

DATE:	16 July 2025	CONFIDENTIALITY:	Confidential
SUBJECT:	Biodiversity Net Gain Assessment -SuDS Pond		
PROJECT:	Warminster Barracks	AUTHOR:	Gary Lindsay
CHECKED:	Marianne Curtis	APPROVED:	Huw Bramhall

Digitally signed by Marianne Curtis
DN: cn=Marianne Curtis, o=WSP,
email=marianne.curtis@wsp.com

Digitally signed by Gary Lindsay
Reason: I am the author of this document
Date: 2025.07.17 11:48:36 +0100

Digitally signed by Huw Bramhall
DN: cn=Huw Bramhall, o=WSP,
ou=Ecology,
email=huw.bramhall@wsp.com
Date: 2025.07.18 13:15:52 +0100

INTRODUCTION

Project Background

WSP UK Limited (hereafter referred to as WSP) was commissioned by Aspire Defence to undertake a Biodiversity Net Gain (BNG) assessment of the development of a Sustainable Drainage System (SuDS) at Warminster Barracks, Wiltshire, (referred to as the “Proposed Development”).

The Proposed Development is located at ST 89151 44695 within the Warminster Barracks site. It will comprise of a SuDS pond which is functionally linked to a nearby newbuild. The Proposed Development’s boundary is shown in **Figure 1, Appendix A** and is hereafter referred to as “the Site”. The Site is approximately 0.2761ha based on its design on 15th April 2025.

The purpose of this document is to inform a planning application for the proposed SuDS pond, and evidence that the Proposed Development achieves a net gain target of 10% in line with the mandatory requirement for all planning applications and with MoD Policy¹.

Biodiversity Net Gain

BNG is an approach to development which aims to leave the natural environment in a measurably better state than beforehand. The process follows the mitigation hierarchy, which sets out that everything possible must be done to firstly avoid, secondly minimise and thirdly restore / rehabilitate losses of biodiversity on site. Only as a last resort, residual losses are compensated for using offsite habitat enhancement or creation. To undertake the assessment the Statutory Biodiversity Metric Calculation Tool 1.0.3² (herein referred to as “the Metric”) is used to quantify the biodiversity losses and gains resulting from development and a qualitative assessment is undertaken to review adherence to BNG Good Practice Principles (2016)³ (hereafter referred as “the Principles”).

Purpose of the Report

This report uses the Metric and the Principles to produce an assessment report that:

1. Establishes the total number of baseline Area Habitat Units (AHU) and Hedgerow Linear Units (LU) within the Site (the baseline);
2. Establishes the total number of AHU and HU which will be retained, enhanced, and created under the current design of the Proposed Development’s landscape mitigation plan;
3. Determines whether the Proposed Development will result in a quantitative net loss, no net loss, or a net gain for biodiversity on Site; and,
4. Determines whether the Proposed Development achieves a scheme-wide net gain for biodiversity by evidencing compliance with the BNG good practice principles³.

¹ Defence Instructions and Notices (DIN) document reference 2024DIN04-058- Biodiversity Net Gain (BNG) for England (March 2024) Policy Update

² Available at: Statutory biodiversity metric tools and guides - GOV.UK

³ CIEEM, CIRIA & IEMA (2016). Biodiversity Net Gain: Good practice principles for development. Available: [Biodiversity Net Gain: Good Practice Principles for Development, A Practical Guide. | CIEEM \[accessed 23/02/2022\]](https://www.iema.net/assets/newbuild/documents/IEMA%20Biodiversity%20Net%20Gain.pdf)
<https://www.iema.net/assets/newbuild/documents/IEMA%20Biodiversity%20Net%20Gain.pdf>

It is important to recognise that the quantification of Biodiversity Units (BU) is one of several factors to be considered when assessing the impact of the Proposed Development on biodiversity. Please note that this BNG assessment report does not cover potential impacts of the Proposed Development on protected species, designated sites, or habitats. These are covered within the relevant Preliminary Ecological Appraisal (PEA) report⁴.

