



e3p

Biodiversity Metric Report

Oakenrod School, Rochdale

Reference: 81-303-R1-1

Date: August 2023



BIODIVERSITY METRIC REPORT

Oakenrod School
Rochdale

Prepared for:
Hallmark Developments Ltd

Report Ref: 81-303-R1-1
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EXECUTIVE SUMMARY

Site Address	Land off Bury Road, Spotland Bridge, Rochdale, OL11 4EE
Co-ordinates	E 388760, N 413124
Site Area	Approximately 1.8 ha
Current Site Use	The site comprised an area of disused land within the town of Rochdale. The majority of the site comprised tall ruderal, bare ground and scrub, with an area of broadleaved woodland lies in the south of the site. Bury Road defines the site's northern boundary and the River Roch defines the site's southern boundary with a small section of the river lying within the site's boundary.
Proposed Development	Development proposals include the construction of residential housing, with a wildlife area to be created in the south of the site.
Results	The biodiversity metric results show a gain of 1.31 habitat units and no net change in river units. A gain of 13.81% habitat units will be incurred on-site as a result of development.
Conclusions and Recommendations	The proposed scheme and proposed site plans show a total gain of 1.31 habitat units and no net change in river units as a result of the development. A net gain in habitat units has therefore been achieved on-site. Additional species enhancements could be provided on-site, which could include bat and bird boxes, hedgehog houses and hibernacula.



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1. INTRODUCTION

1.1. BACKGROUND

E3P has been instructed by Hallmark Developments Ltd to undertake a Biodiversity Metric Calculation at Oakenrod School, Rochdale, hereafter referred to as “the site”.

This report has been produced by Zach Squire-Watt BSc (Hons) QCIEEM, Graduate Ecologist at E3P. Zach has experience undertaking Biodiversity Net Gain and Condition Assessments on a variety of projects across the UK.

This report should be read in conjunction with 'Biodiversity Metric 4.0 Calculation Tool – Oakenrod School, Rochdale.xl'.

1.2. PREVIOUS SURVEYS

A Phase 1 Habitat Survey was conducted by Rachel Hacking Ecology in May 2022 (report reference: Rachel Hacking Ecology, 2022). The site was found to comprise bare ground, broadleaved woodland, dense scrub, ephemeral/short perennial and tall ruderal. Three ponds were identified on site, along with several piles of spoil associated with previous demolition. A MoRPH survey was also conducted on the River Roch in the south of the site, the results of which indicate that the river is of 'Fairly Poor' condition. Please refer to Biodiversity Impact Assessment- Oakenrod School, Rochdale (Rachel Hacking Ecology, 2022) for the full river condition assessment.

1.3. SITE LOCATION

The site is located in Rochdale, within a predominantly residential area. Bury Road defines the site's northern boundary, while Bridgefield Road partially defines the site's eastern boundary. The River Roch defines the site's southern boundary, with the river partially within the site boundary. Please refer to Figure 1.1 for the approximate site location.



FIGURE 1.1 APPROXIMATE SITE LOCATION



1.4. OBJECTIVES

The objectives of the Biodiversity Metric are to:

- ✿ Identify percentage change in on-site habitat.
- ✿ Identify the number of habitat units lost/gained on-site; and
- ✿ Determine the need for a conservation offset payment or off-site habitat creation.

The findings of the calculation are detailed within this report, along with recommendations.



2. METHODOLOGY

2.1. BIODIVERSITY METRIC

Department for Environment, Food and Rural Affairs' (DEFRA) Biodiversity Metric 4.0 2023 version was used to undertake the metric calculation. The metric was undertaken following guidance as detailed within The Biodiversity Metric 4.0 User Guide (Natural England, 2023), the Biodiversity Metric 4.0 Technical Supplement (Natural England, 2022) and the Summary of Changes Biodiversity Metric 3.1 to 4.0 (2023).

This metric was calculated by Zach Squire-Watt. Zach has experience carrying out condition assessments and using the Biodiversity Metric Calculation Tool for a variety of sites.

