



e3p

Biodiversity Metric Report

Station Road, Milnrow, Oldham

Reference: 81-470-R3-1

Date: October 2023



BIODIVERSITY METRIC REPORT

Station Road,
Milnrow, Oldham

Prepared for:
Obsidian Design & Build Ltd

Report Ref: 81-470-R3-1
Date Issued: 24/10/2023

E3P

Taylor Road
Trafford Park
Urmston
Manchester
M41 7JQ

+ 44 (0) 161 707 9612
<https://e3p.co.uk/>

Registered in England
CRN: 08725262

QUALITY ASSURANCE

PROJECT NUMBER	81-470		
VERSION	Version 1		
REMARKS	Final		
DATE	October 2023		
PREPARED BY	Z. Squire-Watt		
QUALIFICATIONS	BSc (Hons), MSc, QCIEEM, Graduate Ecologist		
CHECKED BY	L. Thomas		
QUALIFICATIONS	BSc (Hons), ACIEEM, Project Manager - Ecology		
AUTHORISED BY	C. Kenyon		
QUALIFICATIONS	BSc (Hons), MSc, MEnvSc, CEnv, MCIEEM, Associate Director		

EXECUTIVE SUMMARY

Site Address	Station Road, Milnrow, Oldham, OL16 4HQ
Co-ordinates	E 392781, N 412382
Site Area	Approximately 1.87 ha
Current Site Use	The site comprised a warehouse and office building and hardstanding associated with Maqio Toys, with an area of vegetation in the south-east of the site. Residential development surrounds the site to the south and west, with a train line and the River Beal to the south and north respectively.
Proposed Development	Proposals include repair works to the warehouse roof and the construction of a new warehouse in the south-east of the site.
Results	A loss of 0.54 habitat units (41.74%) and no net loss in hedgerow or river units will be incurred on-site as a result of development. The river has been assessed as moderate on a precautionary basis.
Conclusions and Recommendations	The proposed scheme and proposed site plans show a total loss of 0.54 habitat units and no net loss in hedgerow or river units as a result of the development. However, a net gain in habitat and hedgerow units could be achieved on-site. To achieve no net loss in habitat units (0.20%), the following would all need to be implemented: - Enhancing 0.03089 ha of mixed scrub to moderate condition. - Planting three trees with a girth of 18-20 cm when planted. - Planting eight trees with a girth of >18 cm when planted. To achieve a gain of 0.13 habitat units (10.03%), the following would all need to be implemented on site to achieve a net gain in habitat units: - Enhancing 0.03089 ha of mixed scrub to moderate condition. - Enhancing 0.0119 ha of tall ruderal to moderate condition. - Replacing 0.0389 ha of amenity grassland with moderate condition mixed scrub. - Replacing 0.02443 ha of scattered scrub with moderate condition mixed scrub. - Planting two trees with a girth of 18-20 cm when planted. - Planting six trees with a girth of >18 cm when planted. Planting 1 m of species-rich native hedgerow achieves a gain of 0.01 hedgerow units (10.36%). Additional species enhancements could be provided on-site, which could include bat and bird boxes, hedgehog houses and hibernacula.



Table of Contents

EXECUTIVE SUMMARY	2
1.INTRODUCTION	4
1.1. Background	4
1.2. Previous Surveys	4
1.3. Site Location	4
1.4. Objectives	5
2.METHODOLOGY	6
2.1. Biodiversity Metric	6
2.2. On-Site Habitat Baseline Data.....	6
2.3. Post Development Habitat Creation.....	6
2.4. Limitations	6
3.RESULTS.....	7
3.1. On-Site Baseline Condition Assessment Results	7
3.2. Habitat Retention.....	11
3.3. Habitat Creation Condition Assessment.....	12
3.4. Baseline River Condition Assessment Results	13
3.5. Watercourse Retention.....	13
3.6. Strategic Significance	14
3.7. Biodiversity Unit Result	14
4.CONCLUSIONS AND RECOMMENDATIONS	15
5.REFERENCES.....	16
APPENDIX I PHASE 1 HABITAT PLAN.....	17
APPENDIX II PROPOSED SITE PLAN	18



1. INTRODUCTION

1.1. BACKGROUND

E3P has been instructed by Obsidian Design & Build Ltd to undertake a Biodiversity Metric Calculation at Station Road, Milnrow, Oldham, hereafter referred to as “the site”.

