NCP CAR PARK, BATH ROAD, WEST DRAYTON, GREATER LONDON

BIODIVERSITY METRIC ASSESSMENT

A Report to: Heathrow NCP Property Limited

Report No: RT-MME-157814-02

Date: July 2022

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REPORT VERIFICATION AND DECLARATION OF COMPLIANCE

This study has been undertaken in accordance with British Standard 42020:2013 “Biodiversity, Code of practice for planning and development”.

Report Version	Date	Completed by:	Checked and approved by:
Final	08 July 2022	Harry Stone MSc ACIEEM (Ecological Consultant) and Asija Zeidaks BSc (Ecological Project Officer)	Paul Roebuck MSc MCIEEM (South East Manager)

The information which we have prepared is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management’s Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

DISCLAIMER

The contents of this report are the responsibility of Middlemarch Environmental Ltd. It should be noted that, whilst every effort is made to meet the client’s brief, no site investigation can ensure complete assessment or prediction of the natural environment.

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CONTENTS

1. INTRODUCTION

1.1 PROJECT BACKGROUND

In April 2022, Aprirose Real Estate Investment commissioned Middlemarch Environmental Ltd to undertake a Biodiversity Metric Assessment associated with a proposed development at NCP Car Park, Bath Road, West Drayton, Greater London.

The assessment is informed by a Preliminary Ecological Appraisal (Report RT-MME-157814-01) carried out at the site in June 2022 by Middlemarch Environmental Ltd.

1.2 PROJECT SCOPE

The purpose of the Biodiversity Metric Assessment (BMA) is to identify the change in biodiversity value that may result from a change in land use (e.g. development) or management (e.g. biodiversity enhancement) at the site and to establish if a net gain for biodiversity can be achieved. The BMA utilises a biodiversity metric to provide a proxy measure of biodiversity based on habitat attributes, which can then be used to determine the relative change in biodiversity value resulting from any land use or management measures proposed.

It should be noted that the metric is only a proxy for biodiversity using habitat values, and that any proposed enhancements should be designed using appropriate ecological expertise. Existing levels of protection afforded to protected species and to habitats are not changed by use of the metric and statutory obligations will still need to be satisfied. In addition, the metric cannot account for impacts on, or enhancements to, irreplaceable habitats or protected sites, which will need to be assessed separately.

1.3 SITE DESCRIPTION AND CONTEXT

The site under consideration comprises an irregularly shaped parcel of land situated on Bath Road in West Drayton, within the London Borough of Hillingdon. It measures approximately 1.6 ha in size and is centred at National Grid Reference TQ 07445 77070.

At the time of the survey, the site comprised a large disused airport car park with a parcel of woodland along its southern border. A disused site was situated to the north and a residential neighbourhood to the west. Trees lined the site's eastern boundary, followed by a large, steep road verge descending onto the M4.

The wider landscape comprises a mix of industrial and residential development interspersed with green spaces and reservoirs. Heathrow airport's northern runway is situated 250 m south of the site and extensive fields are situated to the east and west.

1.4 DESCRIPTION OF DEVELOPMENT

The proposed development will comprise the following:

> *Demolition of existing car park and redevelopment for industrial (Use Class B2); storage or distribution (Use Class B8); and/or light industrial (Use Class E(g)(iii)) purposes, with ancillary office space, landscaping, car parking, servicing and access arrangements.*

This assessment is based on the documentation detailed in the following documentation listed in Table 1.1.

Document Name / Drawing Number	Author
Proposed Site Plan / 5110 CA 00 00 DR A 00060 Rev P6	Chetwoods (Birmingham) Limited
Soft Landscape Plan / 22-008 001 Rev C	EPD Landscape

Table 1.1: Details of the proposed development

2. METHODS

2.1 BIODIVERSITY METRIC

The biodiversity calculations used within this assessment were undertaken by Harry Stone using 'The Biodiversity Metric 3.1' and associated User Guide[1] and Technical Supplement[2]. Sections 2.2 and 2.3 describe the data used for the assessment and the assumptions applied.

2.2 DATA SOURCES

2.2.1 Existing Baseline

The baseline habitat data and condition assessment for the site is taken from the Preliminary Ecological Appraisal (Report RT-MME-157814-01) carried out by Middlemarch Environmental Ltd in June 2022. A Phase 1 Habitat Plan showing the extent and location of each habitat recorded on site is included in Section 6 (C157814-01-01).

The Biodiversity Metric 3.1 calculator tool utilises the UK Habitat Classification System (UKHab) as the standard data input for habitats. The Phase 1 Habitat Survey data for the site was subsequently converted for the purposes of the metric calculation using the Phase 1 habitats to UKHab translation feature, included in the Biodiversity Metric 3.1 calculator tool, or using professional opinion.

Each habitat or linear feature recorded within the site is assigned a score for 'Distinctiveness', 'Condition' and 'Strategic Significance'. Table 2.1 below describes how each habitat attribute has been determined for the existing baseline habitats in the metric assessment.

