

# BIODIVERSITY METRIC HARTON QUAY

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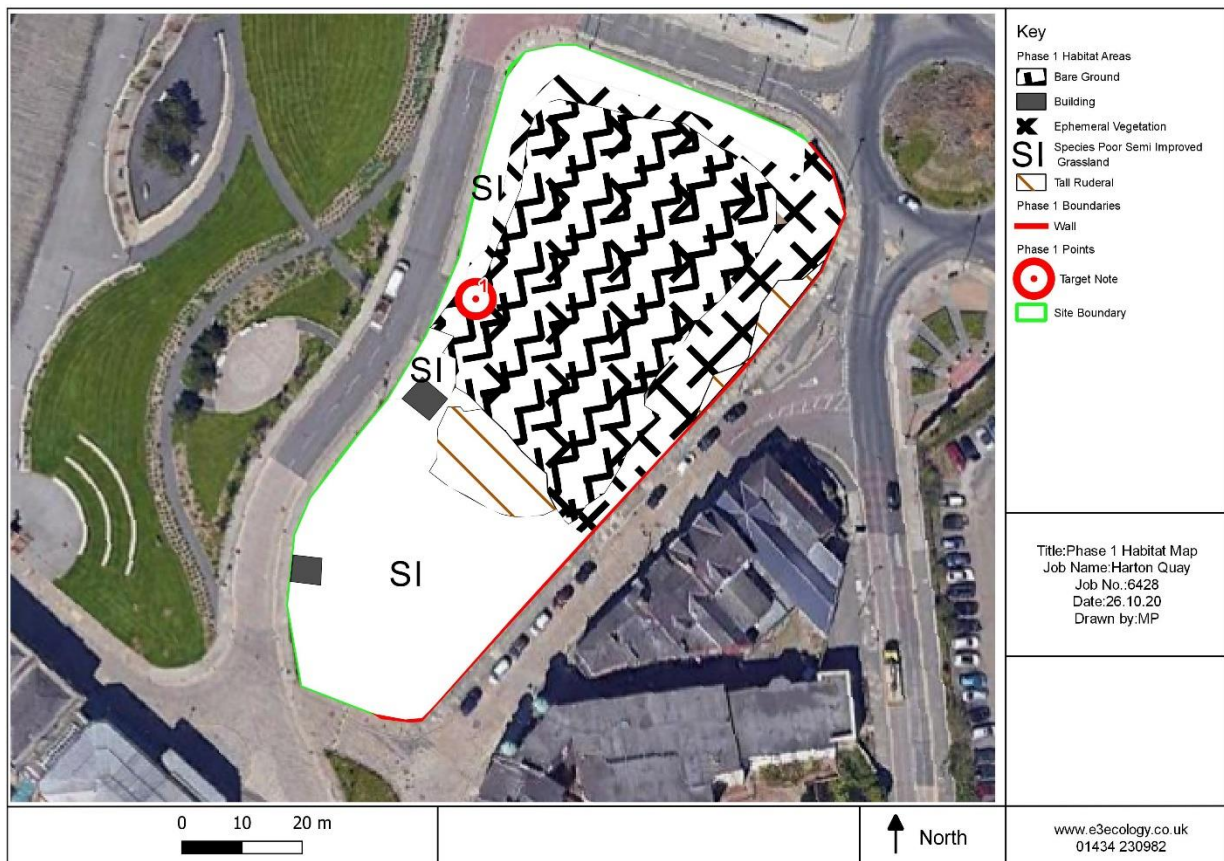
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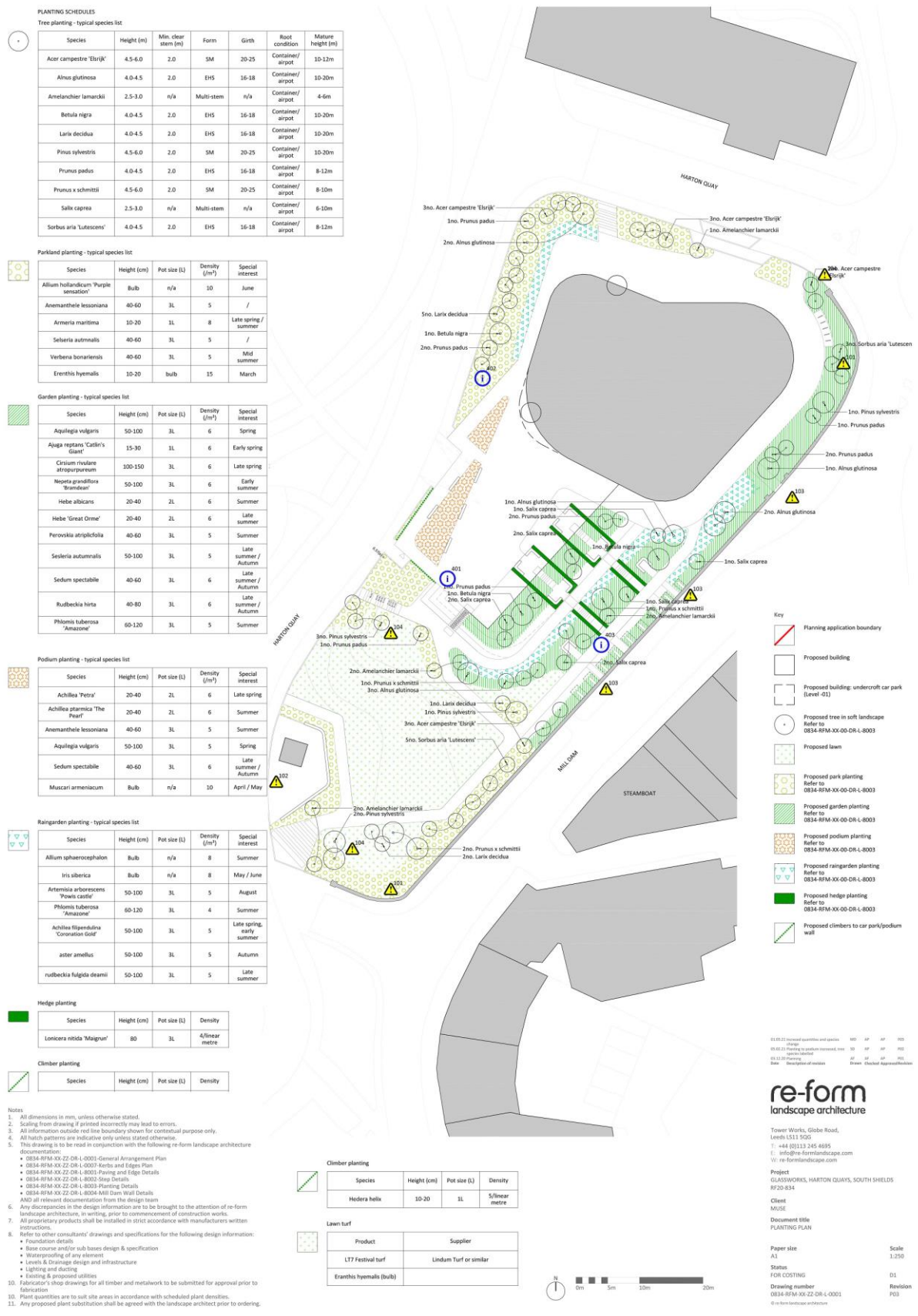
## A. INTRODUCTION