This report has been produced by Zach Squire-Watt BSc (Hons), MSc, 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 – Station Road, Milnrow, Oldham.xl’.

1.2. PREVIOUS SURVEYS

E3P undertook a Preliminary Ecological Appraisal on-site in October 2023 (report reference: 81-470-R2). The survey included a Condition Assessment of the on-site habitats. During the survey, the site was found to comprise a building and hardstanding, amenity grassland, dense scrub, scattered scrub, ephemeral/short perennial, tall ruderal, scattered trees, and treeline.

1.3. SITE LOCATION

The site is located in the south of the town of Milnrow. Station Road defines the site’s north-western boundary and meets Dale Street approximately 100 m north of site. A railway line and the River Beal define the site’s western and northern boundaries respectively. 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 Biodiversity Net Gain assessments and using the Biodiversity Metric Calculation Tool.

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 04th October 2023 during the Preliminary Ecological Appraisal. The Biodiversity Metric 4.0 – Technical Annex 1 – Condition Assessment Sheets and Methodology (Natural England 2023) was used to undertake the condition assessment. The methodology follows the Biodiversity Metric 4.0 – User Guide (Natural England 2023).

On-site baseline habitats were measured off the Phase 1 Habitat Plan using QGIS. The Root Protection Areas (RPAs) of scattered trees were taken from the Arboricultural Impact Assessment and Method Statement (report reference: 81-470-R1).

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

2.3. POST DEVELOPMENT HABITAT CREATION

The Proposed Site Plan was used to measure potential habitat creation on-site (2023, Drawing Number: PL_002). The areas of the proposed warehouse and extension were measured using QGIS from the PDF drawing. However, since the Proposed Site Plan does not include details of any habitat creation, it has therefore been assumed that apart from the habitat that will be removed to make room for the new buildings, the on-site habitats will be retained.

Please see Appendix II for the Proposed Site Plan.

2.4. LIMITATIONS

A detailed Modular River Physical (MoRPh5) Survey was not conducted as no impacts to the watercourse are anticipated and the river condition has been assessed as moderate on a precautionary basis. If proposals change and there are impacts to the watercourse, a Morph5 survey will be required.



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.

TABLE 3.1 HABITAT BASELINE CONDITION ASSESSMENT RESULTS

HABITAT TYPE (PH1)	HABITAT TYPE (UKHAB)	AREA/LENGTH (HA/KM)	CONDITION ASSESSMENT	DESCRIPTION
BUILDINGS/ HARDSTANDING	Urban – Developed Land; Sealed Surface	1.4908	N/A	N/A
AMENITY GRASSLAND	Grassland – Modified Grassland	0.08933	Poor	Fails criteria 1 which is essential for achieving moderate condition as there is less than 6-8 species per m ² .
DENSE SCRUB	Heathland and shrub- Mixed scrub	0.03089	Poor	Passes 2 of 5 condition assessment criteria: The scrub is a good representation of the habitat type it has been identified as, based on its UKHab description (where in its natural range). The appearance and composition of the vegetation closely matches the characteristics of the specific scrub type. At least 80% of scrub is native, and there are at least three native woody species¹, with no single species comprising more than 75% of the cover (except hazel <i>Corylus avellana</i>, common juniper <i>Juniperus communis</i>, sea buckthorn <i>Hippophae rhamnoides</i> or box <i>Buxus sempervirens</i>, which can be up to 100% cover).



