BIODIVERSITY NET GAIN REPORT

OF

MARLBOROUGH COLLEGE, PAVILION NETS



Abricon Ltd
1 Lyons Court
Long Ashton Business Park
Yanley Lane
Long Ashton
Bristol
BS41 9LB
United Kingdom
Telephone: +44 (0)1275 391297
Website: www.abricon.com

Site Address	Pavilion Nets, West of Cricket Pavilion, Marlborough College, Marlborough, SN8 1PA
Report type	Biodiversity Net Gain Report
Client	Marlborough College
Project number	005MARL100

The material and data in this report were prepared under the supervision and direction of the undersigned.

	Name	**Position**
Prepared by	Jade Lemm BSc	Assistant Ecologist
Checked by	Helen Saunders MCIEEM	Principal Ecologist
Checked and Approved by	Jana Prapotnikova MCIEEM	Principal Ecologist/Director

Revision History		
Version	**Issue Date**	**Revision**
1.0	7th September 2023	ISSUE

DISCLAIMER
Abricon has used reasonable skill and care in completing this work and preparing this report, within the terms of its brief and contract, and taking account of the resources devoted to it by agreement with the client. We disclaim any responsibility to the client and others in respect of any matters outside the stated scope. This report is confidential to the client and we accept no responsibility to third parties to whom this report, or any part thereof, is made known. The opinions and interpretations presented in this report represent our reasonable technical interpretation of the information made available to us. Abricon accepts no responsibility for information or data provided by other bodies, and accepts no legal liability arising from the use by other persons of data, information or opinions in this report.

Except for the provision of professional services on a fee basis, Abricon does not have a commercial arrangement with any other person or company involved in the interests that are subject of this report.

COPYRIGHT © Abricon Limited
The material presented in this report is confidential. This report has been prepared for the exclusive use of the client and shall not be distributed or made available to any other company or person without the knowledge and written consent of the client or Abricon Limited.

VALIDITY
Due to the dynamic nature of ecological conditions the results of the survey(s) and related conclusions and recommendations as contained within this report should only be considered valid for up to 12 months from the date the last survey was undertaken.

Any alterations to the site proposals may invalidate the recommendations contained within this report.

Executive Summary

Abricon Ltd. was commissioned by Marlborough College to complete a Biodiversity Net Gain (BNG) assessment for the proposed development of the 'site' at Pavilion Nets, West of Cricket Pavilion, Marlborough College, Marlborough, SN8 1PA. The purpose of the assessment is to quantify the likely habitat gains and losses associated with the proposed development and establish whether the proposal leaves biodiversity in a better state following the alteration of existing habitats and the creation of new habitats.

It is understood that the proposed plans for the site comprise the demolition of the existing outdated cricket nets and the construction of new replacement cricket nets. Site plans are provided in Appendix B at the end of this document. The Natural England (DEFRA) Biodiversity Metric 4.0 was utilised to assess whether the proposal will result in a biodiversity net gain through development by quantifying the value of habitats prior to and post-development.

The pre-intervention biodiversity units were calculated by utilising all habitat data available at the time of writing this report, which predominantly comprised information from the PEA report (Abricon, 2023) as well as satellite imagery of the site. Abricon completed an extended desk study to find information on habitats present in order to confirm the habitats present within the site, in order to inform the biodiversity net gain assessment.

The site block plan prepared by Marlborough College (Drawing number: CN/SP/02, June 2023) was utilised to calculate the post-development biodiversity units for the proposal. The site plan used to inform this assessment is provided at the end of this document.

Following the calculation of the pre-intervention and post-intervention biodiversity units, a net gain of +0.14 (+13.36%) biodiversity units was returned for area-based habitats.

A Landscape Environmental Management Plan (LEMP) will need to be developed for the site, which will provide prescriptions for habitat creation and management to ensure that the targeted habitats and their respective conditions can be delivered as part of the proposed.

Given the positive outcome of the DEFRA Biodiversity Metric for habitat units the proposed development can be considered to be in accordance with the requirements of the National Planning Policy Framework (NPPF, July 2021).

