



Biodiversity Metric Report
Link Logistics Park, Ellesmere Port

Reference:80-411-R4-2
Date: March 2021



BIODIVERSITY METRIC REPORT

Link Logistics Park
Ellesmere Port

Prepared for:
Firethorn Developments Ltd

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EXECUTIVE SUMMARY

Site Address	North Road Industrial Estate, North Road, Ellesmere Port, CH65 1AB				
Co-ordinates	E 338929, N 378705				
Site Area	Approximately 15.5 ha				
Current Site Use	The site comprised a disused area of hardstanding and bare ground, that had been colonised by scattered scrub, with a section of woodland to the west. Previously, the site of the Bridgewater Paper Mill, with the majority of the buildings and structures now demolished.				
Proposed Development	Development proposals include the demolition of the remaining structures on-site and the construction of an industrial development, with landscape planting and an attenuation pond proposed within the northern western area of the site.				
Results	<p>The biodiversity metric results show a loss of habitat and gain of hedgerow units as follows:</p> <table><tr><td>Habitat Units</td><td>- 12.24</td></tr><tr><td>Hedgerow Units</td><td>+ 6.76</td></tr></table> <p>A total loss of 5.48 habitat units will be incurred on-site as a result of development.</p>	Habitat Units	- 12.24	Hedgerow Units	+ 6.76
Habitat Units	- 12.24				
Hedgerow Units	+ 6.76				
Conclusions and Recommendations	A conservation offset payment may be required for development to proceed. Alternatively, off-site habitat compensation could be provided within the local area. Or additional habitat provisions could be provided within the site boundary. Species enhancement measures should be taken into consideration by the LPA when determining payment fees per unit loss.				



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1. INTRODUCTION

1.1. BACKGROUND

E3P has been instructed by Firethorn Developments Ltd to undertake a Biodiversity Metric Calculation at Port Cheshire, Ellesmere Port hereafter referred to as “the site”.

This report has been prepared by Principal Ecologist Celia Barlow, BSc (Hons) MSc MEnvSc CEnv, MCIEEM. Celia holds both Class 1 bat and great crested newt Natural England Licences, Field Identification Skills Certificate (FISC) Level 3 and has key experience with amphibians and reptiles. 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’.

This report should be read in conjunction with ‘Biodiversity Metric 2.0 Calculation Tool Beta Test- Port Cheshire, Ellesmere Port.xl’.

1.2. PREVIOUS SURVEYS

An extended Phase 1 Habitat survey was undertaken by TEP Limited in September 2010 and updated in July 2012 (report reference: NJL Consulting, 2012). TEP Limited also advised on potential impacts associated with decommissioning of plant and demolition of buildings of the former Paper Mill. A bat roost was recorded inside the inking shed DIP#3 which resulted in the production of a Reasonable Avoidance Method Statement to allow removal of the plant and a Natural England licence application (made in May 2011) to allow demolition of the inking shed. This included pre-demolition installation of six bat boxes onto trees on the adjacent Mount Manisty.

E3P completed a Preliminary Ecological Appraisal (PEA) on 05th November 2020 (report reference:80-411-R1-2). The site comprised a large area of hardstanding with smaller areas of broadleaved woodland, neutral semi-improved grassland, dense scrub, scattered scrub and introduced shrub present within the site boundary. Invasive plant species (wall cotoneaster, small-leaved cotoneaster and field horsetail) present on-site. Building 1, 9 and 10 within the site boundary, and B6 and B8 adjacent to the site had low bat roosting potential. Overall, the habitats on site were assessed as having potential to support amphibians, passerine birds, foraging and commuting bats, badger (*Meles meles*), reptiles and hedgehog (*Erinaceus europaeus*).

The on-site waterbody was assessed as providing suitable habitat for great crested newts (*Triturus cristatus*). The Rivacre Brook and the Manchester Ship Canal located adjacent to the north-west and north of the site, respectively, were assessed as having suitability for foraging and commuting otters (*Lutra lutra*). No otter holt building opportunities were present within the site, though Booston Wood adjacent to the site had opportunities within the roots of trees along Rivacre Brook. Records of pair of peregrine falcons (*Falco peregrinus*) nesting on the water tower within the site since 1953 were identified.

In January 2021 E3P completed a Habitat Regulation Assessment of the site (report reference:80-411-R2-1). The proposed development was identified to be within the Zone of Influence of Mersey Estuary SPA and Ramsar. The site was not found to be functionally linked to the designated sites. No likely significant effects were anticipated on the SPA and Ramsar as a result of development. As such, the proposed development site was screened out of further assessment.