Attribute	Description
Distinctiveness	An automated score based on the type of habitat present and its value to wildlife. Highly diverse habitats such as those listed as Habitats of Principal Importance under the NERC Act (2006) or Annex 1 habitats in the Habitats Directive (1992) score highly in this category, whilst highly modified and low diversity habitats such as arable crops will have low distinctiveness scores.
Condition	A score based on the quality of the habitat parcel against published condition criteria (See Appendix A and the Preliminary Ecological Appraisal report RT-MME-157814-01).
Strategic significance	A score based on information set out in local plans or policies. In this instance, a strategic location was defined in accordance with the London Borough of Hillingdon's Local Plan[3] and The London Plan 2021[4].

Table 2.1 – Habitat attributes for existing baseline habitats

The value of each habitat parcel (or linear feature) is presented in terms of habitat (or hedgerow/river) 'biodiversity units' (BU).

2.2.2 Future Baseline

The future baseline conditions of the site are based on the Proposed Site Plan (5110 CA 00 00 DR A 00060 Rev P6). Table 2.2 below describes how each habitat attribute has been determined for the future baseline habitats in the metric assessment.

Attribute	Description
Distinctiveness	An automated score based on professional opinion about the projected habitat type proposed, taking into account the landscaping proposals detailed in Drawing 22-008 001 Rev 1.
Condition	A target condition score of the proposed habitat parcel based on professional opinion about the outline enhancement and future management proposals.

Table 2.2 - Habitat attributes for existing baseline habitats (Continues)

[1] Panks, S., White, N., Newsome, A., Nash, M., Potter, J., Heyton, M., Mayhew, E., Alvarez, M., Russell, T., Cashon, C., Goddard, F., Scott, S.J., Heaver, M., Scott, S.H., Treweek, J., Butcher, B. and Stone, D. (2022) T*he Biodiversity Metric 3.1 – Auditing and accounting for biodiversity: User Guide*. Natural England.

[2] Panks, S., White, N., Newsome, A., Nash, M., Potter, J., Heyton, M., Mayhew, E., Alvarez, M., Russell, T., Cashon, C., Goddard, F., Scott, S.J., Heaver, M., Scott, S.H., Treweek, J., Butcher, B. and Stone, D. (2022) T*he Biodiversity Metric 3.1 – Auditing and accounting for biodiversity: Technical Supplement*. Natural England.

[3] The London Borough of Hillingdon (2012) *Hillingdon Local Plan*. Available at: https://www.hillingdon.gov.uk/local-plan.

[4] Greater London Authority (2021) *The London Plan 2021*. https://www.london.gov.uk/sites/default/files/the_london_plan_2021.pdf.

Attribute	Description
Strategic significance	A score based on information set out in local plans or policies. In this instance, a strategic location was defined in accordance with the London Borough of Hillingdon's Local Plan and the London Plan 2021.
Time to Target Condition	Time to target condition is automatically assigned in accordance with the Biodiversity Metric Tool 3.1. This multiplier can be adapted manually to reflect situations where a habitat is created in advance or where there is a delay in the project timescales for new habitat creation (e.g. project phasing).
Difficulty of Recreation	An automated value based on the difficulty of creating the target habitat. This value is unchanged from the values generated in Metric 3.1.

Table 2.2 - Habitat attributes for existing baseline habitats (Continued)

Following the calculation of the existing and future biodiversity value of the site, a calculation of the net biodiversity change is carried out to determine the 'Post-intervention habitat (or hedgerow/river) units', along with a figure for the percentage of net biodiversity impact loss (or gain).

2.3 CONSTRAINTS AND ASSUMPTIONS

The following constraints and assumptions are applied to this report:

- For the purposes of this report, the term 'Habitat Loss' is applied to proposals that result in a change of habitat type or habitat 'distinctiveness'. This is defined in the Biodiversity Metric even where the new habitat type is created without any physical loss of the previous habitat type (e.g. creation of scrub over grassland). 'Habitat Enhancement' is applied where the habitat type and 'distinctiveness' remains the same, but the 'condition' of the habitat is improved.

- The BNG Assessment necessitates an estimation of future baseline values, based on professional opinion, to determine the change in biodiversity value that could occur as a result of the proposals at the site. The assumptions about target habitat types or condition in this report are based on professional opinion about the likely achievable outcomes at the site, based on the proposed planting plans and presumed management resources. All target habitats presume the implementation of a long-term Management Plan to achieve these ends and a recommendation to this effect is given in Section 4 below.

3. BIODIVERSITY NET GAIN ASSESSMENT

3.1 EXISTING HABITATS

The habitats identified during the Preliminary Ecological Appraisal are described in Table 3.1 and their value in biodiversity units is provided. The current extent of the habitats present is shown in Drawing C157814-01-01 in Section 5. The baseline metric calculations are provided in Appendix B.