HABITAT TYPE (PH1)	HABITAT TYPE (UKHAB)	AREA/LENGTH (HA/KM)	CONDITION ASSESSMENT	DESCRIPTION
				 Seedlings, saplings, young shrubs and mature (or ancient or veteran) shrubs are all present.
EPHEMERAL/ SHORT PERENNIAL	Sparsely vegetated land- Ruderal/Ephemeral	0.05847	Poor	Passes 1 of 3 condition assessment criteria:  "Invasive non-native plant species (listed on Schedule 9 of WCA) and others which are to the detriment of native wildlife (using professional judgement) cover less than 5% of the total vegetated area. Note - to achieve Good condition, this criterion must be satisfied by a complete absence of invasive non-native species (rather than <5% cover). "
SCATTERED SCRUB	Heathland and shrub- Bramble scrub	0.13	N/A	N/A
TALL RUDERAL	Sparsely vegetated land- Ruderal/Ephemeral	0.0547	Good	Passes 3 of 3 condition assessment criteria:  Vegetation structure is varied, providing opportunities for vertebrates and invertebrates to live, eat and breed. A single structural habitat component or vegetation type does not account for more than 80% of the total habitat area.  The habitat parcel contains different plant species that are beneficial for wildlife, for example flowering species providing nectar sources for a range of invertebrates at different times of year.  Invasive non-native plant species (listed on Schedule 9 of WCA) and others which are to the detriment of native wildlife (using professional judgement) cover less than 5% of the total vegetated area. Note - to achieve Good condition, this criterion must be



HABITAT TYPE (PH1)	HABITAT TYPE (UKHAB)	AREA/LENGTH (HA/KM)	CONDITION ASSESSMENT	DESCRIPTION
				satisfied by a complete absence of invasive non-native species (rather than <5% cover).
TALL RUDERAL	Sparsely vegetated land- Ruderal/Ephemeral	0.0119	Poor	Passes 1 of 3 condition assessment criteria: ✿ The habitat parcel contains different plant species that are beneficial for wildlife, for example flowering species providing nectar sources for a range of invertebrates at different times of year.
TREELINE	Line of trees	0.01615	Moderate	Passes 3 of 5 condition assessment criteria: ✿ At least 70% of trees are native species. ✿ Tree canopy is predominantly continuous with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide. ✿ At least 95% of the trees are in a healthy condition (deadwood or veteran features valuable for wildlife are excluded from this). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.
SCATTERED TREES	Individual trees- Urban tree	0.0266 (2 medium ,2 small)	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).



HABITAT TYPE (PH1)	HABITAT TYPE (UKHAB)	AREA/LENGTH (HA/KM)	CONDITION ASSESSMENT	DESCRIPTION
				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.



3.2. HABITAT RETENTION

Table 3.2 shows the areas of habitat that are to be retained under the current proposals, which includes the majority of the on-site habitats. Habitats that will be lost following construction include 0.05705 ha of ephemeral/short perennial and 0.1055 ha of scattered scrub to make room for the proposed warehouse.

TABLE 3.2 HABITATS TO BE RETAINED

HABITAT TYPE (LANDSCAPE PLAN)	HABITAT TYPE (UKHAB)	AREA/LENGTH (HA/KM)
HARDSTANDING AND BUILDINGS	Urban - Developed Land; Sealed Surface	1.3889
AMENITY LAWN	Grassland – Modified Grassland	0.08933
DENSE SCRUB	Heathland and Shrub – Mixed Scrub	0.03089
EPHEMERAL/SHORT PERENNIAL	Sparsely vegetated land- Ruderal/Ephemeral	0.001415
SCATTERED SCRUB	Heathland and shrub- Bramble scrub	0.02442
TALL RUDERAL	Sparsely vegetated land- Ruderal/Ephemeral	0.0547
TALL RUDERAL	Sparsely vegetated land- Ruderal/Ephemeral	0.0119
SCATTERED TREES	Individual trees- Urban tree	0.0266
TREELINE	Line of trees	0.01615



3.3. HABITAT CREATION CONDITION ASSESSMENT

Table 3.3 shows the details of the condition assessments for the habitats that are to be created, which include an extension to the pre-existing warehouse and a new warehouse unit.