This metric was reviewed by Associate Director Celia Barlow, BSc (Hons) MSc MEnvSc CEnv MCIEEM. Celia has undertaken a number of online training courses with CIEEM including 'Calculating and Using Biodiversity Units with Metric 2.0' and 'Biodiversity Net Gain Through Development'. Celia has also completed Condition Assessments on a number of sites across the UK and holds a Level 3 Field Identification Skills Certificate (FISC).

2.2. ON-SITE HABITAT BASELINE DATA

The baseline data used to inform the condition assessment was collected on 17th May 2022 during the Phase 1 Habitat Survey conducted by Rachel Hacking Ecology report. All baseline habitat condition assessments have therefore been taken from the previously produced report (Rachel Hacking Ecology, 2022).

On-site baseline habitats were measured by re-digitalising the plans produced by Rachel Hacking Ecology (2022) to obtain accurate measurements. The Root Protection Areas (RPAs) of scattered trees were taken from the Arboricultural Impact Assessment (AIA) produced by Tree Solutions in 2022 (22/AIA/ROCH/11). Please see Appendix I for the Phase 1 Habitat Plan.

Phase 1 habitat types were translated into UKHab habitat types using the metrics Technical Data Translation Tool.

2.3. POST DEVELOPMENT HABITAT CREATION

The Landscape Proposals were used to measure potential habitat creation on-site (Trevor Bridge Associates, Drawing numbers 7188.01, 7188.02 & 7188.03). The areas of proposed habitat were measured using QGIS from the PDF drawing and the area of proposed trees was calculated using the Urban Tree Calculator within the metric.

A 70:30 ratio to the area of built houses: area of vegetated gardens has been applied in the metric. This is to reflect any uncertainty of the status of the vegetated gardens once residents move into the houses as a vegetated garden could be paved with hardstanding, thus reducing the biodiversity value of the garden.

Please see Appendix II for the Landscape Proposals.



2.4. LIMITATIONS

Some areas on the site are double counted, including root protection zones and areas of habitat, where overlap is shown. This means areas of habitat pre- and post-development do not total to the same area.



3. RESULTS

3.1. ON-SITE BASELINE CONDITION ASSESSMENT RESULTS

Table 3.1 shows the details of the habitat condition assessment used for input into the metric calculation tool. Please refer to the Biodiversity Impact Assessment (Rachel Hacking Ecology, 2022) for the full condition assessment criteria for each habitat.

TABLE 3.1 HABITAT BASELINE CONDITION ASSESSMENT RESULTS

HABITAT TYPE (PH1)	HABITAT TYPE (UKHAB)	AREA/LENGTH (HA/KM)	CONDITION ASSESSMENT	DESCRIPTION
SPOIL HEAPS	Urban – Vacant or derelict land	0.11	Poor	Passes 1 of 3 condition assessment criteria.
TALL RUDERAL	Sparsely vegetated land – Ruderal/Ephemeral	0.671	Poor	Passes 1 of 3 condition assessment criteria.
EPHEMERAL/ SHORT PERENNIAL	Sparsely vegetated land – Ruderal/Ephemeral	0.1	Moderate	Passes 2 of 3 condition assessment criteria.
BARE GROUND	Urban – Bare ground	0.399	Poor	Passes 1 of 3 condition assessment criteria.
PONDS	Lakes – Ponds (non-priority habitat)	0.0722	Moderate	Passes 8 of 9 condition assessment criteria.
CONTINUOUS SCRUB	Heathland and shrub – Mixed scrub	0.15	Poor	Fails all condition assessment criteria.
BROADLEAVED WOODLAND	Woodland and forest – Other woodland; broadleaved	0.276	Moderate	Passes 27 of 39 condition assessment criteria.