1 Introduction

1.1 Survey Aims and Objectives

1.1.1 Abricon Ltd. was commissioned by Marlborough College to complete a Biodiversity Net Gain (BNG) assessment for the proposed development of the 'site' at Pavilion Nets, West of Cricket Pavilion, Marlborough College, Marlborough, SN8 1PA. The purpose of the assessment is to quantify the likely habitat gains and losses associated with the proposed development and establish whether the proposal leaves biodiversity in a better state following the alteration of existing habitats and the creation of new habitats.

1.1.2 This assessment has been compiled to support the application at the above address, which will hereby be referred to as 'the site'. The assessment will also give recommendations of how to achieve net gain within the site.

1.2 Site Location & Description

1.2.1 The site is cricket nets located within several sports fields, located 200m north of Marlborough College. The land within the application boundary is approximately 0.5ha. The site is centred on National Grid Reference: SU 18237 69218.



Figure 1 – Site Location (highlighted)

Imagery ©2023 Google, Imagery ©2023 Bluesky, Infoterra Ltd & COWI A/S, CNES / Airbus, Getmapping plc, Infoterra & Bluesky, Maxar Technologies, The GeoInformation Group, Map data ©2023

1.3 Proposed Development

1.3.1 It is understood that the proposed plans for the site comprise the demolition of the existing outdated cricket nets and the construction of new replacement cricket practice nets. Site plans are provided in Appendix B at the end of this document. Within the proposed plans, the redline

boundary is shown to extend all the way to the main road. However, after discussions with the client the road leading to the site has no planned works and is only intended to indicate the access route to the site so will not impact any protected species and will not be included within this assessment.

2 Methodology

2.1 Biodiversity Metric Assessment

2.1.1 *"The biodiversity metric is a habitat-based approach used to assess an area's value to wildlife. The metric uses habitat features to calculate a biodiversity value"* (Natural England, 2021).

2.1.2 A core principle set out in the National Planning Policy Framework (Ministry of Housing, Communities & Local Government, 2021) is to achieve sustainable development, which can be attained by planning proposals meeting three fundamental objectives of an economic, social and environmental nature. The environmental objective states that proposals will '*contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy'*. The legislation (Environment Act 2021) states that most developments in England (with a few exemptions) will have to deliver at least 10% Biodiversity Net Gain (BNG) in order to be granted planning permission.

2.1.3 The Natural England (DEFRA) Biodiversity Metric 4.0 was utilised to assess whether the proposal will result in a biodiversity net gain through development by quantifying the value of area and linear habitats prior to and post development. This was achieved through calculating pre-intervention and post-intervention biodiversity units based on the habitats anticipated to be removed, altered, provided and/or enhanced to establish whether the difference results in a quantified net loss or gain in biodiversity. As set out in the Biodiversity Net Gain provisions in the Environment Act 2021, a 10% net gain will be required from all sites when the scheme comes into force in late 2023.

2.1.4 Pre-intervention biodiversity units were determined by multiplying the size of a certain habitat parcel/length by its 'quality', which encompasses its distinctiveness, condition, strategic location and connectivity. Each parcel/length of habitat on site was accounted for and as a result provides differing biodiversity units. The pre-intervention assessment determines the baseline biodiversity value of the development site and was quantified by adding the aforementioned biodiversity units together.

2.1.5 The pre-intervention biodiversity units were calculated by utilising all habitat data available at the time of writing this report, which predominantly comprised information from the Preliminary Ecological Appraisal report (Abricon, 2023) as well as historic satellite imagery of the site, in order to inform the biodiversity net gain assessment.

2.1.6 The post-intervention assessment calculates the number of biodiversity units anticipated to be achieved through development. Post-intervention biodiversity units were determined in the same manner as outlined above while also taking into account the difficulty and time it takes to achieve habitat establishment, in addition to factoring in the element of risk in attaining the desired habitat.

2.1.7 The site plan prepared by Marlborough College (Drawing number: CN/SP/02, June 2023) was utilised to calculate the post-development biodiversity units for the proposal.

2.2 Personnel

2.2.1 Jade Lemm BSc, PGDip, has been working in environmental consultancy since 2019. She is a qualifying member of CIEEM and holds a BSc and Postgraduate Diploma in related subjects. Jade's primary experience includes Preliminary Ecological Appraisal, Ecological Assessment, protected species surveys, project and schedule management and Ecological Clerk of Works.

