BALMORAL AVENUE BANBURY OXON

UK HABS AND BNG ASSESSMENT

ACD ENVIRONMENTAL

Ecology
Archaeology
Arboriculture
Landscape Architecture

orbit building communities

Written By:	DL
Date:	23.02.2024
Document File Ref:	ORB24157
Revision:	*
Date of last revision:	28.02.2024
Revised by:	DL

QUALITY ASSURANCE

This report has been prepared in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Report Writing (2nd Edition, December 2017).

The facts stated in this report are true to the best of our knowledge and belief, and any opinions expressed are held genuinely and in accordance with the accepted standards of the profession. ACD Environmental Ltd is a CIEEM Registered Practice.

Client:	Orbit Building Communities
Site/job:	Balmoral Avenue Phase 2, Banbury, Oxfordshire
Author:	Dominic Lambert – Graduate

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1 INTRODUCTION

1.1. ACD Environmental Ltd have been commissioned by Orbit Building Communities to undertake mapped UKHab/BNG baseline surveys at a proposed development site known as Balmoral Avenue Phase 2, Banbury, Oxfordshire (**Image 1**).

1.2. The Approved Development Site is subject to a planning application for the erection of 49 dwellings along with access, public open spaces and other infrastructure at the Land at Bretch Hill from Balmoral Avenue, along with parking and landscaping.

1.3. Due to a forecasted on-site post-intervention loss, ACD Environmental Ltd was commissioned to investigate whether a net loss or gain would be achieved through the new development on the existing and off-site habitats (**Image 2**). This report also provides condition assessments for on-site habitats, to identify condition uplift for retained habitats, in addition to on-site and off-site habitat creation.

1.4. Based on a completed Natural England Biodiversity Metric 4.0, baseline survey results for on-site and off-site habitats have been provided, with corresponding recommendations for a suite of ecological habitat enhancement and creation opportunities, to achieve an overall biodiversity net gain.

Image 1: Proposed development site in red.

Image 2: Proposed off-site area in blue.

Competence

1.5. This report has been written by Dominic Lambert, ACD Environmental Ltd. Dominic is a Graduate Ecologist and has been involved in a wide range of surveys, including Extended Phase 1 habitat surveys, and reports, including Preliminary Ecological Appraisals (PEAs), Ecological Impact Assessments (EcIAs). He is a Qualifying member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

1.1. A Technical Review of this report has been undertaken in line with ACD Environmental Ltd's Quality Assurance procedures. The Technical Review was undertaken by Lisa Durrant. Lisa is a Senior Ecologist at ACD Environmental Ltd. She has 13 years' experience in ecological consultancy and holds Natural England Class License for bats (Level 2), great crested newts, dormice, and barn owl *Tyto alba*. She is a Full Member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

1.2. An Extended Phase 1 and Phase 2 survey of the Site and wider Survey Area was undertaken by The Environmental Dimension Partnership (EDP) in May 2021. Please refer to the Ecological Appraisal document completed by EDP for further information[1].

1.3. The baseline ecological investigations undertaken as part of this Appraisal included a desk study, Extended Phase 1 Habitat survey, badger, bird, bat activity, great crested newt and hazel dormouse surveys. These surveys were undertaken with reference to best practice guidance.

1.4. Based upon the studies that were undertaken as described above, using professional judgement and experience, a number of Phase 2 surveys were considered necessary in order to inform the ecological assessment.

Purpose of the report

1.5. The purpose of this report is to identify ecological habitat enhancement opportunities within the site and offsite locations where possible, to achieve an overall net gain, to satisfy the **Planning Condition 19;** that 'no development shall take place, including any demolition and any works of site clearance, and as part of any reserved matters application for layout and landscaping, until a method statement and scheme for enhancing biodiversity such that an overall net gain for biodiversity is achieved, has been submitted to and approved in writing by the Local Planning Authority'.

1.6. Therefore, a biodiversity impact assessment has been completed, to ensure the development provides a net gain in biodiversity in accordance with Policy ESD10 of the Cherwell Local Plan 2011-2031 Part 1 and Government guidance contained within the National Planning Policy Framework that the proposed development would comply with local and national planning policy, in relation to Biodiversity Net Gain.

1.7. This report should be read in conjunction with the Landscape and Ecological Management Plan (LEMP)[2] and Soft Landscape Specification Report (SLS)[3], both produced by ACD Environmental Ltd.

[1] Environmental Dimension Partnership (2021). Ecological Appraisal. REF: edp7133_r002a.

