

Assessment of Biodiversity Biodiversity Net Gain (BNG)

Version 1
13.02.2025

Prepared for: Exemplar

Site: Bury (Phase 2)

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1. Introduction

1.1 Background to the project

Amenity Tree was commissioned by Exemplar Healthcare to undertake a Biodiversity Assessment for the proposed development.

1.2 Site location and context

The Preliminary Ecological Appraisal stated:

‘The site is located within Bury an urban environment. The area is mixed use. There is residential and offices to the north and west, with a leisure centre to the east. To the South is Jubilee Way. The main area of site is vacant previously developed land. Beyond the boundary, at the south of site, scattered trees are present. Identified habitats include ephemeral/short perennial has been identified on-site, indicated by “short patchy plant associations typical of derelict urban sites” (JNCC, 2010).’.

The total area of the site is approximately 0.2715 hectare.

1.3 Report purpose and legislative background

- 1.3.1 This assessment was requested by the client for the purposes of supporting a planning application for the site’s development in line with The Environment Act 2021, including Part 6 of the Environment Act 2021 ‘nature and biodiversity’, which allows for biodiversity gain in the planning system. Schedule 14 of the Environment Act 2021 has been brought into force and there are current regulations legally mandating BNG.

The British Standard BS 8683:20211 defines BNG as “*a specific, quantifiable outcome from project activities that deliver demonstrable benefits for biodiversity compared to the baseline situation.*”

The National Planning Policy Framework 2021 (NPPF) emphasises the importance of protecting and enhancing the natural environment. The NPPF approach to BNG is set out in Paragraph 179b, which is to “*promote the*

conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity”.

1.3.2 A Preliminary Ecological Appraisal confirmed habitats present. Therefore, the habitats present are confirmed and using the UK Habitats Classification System (UKHAB) it is possible that the appropriate habitat classification is used in the BNG metric.

1.3.3 The scope of the Assessment is therefore:

- Assessment of the habitats within the site in accordance with the UK Habitats Classification (UK Habitats Classification Working Group, 2018).
- Completion of Condition Assessments of each habitat in accordance with those presented in The Biodiversity Metric 4.0: Auditing and accounting for biodiversity value: technical supplement (Crosher, et al., Beta version, July 2019).

2. Survey Methods

2.1 Vegetation and Habitats

2.1.1 An extended phase one habitat survey plan (in accordance with JNCC, 2010) is provided in appendix 2 which confirmed the habitats present. Appendix 3 is the habitat mapping based on the UK Habitat Classification system (UK Habitats Classification Working Group, 2018) which details ephemeral / ruderal.

2.1.2 Table 1 details the conversion used from JNCC habitats to UK Habitat classifications / BNG metric habitat descriptors.

JNCC Habitat type	UK Habs/ BNG metric descriptors.
Ephemeral	Ruderal / ephemeral
Scattered trees	Urban trees

2.1.3 Whilst on the site the habitat survey searched for all plants including those that are considered rare, uncommon or are statutorily protected such as those listed in schedule 9 of the *Wildlife and Countryside Act 1981* (as amended).

2.2 Limitations

2.2.1 The survey was conducted in the sub optimal survey period for vascular plants as determined by JNCC, 2010, but broad species and habitats were identifiable.

2.3 Evaluation

2.3.1 Habitats have been assessed to determine whether they meet those described in the UK Biodiversity Action Plan – Priority Habitat descriptions which are used to form Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

2.3.2 <https://www.daftlogic.com/projects-google-maps-area-calculator-tool.htm> and AutoCad has been used to measure habitat size and all habitats are calculated as areas.

2.3.3 The BNG Assessment tool “The Statutory Biodiversity Metric 4.1 – Natural England 2023) is used for the evaluation and condition assessment is made using the technical support provided by Natural England.

2.3.4 Other government advice on wildlife such as the National Planning Policy Framework (NPPF) or the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017, is referenced where applicable and any impacts on protected species are evaluated in accordance with current guidance.

3. Survey results

3.1 History of site

3.1.1 The recent history of the site can be examined using historic aerial imagery. The site appears to have been recently demolished prior to January 2020, therefore no habitat degradation has occurred.

3.1.2 An examination of <https://magic.defra.gov.uk/MagicMap.aspx> indicates the following.

The site is located within SSSI Impact Zone for Rochdale Canal SSSI which is located 8100m east of site. The site is located approximately 18km from a Wigan Flashes National Nature Reserve and 1900m from Chesham Woods Local Nature Reserve. The development proposal does not appear to conform to those development types that require the LPA to consult Natural England on the likely risks.