HABITAT TYPE (PH1)	HABITAT TYPE (UKHAB)	AREA/LENGTH (HA/KM)	CONDITION ASSESSMENT	DESCRIPTION
HARDSTANDING (WEIR)	Urban – Developed land; sealed surface	0.0163	N/A	N/A
SCATTERED TREES	Individual trees- Urban tree*	0.2597	Moderate	Pass 4 of 6 condition assessment criteria.
RIVER	Other rivers and streams	0.02	Fairly Poor	Please refer to Biodiversity Impact Assessment (Rachel Hacking Ecology).

*Baseline trees are numbered on the AIA as follows: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 24, 25, 26, 27, 28

3.2. HABITAT RETENTION

Table 3.2 shows the details of habitats to be retained. Habitats to be retained include scattered trees, two ponds in the south of the site, hardstanding associated with the weir, an area of mixed scrub in the east of the site and a strip of land in the north-west of the site containing ephemeral/short perennial, bare ground and broadleaved woodland.

TABLE 3.2 HABITAT RETENTION CONDITION ASSESSMENT RESULTS

HABITAT TYPE (LANDSCAPE PLAN)	HABITAT TYPE (UKHAB)	AREA (HA)
EPHEMERAL/SHORT PERENNIAL	Sparsely vegetated land – Ruderal/Ephemeral	0.00988
BARE GROUND	Urban – Bare Ground	0.00572
PONDS	Lakes – Ponds (non-priority habitat)	0.0576
MIXED SCRUB	Heathland and shrub – Mixed scrub	0.048
BROADLEAVED WOODLAND	Woodland and forest – Other woodland; broadleaved	0.112
HARDSTANDING (WEIR)	Urban – Developed land; sealed surface	0.0163
SCATTERED TREES	Individual trees – Urban tree	0.1697



HABITAT TYPE (LANDSCAPE PLAN)	HABITAT TYPE (UKHAB)	AREA (HA)
RIVER	Other rivers and streams	0.02

Retained trees are numbered on the AIA as follows: 3, 4, 5, 6, 7, 10, 11, 12, 13, 25, 27, 28, 29.

3.3. HABITAT CREATION CONDITION ASSESSMENT

Habitats are indicated on the Landscape Plan, which include residential housing and a wildlife area. Table 3.3 shows the details of the target condition assessment and total areas of habitat creation. It has been assumed that there will be no significant delay in the creation of the proposed habitat features, as such the delay in starting habitat creation has been set to zero.

TABLE 3.3 HABITAT CREATION CONDITION ASSESSMENT RESULTS

HABITAT TYPE (LANDSCAPE PLAN)	HABITAT TYPE (UKHAB)	AREA (HA)	TARGET CONDITION/DESCRIPTION	TARGET TIME TO CONDITION (YEARS)
BUILDINGS/ HARDSTANDING	Urban – Developed land; sealed surface	1.034	N/A	N/A
AMENITY GRASSLAND	Grassland – Modified grassland	0.0597	Moderate – Passes 4 of 7 condition assessment criteria: There are 6-8 vascular plant species per m2 present, including at least 2 forbs (this may include those listed in Footnote 1). Note - this criterion is essential for achieving Moderate or Good condition. Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m2 (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as	1



HABITAT TYPE (LANDSCAPE PLAN)	HABITAT TYPE (UKHAB)	AREA (HA)	TARGET CONDITION/DESCRIPTION	TARGET TIME TO CONDITION (YEARS)
			medium, high, or very high distinctiveness, please use the relevant condition sheet. - Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities. - Cover of bracken <i>Pteridium aquilinum</i> is less than 20%. - There is an absence of invasive non-native plant species³ (as listed on Schedule 9 of WCA4).	
WILDFLOWER MEADOW	Grassland – Other neutral grassland	0.0986	Moderate – Passes 4 of 6 condition assessment criteria: - The grassland is a good representation of the habitat type it has been identified as, based on its UKHab description - the appearance and composition of the vegetation closely matches the characteristics of the specific grassland habitat type. Indicator species listed by UKHab for the specific grassland habitat type are consistently present. Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only. - Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	5