The Environment Act (2021) introduced a requirement in that the majority of planning applications for development from the 12th February 2024 are required to meet the objective that the 'biodiversity value attributable to the development exceeds the pre-development biodiversity value of the on-site habitat by at least 10%'. National and Local Policy Planning Obligations further promote use of the BNG process. The Proposed Development has a net gain target of 10% In line with this.

⁴ WSP (2025). PAC-L1-BB0621-XX-RP-ES-000006 Aspire Warminster – Paired Mess and associated SuDS Pond PEA Report

METHODOLOGY

This BNG assessment uses the following industry recognised good practice guidance:

- CIEEM, IEMA & CIRIA (2016) Biodiversity Net Gain: Good Practice Principles for Development³
- The 2024 Defra Statutory Biodiversity Metric Calculation Tool 1.0.3² (herein referred to as the Metric), following the methodology set out within The Statutory Biodiversity Metric User Guide (July 2024)
- British Standard 8683 Process for designing and implementing Biodiversity Net Gain – Specification (2021)⁵
- CIEEM (2021) Biodiversity Net Gain Reporting and Audit Templates⁶

With respect to strategic significance the following approach summarised within **Table 2.1** has been taken to identify the relevant category.

Table 2.1 Method for assigning strategic significance

Strategic Significance	Method
Within an area formally identified in local strategy	Habitats are assigned this category where the following criteria are met: • It is located within an area identified as a statutory designated site⁷ or non-statutory designated site⁸ or within a relevant local strategy; and • Habitats are specified in relation to the identified area; <i>or</i> • Where specific details on relevant habitats to the identified site are unknown, all habitats which sit within the formally identified area are assigned to this level.
Location ecologically desirable but not in location strategy	Professional judgement will be applied to determine if the location is deemed ecological desirable for a particular habitat type. This decision will take account of the proximity of formally identified areas and ecological connectivity (i.e., if the habitat forms a strategic corridor) to the Site.
Area not in a local strategy	Any habitats which do not fall into either of the above categories will be assigned this level of strategic significance.

The Metric has been used to calculate the baseline biodiversity value; a post-development biodiversity value; and a net change in biodiversity value associated with the Proposed Development.

A qualitative assessment has also been undertaken, against the Biodiversity Net Gain: Good Practice Principles³.

⁵ British Standards Institute, 2021. BS 8683:2021 *Process for designing and implementing Biodiversity Net Gain. Specification*. UK: BSI [accessed 23/01/2023]

⁶ <https://cieem.net/wp-content/uploads/2021/07/CIEEM-BNG-Report-and-Audit-templates2.pdf> [accessed 23/01/2023]

⁷ To include Special Protection Areas (SPAs), Special Areas of Conservation (SACs), Ramsar, Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNRS)

⁸ To include Local Nature Reserves (LNRs) and County Wildlife Sites (CWS)

Data Sources

The following data sources have been used to complete the BNG assessment: Publicly available Open-Source Natural England datasets for Habitats of Principal Importance (HPI), ancient woodland (classed as irreplaceable habitat), and statutory designated sites for nature conservation⁹. Full details of the desk study method are provided within the PEA⁴. The results of the desk study have been used to inform the strategic significance value in line with the methodology detailed within the Metric.

A UK Habitat Classification (UKHab) survey was undertaken in August 2024 by an experienced WSP ecologist following best practice guidelines¹⁰ which established a baseline habitat database, detailing the condition and type of habitat parcels on Site, their area (ha) and their geographic distribution in line with the Metric. Full details of the survey method are provided within the PEA and the baseline habitats are shown on **Figure 2** within **Appendix A**.

All areas / lengths of habitats have been measured using ArcGIS ArcMap 10.8.1 with reference to Ordnance Survey World Imagery base map.