Phase 1 Habitat	UKHab Habitat Equivalent	Area (ha) / Length (km)	Description (distinctiveness, condition, connectivity and strategic significance)	Value (Biodiversity Units)
Area Based habitats				
Building and hardstanding	Developed land; sealed surface	0.77	Habitat is automatically classed as being of 'Very Low' distinctiveness, and due to its lack of habitat attributes is not assigned a condition score.	0.00
Ephemeral/short-perennial	Vacant/derelict land/bareground	0.78	Habitat is automatically classed as being of 'Low' distinctiveness. Assessed against the urban condition criteria the habitat has been assigned a condition of 'Moderate'.	3.41
Semi-natural broad-leaved woodland	Other woodland; broadleaved	0.11	Habitat is automatically classed as being of 'Medium' distinctiveness. Assessed against the woodland condition criteria the habitat has been assigned a condition of 'Fairly Poor'.	0.76
Total Area (ha)		**1.66**	**Total Site Baseline (Biodiversity Units)**	**4.17**

Table 3.1: Summary of existing habitats and linear

3.2 FUTURE BASELINE AND IMPACTS

3.2.1 Description of the future baseline

The future baseline for the purposes of this assessment is set out in the Soft Landscape Proposals (22-008 001 Rev C) by EPD Landscape. An adapted version of this map is included in Section 6 showing how each landscaping area has been translated to a habitat type for the purpose of Biodiversity Metric Assessment.

3.2.2 Impacts

Table 3.2 outlines the potential biodiversity impacts of the proposed development (including area proposed for retention, retained for enhancement, or habitats that are lost).

Phase 1 Habitat	UKHab Habitat	Habitats Retained		Habitat retained for Enhancement		Habitat Loss	
		Area/Length (Ha/Km)	Value (BU)	Area/Length (Ha/Km)	Value (BU)	Area/Length (Ha/Km)	Value (BU)
Area based habitats							
Building and hardstanding	Developed land; sealed surface	0.00	0.00	0.00	0.00	-0.77	-0.00
Ephemeral/short-perennial	Vacant/derelict land/bareground	0.01	0.07	0.00	0.00	-0.76	-3.35
Semi-natural broad-leaved woodland	Other woodland; broadleaved	0.03	0.21	0.00	0.00	-0.08	-0.54
Total Impact (Area habitats)		**0.05**	**0.28**	**0.00**	**0.00**	**-1.66**	**-4.17**

Table 3.2: Summary of impacts

3.3 HABITAT CREATION / ENHANCEMENT

Table 3.3 below outlines the value of the proposed habitat creation/ enhancements in the development proposals.

Landscape typology	UKHab Habitat	Area (ha) / Length (km)	Description (target distinctiveness, condition, connectivity strategic significance and risk multipliers)	Value (Biodiversity Units)
Habitats				
Ornamental groundcover mix	Introduced shrub	0.01	Comprises the areas of ornamental groundcover planting focused on the car parking spaces and substation. The habitat is automatically assessed as being of 'Low' distinctiveness and is allocated a fixed condition score.	0.01
Native woodland intermediate mix	Other woodland; broadleaved	0.16	Comprises the areas of native woodland planting. The habitat is automatically assessed as being of 'Medium' distinctiveness and is projected to achieve 'Fairly Poor' condition.	0.86
Species rich wildflower meadow	Other neutral grassland	0.02	Comprises the areas of grassland. The habitat is automatically assessed as being of 'Medium' distinctiveness and is projected to achieve 'Good' condition.	0.14
Proposed building and hardstanding	Developed land; sealed surface	1.37	Comprises the new area of built development (buildings and hardstanding). The habitat type is automatically assessed as being 'Very low' distinctiveness and due to the limited attributes for biodiversity is not assigned a condition.	0.00
Scattered trees*	Urban tree	0.33	Comprises a total of 9 urban trees throughout the development. The trees are categorised as being of medium size class and of 'Medium' distinctiveness. Assessed against the urban trees condition criteria, these trees are assigned a 'Poor' condition score.	1.06
Native woodland edge/core mix	Mixed scrub	0.06	Comprises the areas of native woodland edge planting. The habitat is automatically assessed as being of 'Medium' distinctiveness and is projected to achieve 'Poor' condition.	0.24
Ephemeral/short -perennial	Vacant/derelict land/bareground	0.0008	Comprises the Jersey cudweed translocation zone. The habitat is automatically assessed as being of 'Low' distinctiveness and is projected to achieve 'Good' condition.	0.00
Total Creation (Area habitats)		**1.61**	**Total Value (Area Habitats)**	**2.37**
Hedgerows				
Native mixed hedge	Native hedgerow	0.23	The hedge is automatically classified as being of 'Low' distinctiveness and is projected to achieve 'Moderate' condition.	0.78
Total Creation (Area habitats)		**0.23**	**Total Value (Area Habitats)**	**0.82**
Key ***** Habitat area not included in total area				

Table 3.3: Summary of habitat creation and enhancement proposals

3.4 HEADLINE RESULTS

Table 3.4 details the headline results. Full details of the biodiversity metric calculations can be found in Appendix B.