[2] ACD Environmental Ltd (2023). Landscape and Ecological Management Plan. REF: ORB24157_LEMP. %20User%20guide%20(20).pdf

[3] ACD Environmental Ltd (2023). Soft Landscape Specification (SPS). REF: ORB24157_Spec.

1.8. The biodiversity impact assessment metric has been completed, to highlight the specifications of the biodiversity enhancement measures.

2 LEGISLATION

Environment Act 2021

2.1. In accordance with the Environment Act 2021[4], mandatory Biodiversity Net Gain (BNG) will apply from November 2023 for developments in the Town and Country Planning Act 1990, unless exempt. It will apply to small sites from April 2024.

2.2. Schedule 7A of the Act makes provision for grants of planning permission in England to be subject to a condition, to secure that the 'biodiversity gain objective' is met.

2.3. The 'biodiversity gain objective' is met in relation to development for which planning permission is granted if the biodiversity value attributable to the development exceeds the pre-development biodiversity value of the onsite habitat by at least the relevant percentage.

2.4. The biodiversity value attributable to the development is the total of—

(a) the post-development biodiversity value of the onsite habitat,

(b) the biodiversity value, in relation to the development, of any registered offsite biodiversity gain allocated to the development, and

(c) the biodiversity value of any biodiversity credits purchased for the development.

2.5. The relevant percentage is 10%, but the Secretary of State may by regulations amend this paragraph so as to change the relevant percentage.

2.6. The biodiversity value of any habitat or habitat enhancement are to its value as calculated in accordance with the 'Biodiversity Metric'.

2.7. Every planning permission granted for the development of land in England shall be deemed to have been granted subject to the condition in sub-paragraph (2), which states that the development may not be begun unless:

(a) a biodiversity gain plan has been submitted to the planning authority

(b) the planning authority has approved the plan.

2.8. Local Planning Authorities (LPAs) will have to approve a biodiversity net gain plan for development work before it can start.

[4] Environment Act 2021. Available from:https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted

3 METHODOLOGY

UKHab survey

3.1. The Extended Phase 1 baseline habitat mapping of the on-site and off-site habitats was carried out on 27th May 2021 with reference to the methods described in JNCC 2010[5], in order to inform the baseline habitats and (potential) protected species information for the application.

3.2. This date is in accordance with the Environmental Act 2021, which states if planning consent has been given at the time of the baseline survey, the date of the survey is considered acceptable.

3.3. The Extended Phase 1 survey involves identifying and mapping the principal habitat type and identifying the dominant plant species present in each principal habitat type. In addition, any actual or potential protected species or Species of Principal Importance.

3.4. The Phase 1 survey was conducted in May, which is within the optimum season for these surveys. Therefore, the survey results are considered to be sufficient and reliable.

3.5. Following the baseline surveys, maps were digitised using the software programme QGIS.

Biodiversity Metric

Assessment Framework

3.6. For the purposes of this assessment, the Biodiversity Metric 4.0 (JP039) has been utilised.

3.7. The Biodiversity Metric 4.0 is accompanied by a 'Calculation Tool'. This was used to calculate the existing biodiversity units for the flagship sites The User Guide[6] has been followed.

3.8. The baseline habitat map is shown in **Appendix 2.** The biodiversity metric calculation tool is provided as a separate document.

Habitat Measurements

3.9. Baseline habitat measurements were carried out in line with the results of the Extended Phase

[5] Joint Nature Conservation Council (2010) Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit (reprinted with minor corrections for original Nature Conservancy Council publication)

[6] Natural England Joint Publication JP039. The Biodiversity Metric 4.0 User Guide. Defra Group. Natural England. March 2023. Available online: file:///C:/Users/daniel/Downloads/The%20Biodiversity%20Metric%204.0%20-%20User%20guide%20(20).pdf

1 and 2 surveys to produce the baseline map.

3.10. Measurements were entered to the nearest 0.01ha.

Distinction Assessments

3.11. Habitats are assigned to distinctiveness bands automatically within the Metric. These are based on an assessment of the distinguishing features of a habitat or linear feature, including the consideration of species richness, rarity (at local, regional, national, and international scales), and the degree to which a habitat supports species rarely found in other habitats.

3.12. The distinctiveness band of each habitat is preassigned in the Biodiversity Metric 4.0. The bands are based upon the UKHab classification system. The distinctiveness categories used are tailored to habitat type.