Multi-Agency Geographic Information for the Countryside website data has confirmed the following habitats and species apply to the site and its immediate locality:

- There are no section 41 habitats listed on the inventory on the site.
- Priority woodland is located in numerous areas within a 1km radius of site.
- The site is located 850m southwest of Network Enhancement Zone 2 and 200m from Network Expansion Zone.
- There are no important bird areas, seabird considerations, or water and wetland considerations in respect of avian species.
- The site is in the range of 4 species of Arable Assemblage Farmland Birds under the Countryside Stewardship Scheme (CSS).
- The site is located within the CSS for avian species (Lapwing and Curlew) shown by data collation periods between 2005-2010.

- The closest granted European Protected Species (EPS) license applications is for bats 550m southwest of site.

3.2. Site description and condition assessment of habitats

3.2.1 The site is best described as ephemeral / ruderal.

3.2.3 A condition assessment for the ephemeral / ruderal is provided in appendix 5. The condition habitat assessment scored 1 core criteria passed making it a poor condition.

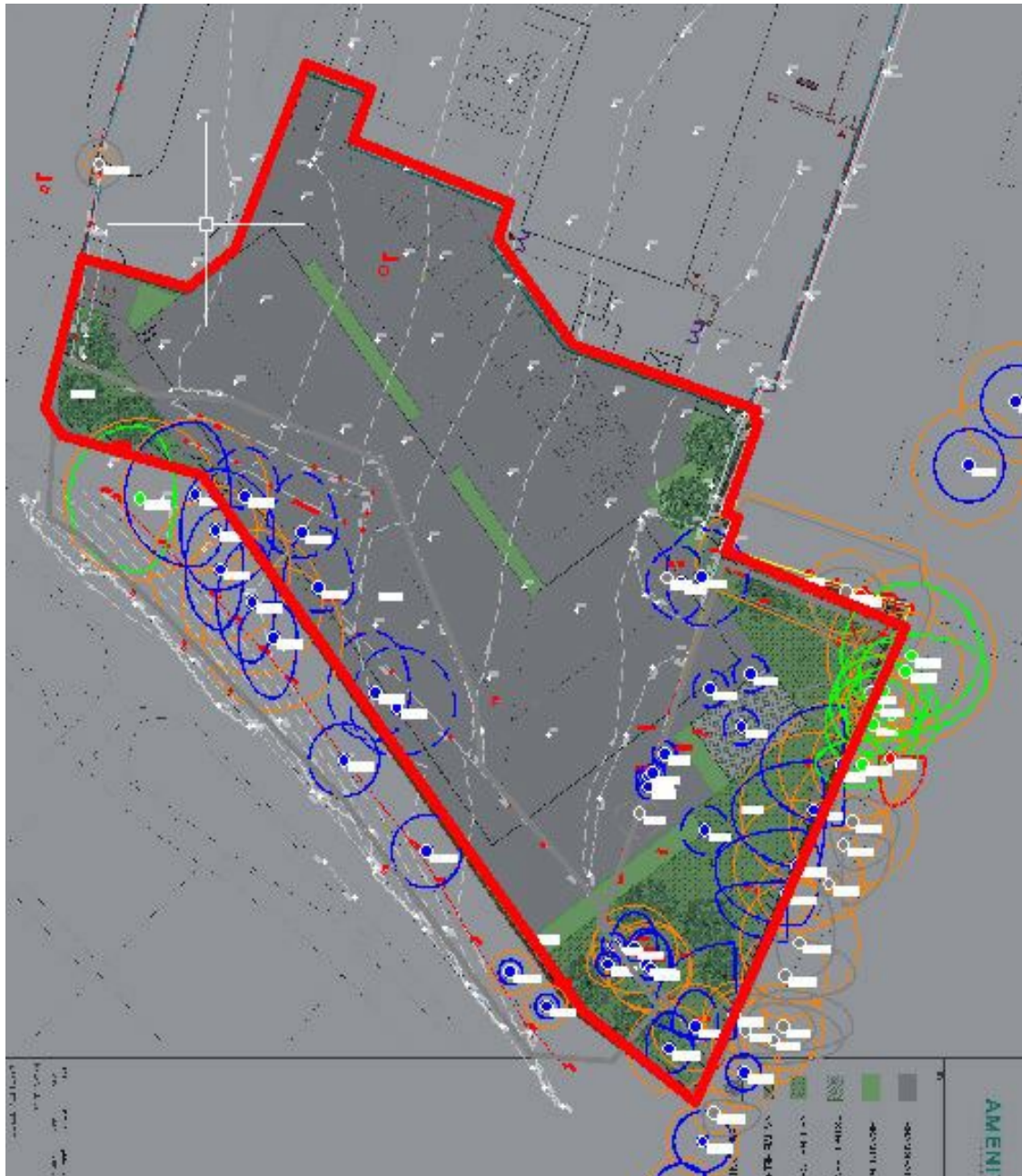
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
Core Criteria - must be assessed for all urban habitat types :			
A	Vegetation structure is varied, providing opportunities for vertebrates and invertebrates to live, eat and breed. A single structural habitat component or vegetation type does not account for more than 80% of the total habitat area.	No	No variety of height or structure
B	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.	Yes	
C	Invasive non-native plant species (listed on Schedule 9 of WCA ¹) and others which are to the detriment of native wildlife (using professional judgement) ² cover less than 5% of the total vegetated area ³ . Note - to achieve Good condition, this criterion must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).	No	

