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Stag Brewery Application B

Biodiversity Net Gain Design Stage Assessment

Date: March 2023

Client Name: Reselton Properties Limited

Document Reference: WIE18671-114-TN-21-4-1-BNG App B

This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS EN ISO 45001:2018)

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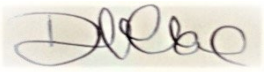

1. Introduction

This Biodiversity Net Gain (BNG) design stage assessment has been prepared by Waterman Infrastructure & Environment Ltd (Waterman) on behalf of Reselton Properties Limited (hereafter referred to as the 'Applicant'). It has been undertaken to address a request from London Borough of Richmond upon Thames (LBRuT)[1] to provide a separate BNG assessment for Application B for the proposed comprehensive redevelopment of the former Stag Brewery Site in Mortlake (hereafter referred to as the 'Site').

LBRuT has requested this Technical Note (TN), as the BNG assessment provided as part of Appendix 13.5[2] (Biodiversity Net Gain Report) of the Environmental Statement (ES) undertaken by Waterman in 2022 combined both Application A and B (hereafter referred to as the 'combined BNG assessment'). This approach was undertaken as the planning submissions[3],[4] have the same Applicant and were submitted together. Whilst they are separate Applications, they would be linked through a Section 106 agreement (as detailed in section 1.1) and as such are dependent on each other (one cannot proceed without the other). It is also anticipated that the delivery of the

[1] Gargan. A. (2023) Email to Lee Mantle and Ellen Smith 16th February 2023.
[2] Waterman (2022). The Former Stag Brewery, Mortlake. Biodiversity Net Gain Design Stage Report. Ref WIE18761-103-R-2-1-10-BNG
[3] Application A - Planning Ref: 22/0900/OUT
[4] Application B - Planning Ref: 22/0902/FUL

developments would overlap/come forward at the same time (exact programme to be confirmed). The planning application boundary for Application B at the Site is detailed in **Figure 1.**

This TN should be read in conjunction with Technical Appendix 13.1 (Preliminary Ecological Appraisal (PEA))[5] and 13.4 as detailed above (**that has now been superseded by this TN**), of the ES undertaken by Waterman in March 2022 to accompany planning submissions.

1.1 Proposed Development

The proposed development of Application B at the Site comprises a school planning application and would include the demolition of existing buildings to allow for comprehensive phased redevelopment of the Site as well as associated highways works which encompass the Section 278 (S278) works boundary. Collectively, the development at Application B and the S278 works to be applied within this BNG assessment are hereafter referred to as the 'Development'.

In summary, the S278 works include amendments and reconfiguration to the Chalkers Corner junction to alleviate the transport and traffic impacts associated with the operation of the proposed development within the Site (i.e Application A and B). For the purposes of BNG, the S278 works have been split equally between Application A and Application B. Further details are presented within the Limitations and Assumptions section of this TN.

Application B seeks planning permission for the following development:

"Detailed planning permission for the erection of a three-storey building to provide a new secondary school with sixth form; sports pitch with flood lighting, external MUGA and play space; and associated external works including landscaping, car and cycle parking, new access routes and other associated works".

It should be noted that Application B and A are separate applications, but would be linked through a S106 Agreement to ensure that the Application B land is handed over at an appropriate time to the Education and Skills Funding Authority (ESFA) who would deliver Application B, and that the associated highway works (expected to be secured by Section 278 (S278) works)) are carried out at an appropriate stage, in conjunction with either Application A or B.

This BNG assessment has been prepared to demonstrate if the development is in line with planning policy requirements and achieves the targeted minimum of 10% BNG on Site in line with the Environment Act 2021.

1.2 Site Setting

The Site comprises the planning application boundary of Application B (2.18ha) and the S278 works boundary, which are required for the delivery of both Applications A and B. The total area for the S278 boundary is 2.41ha. As noted previously the S278 applies to both Application A and B its baseline area has been divided evenly between the Applications to ensure no bias. The total area of the Site is therefore 3.39ha.

The Site is centred on Ordnance Survey Grid Reference TQ 202 759. The Site is located within the planning boundary of Application A and bound by Lower Richmond Road to the south. The majority of the Site currently comprises of a large area of amenity grassland with a mixture of hardstanding

[5] Waterman (2022). Stag Brewery, Mortlake. Preliminary Ecological Appraisal. Ref WIE18761-103-1-2-4-PEA

and buildings to the east, as well as urban trees. The Site and existing baseline habitats subject to this design stage BNG assessment are shown in Habitat Features Plan, **Figure1.**

1.3 Relevant Legislation and Policies

The following legislation and policies are considered relevant to this BNG design stage assessment:

- Environment Act 2021[6]
- National Planning Policy:
  - National Planning Policy Framework, 2021[7];
- Regional Planning Policy:
  - The London Plan, 2021[8];
- Local Planning Policy:
  - London Borough of Richmond upon Thames: Adopted Local Plan 2018/2020[9].

Refer to **Appendix A** for full details of the above legislation and policies.