Limitations and Assumptions

- For the purpose of this assessment, it has been assumed that all baseline habitats outside of Root Protection Areas (RPA) will be lost during the course of the construction phase. This is because impacts are predicted on grassland from the access of heavy plant during construction, excavation and levelling works and the installation of below-ground utilities.
- The RPA for three trees falls inside the western boundary of the Site. These have not been included in the baseline biodiversity for the site as the trees are outside the Site boundary and they are not impacted either directly or indirectly by the Proposed development. The existing habitat at those locations is being retained with no change to condition planned (currently poor quality g4 modified grassland) and no digging or heavy vehicle movements to take place.
- It has been assumed that habitat creation will be complete within 12 months of the commencement of works onsite. If this is not possible, calculations will need to be reassessed, and additional biodiversity units may be required to compensate for this time delay.
- As the Wiltshire Local Nature Recovery Strategy (LNRS) is still in its first draft phase and currently being developed, it was not possible to access this information at the time of writing. In place of this, professional judgement has been used to determine the Strategic Significance of habitats, given the context of the site.

RESULTS

Strategic significance

The Wiltshire LNRS is currently still being developed and could not be accessed at the time of writing this report. The wider area surrounding the Site consist of developed urban and residential land. No obvious connectivity is present to areas of higher value for biodiversity such as semi natural habitats to the north and south of the barracks site.

⁹ Natural England (2021) Priority Habitat Inventory (England) Opensource dataset

¹⁰ UKHab Ltd (2023) UK Habitat Classification Version 2.0.

Therefore, all habitats have been assigned a strategic significance of 'Area/compensation not in local strategy/ no local strategy' (i.e. they do not have any strategic significance).

Baseline biodiversity

The baseline habitats found on site are shown on **Figures 2, Appendix A**.

No statutory sites designated for nature conservation, irreplaceable habitats, or HPis were present within the Site. Habitats within the Site consisted of modified grassland and developed land/sealed surface.

Tab 'A-1 On-Site Habitat Baseline' within the accompanying Metric¹¹ provides details on the habitat baseline and should be referred to for full details on the habitats present on Site. Additional details can be found within the PEAs⁴.

There are no impacts to hedgerows or watercourses so these types of biodiversity units will not be mentioned further in this report.

Post development biodiversity

Planned post development habitats are shown on **Figure 3, Appendix A**. The 'A-2 On-Site Habitat Creation' and 'A-3 On-Site Habitat Enhancement' tabs within the accompanying Metric¹¹ provide details on the retained, enhanced and created habitats.

The area contained within the footprint of the SuDS pond and the surround grassland and access paths will be maintained as 'poor' condition modified grassland with an intensive mowing regime. It will be managed for amenity purposes with an intensive mowing regime to ensure easy access and maintenance.

An area of g3c 'other neutral grassland' will be created in the northeast of the site, adjacent to the SuDS pond. This will be created using a seed mix containing a blend of twenty low growing wildflower species, including forget me not *Myosotis arvensis*, yellow rattle *Rhinanthus minor*, cowslip *Primula veris*, bladder campion *Silene vulgaris* and ragged robin *Lychnis flos-cuculi*. This habitat is expected to achieve 'moderate' condition under the BNG Metric.

One tree was identified within the site boundary, a young beech *Fagus sylvatica* tree in moderate condition (passes condition assessment criteria A (native tree species), B (individual trees automatically pass) and F (more than 20% of tree canopy is oversailing vegetation beneath), this will be retained with no excavation or impacts within the RPA.

Summary of overall biodiversity change

The Metric results is shown on **Figure 3.1 – 3.2**. The Figures summarises the changes in biodiversity units (BU) generated for area-based habitats present onsite during the baseline and post-development mapping, the change in units for all area-based habitats, along with details on the overall quantitative outcome.

¹¹ WSP (2025) The_Statutory_Biodiversity_Metric_Calculation_Tool_-_Warminster Barracks

Figure 3.1 Headline results

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	<i>Habitat units</i>	0.06
	<i>Hedgerow units</i>	0.00
	<i>Watercourse units</i>	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	<i>Habitat units</i>	10.30%
	<i>Hedgerow units</i>	0.00%
	<i>Watercourse units</i>	0.00%
Trading rules satisfied?	Yes ✓	

