal resource to support significant numbers or rarer bat species. In comparison, areas of woodland, scattered mature trees and extensive hedgerows are located in the wider landscape, offering more optimal foraging and commuting habitats. Habitat creation within the Site including a more species diverse grassland habitat is anticipated to increase suitable foraging habitat, albeit on a small scale. The development will only utilise sensitive outdoor lighting which will not illuminate the foraging habitat within or along the site boundaries to ensure no indirect impacts to the local bat population. Therefore, it is considered that the loss of habitats from within the Site will not significantly impact upon the conservation status of bats at a Site or wider level.

Birds

3.4.6 All birds are afforded protection under the WCA (1981), with several species also listed as Species of Priority Importance under NERC S.41 and under Birds of Conservation Concern.

3.4.7 The grassland habitat provides limited foraging resource to birds. This will be improved through the creation of a more diverse grassland habitat following the construction of the proposed development.

3.4.8 The grassland habitat is heavily disturbed being within a park used by the general public, specifically dog walkers. It is not considered suitable to support ground nesting birds. The woodland has the potential to support nesting birds however this will be retained and protected during the construction phase. It is therefore considered that there will be no impact to nesting birds.

Hedgehog

3.4.9 Hedgehogs *Erinaceus europaeus* are listed as a Species of Principal Importance under NERC S.41.

3.4.10 The habitats within the Site are small in extent and not expected to support significant numbers of hedgehogs. The small area of woodland providing suitable refuge and commuting habitat for hedgehogs within the Site is to be retained.

3.4.11 With limited suitable habitat within the Site, the presence of more optimal foraging and commuting habitats within the immediate and wider landscape; it is considered that the loss of the habitat within the Site will not significantly impact upon the local conservation status of hedgehogs.

4 DISCUSSION AND RECOMMENDATIONS

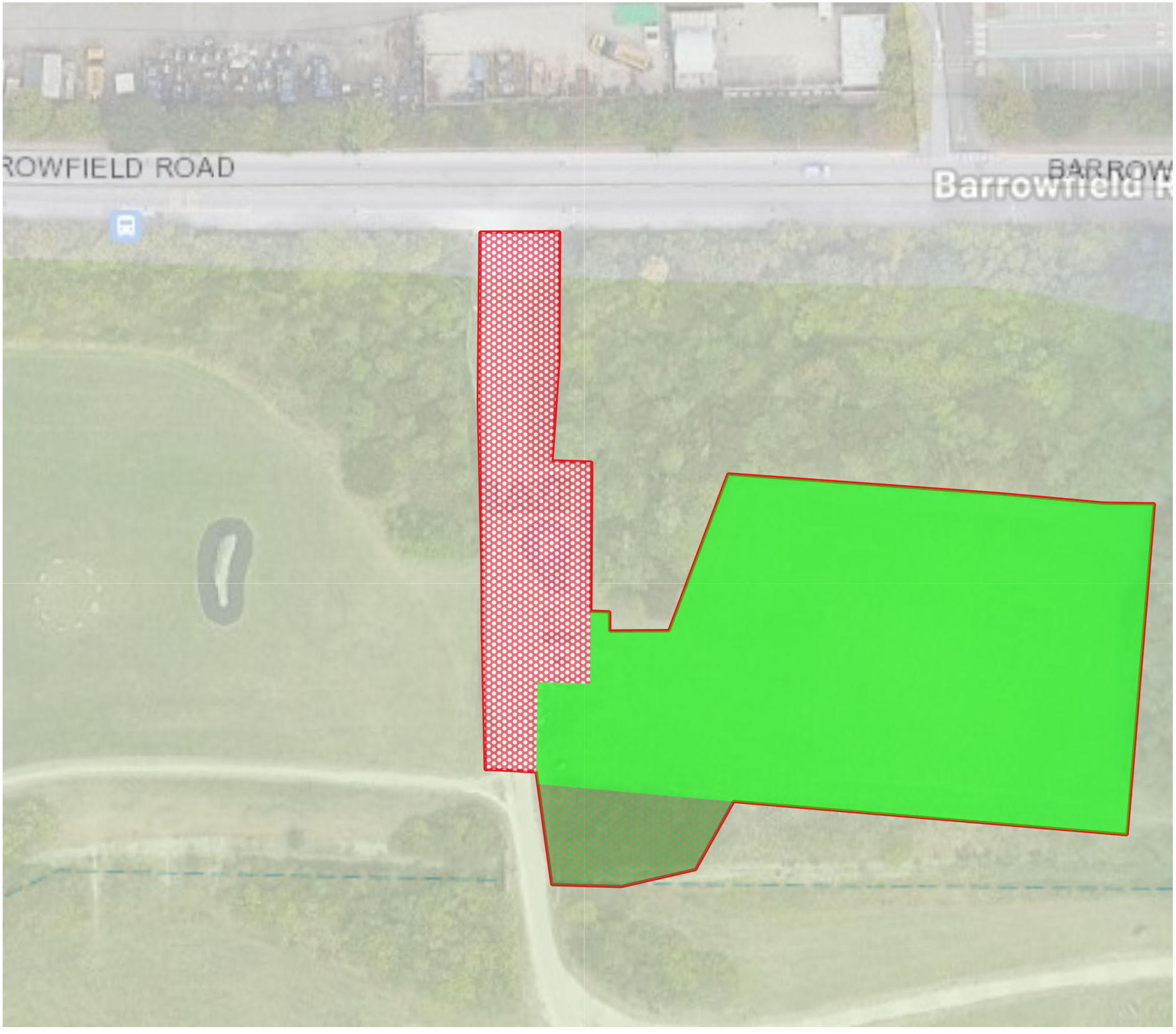
4.1.1 The development has the potential to impact upon the following ecological receptors which are discussed further in this section:

