

British Museum ARC: Secondary Access Biodiversity Statement

Prepared on behalf of

British Museum

Final Report

20 December 2024

32/58-2B

British Museum ARC: Secondary Access

Biodiversity Statement

Report Release Sheet

Draft/Final:	Final Report
Issue Number:	32/58-2B
Date:	20 December 2024
Client:	British Museum The Octagon, 2 nd Floor Pynes Hill Court Rydon Lane Exeter EX2 5AZ
Main Author(s):	Anna Showan BSc (Hons) MSc ACIEEM
Contributors/Surveyors:	Jodie Southgate BA (Hons) MSc MCIEEM James Mitchell BSc (Hons) Alice Holley BSc (Hons) MSc
Report Prepared for Issue by:	 Anna Showan BSc (Hons) MSc ACIEEM
Report Approved for Issue by:	 Ben Kite BSc (Hons) MSc CEcol MCIEEM PIEMA



British Museum ARC: Secondary Access

Biodiversity Statement

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Biodiversity Statement

BIODIVERSITY GAIN VALIDATION STATEMENT

This Statement provides the minimum information required to validate the planning application for the Proposed Scheme, as set out in Article 7 of the Town and Country Planning (Development Management Procedure) (England) Order 2015 (as amended by The Biodiversity Gain (Town and Country Planning) (Modifications and Amendments) (England) Regulations 2024).

EPR hereby confirms that the Applicant believes that planning permission, if granted, would be subject to the biodiversity gain condition.

The on-site pre-development biodiversity value is taken to be the date that the Application is submitted. No activities resulting in a permanent loss of on-site biodiversity value (degradation) have taken place between 30 January 2020 and this date.

A completed Statutory Biodiversity Metric Calculation Tool (as published on 23 July 2024) has been submitted with the Application as part of the Information for Biodiversity Net Gain Pack. This shows the calculations of the pre-development biodiversity value of the onsite habitat on the date of application. The baseline on-site biodiversity value is calculated as follows:

- 0.85 Area Habitat units;
- 0 Hedgerow units; and
- 0 Watercourse units (no watercourses on site).

Plans, drawn to an identified scale and showing the direction of North, are included within this document (**Map 1**) showing the on-site habitat existing on the date of the application. No irreplaceable habitats, as defined by The Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024, are present.

British Museum ARC: Secondary Access

Biodiversity Statement

1. INTRODUCTION

Scope

- 1.1 This report sets out the details of the Biodiversity Net Gain calculations completed for the Proposed Scheme, including:
- Assessment Methodology;
 - Summary of evidence underpinning Metric decisions;
 - Assumptions and Limitations;
 - Headline Results;
 - Summary of proposed significant on-site habitat enhancements;
 - Summary of proposed off-site habitat enhancements; and
 - Overview of proposed arrangements for BNG delivery and monitoring.
- 1.2 It is equivalent to the 'BNG Design Stage Report' recommended by the Chartered Institute of Ecology and Environmental Management (CIEEM) in their Biodiversity Net Gain Report & Audit Templates guidance document (CIEEM, 2021a).

Statement of Competence

- 1.3 This report, the Statutory Metric Tool and Target Condition Assessments were completed by Jodie Southgate BA (Hons) MSc MCIEEM and Anna Showan BSc (Hons) MSc ACIEEM, Senior Ecologist at EPR and reviewed by Ben Kite BSc (Hons) MSc CEcol MCIEEM PIEMA, Director at EPR. Anna also completed the baseline fieldwork and condition assessments.
- 1.4 Jodie and Anna have worked in ecological consultancy for over ten years, with Jodie specialising in habitat survey and assessment, including BNG. She has completed metrics for a range of sites on a regular basis since DEFRA's Metric 2.0 was released in 2019 and has attended several webinars and training courses on BNG, including a series of CIEEM webinars on the Statutory Metric in January/February 2024, the CIEEM 2022 conference on BNG and a two-day online course "Using UKHab for BNG" run by UKHab Ltd in 2022. Jodie also leads EPR's internal training on BNG and has provided CPD to external companies on BNG and the use of metrics.