Condition Assessment Criteria		Criterion passed (Yes or No)
A	The tree is a native species (or at least 70% within the block are native species).	Yes
B	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).	Yes
C	The tree is mature (or more than 50% within the block are mature).	No
D	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.	Yes
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	No
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Yes
Number of criteria passed		
Condition Assessment Result (out of 6 criteria)		Score Achieved x/✓
Passes 5 or 6 criteria		Good (3)
Passes 3 or 4 criteria		Moderate (2)

Urban trees baseline.

There are a total of 57 records in the tree report. Within the redline there are a total of 24 records comprising of 17 small trees and 7 medium size trees in moderate condition as shown below and in appendix 2 providing an overall coverage of 0.1832Hectare. The following trees are lost for development; T1, T2, T3, G2, G3, T7, T8, G5, T38, T43, T44, T45, T46. This is a total of 4 medium trees and 9 small trees which is a total of 0.1018 of removed coverage in the red line and a retained coverage of 0.0814. **Can they be enhanced to good?**

Tree No.	latin name	Diameter(mm)	On site	Retained or removed	BNG size class
T1	Prunus avium (Wild Cherry)	200	On	Removed	Small
T2	Acer pseudoplatanus (Sycamore)	300	On	Removed	Small
T3	Platanus X hispanica (London Plane)	300	On	Removed	Small
T6	Salix caprea (Goat Willow)	150,200	On	Retained	Small
G2	Betula pendula (Silver Birch)	100	On	Removed	Small
G3	Alnus glutinosa (Common Alder)	200	On	Removed (3no)	Small
T7	Alnus glutinosa (Common Alder)	150	On	Removed	Small
T8	Salix caprea (Goat Willow)	100	On	Removed	Small
T9	Salix caprea (Goat Willow)	450	On	Retained	Medium
T10	Salix caprea (Goat Willow)	350,300,250	On	Retained	Medium
T11	Salix caprea (Goat Willow)	450	On	Retained	Medium
T12	Salix caprea (Goat Willow)	200	On	Retained	Small
T13	Salix caprea (Goat Willow)	200,100	On	Retained	Small
T14	Betula pendula (Silver Birch)	300	On	Retained	Small
T15	Betula pendula (Silver Birch)	300	On	Retained	Small
T16	Betula pendula (Silver Birch)	300	On	Retained	Small
T17	Betula pendula (Silver Birch)	150	On	Retained	Small
T18	Betula pendula (Silver Birch)	150	On	Retained	Small
G5	Betula pendula (Silver Birch)	150	On	Removed	Small
T38	Acer pseudoplatanus (Sycamore)	300	On	Removed	small
T43	Platanus X hispanica (London Plane)	450	On	Removed	Medium
T44	Platanus X hispanica (London Plane)	450	On	Removed	Medium
T45	Platanus X hispanica (London Plane)	450	On	Removed	Medium
T46	Platanus X hispanica (London Plane)	450	On	Removed	Medium



3.2.4 Summary of the area based habitat (Site size 0.2715 ha)

Habitat ref	UK Habitat Classification Type	Condition Assessment Result	Ha / Linear M
Habitat 1	Sparsely vegetated land – ephemeral/ruderal	Poor	0.2715
Habitat 2	Urban trees	Moderate	0.1832 (0.0814 retained)

4. Evaluation and Assessment

4.1 Proposed habitat creation and enhancement

The site shall be developed as proposed in appendix 4 and as detailed below.