- Biodiversity;

Biodiversity

4.1.2 The proposed development is primarily within modified grassland which is of low biodiversity value. Existing habitats have been retained as far as possible within the landscape scheme including other broadleaved woodland and areas of modified grassland for amenity use. The loss of grassland habitat to the development will be compensated for through the planting of other neutral grassland strips within the retained green open space surrounding the development. In addition a small bin shed will support a sedum roof which will provide a pollination resource to invertebrates. Taking into account the reasonable assumptions, the construction of the proposed development is predicted to result in a net unit change of +0.14 HU which is a net percentage change of **+17.16%.** Based on the calculations undertaken as part of this assessment, the trading rules of the metric have been satisfied with respect to HU. The assessment has confirmed that the current proposed development design (see Appendix 2) will provide a greater than 10% net gain in biodiversity thereby meeting both national and local planning policy.

APPENDIX 1 – UK Habitat Classification Plan



LEGEND

Red Line Boundary

HABITATS

Artificial unvegetated, unsealed surface

Modified grassland

Other woodland; broadleaved

0 15 30 m

CHANGING PLACES CHANGING LIVES

LANDSCAPE ARCHITECTS

Groundwork Yorkshire
Environment and Business Centre
Merlyn-Rees Avenue, Morley
Leeds, LS27 9SL

www.groundwork.org.uk/north-east-and-yorkshire/

Charity Registration 519846
Company Registration 220681

GRID REFERENCE:
SE 46154 05253

ADDRESS:
PHOENIX PARK CAR PARK, BARROWFIELD ROAD, THURNSCOE, BARNSLEY, SOUTH YORKSHIRE, ENGLAND

POST CODE:
S63 0JF

-

22 STRAWBERRY DALE, HARROGATE

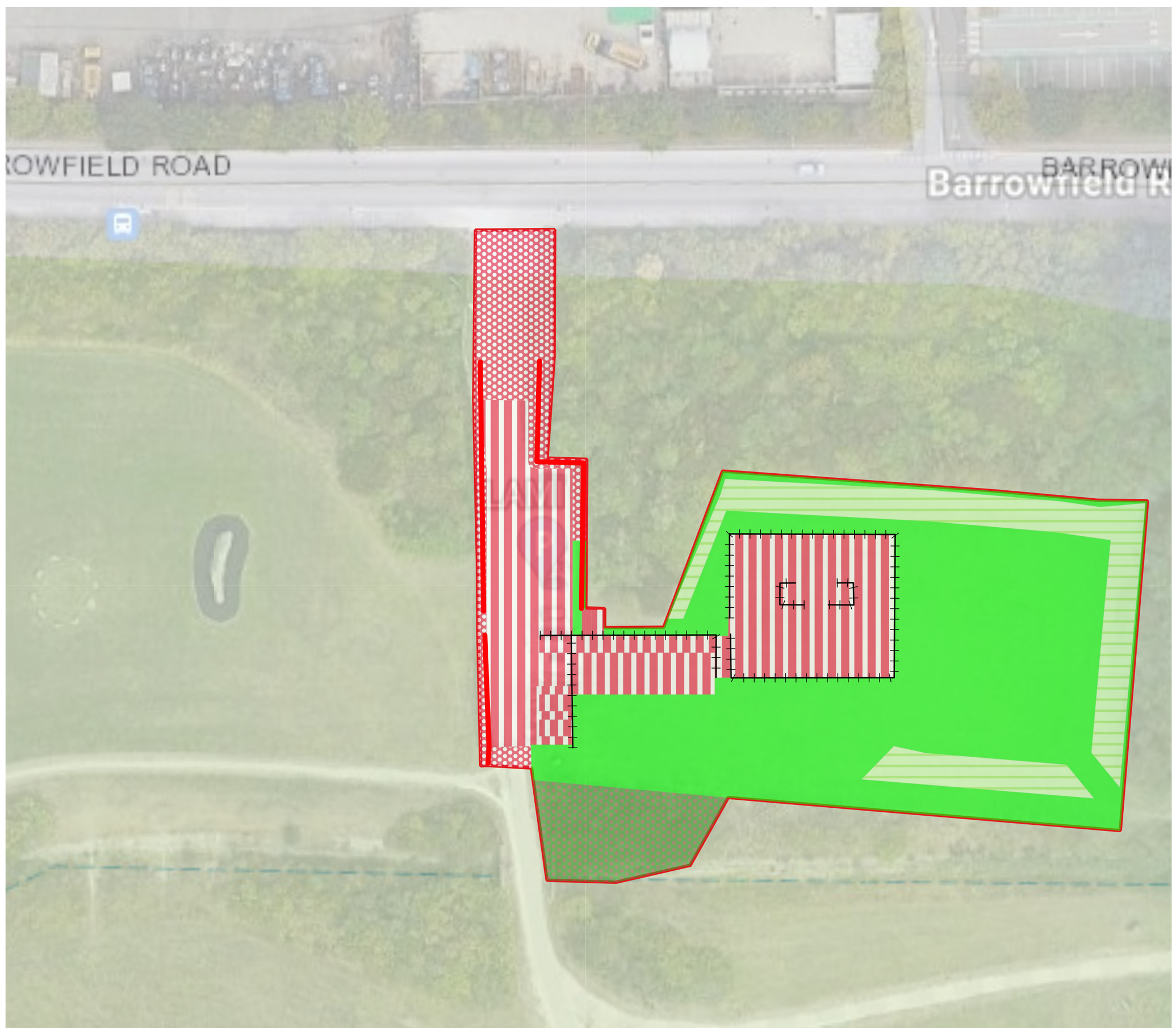
Drawing title:

UK HABITAT CLASSIFICATION PLAN- BASELINE

Drawing No. :
001

Scale:	Date:
1:500@A3	June 2024
Drawn by: STL	Checked by: -

APPENDIX 2 – Landscape Scheme



LEGEND

Red Line Boundary

HABITATS

Artificial unvegetated, unsealed surface

Developed land; sealed surface

Modified grassland

Other green roof

Other neutral grassland

Other woodland; broadleaved

2. Fence

1. Built linear Feature

0 15 30 m

GROUNDWORK

CHANGING PLACES
CHANGING LIVES

LANDSCAPE ARCHITECTS

Groundwork Yorkshire
Environment and Business Centre
Merlyn-Rees Avenue, Morley
Leeds, LS27 9SL

www.groundwork.org.uk/north-east-and-yorkshire/

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POST CODE:
S63 0JF

-

22 STRAWBERRY DALE, HARROGATE

Drawing title:
UK HABITAT CLASSIFICATION PLAN- PROPOSED

Drawing No. :
001

Scale:	Date:
1:500@A3	July 2024
Drawn by: STL	Checked by: -

Hop path overlay on existing rolled stone.

12 car park spaces and 2no. disabled spaces.

1
2
3
4
5
6
7
8
9
10
11
12

Proposed bin store with Sedum green roof and path for easy access.

Proposed 2.4m high 385 palisade weld mesh fence.

Gate

1no. bike maintenance stand
7no. bike stands

Temporary access road.
To be made good after works.

Proposed 0.5m high timber knee rail.

Disabled parking signs.

Disabled parking bays delineated with grasscrete.

PROPOSED PLAY AREA

Neutral grass area

4.35

4.80

4.50

Neutral grass area

4.50

Neutral grass area

Existing gate

Existing desire line

Existing desire line

KEY

- Area of hop path overlap on existing surface for vehicle use.
- Hop path surfacing for pedestrian use.
- Proposed community hub building.
- Neutral grass areas for 10% BNG
- Red line boundary

Client:
THE LAND TRUST

North

Project:
PHOENIX PARK, GOLDTHORPE

Address:
PHOENIX PARK, BARROWFIELD RD, THURNSCOE, ROTHERHAM, S63 0BD

Drawing title:
LANDSCAPE LAYOUT WITH NEUTRAL GRASSLAND AREAS FOR BNG

Revision:
REV D - NEUTRAL GRASS AREAS UPDATED, CHANGE IN CYCLE PROVISIONS; RED LINE BOUNDARY CHANGED; DRAWING TITLE CHANGED

Drawing no:
002

Scale:	Date:
1:250@A3	10.07.24

Drawn by:	Checked by:
TM	MK

GROUNDWORK
CHANGING PLACES CHANGING LIVES

LANDSCAPE ARCHITECTS

Groundwork Yorkshire
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www.groundwork.org.uk/north-east-and-yorkshire/

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APPENDIX 3 – Site Photos

APPENDIX 4 AND APPENDIX 5 PROVIDED AS SEPARATE DOCUMENTS TO THIS REPORT