Figure 3.2 Detailed results

Summary Figures			
Net project biodiversity units (Including all on-site & off-site habitat retention / creation)	Habitat units	0.06	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Total project biodiversity % change (Including all on-site & off-site habitat creation + retained habitats)	Habitat units	10.30%	
	Hedgerow units	0.00%	
	Watercourse units	0.00%	
Combined habitat retention and enhancement			
	Habitats	Hedgerows	Watercourses
Total on-site and off-site baseline area / length	0.28	0.00	0.00
Total on-site and off-site baseline units	0.56	0.00	0.00
Total on-site and off-site baseline area / length retained	0.00	0.00	0.00
Total on-site and off-site baseline units retained	0.01	0.00	0.00
Total on-site and off-site area / length proposed for enhancement	0.00	0.00	0.00
Total on-site and off-site baseline units proposed for enhancement	0.00	0.00	0.00
Total on-site and off-site baseline area / length lost	0.27	0.00	0.00
Total on-site and off-site baseline units lost	0.54	0.00	0.00

The Proposed Development will result in an estimated **10.30% net gain** in AHUs. The Proposed Development meets the habitat trading rules within the Metric (refer to the Trading Summary tab within the Metric), meaning the proposed habitats compensate for habitat losses in the same broad habitat group, ensuring the best outcomes for local biodiversity.

In conclusion, the Proposed Development as assessed **achieves a quantitative biodiversity net gain**.

Qualitative BNG assessment

Table 3.1 sets out the qualitative assessment against the best practice BNG principles and provides a review to determine if wider BNG obligations (i.e. in addition to the measurable net gain) have been met.

Table 3.1 Evidence of project compliance with BNG good practice principles

Principle	Description	Evidence	Current Outcome
1. Apply the mitigation hierarchy	Do everything possible to first avoid and then minimise impacts on biodiversity. Only as a last resort, and in agreement with external decision-makers where possible, compensate for losses that cannot be avoided. If compensating for losses within the development footprint is not possible or does not generate the most benefits for nature conservation, then offset biodiversity losses by gains elsewhere.	The design for the Proposed Development compensates for negative impacts by creating new habitats that are more biologically valuable on Site. Where habitats will be impacted by the construction of the Proposed Development, the habitats will be replaced like-for-like or better. Biodiversity losses that could not be avoided on-site are compensated for within the Site boundary.	Achieved
2. Avoid losing biodiversity that cannot be offset by gains elsewhere	Avoid impacts on irreplaceable biodiversity – these impacts cannot be offset to achieve No Net Loss or Net Gain.	No irreplaceable habitats or habitats within statutory designated sites for nature conservation will be impacted by the Proposed Development. Habitat types within the Site are common and widespread habitats that can be offset. Net gains are sought and achieved for these habitats.	Achieved
3. Be inclusive and equitable	Engage stakeholders early, and involve them in designing, implementing, monitoring, and evaluating the approach to Net Gain. Achieve Net Gain in partnership with stakeholders where possible and share the benefits fairly among stakeholders.	The Proposed Development has undergone iterative changes with input from external stakeholders to ensure the best outcomes for biodiversity and ensure that the target condition for habitat types is achievable.	Achieved
4. Address risks	Mitigate difficulty, uncertainty, and other risks to achieving Net Gain. Apply well-accepted ways to add contingency when calculating biodiversity losses and gains in order to account for any remaining risks, as well as to compensate for the time between the losses occurring and the gains being fully realised.	Within the Metric, risk multipliers are applied with respect to time to target condition to account for the time required for habitats to reach any given condition, along with risk multipliers associated with the difficulty to create any given habitat. No high difficulty habitats were targeted for creation.	Achieved