The total area of the site is approximately 0.2715 hectare.

REF	LSCP DESCRIPTION	BNG DESCRIPTION	HECTARE / NO.	LM/NO
1	TREES			11no.
2	WILDFLOWER	NEUTRAL GRASSLAND	0.0565	
3	AMENITY GRASSLANDS	MODIFIED GRASSLAND	0	
4	NATIVE HEDGEROWS	NATIVE HEDGEROWS		126
5	SHRUB BEDS	URBAN INTRODUCED SHRUBS	0.0134	
6	URBAN SEALED SURFACES	URBAN SEALED SURFACES	0.2016	
		TOTAL HA:	0.2715	
7	AREA WITHIN GREEN LINE BOUNDAR	TOTAL HA:	0.2715	

Proposed urban tree sizes. The total proposed coverage of these in the proposed habitat creation within the metric is 0.0448Ha.

4.2 Habitat creation methods – Neutral grassland

Other neutral grassland contains Biodiverse lawn EL1 (unmown and mown) and flowering meadow EM4.

Recommended Seed Mixes:

- Emorsgate Seeds EM4
- Emorsgate Seeds EL1

Considerations:

- If soil is being imported into the site, then nutrient poor soil should be used to create wildflower areas in order to support the establishment of the meadow.

- Don't add fertiliser as this will increase fertility of the soil and negatively impact the wildflower meadow.
- Reducing soil fertility: Due to the baseline conditions of the site intensive nutrient stripping techniques are not considered necessary and therefore nutrients should be removed from the grassland through silage cuts

Creation Methodology:

- Create a fine tilth for a seedbed by digging or rotovating the soil then firming and raking.
- Sow seed mixture evenly by hand at 5g per square meter during, late summer/early autumn.

Additional Methodology:

- Designate some areas of grassland for creation of a calcareous species sward with thin poor soils and good drainage. These areas should be managed in line with 'other neutral grassland' once established.
- Remove topsoil and spread limestone chippings.
- Translocation of soils from habitats within the site to be removed by development should be carried out by an experienced contractor alongside Suitably Qualified Ecologist (SQE) who can identify appropriate soils.

Habitat creation methods – Urban trees

Recommended Species: At least 70% of trees should be native species found in the local area, taking into account the requirement to plant trees that will be appropriate for anticipated changes in climate.

Considerations:

- Trees will adapt to natural conditions. Additional watering will only be required during a particularly long dry spell

Trees are to be planted within the tree planting season (October to March inclusive).

- Up to 30% of street trees will not establish and therefore supplementary planting over the following three years will be required to achieve prescribed numbers over the longer term.

Creation Methodology:

- Advanced nursery stock trees or larger will be planted within optimal tree planting season (October to March inclusive).
- Suitable wooden stakes will be used to support the trees.
- Weeds will be controlled around the base of the trees by applying organic mulch (10cm depth in a 50cm buffer around trees), this will also assist with water retention. This will be applied in early summer until trees are successfully established (minimum 3 years).

4.3 Management and monitoring

The following section details management and monitoring methodologies for the habitats proposed to be created and retained on site

The site should be subject to a UKHAB classification survey alongside a condition assessment of the created and enhanced habitats. This survey should be carried out by a suitably qualified ecologist, starting 1 year after the project is completed, with follow up visits within year 2, 5, 10, 20, until the final visit on year 30. A report provided by an independent assessor shall be submitted to the LPA, when habitats as listed in the Biodiversity Metric are judged to have reached target condition.

A review of management of all habitats should be undertaken at years 10 and 20 with the management programme will be updated/adjusted accordingly.

General Management

The following management practices are recommended throughout the site in order to protect created habitats from harmful management practices.