Description of Site

- 1.5 The Site is around 0.17 hectares in size and is located to the south of Cutbush Lane in Wokingham, centred approximately on Ordnance Survey (OS) Grid Reference SU743691. The village of Shinfield is located just under 1 km to the south-west, and the town of Reading is located under half a kilometre to the north, on the opposite side of the M4 Motorway.

- 1.6 The Site is located partially within the British Museum ARC facility. The wider surrounds comprise farmland and ongoing development of Shinfield Studios to the north and west. The eastern boundary of the wider ARC site is delineated by St John's Copse, an area of likely Ancient Semi Natural Woodland (ASNW) that is listed on Natural England's Provisional Ancient Woodland Inventory (PAWI).
- 1.7 The Site falls within a designated Biodiversity Opportunity Area (BOA), which is detailed in **Section 3**. The BOA covers a wide area along the River Lodden valley, supporting habitats within which are opportunities for providing benefits to biodiversity.

Description of Development

- 1.8 The British Museum ARC was granted planning permission in 2018 (application reference 182059) and is now operational. The current proposal seeks to achieve planning permission for the addition of a new secondary access vehicular route, to be sited along the northern boundary of the wider ARC site, off the proposed Cutbush Lane (East) extension road. The works are in association with the extension of Cutbush Lane (East) (which received planning permission (Ref: 232995) in September 2024), in partnership with the University of Reading (UoR), who are responsible for road works outside the red line of this application. Site proposals are shown in **Appendix 1**.

Legislation and Policy Context

- 1.9 A minimum 10% net gain in biodiversity, as measured by the Statutory Biodiversity Metric (DEFRA, 2024a), is now a condition of most types of planning permission in England under the Environment Act 2021 and associated secondary legislation.
- 1.10 Guidance has clarified that where present on-site, the 10% gain requirement applies individually to three categories of habitat: 'Area Habitats', 'Hedgerows', and 'Watercourses'. This is measured in 'units' which can be delivered on-site, off-site, or a combination of both, and must be secured for a minimum of 30 years.
- 1.11 The National Planning Policy Framework (NPPF) (MHCLG, 2024) requires local plans to "identify and pursue opportunities for securing measurable net gains in biodiversity" and enhance the natural and local environment by "minimising impacts on and providing net gains for biodiversity".

Guidance

- 1.12 The following guidance documents have informed the BNG assessment and overall approach:
- DEFRA's Biodiversity Gain Guidance, available at: <https://www.gov.uk/government/collections/biodiversity-net-gain>;
 - The Statutory Biodiversity Metric User Guide (DEFRA, 2024);
 - The UK Habitat Classification Version 2.0 (UKHab Ltd, 2023);
 - Biodiversity Net Gain. Good Practice Principles for Development – A Practical Guide (Baker et al., 2019);
 - Biodiversity Net Gain Report and Audit Templates (CIEEM, 2021a);

- Good Practice Requirements for Delivering Biodiversity Net Gain (On- and Off-Site) (CIEEM, 2021b); and
- BS8683:2021 Process for designing and implementing Biodiversity Net Gain – Specification (BSI, 2021).

2. ASSESSMENT METHODOLOGY

Metric Version and Assessors

- 2.1 The Statutory Biodiversity Metric and Condition Assessments published on 23 July 2024 were used for this BNG assessment.
- 2.2 The calculations were carried out by Anna Showan BSc (Hons) MSc ACIEEM, Senior Ecologist at EPR, assisted by Jodie Southgate BA (Hons) MSc MCIEEM, Specialist Principal Ecologist at EPR and reviewed by Ben Kite BSc (Hons) MSc CEcol MCIEEM PIEMA, Director of EPR. All are experienced ecologists and BNG practitioners.

Baseline Surveys

- 2.3 Baseline habitat and condition assessment surveys of the habitats on-site were carried out by Anna Showan BSc (Hons), MSc ACIEEM, Senior Ecologist as part of the Preliminary Ecological Appraisal (PEA) on 3 December 2024.
- 2.4 Habitat mapping was undertaken according to the UK Habitat Classification v.2.0 methodology (UKHab Ltd, 2023) and translated into BNG habitat categories where necessary.
- 2.5 Each area or length of habitat has been assigned an individual 'Habitat ID' and mapped in ESRI ArcGIS software (**Map 1**).
- 2.6 Detailed habitat descriptions, including species lists where appropriate, are set out in the Ecological Appraisal (EPR, 2024), submitted separately within the application.
- 2.7 No watercourses or hedgerows are present on Site; therefore, these elements of the Statutory Metric do not apply.