3.13. Distinctiveness Assessments are assigned according to **Table 1**.

Table 1: Distinctiveness Assessment

Category	Scores	Multiplier
Very High	8	Priority habitats as defined in Section 41 of the Natural Environment and Rural Communities (NERC) Act that are highly threatened, internationally scarce and require conservation action e.g. blanket bog
High	6	Priority habitats as defined in Section 41 of the NERC Act requiring conservation action e.g. lowland fens
Medium	4	Semi-natural habitats not classed as a Priority Habitat
Low	2	Habitat of low biodiversity value. Temporary grass and clover ley; intensive orchard; rhododendron scrub
Very Low	0	Little or no biodiversity value e.g. hard standing or sealed surface

Condition Assessments

3.14. Condition assessments for existing habitats can be found in a separate excel document. Condition assessments are based on a set of criteria which are specific to habitat type. The

baseline surveys were used to inform the completion of condition assessments for each habitat type/parcel.

3.15. Condition sheets for the woodland habitat and pond are provided as separate documents.

Strategic significance

3.16. The spatial location of a habitat is treated as a component of the quality of a habitat parcel in the same way as distinctiveness or condition. Strategic significance is used to determine whether the habitat is of increased importance due to its location.

Risk Factors

3.17. As part of any proposed habitat creation and restoration, risk factors must be taken into account to correct for disparity, delay or risk. These values are preassigned within the Biodiversity Metric 4.0 and take into consideration the following factors:

- Temporal risk; and
- Difficulty of creation and restoration.

3.18. Advance/delay in habitat creation takes into account any significant time difference in the creation of a habitat type. This time is measured in full years and is entered by the assessor.

3.19. Habitat creation in advance is rewarded by reducing the difficulty and temporal risk multipliers applied. This reflects the lower delivery risk - there is less risk of failure when a habitat is already making progress towards its target condition.

3.20. Any significant delay in the creation of a habitat type relative to loss of on-site habitats (e.g. due to phased developments and developments that temporarily require parts of the development site for construction purposes) is added to the pre-populated time to target condition and increases the effect of the risk multiplier accordingly.

Professional judgement

3.21. Although the Biodiversity Metric 4.0 is a valuable tool underpinned by ecological evidence, there are certain limitations and allowance for professional judgement that must be considered when applying the metric.

4 BASELINE SURVEY RESULTS

4.1. The following habitats were recorded and mapped during the baseline surveys:

- Other woodland; broadleaved.
- Blackthorn scrub.
- Cereal crops.
- Developed land; sealed surface.
- Ruderal/ephemeral.
- Individual trees.
- Off-site cropland.
- Off-site hedgerows with trees.

4.2. The proposed development site currently comprises meadow mixed grassland, neutral grassland, amenity grassland, introduced shrub, decorative shrubs, bulb planting and planted/retained trees, in addition to developed land; sealed surface. Native and decorative hedgerows will be planted throughout the site. The hedgerow in the southern side of the site is to be retained. The hedgerow to the eastern side of the site is also to be retained.

4.3. Tree species present on site comprise of ash *Fraxinus excelsior* and sycamore *Acer pseudoplatanus*. Ground flora species present within the site comprised common nettle *Urtica dioica*, rosebay *Chamaenerion angustifolium*, willowherb *Chamerion angustifolium*, burdock *Arctium* and thistles *Cirsium sp*. Hedgerow flora consisted of hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa*, elder *Sambucus nigra*, crab apple *Malus sylvestris* and elm species *Ulmus spp*.

4.4. The on-site woodland was assessed as ‘moderate’ condition, generating 0.88 baseline habitat units.

4.5. The individual trees on site were classed as ‘good’ condition as they are native species but are not mature (trunk diameter at chest height is less than 30cm), and generate 0.84 baseline habitat units.

4.6. The blackthorn scrub was assessed as ‘moderate’ condition Roughly 25% or less (visual estimate) of the plants present are pollinator friendly with the remainder for decorative purposes only and a variety of seedlings, saplings, young and mature shrubs are present. Generating 5.84 baseline habitat units.

4.7. Cereal crops are given an automated classification of ‘Condition Assessment N/A’, by the biodiversity metric.

4.8. Ruderal/ephemeral was assessed as ‘poor’ condition due to the regular mowing and traditional maintenance and presence of invasive non-native species. This habitat doesn’t generate any baseline habitat units.

Off-site habitat creation

4.9. An area off-site, comprising of cropland (0.54ha) has been included in the metric calculations as previously agreed, to allow for off-site mitigation. The proposed area is within the blue line boundary and will be accounted for.