HABITAT TYPE (LANDSCAPE PLAN)	HABITAT TYPE (UKHAB)	AREA (HA)	TARGET CONDITION/DESCRIPTION	TARGET TIME TO CONDITION (YEARS)
			- Cover of bracken <i>Pteridium aquilinum</i> is less than 20% and cover of scrub (including bramble <i>Rubus fruticosus</i> agg.) is less than 5%. - Combined cover of species indicative of sub-optimal condition and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species³ (as listed on Schedule 9 of WCA4) are present, this criterion is automatically failed.	
POND	Lakes – Ponds (non-priority habitat)	0.0255	Moderate – Passes 6 of 7 condition assessment criteria: - The pond is of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution. Turbidity is acceptable if the pond is grazed by livestock. - Less than 10% of the water surface is covered with duckweed <i>Lemna</i> spp. or filamentous algae. - The pond is not artificially connected to other waterbodies, e.g. agricultural ditches or artificial pipework. - Pond water levels can fluctuate naturally throughout the year. No obvious artificial dams², pumps or pipework.	3



HABITAT TYPE (LANDSCAPE PLAN)	HABITAT TYPE (UKHAB)	AREA (HA)	TARGET CONDITION/DESCRIPTION	TARGET TIME TO CONDITION (YEARS)
			- There is an absence of listed non-native plant and animal species³. - The pond is not artificially stocked with fish. If the pond naturally contains fish, it is a native fish assemblage at low densities.	
RESIDENTIAL GARDENS	Urban – Vegetated Gardens	0.324	N/A	1
PROPOSED TREES	Individual trees – Urban tree	1.5757 (43, medium)	Moderate – Passes 4 of 6 condition assessment criteria: - The tree is a native species (or at least 70% within the block are native species). - The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion). - There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height. - More than 20% of the tree canopy area is oversailing vegetation beneath.	27



3.4. STRATEGIC SIGNIFICANCE

The strategic significance was defined as 'Formally identified in local strategy'. The site comprised an area of disused land within the town of Rochdale. The majority of the site lies within a Greenspace corridor which runs along the River Roch; developments must therefore not sever or impede the key functions of designated greenspace corridor (Rochdale Core Strategy, 2016).

3.5. BIODIVERSITY UNIT RESULT

The headline results of the metric show a gain of 1.31 habitat units and no change in river units as a result of development. Table 3.4 shows the headline results detailed within the Biodiversity Metric.

TABLE 3.4 HEADLINE RESULTS

HEADLINE	CATEGORY	RESULT
TOTAL NET UNIT CHANGE	Habitat Units	+1.31
	Hedgerow Units	N/A
	River Units	0.00
TOTAL NET % CHANGE	Habitat Units	+13.81%
	Hedgerow Units	N/A
	River Units	0.00%



4. CONCLUSIONS AND RECOMMENDATIONS

The proposed scheme and proposed site plans show a total gain of 1.31 habitat units as a result of the development. A net gain of 10% has therefore been achieved on site.

The Biodiversity Metric does not take account for additional species enhancements within the site, and to further increase the site's value for wildlife the following could be provided:

-  Creation of hibernacula (following guidance set out within Froglife, 2001) for common amphibians.
-  Hedgehog houses may be installed to enhance the site for hedgehogs.
-  Bat and bird boxes could be integrated into the proposed residential units.



5. REFERENCES

- ✦ National Planning Policy Framework (2021). Ministry of Housing, Communities and Local Government.
- ✦ Natural England Joint Publication JP039. (2023). The Biodiversity Metric 4.0. User Guide. Technical Annex 2.
- ✦ Natural England Joint Publication JP039. (2023). The Biodiversity Metric 4.0. User Guide.
- ✦ Natural England. (2023). The Biodiversity Metric 4.0. Technical Annex 1. Condition Assessment Sheets.
- ✦ Rachel Hacking Ecology. (2022). Biodiversity Impact Assessment – Oakenrod, Rochdale.
- ✦ Rochdale Borough Council. (2016). Rochdale Core Strategy, Adopted October 2016.
- ✦ Trevor Bridge Associates (2023). Landscape Proposal – Oakenrod School Site, Rochdale (Drawing number 7188.01).
- ✦ Trevor Bridge Associates (2023). Landscape Proposal – Oakenrod School Site, Rochdale (Drawing number 7188.02).
- ✦ Trevor Bridge Associates (2023). Landscape Proposal – Oakenrod School Site, Rochdale (Drawing number 7188.03).