2.2.2 Lainey Wilkinson BSc, MSc, has been working in environmental consultancy since 2020. She holds a BSc and MSc in related subjects. Her primary experience comprises Preliminary Roost Assessments and subsequent report writing, completion of bat emergence/re-entry and activity surveys and analysis of bat sound files.

2.2.3 Helen Saunders BSc (Hons), PGDip, MCIEEM has worked in ecological consultancy for over 10 years and is an experienced project manager and environmental survey coordinator, including for major infrastructure projects. She is a full member of CIEEM and skilled in undertaking ecological surveys and reporting including Preliminary Ecological Appraisal, protected species, Ecological Impact Assessment and Biodiversity Net Gain assessment (including river condition assessment). Helen has also provided advice on wildlife legislation and planning policy including commenting on ecological matters regarding planning applications on behalf of local planning authorities.

2.2.4 Jana Prapotnikova has worked in consultancy sector since 2006 with a focus on mammalian ecology, particularly bats and badgers. Jana runs Abricon's Ecology Department as well as being involved in project delivery. She has managed various ecological projects and has expertise in a range of ecological survey techniques including Phase 1 habitat assessments and a variety of protected species surveys (e.g. the aforementioned mammal species as well as reptiles and great crested newts). Jana also devises ecological mitigation schemes for a variety of protected species. She is well versed in producing preliminary ecological appraisals, BREEAM/CSH Ecology Assessments, protected species licences, Ecological Impact Assessments (EcIA), Construction Environmental Management plans, Biodiversity Enhancement Schemes and Ecological Design Strategies. Jana holds Natural England and Natural Resources Wales Class 2 licence for bats as well as Natural England Class and Natural Resources Wales Class 1 licence for great crested newts. She is also a Registered Consultant of the Bat Low Impact Class Licence (BLIC) and holds a CSCS card. Jana is a full member of Chartered Institute of Ecology and Environmental Management (MCIEEM).

2.3 Limitations

Biodiversity Metric Constraints

2.3.1 During the Biodiversity Metric calculations, no constraints or limitations occurred.

3 Biodiversity Metric Results

3.1 Pre-Intervention Biodiversity Units

3.1.1 The area-based habitats identified during the Preliminary Ecological Assessment visit were noted. These habitats were labelled as the following:

UKHab Classification	Condition Assessment
Artificial unvegetated, unsealed surface (the cricket pitch areas made up of permeable geotextile)	N/A
Modified Grassland	Poor – from the site visit and using the Metric condition assessment tool (Appendix D for Metric results), the grassland contains a relatively typical selection of grasses and vascular species. Sward height was maintained regularly below ~5cm.
Modified Grassland (Western Boundary)	Fairly Poor – from the site visit and using the Metric condition assessment tool (Appendix D for Metric results), the grassland contains a relatively typical selection of grasses and vascular species. Sward height was above 5cm with no regular maintenance. The longer sward height marginally improves the biodiversity of the western boundary grassland compared to the remainder of the site. All retained.
Individual trees – Urban Trees	4 x small (all moderate condition) and 1 x medium in moderate condition – all trees retained. Arboricultural assessment for this site (Certhia, April 2023) aided the condition assessment of the trees.

3.1.2 The baseline biodiversity units were calculated for area habitats, as displayed in the worksheet titled ‘A-1 Site Habitat Baseline’ within the metric spreadsheet.

3.1.3 A portion of the modified grassland habitat in the above table is anticipated to be lost through development due to creation of new cricket pitch areas.

3.2 Post-Intervention Biodiversity Units

3.2.1 The area-based habitats identified within the development plan were: modified grassland, unsealed unvegetated cricket pitches and mixed scrub. The post development area habitats were characterised as the following:

UKHab Classification	Condition Assessment	Notes
Developed land; un-sealed surface	N/A	Cricket practise nets
Modified grassland	Poor	Areas of grassland being retained although part lost due to pitch creation
Modified grassland (western boundary)	Fairly Poor	All retained
Mixed Scrub	Good	Area of mixed scrub to be created along the northern boundary
Urban tree	Good	4 x new small urban trees planted

3.2.2 The baseline biodiversity units were calculated for the above newly created area habitats, as displayed in the worksheet titled 'A-2 Site Habitat Creation' within the metric spreadsheet.