1.3. SITE DESCRIPTION

The site is located north of Ellesmere Port, within a predominantly industrial area of Overpool. North Road lies adjacent to the southern site boundary, with the M53 approximately 110 m south of the site. Rivacre Brook is present approximately 25 m west of the site, within Booston Wood, and a disused railway line forms the northern site boundary, terminating halfway along the northern site boundary. Manchester Ship Canal lies adjacent to the north of the site and railway line, with the River Mersey located beyond this, approximately 170 m north of the site. 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 2.0 December 2019 Beta Test Version was used to undertake the metric calculation. The metric was undertaken following guidance as detailed within The Biodiversity Metric 2.0 User Guide (Natural England, 2019) and The Biodiversity Metric 2.0 Calculation Tool: User Guide (Natural England, 2019).

The Biodiversity Metric calculation has been undertaken by Principal Ecologist Celia Barlow, BSc (Hons) MSc MEnvSc CEnv, MCIEEM. Celia has undertaken a number of online training courses with the Chartered Institute of Ecology and Environmental Management (CIEEM) including 'Calculating and Using Biodiversity Units with Metric 2.0' and 'Biodiversity Net Gain Through Development'.

Within the metric, connectivity scores were set at 'low' for low and moderate distinctiveness habitats and 'medium' for high or very high distinctiveness habitats in the absence of local data (Natural England, 2019).

2.2. ON-SITE HABITAT BASELINE DATA

The baseline data used to inform the condition assessment was collected on 05th November 2020 during the Preliminary Ecological Appraisal. Please see Appendix I for the Phase 1 Habitat Plan.

On-site baseline habitats were measured off the Phase 1 Habitat Plan. The Phase 1 Habitat Plan was scaled and traced in AutoCAD allowing for accurate measurements. All habitats were rounded to two decimal places to facilitate input into the metric. Scattered trees measurements reflect the canopy cover of the trees.

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

2.3. POST DEVELOPMENT HABITAT CREATION

The draft Landscape Concept Plan (Barry Chinn Associates, 2021) was used to measure habitat creation on-site. The areas of proposed habitat were measured using AutoCAD from the DWG drawing.

All habitats were rounded to two decimal places to facilitate input into the metric. Proposed scattered tree measurements were calculated using the 'street trees' tool within the metric.

2.4. LIMITATIONS

The Biodiversity Metric 2.0 Beta Test currently only allows habitat measurements to be input to two decimal places, reducing the accuracy of the calculations.

Some areas on the site are double counted, including tree areas and areas of grassland, 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 condition assessment.

TABLE 3.1 HABITAT BASELINE CONDITION ASSESSMENT RESULTS

HABITAT TYPE (PH1)	HABITAT TYPE (UKHAB)	AREA (HA)	CONDITION ASSESSMENT	DESCRIPTION
BUILDINGS	Urban; Developed Land; Sealed Surface	14.1	N/A	N/A
HARDSTANDING				
NEUTRAL SEMI-IMPROVED GRASSLAND	Grassland – Modified Grassland	0.5	Poor	Most of the condition criteria are being failed. Cover of undesirable species above 15%, usually resulting in a dense scrub or tree cover, or high cover of exotic species.
BROADLEAVED WOODLAND – SEMI-NATURAL	Lowland mixed deciduous woodland	0.92	Moderate	Habitat type clearly fails at least 2 of the condition criteria. <i>3. A diverse age and height structure of the trees, 6. Standing and fallen dead wood of over 20 cm diameter are present including fallen large dead branches/stems and stumps, 8. The area is protected from damage by agricultural and other adjacent operations.</i>
DENSE SCRUB	Heathland and shrub-Mixed scrub	0.7	Moderate	Meets Condition Assessment Criteria for Moderate. The single woody species cover is greater than 75%
SCATTERED SCRUB		1.3		The age range is missing some size classes. Scrub type of high biodiversity in poor condition.
INTRODUCED SHRUB	Urban-Introduced Shrub	0.1	Poor	Cover of undesirable and invasive species above 20%
STANDING WATER	Temporary lakes, ponds and pools	0.39	Moderate	Meets Condition Assessment Criteria for Moderate: There is only moderate water quality. There is insufficient extent of semi natural riparian land.



HABITAT TYPE (PH1)	HABITAT TYPE (UKHAB)	AREA (HA)	CONDITION ASSESSMENT	DESCRIPTION
				Submerged and floating plants are limited by still presence.

3.2. HABITAT RETENTION

Table 3.2 outlines the habitats to be retained and partially retained.

TABLE 3.2 HABITAT RETENTION

HABITAT TYPE (LANDSCAPE PLAN)	HABITAT TYPE (UKHAB)	AREA (HA)	CONDITION
BROADLEAVED WOODLAND	Woodland and Forest-Other Woodland; Broadleaved	0.05	Moderate

3.3. HABITAT CREATION CONDITION ASSESSMENT

Table 3.3 shows the details of the target condition assessment and areas of habitat creation.