Post-Development Plans

- 2.8 The following plans produced by other technical consultants, submitted for approval with the Application, were used as the basis for the post-development calculations. These plans were imported into ArcGIS software and each line or polygon was assigned a BNG habitat type and target condition (**Map 2**):
 - Proposed Site Plan (John McAslan + Partners, 2024).

Metric Inputs

General Limitations of Metrics

- 2.9 As acknowledged in the User Guide (DEFRA, 2024), the Statutory Biodiversity Metric has inherent limitations. Extracts are provided below:

“The use of this biodiversity metric does not override existing biodiversity protections, statutory obligations, policy requirements, ecological mitigation hierarchy or any other requirements. This includes consenting or licensing processes, for example woodlands.” (Principle 2).

“This biodiversity metric is not a complex or comprehensive ecological model and is not a substitute for expert ecological advice.” (Principle 4)

This biodiversity metric is designed to inform decisions in conjunction with locally relevant evidence, expert input, or guidance.” (Principle 6)

- 2.10 In relation to Principle 2, protected and important species are considered in detail as part of the Ecological Appraisal (EPR, 2024). This also includes avoiding and mitigating impacts.
- 2.11 In relation to Principles 4 and 6, when completing a Metric, an assessor must make a number of decisions based on available evidence (such as ecological survey data), professional judgement, and ecological expertise. The User Guide also states that “Evidence for metric decisions should be provided and signposted within the ‘User Comments’ column of the biodiversity metric tool”.

Strategic Significance

- 2.12 A Local Nature Recovery Strategy has not yet been published for Berkshire, and the habitats on site do not meet the definitions of “high” or “medium” strategic significance as set out in Table 8 of the Biodiversity Metric User Guide. The baseline and post-development habitats have therefore been assigned “low” strategic significance.

Target Conditions

- 2.13 The Target Conditions are considered to be realistic and achievable over the timeframes specified by the metric in the ‘final time to target condition’ column and will be delivered and maintained through the implementation of a HMMP to be submitted alongside the Biodiversity Gain Plan to discharge the general biodiversity gain planning condition, should consent be granted. An overview of the measures required to achieve and maintain the target conditions are set out **Section 3** of this document under “Proposals to Deliver Net Gain”.

3. SUMMARY OF RESULTS

Introduction

- 3.1 The following should be read with reference to **Map 1** and the completed Metric Calculation Tool and Condition Assessment spreadsheets submitted separately with the Application.

Description of Baseline

- 3.2 The total number of on-site baseline units is calculated as follows:
- Area Habitats: 0.85 units.
- 3.3 The composition of the Area baseline habitat units is broken down into the following habitat types:
- Other neutral grassland;
 - Bramble scrub;

- Rural trees;
 - Bare ground; and
 - Developed land; sealed surface.
- 3.4 The grassland is in Moderate condition. It is relatively species rich (seeded with Emorsgate EM2 General Purpose Wildflower Meadow Mix), but fails the criteria relating to varied sward height and percentage of bare ground.
- 3.5 Trees on Site are young and healthy, though, due to their age, lack the structure required to meet Good condition. All trees on-site are therefore of Moderate condition.
- 3.6 Bare ground on-site is of Poor condition owing to a total lack of vegetative growth. The ruderal/ephemeral vegetation is largely comprised of Stinging Nettle *Urtica dioica*, Cow Parsley *Anthriscus sylvestris* and Greater Plantain *Plantago major* and is in Poor condition.
- 3.7 The Bramble scrub and hardstanding on-site is not applicable for condition assessment.