HABITAT TYPE (PH1)	HABITAT TYPE (UKHAB)	AREA/LENGTH (HA/KM)	CONDITION ASSESSMENT	TARGET TIME TO CONDITION (YEARS)
BUILDINGS/ HARDSTANDING	Urban – Developed Land; Sealed Surface	0.2640	N/A	N/A



3.4. BASELINE WATERCOURSE CONDITION ASSESSMENT RESULTS

One watercourse, the River Beal, was within 10 m of the site boundary in several areas along the site's northern boundary. Please see Table 3.4 for a summary of this watercourse.

HABITAT TYPE (LANDSCAPE PLAN)	HABITAT TYPE (UKHAB)	LENGTH (KM)	FINAL CONDITION CLASS	WATERCOURSE ENCROACHMENT	RIPARIAN ENCROACHMENT
RIVER BEAL	Other Rivers and Streams	0.1575	Moderate	Major Greater than 20% of the bank length comprises an engineered bank revetment.	Major/Major An expanse of hardstanding was present within 4 m of the Brook's left bank, whilst a building was present within 4 m of the right bank.

3.5. WATERCOURSE RETENTION

The River Beal will be retained throughout the development. Due to the small scale of the proposals, no change in watercourse or riparian encroachment is expected, therefore the condition will remain Moderate.

HABITAT TYPE (LANDSCAPE PLAN)	HABITAT TYPE (UKHAB)	LENGTH (KM)	FINAL CONDITION CLASS	WATERCOURSE ENCROACHMENT	RIPARIAN ENCROACHMENT
RIVER BEAL	Other Rivers and Streams	0.1575	Moderate	Major	Major/Major



3.6. STRATEGIC SIGNIFICANCE

The strategic significance was defined as 'Area not in local strategy, no local strategy' (Rochdale Council, 2006). The site comprised an office and warehouse building that is currently in use, with associated hardstanding and areas of vegetation on the site boundaries. Due to the developed nature of the site and the lack of ecologically valuable habitats within the boundary, the site is not anticipated to have significant ecological value.

3.7. BIODIVERSITY UNIT RESULT

The headline results of the metric show a loss of 0.54 habitat units and no net loss in hedgerow or 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	-0.54
	Hedgerow Units	0.00
	River Units	0.00
TOTAL NET % CHANGE	Habitat Units	-41.74%
	Hedgerow Units	0%
	River Units	0%

The trading rules of the metric have not been satisfied as habitats lost have not been 'traded up'.



4. CONCLUSIONS AND RECOMMENDATIONS

The proposed scheme and proposed site plans show a total loss of 0.54 habitat units and no net change in hedgerow or river units as a result of the development. However, a net gain in habitat and hedgerow units could be achieved on-site, as detailed below.

Planting 1 m of species-rich native hedgerow will achieve a net gain of 0.01 hedgerow units (10.39%) and satisfy the trading rules.

The following changes would all need to be implemented to achieve no net loss in habitat units (0.20%):

- ✿ Enhancing 0.03089 ha of mixed scrub to moderate condition.
- ✿ Planting three trees with a girth of 18-20 cm when planted.
- ✿ Planting eight trees with a girth of >18 cm when planted.

However, from January 2024 a 10% net gain and satisfaction of the trading rules will become mandatory for all proposed developments. Therefore, to achieve a gain of 0.13 habitat units (10.03%) on-site and satisfy the trading rules, all of the following would need to be implemented:

- ✿ Enhancing 0.03089 ha of mixed scrub to moderate condition.
- ✿ Enhancing 0.0119 ha of tall ruderal to moderate condition.
- ✿ Replacing 0.02443 ha of scattered scrub with moderate condition mixed scrub.
- ✿ Planting three trees with a girth of 18-20 cm when planted.