TABLE 3.3 HABITAT CREATION CONDITION ASSESSMENT RESULTS

HABITAT TYPE (LANDSCAPE PLAN)	HABITAT TYPE (UKHAB)	AREA (HA)	TARGET CONDITION	DESCRIPTION/TARGET TIME TO CONDITION
BUILDINGS	Urban; Developed Land; Sealed Surface	12.83	N/A	N/A
HARDSTANDING				
PROPOSED WOODLAND EDGE	Lowland mixed deciduous woodland	0.57	Good	Target time to condition will be achieved within 32 years.
PROPOSED CLOSE MOWN GRASS	Urban- Amenity Grassland	0.58	Moderate	Target time to condition will be achieved within one year as the species used will be quick to establish.
PROPOSED SPECIES RICH GRASSLAND	Grassland- Lowland Meadow	0.89	Good	Target time to condition will be achieved within 15 years.
PROPOSED	Grassland- Other	0.24	Good	Target time to



HABITAT TYPE (LANDSCAPE PLAN)	HABITAT TYPE (UKHAB)	AREA (HA)	TARGET CONDITION	DESCRIPTION/TARGET TIME TO CONDITION
WETLAND GRASSLAND	neutral grassland			condition will be achieved within 15 years.
AQUATIC/MARGINAL PLANTING	Wetland – Fens	0.06	Good	Target time to condition will be achieved within 30 years.
PROPOSED ORNAMENTAL SHRUB PLANTING	Urban – Introduced Shrub	0.12	Good	Target time to condition will be achieved within one year as the species used will be quick to establish.
PROPOSED THICKET MIX PLANTING	Heathland and shrub- Mixed scrub	0.61	Good	Target time to condition will be achieved within seven years.
PROPOSED TREE PLANTING (21)	Street Tree (Small)	<0.01	Moderate	Target time to condition will be achieved within 27 years.
PROPOSED TREE PLANTING (25)	Street Tree (Medium)	0.10	Moderate	Target time to condition will be achieved within 27 years.
PROPOSED TREE PLANTING (221)	Street Tree (Large)	2.13	Moderate	Target time to condition will be achieved within 27 years.
POND	Lakes- Ponds (Priority Habitat)	0.39	Moderate	Target time to condition will be achieved within ten years.
PROPOSED MIXED SPECIES NATIVE HEDGEROW	Native Species Rich Hedgerow with Trees	0.6 km	Good	Target time to condition will be achieved within 20 years.
PROPOSED SINGLE SPECIES HEDGEROW	Native Hedgerow	0.9 km	Good	Target time to condition will be achieved within ten years.



3.4. STRATEGIC SIGNIFICANCE

The strategic significance was defined as 'location ecologically desirable but not in local strategy'. On the northern site boundary is the Manchester Ship Canal with the Mersey Estuary Site Special Scientific Interest (SSSI) Special Protection Area (SPA) and Ramsar. The Mersey Estuary is designated as it is an internationally important site for wildfowl and consists of large areas of intertidal sand and mudflats. The site also includes an area of reclaimed marshland, salt-marshes, brackish marshes and boulder clay cliffs with freshwater seepages. The canal and estuary are expected to act as important commuting and foraging features for a variety of local wildlife.

Multiple areas of woodland are present in proximity to the site, such as Booston Wood Local Wildlife Site (LWS), which also forms part of the western aspect of the site, Mount Manisty, approximately 95 m north of the site, Rivacre Wood, approximately 800 m south west of the site and Well Wood, Clayhill Wood and Church Wood that together form Rivacre Valley Local Nature Reserve (LNR) approximately 430 m south west of the site. These areas of woodland are connected and anticipated to form foraging, commuting and resting habitat for a variety of local wildlife, as well as nesting and roosting habitat for birds and bats within the trees present. Ancient woodland comprises Clayhill Wood and part of Church Wood, expected to provide unique habitat for communities of flora, fungi, invertebrates and specialist species of birds and mammals.

3.5. BIODIVERSITY UNIT RESULT

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	-12.24
	Hedgerow Units	6.76
	River Units	N/A
Total Net % Change	Habitat Units	-32.27 %
	Hedgerow Units	N/A (no baseline hedgerows to calculate % change)
	River Units	N/A

A total loss of 12.24 habitat units will be incurred on-site as a result of development. However, an increase in hedgerow units of 6.76 will be achieved resulting in an overall loss of 5.48 biodiversity units on-site.