4.10. The proposed habitats are to include an attenuation pond (0.19ha) and mixed scrub (0.35ha) to assist in achieving a net gain. The species proposed for this area will include hawthorn *Crataegus monogyna*, ivy *Hedra helix* and elder *Sambucus nigra.*

4.11. The scrub planting will compensate the loss of scrub habitat around the development site and gap planting of hedgerows to enhance species diversity and habitat heterogeneity. Further enhancements will include; log piles and hibernacula.

4.12. There are four off-site hedgerows with trees, totalling 0.17km in length, with a loss of 0.0065km to allow the creation of the attenuation pond, designed for wildlife with permanent water elements and variable shelves to allow for a variety of aquatic species.

4.13. The net loss in off-site hedgerows can be compensated for, through the inclusion of creating a native hedgerow of 0.01km within the blue line boundary.

Limitations

4.14. Due to the condition sheets being unavailable, assessments of the habitat conditions were made from the original metric completed by EDP. However, condition sheets were not discussed in the original report, therefore reasons for their condition have been made at face value. This may need to be updated and a site visit conducted to gain condition sheets for a more detailed assessment of each habitat.

5 CONCLUSION

5.1. ACD Environmental Ltd have been commissioned by Orbit Building Communities to undertake an updated biodiversity metric for a proposed development site known as Balmoral Avenue Phase 2, Banbury, Oxfordshire (**Image 1**).

5.2. The proposed development site is subject to a planning application (21/03644/OUT) for the erection of 49 dwellings along with access from Balmoral Avenue along with parking and landscaping.

5.3. Based on a completed Natural England Biodiversity Metric 4.0, baseline survey results for on-site and off-site habitats have been provided, with corresponding recommendations for a suite of ecological habitat enhancement and creation opportunities, to achieve an overall biodiversity net gain.

5.4. The proposed development achieved a total net gain of 15.35%, which equates to 2.33 habitat units, and on-site hedgerows saw a 1.10% total net gain equating to 0.06 units. However, the trading rule of proposing the same quality broad habitat or higher has not been met for arable land (-4.32 habitat units lost), heathland and shrub (-1.70 habitat units lost) and ruderal/ephemeral habitats (-0.06 units lost).

Enhancement and Creation Opportunities

5.5. In order to satisfy the trading rules, offsite creation and onsite habitat enhancements will be required, which meets the current habitats onsite or of a higher distinctiveness.

5.6. Therefore, an area off-site comprising of cropland has been proposed for the habitat creation to mitigate the loss in habitat units previously encountered. Thus, a net gain of 15.35% is considered attainable with the on-site and off-site habitat creation plans (**Appendix 3 and 4**).

5.7. However, a loss has been identified in the off-site hedgerow units -0.05 units (-3.88%). This can be compensated for by planting a native hedgerow of 0.01km within the blue line boundary.

5.8. Subsequently, combined with some offsite habitat creation and potential on-site enhancements it is considered the development scheme will deliver a net gain and satisfy the trading rules.