The BNG Hierarchy

- 3.8 The Proposed Scheme was designed with ecological input from an early stage and due consideration has been given to the BNG Hierarchy throughout the masterplanning process.
- 3.9 The BNG Hierarchy, as set out in Article 37A of the Town and Country Planning (Development Management Procedure) (England) Order 2015 (as amended) requires developers to take the following steps in relation to BNG:
- Avoidance of adverse effects to on-site habitats of 'Medium' distinctiveness and above;
 - Insofar as they cannot be avoided, mitigating those effects;
 - Insofar as they cannot be mitigated; compensating for those effects by prioritising in order, where possible:
 - 1) Enhancement of existing on-site habitats;
 - 2) Creation of new on-site habitats;
 - 3) Allocation of registered off-site gains; and finally
 - 4) Purchase of national off-site biodiversity credits.
- 3.10 **Table 3.1** sets out a summary of how the BNG Hierarchy has been applied by the Proposed Scheme.

Table 3.1: Application of the BNG Hierarchy

Action	Evidence of application
Impact Avoidance:	The area of impact has been reduced as far as practically possible to minimise disturbance or destruction of habitats.
Mitigation:	As detailed in the Ecological Appraisal, mitigation against the risk of harm of protected and notable species includes avoidance of vegetation removal during the nesting season and covering of excavations to avoid entrapment of mammals, [REDACTED]
Compensation:	
Habitat enhancements (on-site)	Due to the nature of the habitats present on-site and the proposals, habitat enhancement is not feasible.
Habitat creation (on-site)	New species-rich grassland (other neutral grassland) will be seeded over existing bare ground and hardstanding and native trees will be planted.
Off-site gains allocated to Application	n/a
Purchase of Biodiversity Credits	n/a

Headline Results

3.11 As set out in the Metric Calculation Tool submitted with the Application, the Proposed Scheme is predicted to deliver the following net gains, with all Trading Rules met:

- 0.21 area habitat units, or 24.95%

3.12 As shown above and in the separately submitted Metric, a 24.95% gain in habitat units is to be provided through on-site habitat creation, namely Other Neutral Grassland, Rural Trees, and small amount of Mixed Scrub.

Additionality

3.13 The BNG 'additionality' rules (DEFRA, 2024c) state that at least 10% of the biodiversity units delivered by an application must come from additional activities other than those already required to deliver mitigation and compensation.

3.14 As the Site baseline comprises 0.85 Area habitat units, at least 0.085 of the post-development Area habitat units must therefore be derived from additional measures.

3.15 For the Area habitats, this is achieved through creation/maintenance of other neutral grassland, to Moderate condition over a 5 year period. In addition, native trees will be planted within the Site. This generates 18.69% (0.2 units) of the total post-development Area habitat units.

Proposals to Deliver Net Gain

3.16 Species-rich grassland will be created on-site following ground preparation. The grassland will be created by seeding using Emorsgate EM2 Standard General Purpose Meadow Mixture (<https://wildseed.co.uk/product/mixtures/complete-mixtures/general-purpose-meadow-mixtures/standard-general-purpose-meadow-mixture/>), or similar approved.

- 3.17 The grassland will be managed in accordance with the management prescriptions already prescribed for the wider ARC site, involving a mowing regime to allow flowers to develop and set-seed annually. Weeding will be undertaken by hand, particularly within the first year and should failings arise, seeding will be repeated.
- 3.18 Native tree species will be planted within the Site, to create a varied structure, in line with the original aspirations of the wider ARC site.
- 3.19 In order to meet the Metric's Trading Rules, a small amount of native mixed scrub will be planted within the grassland, on the edge of the retained Bramble. This will comprise at least three native species such as Hawthorn *Crataegus monogyna*, Hazel *Corylus avellana* and Dogwood *Cornus sanguinea* to satisfy condition assessment Criterion A. The scrub is also expected to pass Criteria C and D through active management, therefore meeting Moderate condition within the five-year time to target condition.
- 3.20 The locations of these areas are shown on **Map 2**.
- 3.21 Should planning consent be granted, further details on the below measures will be set out in the HMMP to be produced alongside the Biodiversity Gain Plan to discharge the general Biodiversity Gain condition.