3.2.3 All newly proposed or retained/enhanced habitats are displayed in the Proposed Habitats Plan in Figure 2 below.



Figure 2 - Proposed Habitats Plan

4 Biodiversity Net Gain Results

4.1.1 Following the calculation of the pre-intervention and post-intervention biodiversity units, a net gain of +0.14 biodiversity units was returned for area-based habitats. These results are summarised in the below table:

Table 1 – Biodiversity Net Gain Results

On-site baseline	Habitat units	1.07	
	Hedgerow units	0.00	
	Watercourse units	0.00	
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	1.22	
	Hedgerow units	0.00	
	Watercourse units	0.00	
On-site net change (units & percentage)	Habitat units	0.14	13.36%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	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	0.00%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.14	
	Hedgerow units	0.00	
	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	0.14	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	13.36%	
	Hedgerow units	0.00%	
	Watercourse units	0.00%	
Trading rules satisfied?	Yes ✓		

4.1.2 As outlined in the above table, assuming that the habitats targeted for creation/enhancement will be achieved, the proposed development is anticipated to result in a net gain in area-based habitat units (+13.36%). Also trading rules would be satisfied.

5 Enhancements

5.1.1 In addition to the metric results above, the proposed development will also incorporate several ecological enhancement features within the fabric of the proposed units in order to enhance the post-development site's overall value for biodiversity. These will comprise the following:

- 2 x bird boxes (Vivara Pro Seville 32mm WoodStone Nest Box or similar) are to be installed on two semi-mature or mature trees (north or east facing) on the site.

6 Conclusions

6.1.1 The above assessment has concluded that the proposed development is anticipated to deliver a net gain in area units.

6.1.2 The net gain for area-based habitats can potentially be achieved through the creation of 'wildlife friendly areas' comprising good condition hawthorn scrub to be planted along the northern boundary as well as tree planting around the site. So, with the current site plans the trading rules are satisfied.

6.1.3 A Landscape Environmental Management Plan (LEMP) will need to be developed for the site, which will provide prescriptions for habitat creation and management to ensure that the targeted habitats and their respective conditions can be delivered as part of the proposed development once it is known how a biodiversity net gain can be delivered on-site for both area and linear habitats on-site.

7 References

Abricon (2023). Preliminary Ecological Appraisal of Marlborough College, Barton Dene Cricket Nets.

Biodiversity and Planning: guidance for new developments Supplementary Planning Document [DRAFT] (July 22). Available at: https://consultations.southglos.gov.uk/BioSPD/consultationHome [Accessed: March 28, 2023].

Butcher, B., Carey, P.,Edmonds, R., Norton, L. and Treweek, J., (2020). The UK Habitat Classification User Manual Version 1.1 at https://ukhab.org/

Environment Act 2021, Part 6 Nature and Biodiversity. Available at: https://www.legislation.gov.uk/ukpga/2021/30/part/6/enacted (Accessed: 31 August 2023).