	Habitat units	Hedgerow units
On-site baseline	4.17	0.00
On-site post-intervention	2.65	0.82
Total net unit change	-1.52	0.82
Total net % change	-36.55	100.00

Table 3.4: Biodiversity metric assessment headline results

The existing value of the habitats on site is **4.17 BU**.

The proposals (habitat loss, retention and creation combined), as based on the Soft Landscape Proposals (22-008 001 Rev C), will deliver a net loss of **-1.52 BU**, a **-36.55%** decrease of baseline habitat value.

The existing value of the hedgerows on site is **0.0 BU**.

The proposals (habitat loss, retention, enhancement and creation), as based on Soft Landscape Proposals (22-008 001 Rev C), will deliver a net gain of **0.78 BU**, a **100.00%** increase of baseline hedgerow value.

4. DISCUSSION AND RECOMMENDATIONS

4.1 CONCLUSIONS

Biodiversity Change

Net Loss

The BMA identifies that the proposed development will result in a net loss of **-1.44 BU** (Habitats). This is equivalent to -36.55% of the baseline habitat value. The net loss is primarily driven by inability of the development to balance the loss of 'Vacant/derelict land/bareground' habitat which occupies 47% of the existing site and accounts for 3.41 of the 4.17 (82%) baseline habitat units. The mitigation hierarchy of the National Planning Policy Framework[5] and the London Plan 2021[6], state that where adverse biodiversity impacts cannot be avoided or mitigated, compensation will be required to ensure that development proposals achieve net gains in biodiversity. Compensation for the residual loss of habitats will therefore be required to ensure that the development can achieve an overall net gain for biodiversity and ensure compliance with planning policy.

In this instance, opportunities to provide further habitat creation/enhancement within the site to address residual losses and secure a net gain have been explored but it was deemed that, due to the type, layout and end use of the development scheme, achieving a net gain was not feasible on site. An offsite compensation solution (e.g. biodiversity offset) will therefore be required and it is recommended that the Local Planning Authority are contacted to discuss options for how this could be achieved to secure a net gain for biodiversity overall. A recommendation to this effect is included in Section 4.2 below.

Jersey cudweed *Gnaphalium luteoalbum* has been identified on site. This species is listed on Schedule 8 of the Wildlife and Countryside Act 1981 (as amended), making it unlawful to intentional pick, uproot, or destroy the wild plant or any seed or spore attached to the plant. A licence from Natural England is therefore required prior to the clearance of the site. Heathrow NCP Property Limited have instructed Middlemarch Environmental Ltd to produce a Jersey Cudweed Mitigation Strategy (RT-MME-158136), which will focus on translocating the existing plants and seedbank to appropriately landscaped areas of the developed site. These translocation areas have been incorporated into the Soft Landscaping Plans and are of relevance to this Biodiversity Net Gain Assessment as they deliver 0.07 habitat units within 157 m^2. Alternative soft landscaping could deliver more habitat units but is at conflict with this bespoke approach to a protected species on site.

Net Gains

The BMA identified that the proposed development will result in a net gain of **0.78 BU** (Hedgerows). This net gain exceeds the 10% net gain in hedgerow value advocated by the draft Environment Bill. This ensures that the proposed development is compliant with planning policy for hedgerows (subject to long-term management) and so therefore no additional recommendations are given.

As biodiversity units for habitats and hedgerows are measured differently in the metric, the values generated for one are not comparable to the other. The net gain in hedgerows cannot be used to counterbalance the net loss in habitats described above.

Biodiversity Enhancement Management Plan

The projected onsite habitat values given in this report are based on the assumption that an appropriate management plan will be implemented to ensure that the habitats and hedgerows will be established and maintained to fulfil their intended biodiversity value. Biodiversity Net Gain Principles[7] necessitates that any biodiversity units claimed must be deliverable over a minimum period of 30 years. As such, the recommended management plan must provide long-term management proposals and provide scope for monitoring and reporting, to demonstrate that the intended values will be achieved over a minimum 30-year period. A recommendation to this effect is included in Section 4.2 below.

[5] Ministry of Housing, Communities and Local Government (2021) National Planning Policy Framework. Available https://www.gov.uk/government/publications/national-planning-policy-framework--2

[6] Greater London Authority (2021) *The London Plan 2021*. https://www.london.gov.uk/sites/default/files/the_london_plan_2021.pdf.

[7] CIRIA, CIEEM, IEMA (2016) *Biodiversity Net Gain: Good Practice Principles for Development* [Available https://cieem.net/wp-content/uploads/2019/02/Biodiversity-Net-Gain-Principles.pdf]

4.2 RECOMMENDATIONS

R1 The Local Planning Authority should be contacted to discuss the provision of an offsite compensation solution to address the residual requirement of **1.64 BU** (Habitats) needed to ensure the development proposals can deliver a biodiversity net gain.