END OF REPORT



APPENDIX I

PHASE 1 HABITAT PLAN



Key:

— Site boundary

• Bare ground

■ Broadleaved woodland

▤ Continuous scrub

⦿ Ephemeral/short perennial

■ River Roch

⦿ Spoil

▤ Tall ruderal

Notes

Issue: 1	Revision: 1	Date: 07/08/23	Drawn: ZSW	Authorised: CB
Client: Hallmark Developments Ltd			Job No. 81-303	Date: 07/08/23
			Drawing No. 81-303-001	Scale: 1 : 1800 @A4
Job title: Oakenfold School, Rochdale			Drawing title: Phase 1 Habitat Plan	



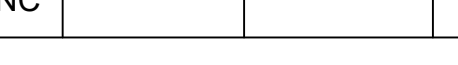
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APPENDIX II

LANDSCAPE PLANS

The background of the page is composed of several geometric shapes in shades of orange. A large, dark orange shape occupies the top right. A lighter orange shape is on the left, meeting the dark one at a diagonal line. The bottom left corner features a triangular area with a fine, light-colored grid pattern. The text 'APPENDIX II' and 'LANDSCAPE PLANS' is centered in the upper half of the page in a bold, white, sans-serif font.



BIODIVERSE LAWN MIX - To be sown at a rate of 50g/M².

Meadowscape Pro-Species-Rich-26
<https://wildflowerurf.co.uk/products/meadowscapespecies-rich-lawn/#species>

Available from Wildflowerurf.co.uk Tel: 01256 771222 (or similar approved)

WILDFLOWER SEED MIX - To be sown at a rate of 4g/M².