The enhancement of the mixed scrub and tall ruderal to moderate condition can most easily be achieved by removing the Himalayan balsam from the site. Furthermore, please note that in order to achieve moderate condition the proposed scattered trees can be included anywhere on-site providing at least 20% of their canopy cover is oversailing vegetation. If this is unfeasible, off-site compensation or conservation offset payment will be required for the development to proceed. The Local Planning Authority (LPA) will need to be consulted to determine if an offset payment is acceptable.

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

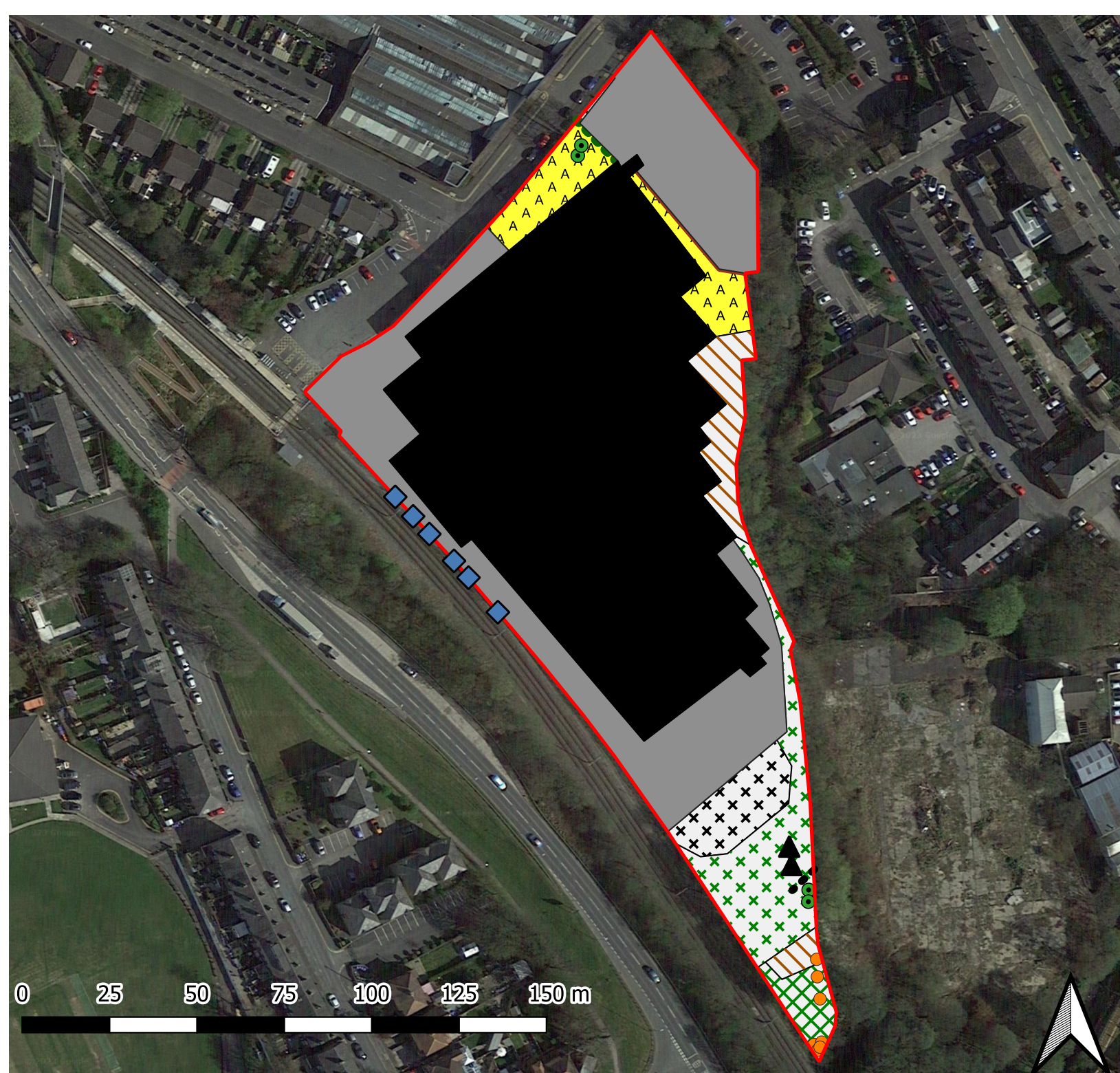
- ✿ E3P (2023). Preliminary Ecological Appraisal (Report reference:81-470-R2).
- ✿ Rochdale Council (2006). Rochdale Borough Unitary Development Plan, Adopted June 2006.
- ✿ National Planning Policy Framework (2021). Ministry of Housing, Communities and Local Government.
- ✿ Natural England Joint Publication 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.
- ✿ Untitled (2023). Proposed Site Plan (Drawing number: PL_002.)