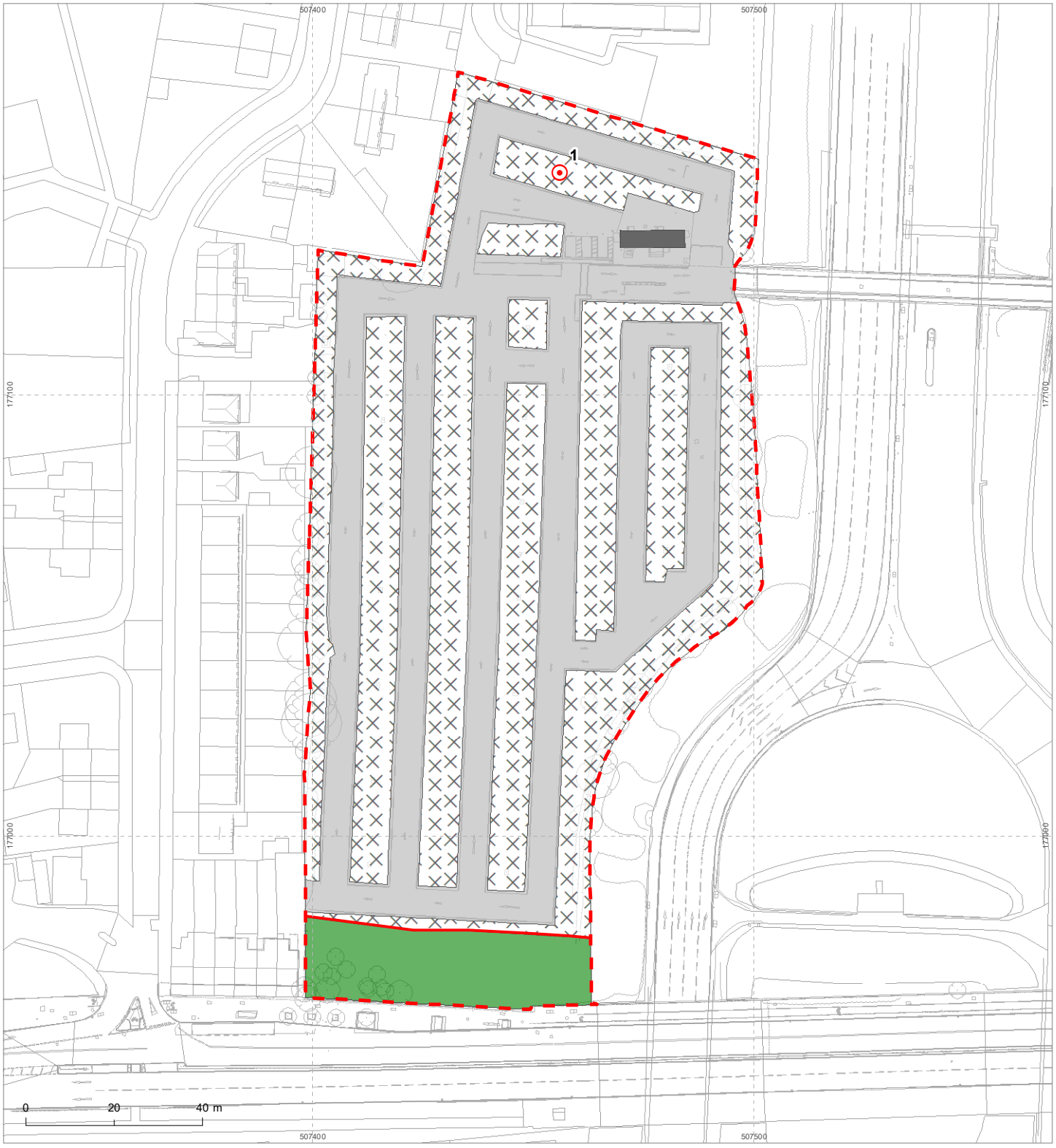
R2 A Biodiversity Enhancement and Management Plan (BEMP) should be produced for all habitats and hedgerows proposed within the site. The BEMP should set out the appropriate establishment works and management prescription required to achieve and maintain the intended type and condition of each habitat /hedgerow/river and stream feature proposed. The BEMP should cover a minimum period of 30 years and include provisions for monitoring, review, reporting and contingency throughout. The BEMP could be produced as part of a planning condition for the proposed development**.**

5. DRAWINGS

Drawing C157814-01-01 – Phase 1 Habitat Survey

Drawing C157814-BNG – Adaptation of Soft Landscape Plans for Purposes of the BNG Assessment

Drawing 22-008 001 Rev C – Soft Landscape Plans (EPD Landscape)



Legend

- Site boundary
- Wall
- Building
- Ephemeral/short-perennial
- Hardstanding
- Semi-natural broad-leaved woodland
- Target note
  - 1 Jersey cudweed *Gnaphalium luteoalbum*

Project	NCP Car Park, Bath Road, West Drayton, Greater London
Drawing	Phase 1 Habitat Map
Client	Aprirose Real Estate Investment
Drawing Number	C157814-01-01
Revision	00
Scale @ A4	1:1,250
Date	May 2022
Approved By	HS
Drawn By	RP