4. CONCLUSIONS AND RECOMMENDATIONS

The headline results of the Biodiversity Metric Calculation indicate a loss of Habitat Units and gain of Hedgerow Units. In total, a loss of 5.48 biodiversity units will be incurred as a result of development. One of the following options will likely be required:

- ❖ Site proposals are amended to increase on-site biodiversity post development. Amendments could include increases to native hedgerow planting and additional tree/ woodland planting.
- ❖ A conservation offset payment is made to the Local Planning Authority. Additional habitat enhancements provided within the site boundary, such as bat and bird boxes, should be considered when a conservation offset fee is determined.
- ❖ Off-site habitat compensation could be provided within the local area. Baseline conditions of any off-site habitats would need to be measured and the Biodiversity Metric re-calculated.



5. REFERENCES

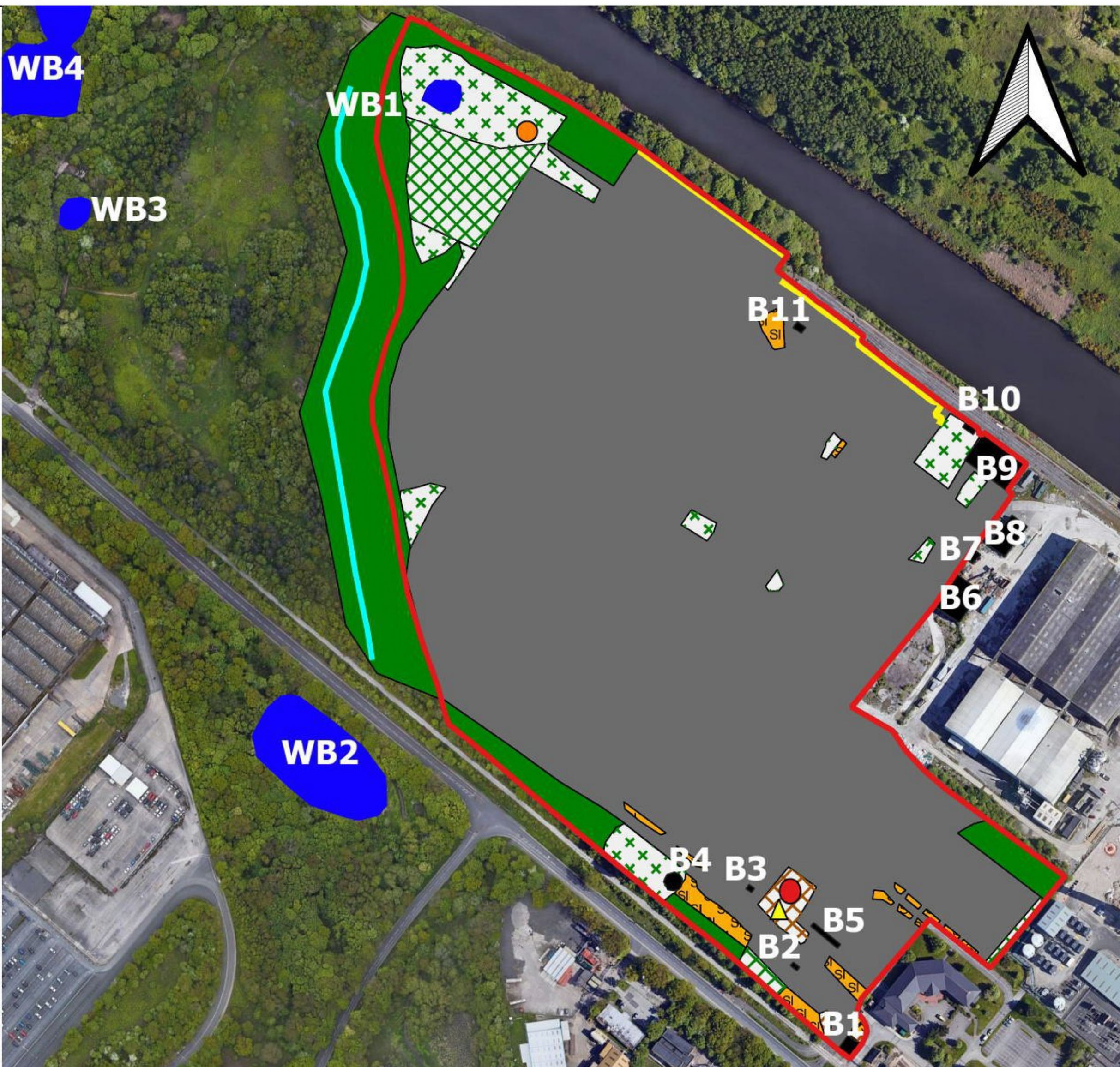
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END OF REPORT



APPENDIX I

PHASE 1 HABITAT PLAN



Key:

- Site Boundary
- Wall
- Running Water
- Building
- Hardstanding
- Waterbody
- Broadleaved Woodland
- Dense Scrub
- Scattered Scrub
- Semi-Improved Grassland
- Introduced Shrub

Notes

- Field Horsetail
- Small-Leaved Cotoneaster
- ▲ Wall Cotoneaster

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