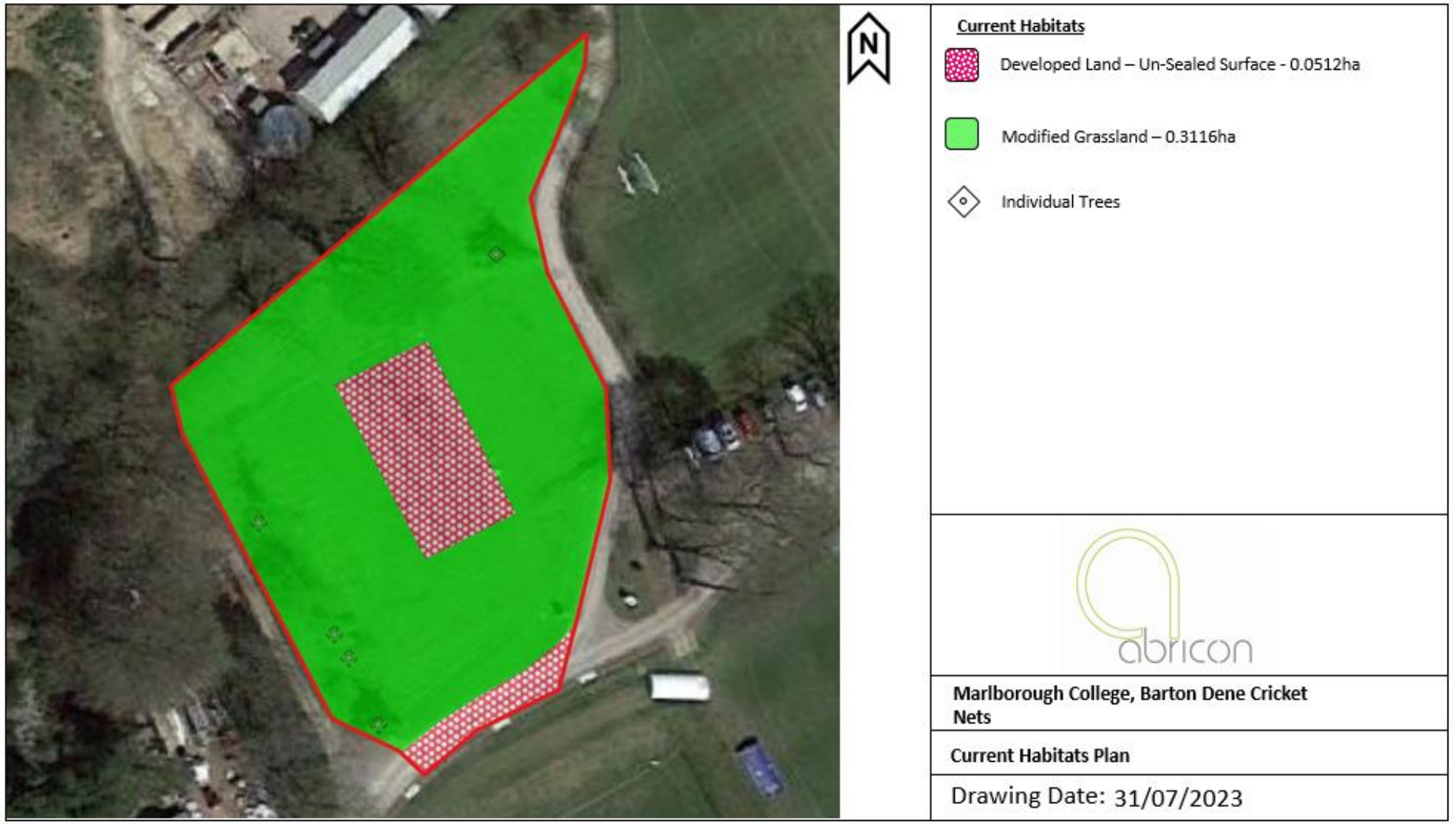
Ian Crosher, Susannah Gold, Max Heaver, Matt Heydon, Lauren Moore, Stephen Panks, Sarah Scott, Dave Stone & Nick White (2019) *The Biodiversity Metric 4.0: auditing and accounting for biodiversity value*. User guide (Beta Version, July 2019). Natural England

Ministry of Housing, Communities & Local Government (2019) National Planning Policy Framework [online]. Available at: www.gov.uk/government/publications [Accessed 25 November 2020].