4. PROPOSALS FOR DELIVERY AND MONITORING

Delivery

- 4.1 The habitat creation, enhancement and management measures summarised in **Section 3** will be implemented for a period of no less than 30 years.
- 4.2 The mechanism for securing the delivery of significant on-site enhancements is to be agreed with Wokingham Borough Council but would take the form of a planning Condition .
- 4.3 EPR recommends that provision is made for the habitat creation/enhancement and management works to be supervised and signed off by a competent ecologist.

Monitoring

- 4.4 The successful establishment of newly created habitats, and progress of all habitats towards their post-development Target Conditions, will need to be regularly monitored to ensure that the predicted BNG will be realised on the ground. The HMMP will set out the details of who will be responsible for this monitoring.
- 4.5 EPR recommends that monitoring should take place in Years 1, 2, 5, 10, 15, 20, 25 and 30. This should include an assessment of progress against the Target Condition Assessment criteria for each parcel, and a short report detailing recommendations for any remedial measures and/or adjustments to be made to the HMMP.

Conclusion

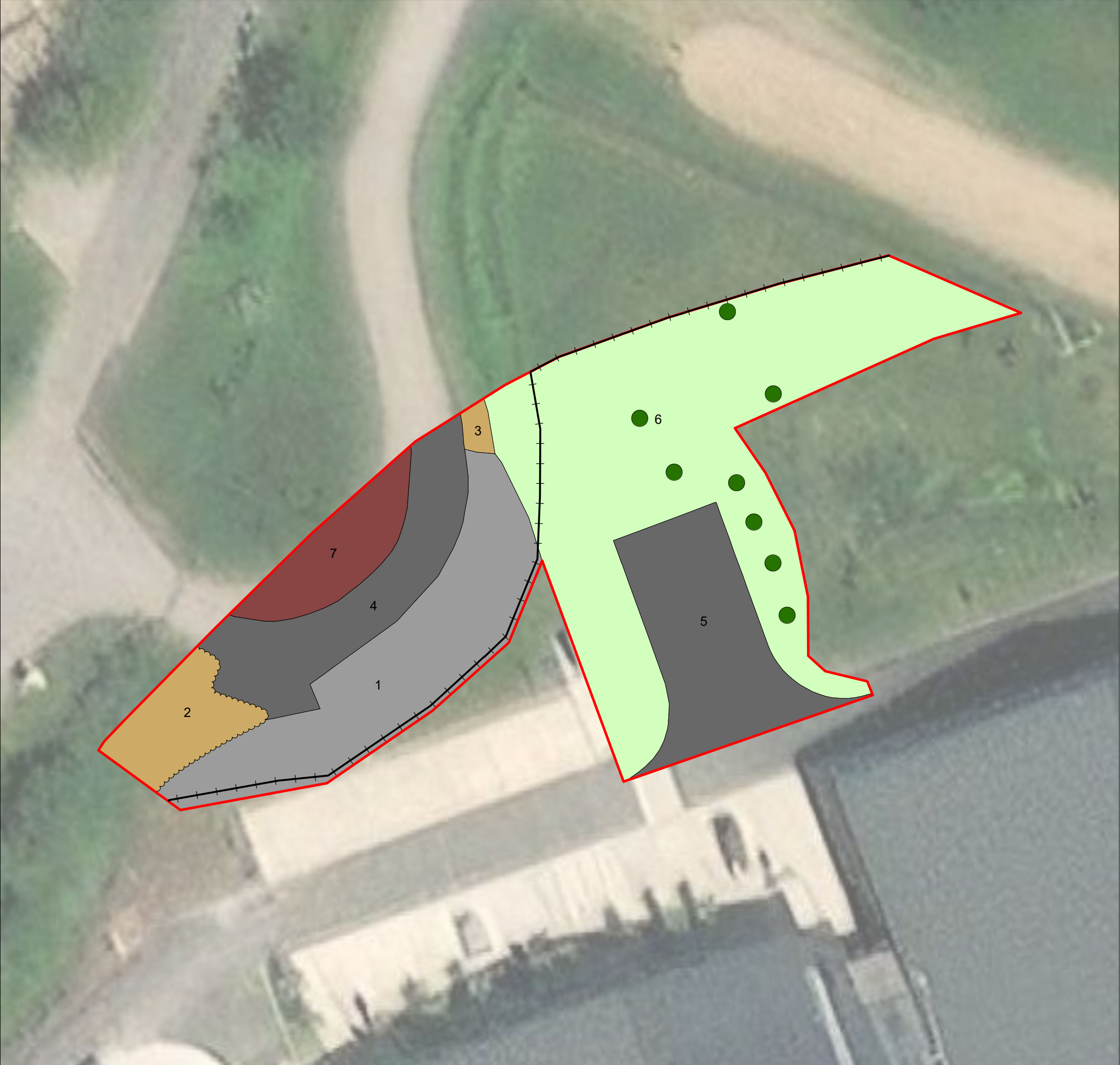
- 4.6 This Report has set out the methodology and results of the Statutory Biodiversity Metric calculations completed for the Proposed Scheme, which predict a net gain in 0.21 habitat units (24.95%).
- 4.7 Net gains will be delivered through on-site habitat creation and ongoing management.
- 4.8 Should planning consent be granted, full details of the arrangements for the delivery of minimum 10% BNG will be set out in a Biodiversity Gain Plan and HMMP and submitted to the LPA for approval.
- 4.9 It is therefore concluded that the Proposed Scheme would comply with the statutory minimum requirements for 10% biodiversity net gain as a condition of planning permission in England under the Environment Act 2021 and Town and Country Planning (Development Management Procedure) (England) Order 2015 (as amended), as well as with the NPPF and local planning policy.