Following on from ecological studies at Harton Quay, South Shields in 2020, E3 Ecology Ltd was commissioned to run a Biodiversity Metric Assessment to calculate the anticipated net change in biodiversity value of the site as a result of the proposed development.

An Ecological Impact Assessment of the site (see separate report) recorded the habitats in figure 1 on the proposed development site, which were used to inform the metric. The development proposals are also shown below in Figure 2.



**FIGURE 1: HABITAT MAP**  
(Google Earth Pro)



**FIGURE 2: DEVELOPMENT PROPOSALS**

## B. METHODOLOGY

The Biodiversity Impact Assessment has been undertaken using the DEFRA Biodiversity Beta Metric 2.0. The assessment of existing on-site habitats has been based on the development footprint.

All measurements are in hectares and rounded up to 2 decimal places. Where there is less than 0.01ha of habitat, this has been included within the habitat types, but given a size of 0.00, being too small to use in the metric.

Under the 2019 metric requirements, all habitats with a low or medium distinctiveness have a low connectivity; high or very high distinctiveness habitats have a moderate connectivity.

To assign strategic significance, the Local Planning Authority website has been searched for local biodiversity plans or other accessible resources that would define if any habitats on site are classified of biodiversity value, green corridors etc. The MAGIC website has also been consulted for network enhancement zones. Where habitats within the site have been identified using these resources, they have been classified as 'within area formally identified in local strategy'. Where habitats have been classified as ecologically desirable, this has been assessed by E3 Ecology, based on the companies knowledge of the site – for example if it supports key species, habitat types that are limited in the area or priority habitats. Otherwise, habitats are assessed as 'Area/compensation not in local strategy/ no local strategy'.

The metric only assesses direct (temporary or permanent) habitat impacts. Where there are potential indirect or species related impacts, these have been assessed in a separate Ecological Impact Assessment report with appropriate mitigation/compensation.

The metric design aims to encourage enhancement, not transformation, of the natural environment (Principle 5: BNG user guide). Where possible, habitat created to compensate for loss of a natural or semi-natural habitat aims to be of the same broad type (e.g. new woodland to replace lost woodland) unless there is a good ecological reason to do otherwise (e.g. to restore a heathland habitat that was converted to woodland for timber in the past).