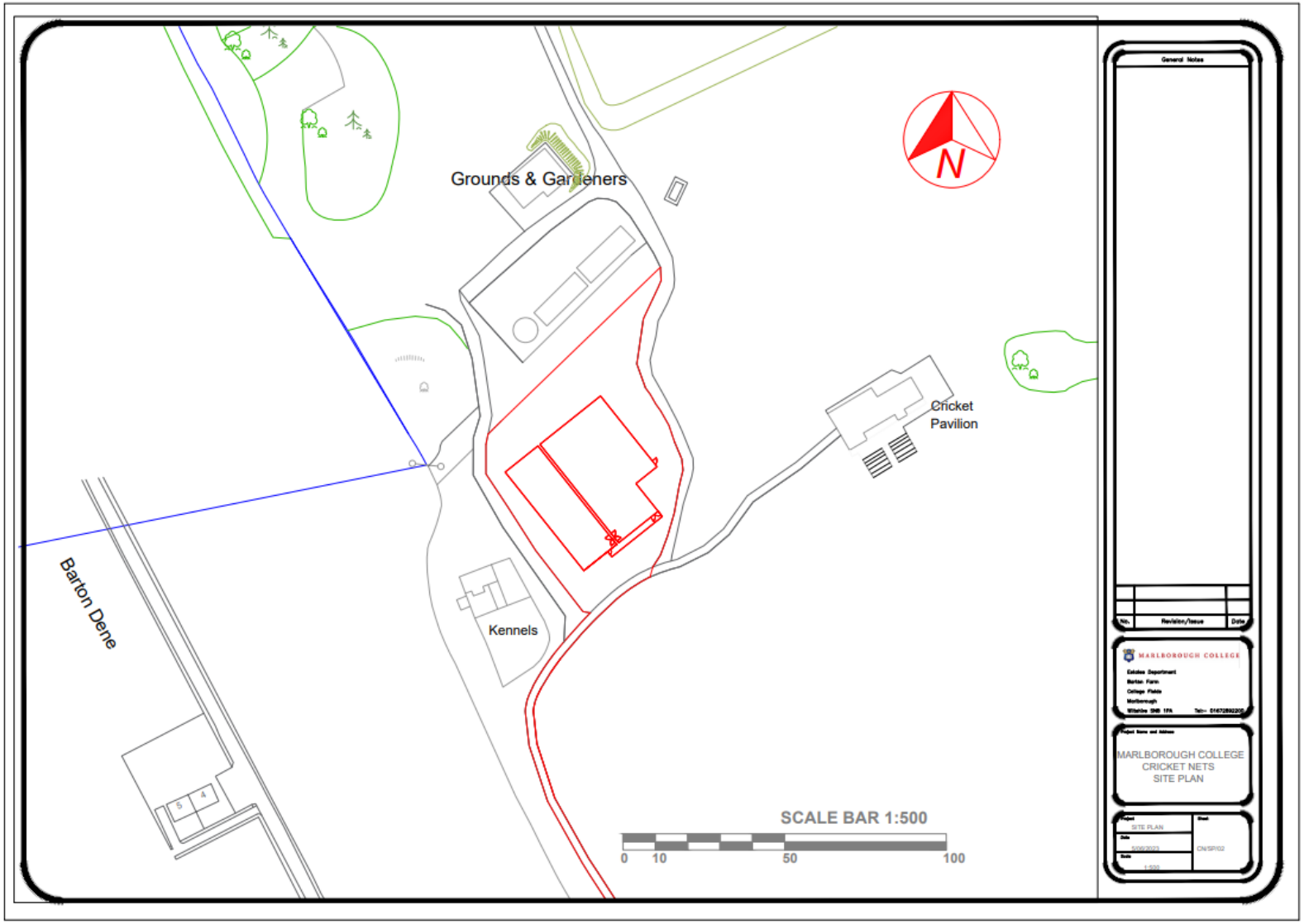
Natural England (2022). Biodiversity metric 4.0: Auditing and accounting for biodiversity calculation tool

Natural England (2021). Guidance: Biodiversity metric: calculate the biodiversity net gain of a project or development