Principle	Description	Evidence	Current Outcome
5. Make a measurable Net Gain contribution	Achieve a measurable, overall gain for biodiversity and the services ecosystems provide while directly contributing towards nature conservation priorities.	The BNG assessment determined a quantitative Net Gain in Habitat Units (10.30%).	Achieved
6. Achieve the best outcomes for biodiversity	Achieve the best outcomes for biodiversity by using robust, credible evidence and local knowledge to make clearly justified choices when: Delivering compensation that is ecologically equivalent in type, amount and condition, and that accounts for the location and timing of biodiversity losses; Compensating for losses of one type of biodiversity by providing a different type that delivers greater benefits for nature conservation; Achieving Net Gain locally to the development while also contributing towards nature conservation priorities at local, regional and national levels; Enhancing existing or creating new habitat; Enhancing ecological connectivity by creating more bigger, better, and joined areas for biodiversity.	The BNG assessment followed a rigorous method and quality assurance process, based on best practice guidance. This ensured that an ecologically sound assessment was made, and the best outcomes for biodiversity can be achieved. The habitats proposed post-development achieve the “like-for-like or better” approach, where the proposed habitats compensate for habitat losses in the same broad habitat group, but with a higher distinctiveness and/or condition score. This ensures the best outcome for local biodiversity which previously relied on the same broad habitat types within the Site, and ensures the Proposed Development meets the habitat trading rules within the Metric (refer to the Trading Summary tab within the Metric). Ecologist have worked closely with the landscape design team throughout the evolving design process resulting in the best outcomes for biodiversity as the BNG assessment directly fed into the landscaping plan implemented in this BNG assessment.	Achieved
7. Be additional	Achieve nature conservation outcomes that demonstrably exceed existing obligations (i.e. do not deliver something that would occur anyway).	The nature conservation outcomes within the policy have been met and exceeded. Area- based	Achieved

Principle	Description	Evidence	Current Outcome
		habitats are being mitigated for like-for-like and with an increased target condition. All habitat proposals work towards the betterment of the BNG position.	
8. Create a Net Gain legacy	Ensure Net Gain generates long-term benefits by: Engaging stakeholders and jointly agreeing practical solutions that secure Net Gain in perpetuity; Planning for adaptive management and securing dedicated funding for long-term management; Designing Net Gain for biodiversity to be resilient to external factors, especially climate change; Mitigating risks from other land uses; Avoiding displacing harmful activities from one location to another; Supporting local-level management of Net Gain activities.	The residual net gain requirements would be delivered and managed, ensuring long term gains for biodiversity for at least 30 years.	Achieved
9. Optimise sustainability	Prioritise Biodiversity Net Gain and, where possible, optimise the wider environmental benefits for a sustainable society and economy.	This BNG Assessment is being used to inform the Proposed Development's mitigation requirements to ensure wider environmental benefits as an outcome of the Proposed Development.	Achieved
10. Be transparent	Communicate all Net Gain activities in a transparent and timely manner, sharing the learning with all stakeholders.	Net gain reports will be freely available to the relevant stakeholders via the LPA planning portal.	Achieved