APPENDIX 1: **Biodiversity Metric results table.**

Balmoral Avenue Phase 2, Banbury, Oxfor

Return to results menu

Headline Results

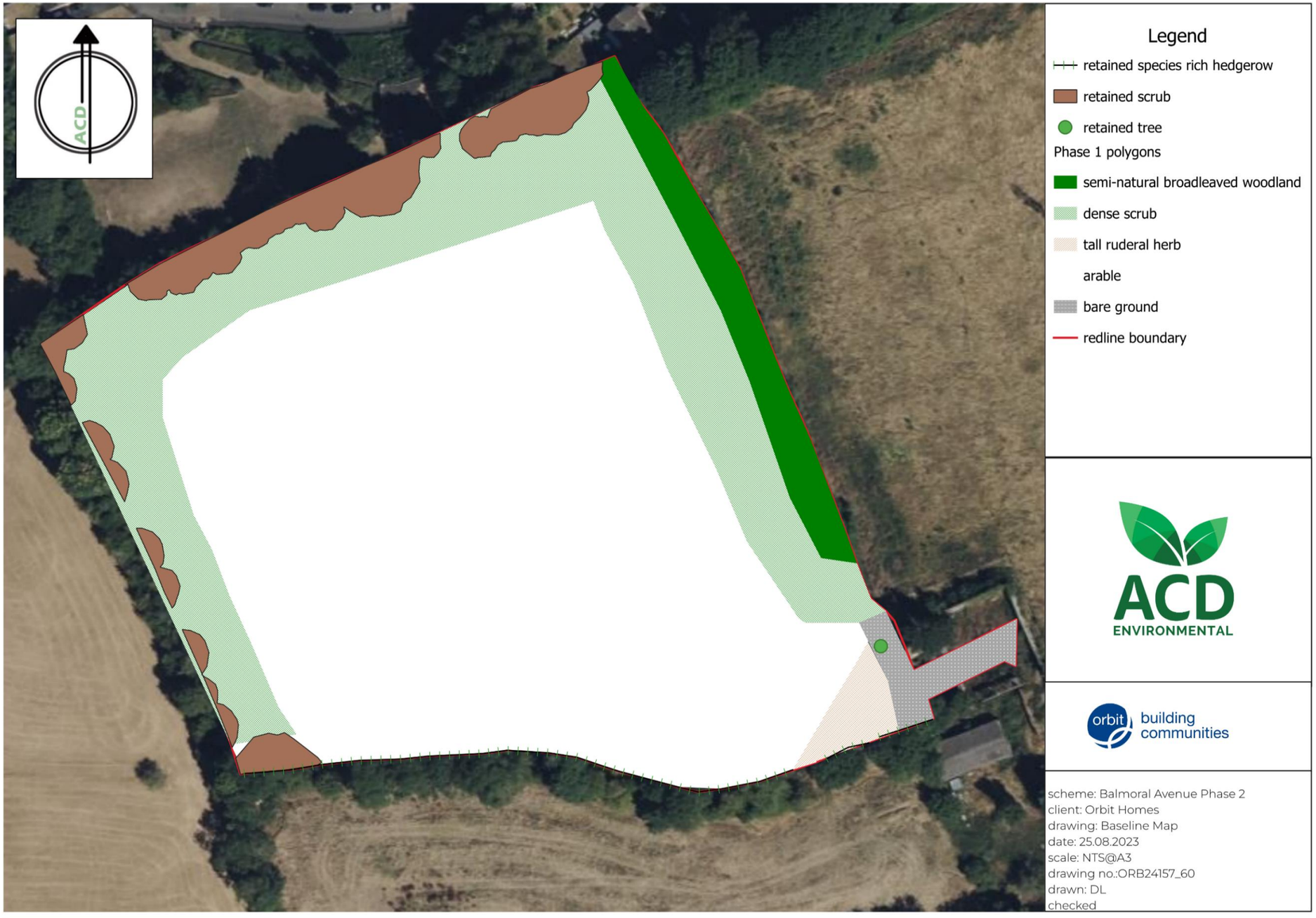
Scroll down for final results ⚠

On-site baseline	*Habitat units*	15.18		
	Hedgerow units	5.76		
	Watercourse units	0.00		
On-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	15.26		
	Hedgerow units	5.88		
	Watercourse units	0.00		
On-site net change (units & percentage)	*Habitat units*	0.08	0.52%	On-
	Hedgerow units	0.12	2.00%	On-
	Watercourse units	0.00	0.00%	
Off-site baseline	*Habitat units*	1.08		
	Hedgerow units	1.34		
	Watercourse units	0.00		
Off-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	3.40		
	Hedgerow units	1.29		
	Watercourse units	0.00		
Off-site net change (units & percentage)	*Habitat units*	2.32	214.70%	
	Hedgerow units	-0.05	-3.88%	
	Watercourse units	0.00	0.00%	
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	2.40		
	Hedgerow units	0.06		
	Watercourse units	0.00		
Spatial risk multiplier (SRM) deductions	*Habitat units*	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		