- Weed control will be undertaken using non-chemical interventions wherever possible including mulching and hand pulling. Where deemed necessary, the spot application of eco-friendly herbicides may be used, avoiding areas containing waterbodies such as ponds and rivers.
- The application of fertilisers will be avoided as excessive nutrient loading will negatively alter the species composition of the habitats.
- Care should always be taken when maintaining habitats to avoid damage or disturbance to protected species such as breeding birds and water vole.
- Any arisings and/or cuttings created by maintenance will need to be removed and disposed of off-site or in a suitable location such as a designated compost heap or alternatively composted within the allotments on site.
- During site clearance and management, wood (including dead wood) should be used to create refugia in a suitable location (within native scrub, woodland, or pond edges) wherever possible.
- All areas are to be monitored for controlled and/or invasive species and appropriate action taken to remove if found.
- All areas to be monitored for fly-tipping, rubbish and litter annually (both construction and post-construction phases) with appropriate action taken to remove if found.

Neutral Grassland

The created neutral grassland areas within the site will require regular monitoring and annual maintenance to achieve 'moderate' condition, allowing the more desirable species to flourish and to reduce the presence of unwanted species that will attempt to colonise the area. The following sets out the UKHAB criteria as to what is a good condition other neutral grassland.

Aim:

- The appearance and composition of the vegetation closely matches characteristics of UKHAB type definition. Indicator species are easily and clearly visible throughout the sward.
- 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.
- Cover of bare ground between 1% and 5% of total habitat area to provide an important resource to insects.
- There is greater than 9 species per meter squared.

Management:

- For the first year of growth, cut to 5cm in May, then cut every 2 months or when sward reaches approximately 15cm. Stop cutting by August to allow wildflowers to seed. Final cut to 5cm will be in October.
- From the second year onwards, cut to 5cm in March or April, then make a second cut to 5cm in October.
- From the second year onwards, designate some areas to receive a cut to 5cm during August in order to produce a more varied habitat that will encourage different species of wildflower.
- Remove all arisings from the area, dispose of in designated areas such as a compost heap.
- Remove encroaching scrub and bracken manually using hand tools.
- Annually create areas of bare ground or 'scrapes' covering 1% to 5% of total habitat area by manually scraping away vegetation with hand tools. These scrapes should be located in sunny areas such as south facing embankments, if possible.

Monitoring:

- Habitat will be monitored for controlled and/or invasive species annually and appropriate action taken to remove if found.
- Monitor for damage, cover of bracken and scrub.
- Monitor bare ground cover.
- Check sward height throughout the first year and cut when it reaches 15cm.