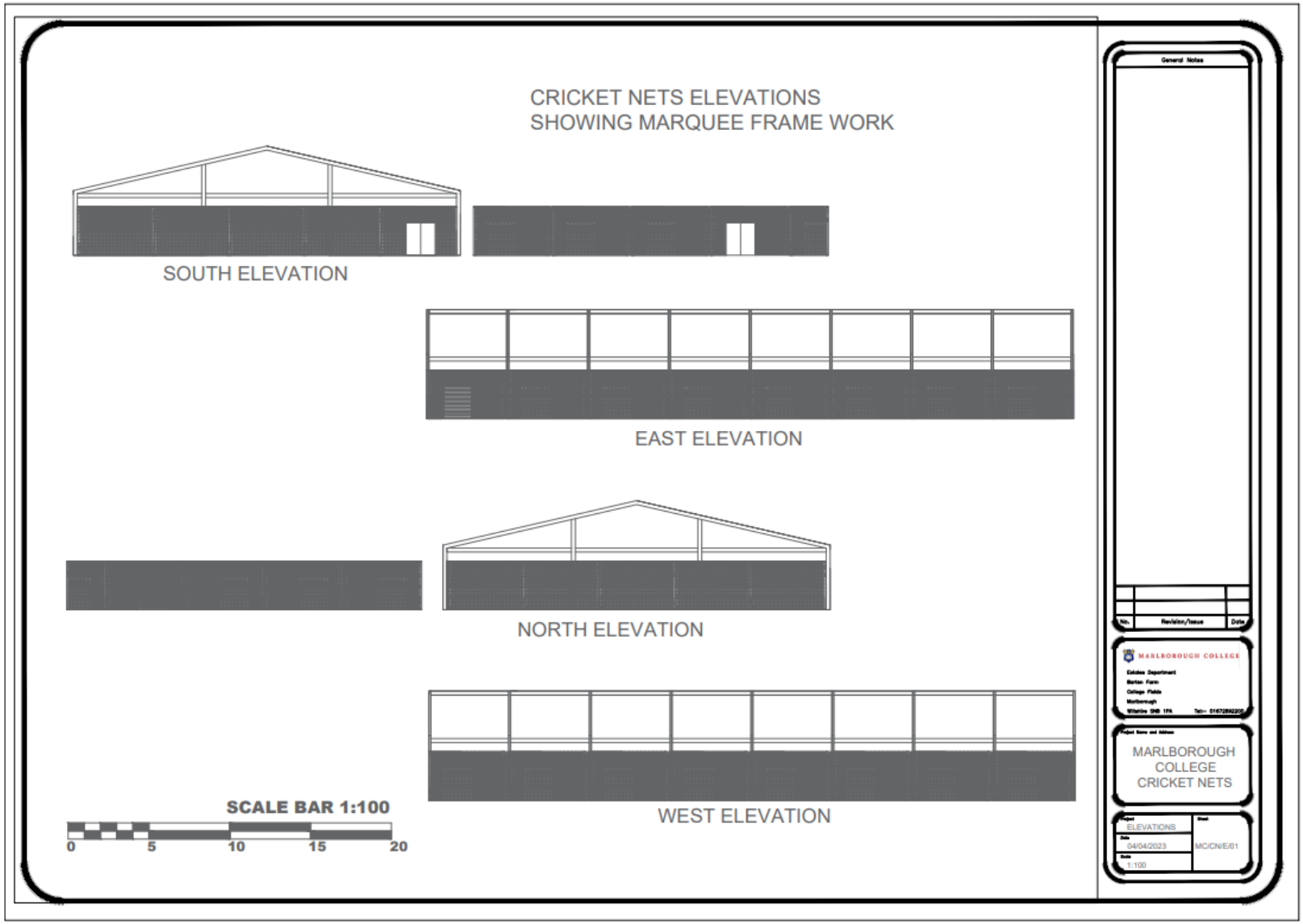
Appendix A – Baseline Habitats



Appendix B – Proposed Site Plan



Proposed Site Plan – Marlborough College (Drawing number: CN/SP/02, June 2023).



Proposed Site Plan – Marlborough College (Drawing number: MC/CN/E/01, April 2023).

Appendix C – Site Photographs

Photograph 1: Cricket nets and modified grassland including northern and eastern boundaries



Photograph 2: Individual trees along the western boundary



Appendix D – Condition Assessment Metric Results

Condition Assessment for the Western Boundary

Condition Sheet: GRASSLAND Habitat Type (low distinctiveness)			
UK Habitat Classification (UKHab) Habitat Type(s)			
Grassland - Modified grassland			
Site name and location	Marlborough College, Barton Dene Cricket Nets (Western boundary)	**On-site or off-site**	On-site
Limitations (if applicable)	N/A	**Survey reference (if relating to a wider survey)**	N/A
Grid reference	SU 18213 69205	**Habitat parcel reference**	
Habitat Description			
ukhab - UK Habitat Classification			