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C157814-01-01

Legend

- Site boundary
- Urban tree
- Native hedgerow
- Introduced shrub
- Mixed scrub
- Other neutral grassland
- Other woodland; broadleaved
- Sealed surface
- Vacant/derelict land/ bare ground

Phase 1 Habitats:

- Building
- Ephemeral/short-perennial
- Hardstanding
- Semi-natural broad-leaved woodland

N

Project	NCP Car Park, Bath Road, West Drayton, Greater London
Drawing	BNG
Client	Aprirose Real Estate Investment
Drawing Number: C157814-BNG	Revision: 00
Scale @ A4: 1:1,250	Date: July 2022
Approved By: HS	Drawn By: GT

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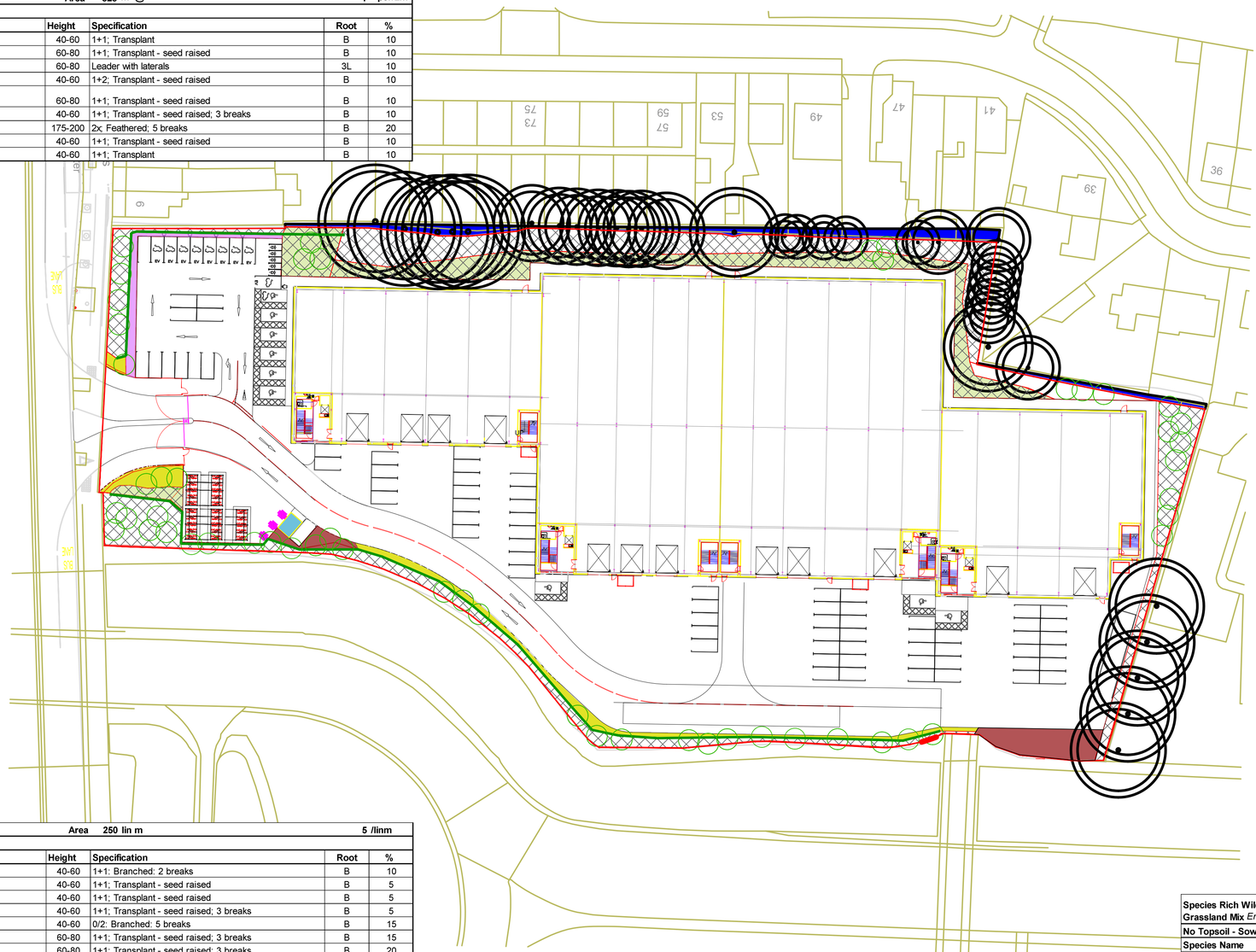
C157814-BNG