5. Conclusions

5.1 The results of the BNG calculation are indicated below.

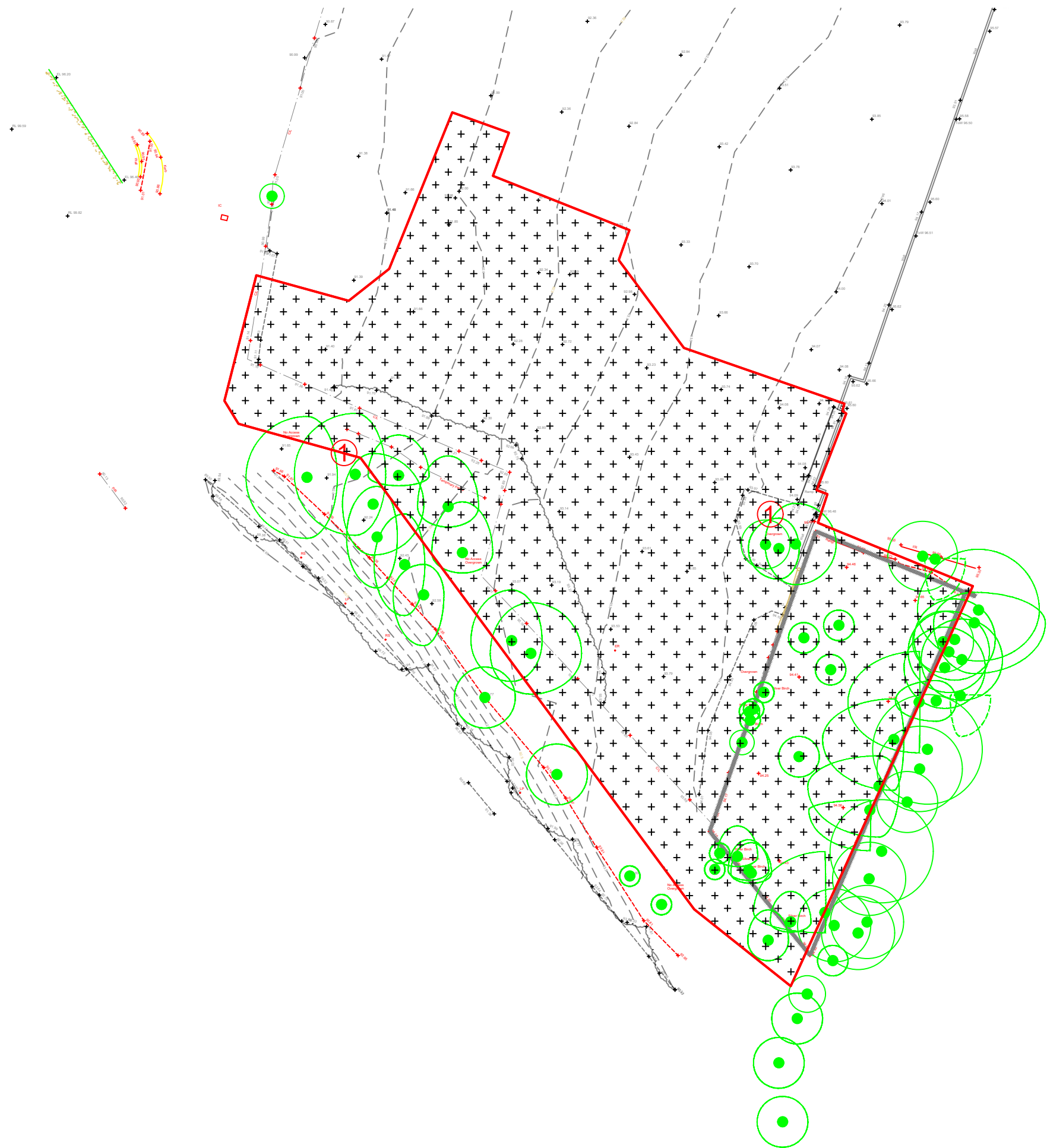
On-site baseline	Habitat units	2.01		
	Hedgerow units	0.00		
	Watercourse units	0.00		
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	1.38		
	Hedgerow units	0.42		
	Watercourse units	0.00		
On-site net change (units & percentage)	Habitat units	-0.63		
	Hedgerow units	0.42		
	Watercourse units	0.00		
Off-site baseline	Habitat units	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Off-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Off-site net change (units & percentage)	Habitat units	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-0.63		
	Hedgerow units	0.42		
	Watercourse units	0.00		
Spatial risk multiplier (SRM) deductions	Habitat units	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
FINAL RESULTS				
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-0.63		
	Hedgerow units	0.42		
	Watercourse units	0.00		
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-31.47%		
	Hedgerow units	N/A		
	Watercourse units	0.00%		
Trading rules satisfied?	No - Check Trading Summaries ▲			
Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	2.01	2.21	0.83

Summary conclusion

The site has a decrease in biodiversity as demonstrated by the metric because of the loss of urban trees and ruderal habitat that cannot be retained within the development scheme and the extent of habitats proposed or retained and enhanced (urban trees) does not reach the mandatory 10% and this scheme has a 0.83 unit deficit.

The metric is reporting errors. The Trading rules have not been satisfied because of the loss of urban trees and ruderal habitat.

Appendix 3 Habitat Condition Assessments and BNG Metric



PHASE ONE HABITAT MAP

KEY



Urban trees



J1.3 Ephemeral perennial

Client:

Exemplar

Project:

Bury

Detail:

HABITAT PLAN - Overview

Drawn By:

SB

Date:

18.01.2024

Scale:

1:500@A3

Drg No:

TR-01

Revision:

V1

Appendix 2 Proposed development and landscape enhancements



EXEMPLAR HEALTH CARE
BURY, BL9 0HD

AMENITYTREE

LIV-10/10/2024-PLANNING CONSULTANT

KEY

- URBAN SEALED SURFACES
- URBAN INTRODUCED SHRUBS
- ASTRO - SEMI SEALED SURFACES
- NEUTRAL GRASSLAND
- NATIVE HEDGE (1M WIDE)
- TREE PLANTING 11 No.

R.02	10.02.25	Updated to assist BNG metrics	AP
REV NO.	DD.MM.YY	DESCRIPTION OF REVISION	INITIALS
PREPARED BY			
AMENITY TREE			
STATUS			
FOR COMMENT			
TITLE			
SITE 2 LANDSCAPE G.A.			
DWG.NO		REVISION	
AT.24.11879.103		R.02	
SCALE	DRAWN	APPROVED	DATE
1:200 @ A1	AC	SD	29.07.24

Appendix 3 Habitat Condition Assessments and BNG Metric