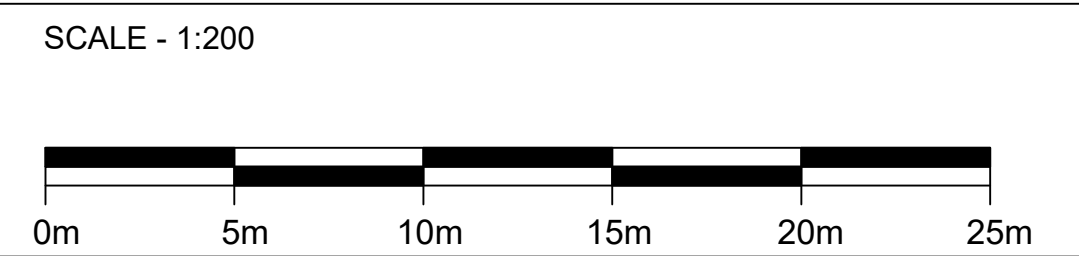
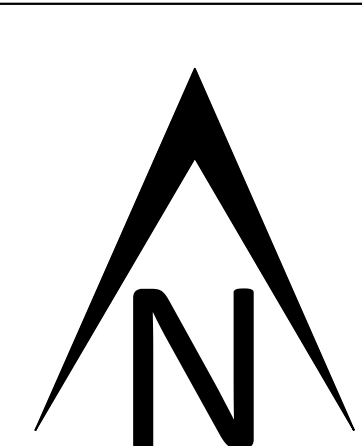
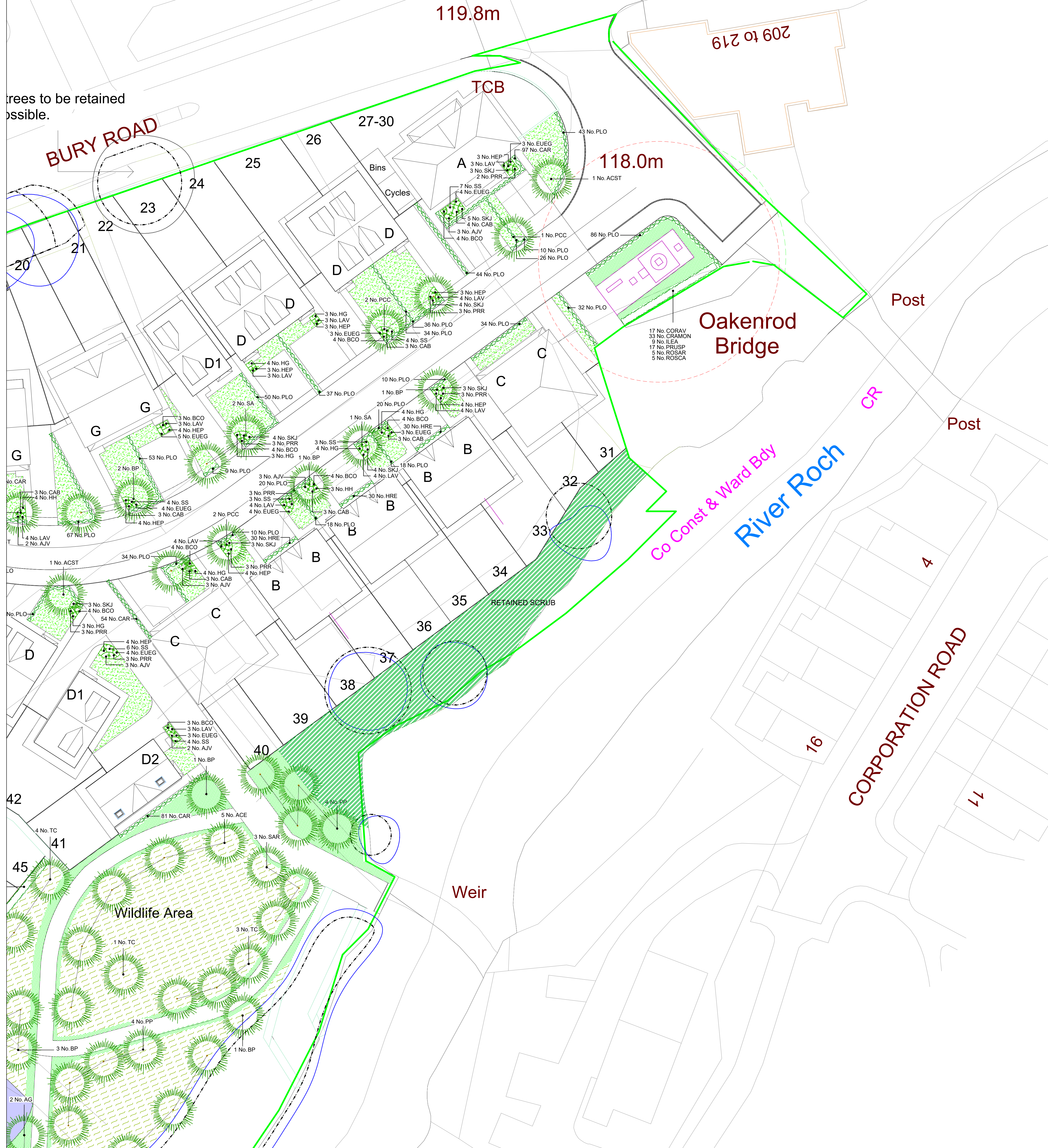
EM2 - Standard General Purpose Meadow Mixture
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Available from Emorgate Seeds Tel: 01553 829 028 or similar approved.
All wildflower areas to have 1M wide close mown grass edge adjacent roads and footpaths. Seeded with grass mix A22.

AMENITY GRASS SEED MIX - To be sown at a rate of 50g/M².

A22 - Hard Wearing, Low Maintenance.
www.germinalmateriaal.co.uk/a22-low-maintenance

Available from Germinal GB Ltd. Tel: 01522 868714 (or similar approved)

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