	Native woodland intermediate mix	Area	1162 m² @		2 per/m²
	Topsoil depth 300mm				
No.	**Species Name**	**Height**	**Specification**	**Root**	**%**
232	Corylus avellana	40-60	1+1; Branched: 2 breaks	B	10
465	Crataegus monogyna	40-60	1+1; Transplant - seed raised	B	20
232	Ilex aquifolium	60-80	Leader with laterals	3L	10
232	Rosa arvensis	40-60	1+1: Branched: 3 breaks	B	10
232	Rosa canina	60-80	1+1: Branched: 3 breaks	B	10
232	Malus sylvestris	60-80	1+1: Branched: 3 breaks	B	10
232	Sambucus nigra	60-80	1+1; Transplant - seed raised; 3 breaks	B	10
232	Viburnum lantana	60-80	1+2; Transplant - seed raised; 3 breaks	B	10
232	Viburnum opulus	60-80	1+2; Transplant - seed raised; 3 breaks	B	10

	Native woodland core mix	Area	828 m² @		1 per/2m²
	Topsoil depth 300mm				
No.	**Species Name**	**Height**	**Specification**	**Root**	**%**
41	Acer campestre	40-60	1+1; Transplant	B	10
41	Betula pendula	60-80	1+1; Transplant - seed raised	B	10
41	Ilex aquifolium	60-80	Leader with laterals	3L	10
41	Pinus sylvestris	40-60	1+2; Transplant - seed raised	B	10
41	Populus tremula	60-80	1+1; Transplant - seed raised	B	10
41	Prunus avium	40-60	1+1; Transplant - seed raised; 3 breaks	B	10
83	Quercus robur	175-200	2x Feathered; 5 breaks	B	20
41	Quercus robur	40-60	1+1; Transplant - seed raised	B	10
41	Ulmus glabra	40-60	1+1; Transplant	B	10

	Trees (Advanced heavy standards)				
No.	**Species Name**	**Height**	**Girth**	**Specification**	**Root**
5	Acer campestre	200-300	16-18	2x; Selected Standard; clear stem minimum 200cm; 4 breaks	RB
9	Betula utilis 'Jaquemontii' (Himalayan Birch)	200-300	16-18	2x; Selected Standard; clear stem 175-200cm; 5 breaks	RB
9	Carpinus betulus 'Fastigiata' (Fastigiate Hornbe	200-300	16-18	2x; Selected Standard; clear stem 175-200cm; 4 breaks	RB
9	Liquidambar styraciflua (Sweet Gum)	400-500	25-30	3x; Semi-mature; clear stem minimum 200cm	RB
9	Quercus robur 'Koster' (Koster (fastigiate) Oak	200-300	16-18	2x; Selected Standard; clear stem 175-200cm; 4 breaks	RB
13	Sorbus aria (Whitebeam)	200-300	16-18	2x; Selected Standard; clear stem 175-200cm; 4 breaks	RB



	Native mixed hedge	Area	250 lin m		5 /linm
	Topsoil depth 300mm				
No.	**Species Name**	**Height**	**Specification**	**Root**	**%**
125	Corylus avellana	40-60	1+1: Branched: 2 breaks	B	10
63	Crataegus laevigata	40-60	1+1; Transplant - seed raised	B	5
63	Crataegus monogyna	40-60	1+1; Transplant - seed raised	B	5
63	Euonymus europaeus	40-60	1+1; Transplant - seed raised; 3 breaks	B	5
188	Ligustrum ovalifolium	40-60	0/2: Branched: 5 breaks	B	15
188	Prunus spinosa	60-80	1+1; Transplant - seed raised; 3 breaks	B	15
250	Sambucus nigra	60-80	1+1; Transplant - seed raised; 3 breaks	B	20
63	Sorbus torminalis	60-80	1+2; Transplant - seed raised	B	5
125	Viburnum lantana	60-80	1+2; Transplant - seed raised; 3 breaks	B	10
125	Viburnum opulus	60-80	1+2; Transplant - seed raised; 3 breaks	B	10

	Ornamental groundcover mix	Area	100 m² @		5 per/m²
	Topsoil depth 300mm				
No.	**Species Name**	**Height**	**Specification**	**Root**	**%**
50	Berberis thunbergii 'Atropurpurea Nana'	15-20	Bushy: 3 breaks	2L	10
50	Bergenia 'Bressingham White'		Full pot	2L	10
50	Ceanothus thrysiflorus repens	30-40D	Bushy: 5 breaks	3L	10
50	Cornus alba "Spaethii"	40-60	0/1/1; Transplant-cutting raised; 3 brks	B	10
50	Euonymus fortunei 'Silver Queen'	15-20D	Bushy: 3 breaks	2L	10
50	Geranium 'Johnson's Blue'		Full pot	2L	10
50	Hebe 'Emerald Green'	20-30	Bushy: 3 breaks	2L	10
50	Prunus laurocerasus 'Zabeliana'	30-40D	Bushy: 3 breaks	3L	10
50	Rosa 'Nozomi'		Cutting: Bush: Strong	2L	10
50	Spiraea japonica 'Gold Mound'	30-40	Bushy: 6 breaks	3L	10