Urban street trees, where present on site, have been classified using the 'street tree helper' within the metric. The biodiversity metric 2.0 user guide provides examples of urban street tree sizes by girth and their area equivalent (table 7.1) though no definition of size ranges. The following reference has been used for size classification:

Size	Stem Diameter (cm)	Breast Height Girth (cm)	RPA (radius in m)
Small	0-20	0-60	Up to 2.4
Medium	20-40	60-120	2.4-4.8
Large	Over 40	Over 120	Over 4.8

All street trees are assumed to be of moderate condition (as specified in metric).

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## C. RESULTS

### C.1 EXISTING AND PROPOSED HABITATS

#### C.1.1 PRE-DEVELOPMENT

The 0.52ha site comprises:

- 0.22ha of partially enclosed bare ground
- 0.07ha of species-poor ephemeral / short perennial (ESP) habitat. Bare ground is still a major constituent of ESP and makes up approximately 50% of the area
- 0.19ha of poor semi-improved grassland
- 0.03ha of scattered tall ruderal vegetation
- 0.01ha of developed land, consisting of two structures at the west of the site, one historic chimney and a second modern electricity substation, with a wall at the eastern boundary.

#### C.1.2 POST DEVELOPMENT

0.3ha of the site will be developed into a new office block and associated hardstanding areas.

It is also proposed to plant small areas (0.02ha) of rain garden. Whilst this can be good for biodiversity, given the small areas and linear nature of the proposed planting, this has been classified as 'poor condition'.

Areas of proposed introduced shrub (0.13ha), with good management, have been classed of good condition as species are selected to be of value to wildlife and providing potential benefits throughout the year, and providing potentially good insect habitat particularly in an urban setting such as this. Areas of proposed amenity grassland (0.07ha) have been classed as moderate condition.

76 trees are to be planted. These have been classified as small street trees, with the area calculated via the street tree helper tool. (0.03ha)

A small area of climbers are proposed, but the area is too small (13.57 linear meters) for including within the calculator.

A small area of hedgerow planting (single species) is proposed. Although included in the hedgerow creation section of the Metric, this is too small (62 linear meters) to show in the headline results. This will provide a minor biodiversity enhancement specific to hedgerows, as no hedgerow is currently present on site.

The table below provides the headline data from the Metric. The excel spreadsheet is provided in digital form.

<b>Harton Quay</b>		<a href="#">Return to results menu</a>	
<b>Headline Results</b>			
<b>On-site baseline</b>	<i>Habitat units</i>	<b>1.02</b>	
	<i>Hedgerow units</i>	<b>0.00</b>	
	<i>River units</i>	<b>0.00</b>	
<b>On-site post-intervention</b> <small>(Including habitat retention, creation, enhancement &amp; management)</small>	<i>Habitat units</i>	<b>1.09</b>	
	<i>Hedgerow units</i>	<b>0.00</b>	
	<i>River units</i>	<b>0.00</b>	
<b>Off-site baseline</b>	<i>Habitat units</i>	<b>0.00</b>	
	<i>Hedgerow units</i>	<b>0.00</b>	
	<i>River units</i>	<b>0.00</b>	
<b>Off-site post-intervention</b> <small>(Including habitat retention, creation, enhancement &amp; management)</small>	<i>Habitat units</i>	<b>0.00</b>	
	<i>Hedgerow units</i>	<b>0.00</b>	
	<i>River units</i>	<b>0.00</b>	
<b>Total net unit change</b> <small>(including all on-site &amp; off-site habitat retention/creation)</small>	<i>Habitat units</i>	<b>0.07</b>	
	<i>Hedgerow units</i>	<b>0.00</b>	
	<i>River units</i>	<b>0.00</b>	
<b>Total net % change</b> <small>(including all on-site &amp; off-site habitat creation + retained habitats)</small>	<i>Habitat units</i>	<b>6.74%</b>	
	<i>Hedgerow units</i>	<b>0.00%</b>	
	<i>River units</i>	<b>0.00%</b>	

Based on the above values, the Biodiversity Impact Assessment Calculator indicates a predicted small net gain of 0.07 biodiversity units (6.74%).



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## D. CONCLUSIONS

The existing habitats on site have only a low biodiversity benefit, comprising poor semi-improved grassland, ephemeral / short perennial and tall ruderal species and areas of bare ground. However, given the relatively small size of the site and limitations to using the Metric on such small areas, delivering a net gain on site using the Metric calculator is difficult. Species within the general planting have been selected for being of value to insects, which in turn can provide foraging for bats and birds. Further biodiversity enhancements, although not taken into account in the calculator, which considers only habitats, could be the incorporation of hedgehog refugia within areas of denser ornamental planting, and the provision of bat, bird (potentially including a peregrine ledge) and/or insect boxes. In addition, a small area of new hedgerow planting has been incorporated.