5. REFERENCES

- The British Standards Institution (BSI) (2021). *BS 8683:2021 Process for designing and implementing Biodiversity Net Gain – Specification*. British Standards Limited, 2021.
- Chartered Institute of Ecology and Environmental Management (CIEEM) (2021a). *Biodiversity Net Gain Report & Audit Templates. Version 1 July 2021*. CIEEM, Ampfield.
- Chartered Institute of Ecology and Environmental Management (CIEEM) (2021b). *Good practice Requirements for Delivering Biodiversity Net Gain (On- and Off-site)* CIEEM, Ampfield.
- CIEEM, CIRIA and IEMA (2019). *Biodiversity net gain. Good practice principles for development*.
- Department for Environment, Food and Rural Affairs (DEFRA) (2024). *The Statutory Biodiversity Metric User Guide. July 2024*.
- DEFRA (2024a). *The Statutory Biodiversity Metric Calculation Tool. July 2024*.
- DEFRA (2024b). *The Statutory Biodiversity Metric – Technical Annex 1: Condition Assessment Sheets and Methodology. July 2024*.
- DEFRA (2024c). *Planning Practice Guidance: Biodiversity Net Gain*. Accessed 11/06/24. Available at: <https://www.gov.uk/guidance/biodiversity-net-gain>
- His Majesty's Stationery Office (HMSO) (2015). *The Town and Country Planning (Development Management Procedure) (England) Order 2015*. HMSO, London.
- HMSO (2021). *Environment Act 2021*. HMSO, London.
- HMSO (2024a). *The Biodiversity Gain (Town and Country Planning) (Modifications and Amendments) (England) Regulations 2024*. HMSO, London.
- HMSO (2024b). *The Environment Act 2021 (Commencement No. 8 and Transitional Provisions) Regulations 2024*. HMSO, London.
- HMSO (2024c). *The Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024*. HMSO, London.
- Ministry of Housing, Communities and Local Government (MHCLG) (2024). *National Planning Policy Framework*. 2024.
- UKHab Ltd (2023). *UK Habitat Classification Version 2.0*. Available at <http://ukhab.org>