	Species Rich Wildflower Mix Meadow		m²
	Grassland Mix *Emorsgate EM4 for Clay Soils*	**Area 187**	@4g/m²
	No Topsoil - Sow seed directly into subsoil		
	Species Name		**%**
	Achillea millefolium	Yarrow	0.50%
	Betonica officinalis - Stachys officinalis)	Betony	1.00%
	Centaurea nigra	Common Knapweed	3.00%
	Galium verum	Lady's Bedstraw	1.50%
	Leucanthemum vulgare	Oxeye Daisy	1.00%
	Lotus conriculatus	Birdsfoot Trefoil	0.50%
	Plantago lanceolata	Ribwort Plantain	2.60%
	Primula veris	Cowslip	0.30%
	Prunella vulgaris	Selfheal	2.00%
	Ranunculus acris	Meadow Buttercup	3.00%
	Rhinanthus minor	Yellow Rattle	1.50%
	Rumex acetosa	Common Sorrel	1.50%
	Silene flos-cuculi - (Lychnis flos-cuculi)	Ragged Robin	0.10%
	Trifolium pratense	Wild Red Clover	0.10%
	Vicia cracca	Tufted Vetch	1.40%
	Agrostis capillaris	Common Bent	8.00%
	Cynosurus cristatus	Crested Dogstail	40.00%
	Festuca rubra	Slender-creeping Red-fescue	28.00%
	Phleum bertolonii	Smaller Cat's-tail	4.00%

Notes

Key

- Existing Trees
- Individual Trees
- Native Woodland Edge Mix
- Native Woodland Intermediate Mix
- Ornamental Groundcover Planting
- Native Hedge
- Species Rich Wildflower Meadow
- Ephemeral / short perennial vegetation- Jersey cudweed translocation zone

N

Rev.	Amendment note	Drawn	Date	Auth'd
C	Revised site layout Chetwoods P5 layout amendment for Jersey Cudweed	KG	07.07.22	
B	Revised site layout	KG	01.07.22	
A	Revised site layout	KG	22.06.22	

Client

Heathrow NCP Property Limited

Project

Industrial development Bath Road Sipson

Title

Soft Landscape Proposals

Project No.		Drg. No.	Rev.
22-008		001	C
Date	Scale	Drawn	Checked
09.06.22	1:500 @ A1	KG	ES

Purpose of Issue

Planning

epd landscape

Glendale Countryside Limited
The Stables, Duxbury Park,
Duxbury Hall Road, Chorley, PR7 4AT
Tel: 01257 460 461 www.epdlandscape.co.uk

APPENDICES

Appendix A – Habitat Condition Assessment
Appendix B – Biodiversity Metric 3.1 Calculation

Appendix A: Habitat Condition Assessment

Table A.1.1 summarises the results of the habitat condition assessment for existing area-based habitats and hedgerows respectively. Table A.1.2 summarises the results for proposed created habitats. For the detailed condition criteria for each habitat, see Panks *et al.* (2022)[8].

Phase 1 Habitat	UK Hab Equivalent	Condition Sheet	Condition Criteria Score													Total Score	Condition Assessment
			C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13		
Ephemeral / short perennial vegetation	Urban - Vacant/derelict land/ bareground	Urban	0	1	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	Moderate
Buildings and Hardstanding	Urban - Developed land; sealed surface	N/A - Other	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A - Other
Semi-natural broad-leaved woodland	Other woodland; broadleaved	Woodland	2	3	1	2	2	3	2	3	1	2	1	1	2	25	Fairly Poor

Table A.1.1 – Summary of condition assessment for baseline habitats

[8] Panks, S., White, N., Newsome, A., Potter, J., Heyton, M., Mayhew, E., Alvarez, M., Russell, T., Scott, S.J., Heaver, M., Scott, S.H., Treweek, J., Butcher, B. and Stone, D. (2022) T*he Biodiversity Metric 3.1 – Auditing and accounting for biodiversity: Technical Supplement*. Natural England.

UK Hab Habitat	Condition Sheet	Condition Criteria Score													Total Score	Condition Assessment
		C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13		
Urban - Introduced shrub	N/A - Poor	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	N/A	N/A - Poor
Other woodland; broadleaved	Woodland	1	3	2	3	2	3	2	2	2	1	1	1	2	25	Fairly Poor
Other neutral grassland	Grassland – Medium, High & Very High Distinctiveness	0	0	1	1	1	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	3	Good
Urban	Urban - Developed land; sealed surface	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	N/A	N/A - Poor
Mixed scrub	Scrub	1	1	1	0	0	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	3	Poor
Urban - Urban Tree	Urban trees	0	0	0	1	0	1	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	2	Poor
Native hedgerow	Hedgerow	0	1	1	1	0	0	0	1	#N/A	#N/A	#N/A	#N/A	#N/A	4	Moderate
Ephemeral / short perennial vegetation	Urban - Vacant/derelict land/ bareground	Urban	1	1	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3	Good

Table A.1.2 – Summary of condition assessment for created habitats

Appendix B – Biodiversity Metric 3.1 Calculation

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