CONCLUSION

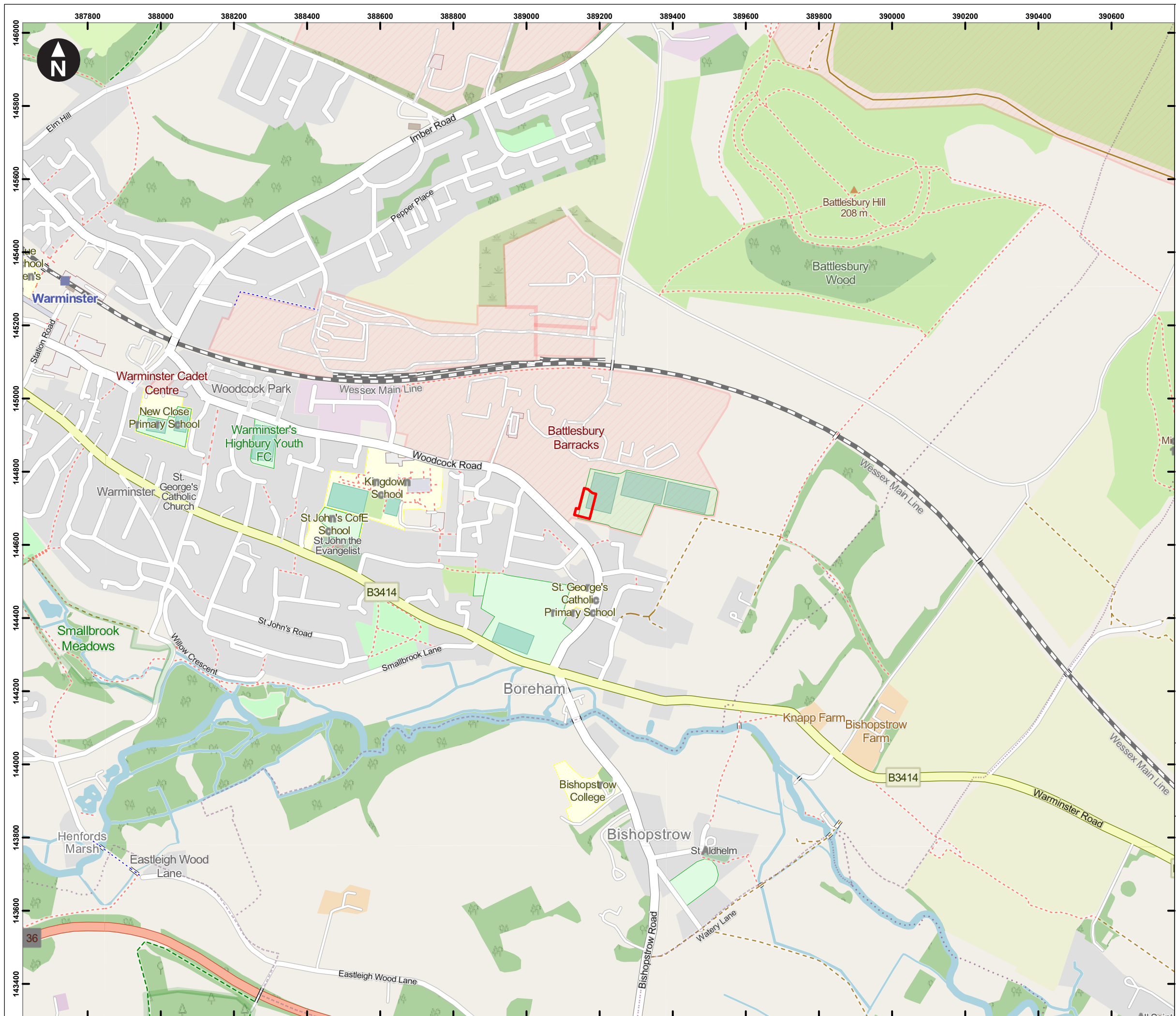
In conclusion the BNG assessment recorded a Site biodiversity baseline of 0.57 BU. Considering the proposed landscaping it is predicted that the Proposed Development will result in an estimated **10.30% net gain** in AHUs with 0.61 BU present post-development.

The qualitative assessment concluded that the Proposed Development is currently meets all of the ten best practice BNG Principles.

In terms of assessment, it is therefore predicted that the Proposed Development will **achieve a quantitative and qualitative biodiversity net gain onsite.**

APPENDIX A - FIGURES

C:\Users\UKBLB775\WSP_036570120907 - Aspire Defence - Documents\2024\UK251622 - 2 Yorks Move - Warminster\03_WIP\03 Drawings\GIS\UK0038444.1622-WSPE-FG-OE-00016_P01.1.aprx Originator: UKBLB775



Key

Site boundary

Inset scale - 1:2,000,000

0 100 200 300 400 500 m

Scale at A3: 1:10,000

OS Open Background: Contains OS data © Crown Copyright and database right 2020
OpenStreetMap: Map data © OpenStreetMap contributors, Microsoft, Facebook, Inc. and its affiliates, Esri Community Maps contributors, Map layer by Esri

Client

Defence
Infrastructure
Organisation

Warminster Future Soldier
Biodiversity Net Gain Assessment - SuDS

Figure 1
Site location

April 2025



Key

- Site boundary
- UK habitats
 - g4 - modified grassland
 - Tree canopy retained
 - Root protection area

Inset scale - 1:2,000,000

Scale at A3: 1:500

World Imagery: Maxar, Microsoft
OS Open Background: Contains OS data © Crown
Copyright and database right 2020

Client

Warminster Future Soldier
Biodiversity Net Gain Assessment - SuDS

Figure 2
UK Habitats

April 2025

C:\Users\UKBLB775\WSP_0365170120907 - Aspire Defence - Documents\2024\UK251622 - 2 Yorks Move - Warminster\03_WIP\03 Drawings\GIS\UK0038444.1622-WSPE-FG-OE-00018_P01.1.aprx Originator: UKBLB775