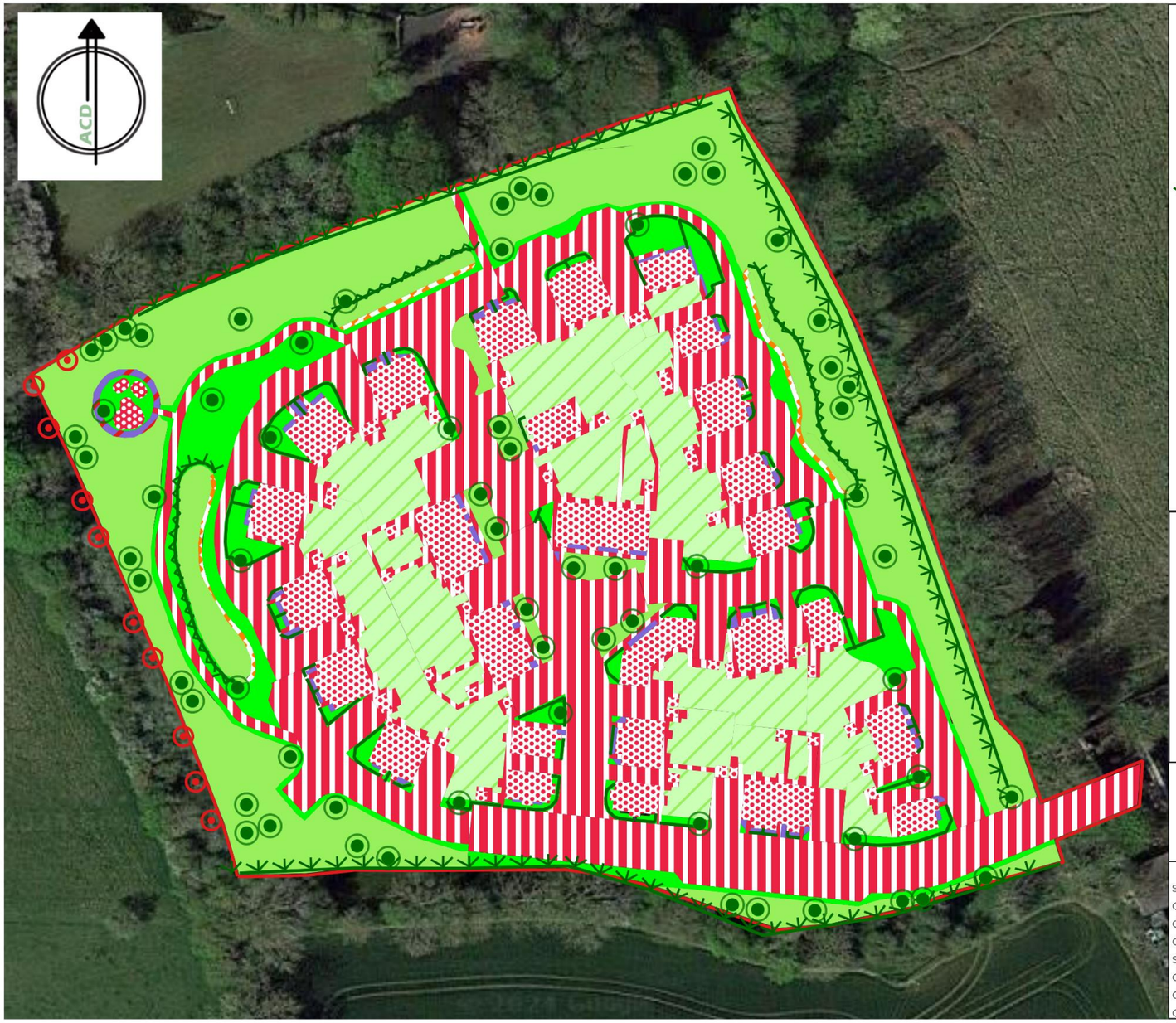
FINAL RESULTS

Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	2.40	
	Hedgerow units	0.06	
	Watercourse units	0.00	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	15.79%	
	Hedgerow units	1.10%	Total net gain ac
	Watercourse units	0.00%	
Trading rules satisfied?	Yes ✓		

APPENDIX 2: BASELINE HABITAT MAP



APPENDIX 3: LANDSCAPE MASTERPLAN / ON-SITE POST INTERVENTION HABITAT CREATION



Legend

- Retained trees
- Planted trees
- Red Line
- Native species rich intact hedge
- Species poor intact hedgerow
- retained Hedges and trees
- grassland - meadow mixture
- neutral grassland
- amenity grassland
- introduced shrub
- decorative shrub
- horticulture - bulb planting
- developed land. sealed surface
- buildings
- artificial unsealed surface

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orbit Your place to thrive

scheme: Balmoral Avenure Phase 2
client: Orbit Homes
drawing: Post Development Plan
date: 29/02/2023
scale: NTS@A3
drawing no.: ORB24157_67
drawn: DL
checked

APPENDIX 4: OFF-SITE POST INTERVENTION HABITAT CREATION

Legend

- Blue Line Boundary
- Hedges and trees
- Mixed Shrub
- Attenuation Pond
- cropland

ACD ENVIRONMENTAL

orbit Your place to thrive

scheme: Phase 2 Balmoral Avenue, Banbury, Oxon
client: Orbit Building Communities
drawing: Off-site Habitat Creation Plan
date: 22.02.2024
scale: NTS@A3
drawing no.: ORB24157_67
drawn: DL
checked

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