END OF REPORT



APPENDIX I

PHASE 1 HABITAT PLAN



Key:

- Site boundary
- A Amenity grassland
- Buildings
- x Ephemeral/short perennial
- X Dense scrub
- Hardstanding
- + Scattered scrub
- / Tall ruderal
- Wall
- Line of trees
- Mammal path
- ▲ Brash piles
- Scattered trees
- Himalayan balsam
- ◆ Field horsetail

Notes

Issue: 1	Revision: 1	Date: 04/10/2023	Drawn: ZSW	Authorised: CK
Client: Obsidian Design & Build Ltd			Job No. 81-470	Date: 04/10/2023
			Drawing No. 81-470-001	Scale: 1 : 2500 @A4
Job title: Station Road, Milnrow, Oldham			Drawing title: Phase 1 Habitat Plan	

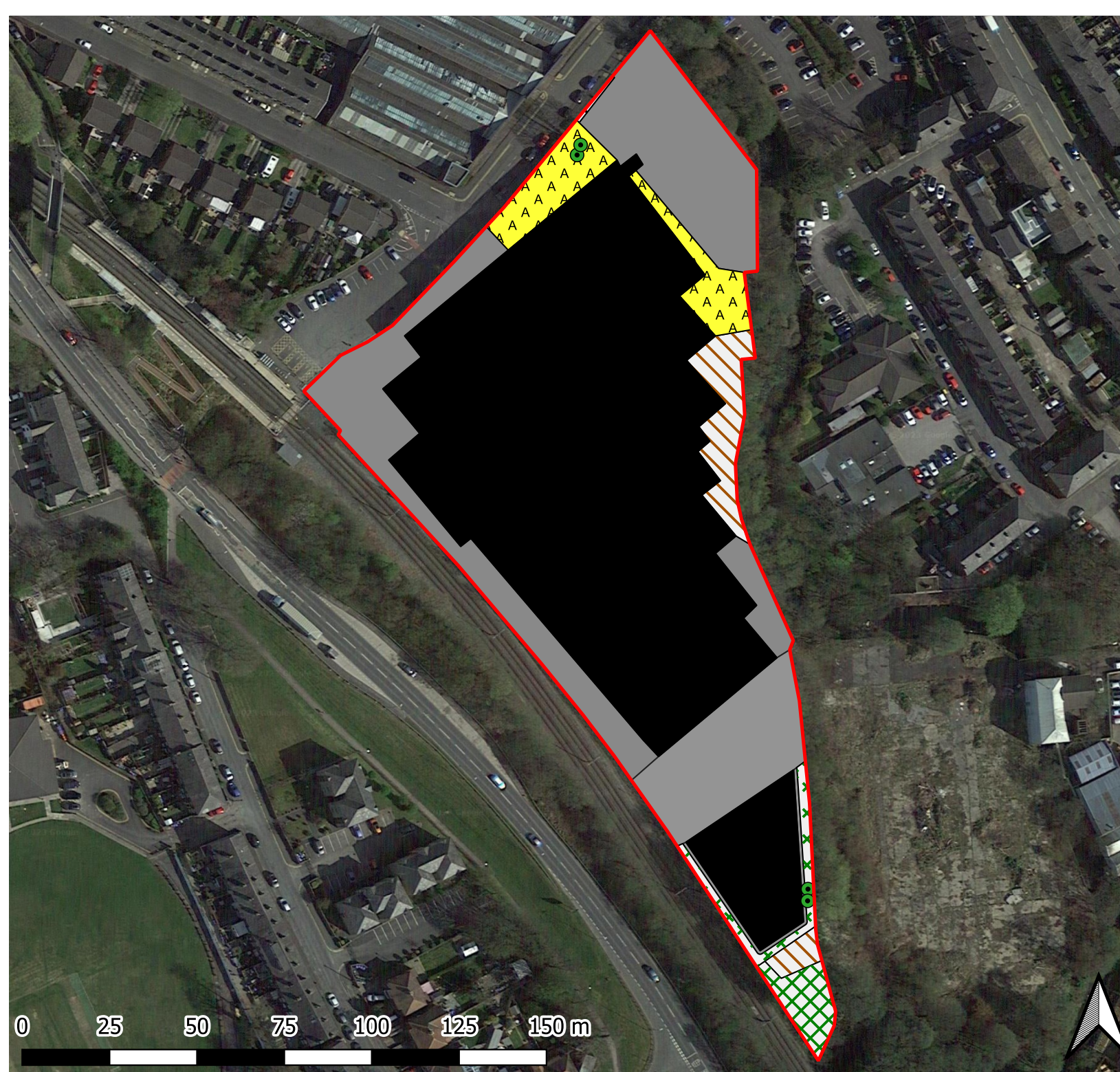


Environmental Engineering Partnership Ltd
Manchester Office
Taylor Road, Urmston M41 7JQ
Tel: 0161 707 9612
Email: info@e3p.co.uk
Website: www.e3p.co.uk

The client must not amend any drawing, design or other intellectual property produced by E3P Ltd without permission in writing from E3P Ltd in advance of any amendments being made. In the event that such written permission is not obtained in advance of the amendments being made, E3P Ltd shall not be liable for any damage or/and losses occurring as a result of the amended drawing, design or intellectual property.

APPENDIX II

PROPOSED SITE PLAN



Key:

— Site boundary

■ Proposed buildings

■ Proposed hardstanding

■ Retained amenity grassland

■ Retained dense scrub

■ Retained ephemeral/short perennial

■ Retained hardstanding

■ Retained scattered scrub

■ Retained tall ruderal

● Retained scattered trees

Notes

Issue: 1	Revision: 1	Date: 20/10/2023	Drawn: ZSW	Authorised: CK
Client: Obsidian Design & Build Ltd			Job No. 81-470	Date: 20/10/2023
			Drawing No. 81-470-003	Scale:
Job title: Station Road, Milnrow, Oldham			Drawing title: Proposed Site Plan	



e3p

Environmental Engineering Partnership Ltd
Manchester Office
Taylor Road, Urmston M41 7JQ
Tel: 0161 707 9612
Email: info@e3p.co.uk
Website: www.e3p.co.uk

The client must not send any drawing, design or other intellectual property produced by E3P Ltd without permission in writing from E3P Ltd in advance of any amendments being made. In the event that such written permission is not obtained in advance of the amendments being made, E3P Ltd shall not be liable for any damage and/or losses occurring as a result of the amended drawing, design or intellectual property.

0 25 50 75 100 125 150 m