	Condition Assessment Criteria	Criterion passed (Yes or No)	Notes (such as justification
A	There are 6-8 vascular plant species per m^2 present, including at least 2 forbs (this may include those listed in Footnote 1). **Note - this criterion is essential for achieving Moderate or Good condition.** Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m^2 (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.	N	Rye Grass, Herb Robert, Dead Nettle, Birds Foot Trefoil, Common Daisy, and Lesser Celendine identified over whole western boundary
B	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 vertebrates and invertebrates to live and breed.	N	Sward height was more than 5cm throughout whole the area.
C	Some scattered scrub (including bramble *Rubus fruticosus* agg.) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of scrub with continuous (more than 30%) cover should be classified as the relevant scrub habitat type.	Y	
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	N	
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens)[2].	Y	
F	Cover of bracken *Pteridium aquilinum* is less than 20%.	Y	
G	There is an absence of invasive non-native plant species[3] (as listed on Schedule 9 of WCA[4]).	Y	
	Essential criterion achieved (Yes or No)		
	Number of criteria passed		5

Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved x/
Passes 6 or 7 criteria including passing essential criterion A	Good (3)	
Passes 4 or 5 criteria including passing essential criterion A	Moderate (2)	
Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A)	Poor (1)	x (Fairly Poor)

Condition Assessment for the site (Excluding the western boundary)

Condition Sheet: GRASSLAND Habitat Type (low distinctiveness)			
UK Habitat Classification (UKHab) Habitat Type(s)			
Grassland - Modified grassland			
Site name and location	Marlborough College, Barton Dene Cricket Nets (Excluding western boundary)	**On-site or off-site**	On-site
Limitations (if applicable)	N/A	**Survey reference (if relating to a wider survey)**	N/A
Grid reference	SU 18250 69227	**Habitat parcel reference**	
Habitat Description			
ukhab - UK Habitat Classification			

	Condition Assessment Criteria	Criterion passed (Yes or No)	Notes (such as justification
A	There are 6-8 vascular plant species per m^2 present, including at least 2 forbs (this may include those listed in Footnote 1). **Note - this criterion is essential for achieving Moderate or Good condition.** Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m^2 (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.	N	Rye Grass, Herb Robert, Dead Nettle, Birds Foot Trefoil, Common Daisy, and Lesser Celendine identified over whole site (Only 1-3 species within a 1m2).
B	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 vertebrates and invertebrates to live and breed.	N	Sward height was less than 5cm throughout whole the area.
C	Some scattered scrub (including bramble *Rubus fruticosus* agg.) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of scrub with continuous (more than 30%) cover should be classified as the relevant scrub habitat type.	Y	
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	N	dry patches evident in many palces - overuse
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens)[2].	Y	
F	Cover of bracken *Pteridium aquilinum* is less than 20%.	Y	
G	There is an absence of invasive non-native plant species[3] (as listed on Schedule 9 of WCA[4]).	Y	
	Essential criterion achieved (Yes or No)		
	Number of criteria passed		4

Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved x/
Passes 6 or 7 criteria including passing essential criterion A	Good (3)	
Passes 4 or 5 criteria including passing essential criterion A	Moderate (2)	
Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A)	Poor (1)	x (Poor)

Condition Assessment for T1, T8, T9, T10 & T11

Site name and location	Marlborough College, Barton Dene cricket pitch	**On-site or off-site**	**On-site**								
		Survey reference (if relating to a wider survey)									
Limitations (if applicable)		**Habitat parcel reference**									
		T1	**T8**	**T9**	**T10**	**T11**					
		Grid reference									
						Larix decidu					
Condition Assessment Criteria		**Criterion passed (Yes or No)**									**Notes (such as justification**
A	The tree is a native species (or at least 70% within the block are native species).	n	Y	n	n	n					
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).	y	y	y	y	y					
C	The tree is mature (or more than 50% within the block are mature).	n	n	n	n	n					
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.	y	y	y	y	y					
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	n	n	n	n	n					
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	y	y	y	y	y					
	Number of criteria passed	**3**	**4**	**3**	**3**	**3**					
Condition Assessment Result (out of 6 criteria)	**Condition Assessment Score**	**Score Achieved x/✓**									
Passes 5 or 6 criteria	Good (3)										
Passes 3 or 4 criteria	Moderate (2)	x	x	x	x	x					
Passes 2 or fewer criteria	Poor (1)										