MAPS

- Map 1** On-Site Baseline Habitats
- Map 2** On-Site Post-Development Habitats



MAP 1 On-Site Baseline Habitats

KEY

Site boundary

Fences

Trees

Other neutral grassland

Bramble scrub

Ruderal/Ephemeral

Developed land; sealed surface

Bare ground

SCALE: 1:300 at A3

05101520

Metres

N

EPR

CLIENT: British Museum

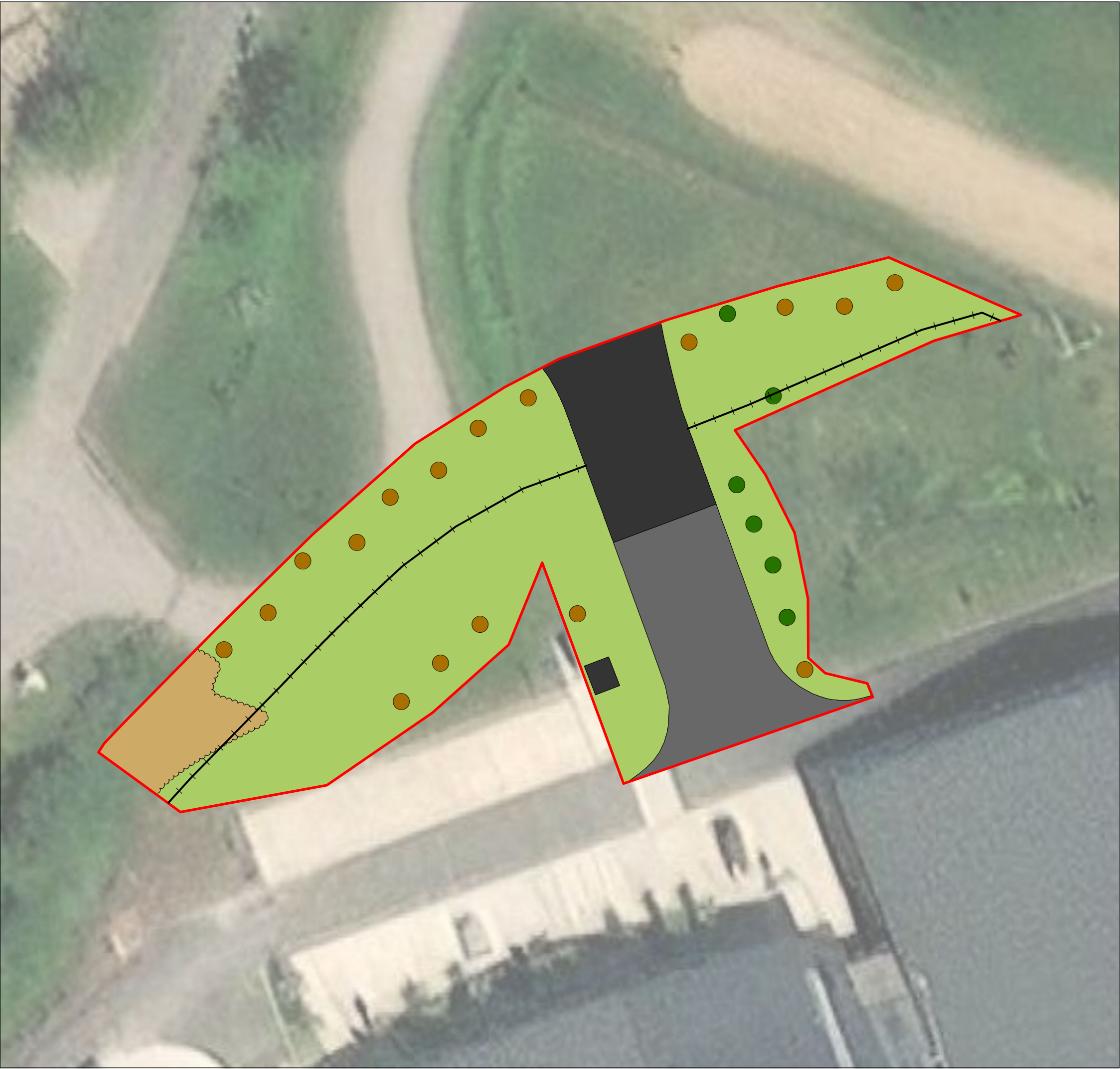
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Aerial Image Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



MAP 2 On-Site Post Development Habitats

- KEY
- Site boundary
 - Retained
 - Trees
 - Bramble scrub
 - Developed land; sealed surface
 - Created
 - Trees
 - Fences
 - Other neutral grassland
 - Developed land; sealed surface

SCALE: 1:300 at A3

0 5 10 15 20 Metres



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