2. Methodology

2.1 Baseline Survey

Technical Appendix 13.1 PEA of the March 2022 ES was undertaken on the 31st August 2021 and comprised an ecological data search and an 'Extended' Habitat Survey whereby all habitats were recorded following the methodology outlined in the UK Habitat (UKHab) Classification User Manual (as shown on **Figure 1**). The type, distinctiveness, condition and extent of each habitat was recorded during this survey, and these factors are discussed in greater detail below.

2.2 Condition Assessment

2.2.1 Baseline Habitats

A condition assessment of those habitats present on Site has been undertaken using the Biodiversity Metric 3.0 – Technical Supplement[10]. This document sets out criteria and characteristics for each habitat and provides guidance on an assessment of habitat condition (which can be 'good', 'fairly good', 'moderate', 'fairly poor' and 'poor', depending on the habitat type). The assessment criteria considered is varied for each habitat but includes criteria such as the presence of undesirable species, habitat extent, habitat health and vegetation structure. CAD software was used to establish the size of each habitat polygon across the Site.

2.2.2 Post-construction Habitat Conditions

Proposed habitat conditions have been assigned to newly created and retained habitats. This has been achieved by reviewing the criteria characteristics for each habitat, set out in the Biodiversity

[6] Environment Act 2021 (legislation.gov.uk)
[7] Department of Communities and Local Government. (2021). National Planning Policy Framework.
[8] Greater London Authority (March 2021) The London Plan The Spatial Development Strategy for Greater London
[9] London Borough of Richmond upon Thames: Adopted Local Plan (2018) Local Plan: Strategic Policies
[10] Panks et al (2021) Biodiversity metric 3.0: Auditing and accounting for biodiversity – Technical Supplement, Natural England (JP029).

Metric 3.0 – Technical Supplement and the proposed landscaping plans to determine a likely achievable condition once the habitats have established and been subject to appropriate management.

The landscaping plans (**Appendix B**) and area measurements were provided by Gillespies LLP as part of their Urban Green Factor (UGF) calculations. The habitats to be created were translated in the best-fit UKHab classification equivalents and assumptions made on the most appropriate assumed conditions (as a result of ongoing future management).

2.3 BNG Calculations

The baseline BNG calculations were undertaken using the Biodiversity Metric 3.0 Calculation Tool[11] as this was used for the whole Site (Application A and B) BNG assessment, so for consistency is being used for the single Application BNG assessments.

Baseline biodiversity units were established using:

- The results of the PEA[12];
- The accurate measurement of on-Site habitats in accordance with current topographical survey information; and
- Professional judgement.

Post-development biodiversity units have been established using:

- Landscape plans and area measurements provided by Information provided by Gillespies LLP;
- Translation of created habitats using the best fit UKHab classification equivalents
- Assumptions on condition as a result of ongoing future management; and
- Professional judgement.

2.4 Limitations and Assumptions

As the Section 278 works boundary is required for the delivery of both Application A and B, 50% of the S278 baseline has been applied to each of the Applications. It is assessed that applying 100% of the S278 baseline to each of the Applications is not practical as this would result in duplication. This approach would ensure that each Application takes a 'worst case' scenario (as no ecological post development compensation/enhancement measures would be provided in the S278 area) and would also allow an accurate combined BNG score for both Applications. For completeness however, the BNG score of each application has also been assessed without the S278 baseline. It should be noted that this approach is considered to be a worst-case scenario as the Section 278 works fall under the Highways Act 1980 and BNG is only required for planning applications under the Town & Country Planning Act 1990 and Planning Act 2008 (from November 2025). The details would be set out fully in the forthcoming BNG Regulations.

The S278 works boundary as a whole contains 41 trees, of which 36 are being retained (19 small and 17 medium sized) and five are being lost (four small and one medium sized). In order to divide the baseline habitat units out evenly, the trees have been divided between Application A and B as follows. Each application would contain 18 retained trees (10 small and eight medium). Application

[11] Panks et al (2021) Biodiversity metric 3.0: Auditing and accounting for biodiversity – Calculation Tool, Natural England (JP029)

[12] Waterman IE Preliminary Ecological Appraisal, The Former Stag Brewery, Mortlake (Ref: WIE18671-103-R-1-2-4-PEA)

A would lose three trees (one medium and two small) and Application B would lose two trees (both small in size). This is because it is not possible for a Site to lose half a tree.

It should be noted that, the 'Tree Planting' information provided within the proposed landscape design plan (**Appendix B**) and DAS[13], has been interpreted using the UKHab definition for urban trees. Therefore 'trees' described as 'Native Ornamentals – Mixed (H:4-7M)' do not fit the definition of an urban tree and have not been counted as such within the Metric.

Native Ornamentals-Mixed match the UKHab description of scrub species, the linear strip of Native Ornamentals proposed to be planted which would run parallel to the sports pitch, to the west of the Site therefore better resemble the definition of a hedgerow. A hedgerow is defined by UK Biodiversity Action Plan Priority Habitat Descriptions as "*any boundary line of trees or shrubs over 20m long and less than 5m wide, and where any gaps between the trees or shrub species are less that 20m wide; All hedgerows consisting predominantly (i.e. 80% or more cover) of at least one woody UK native species are covered by this priority habitat"*. This has therefore been included within the Hedgerow creation section of the Metric.

Information on tree numbers at the baseline was taken from the submitted Arboricultural Impact Assessment (AIA)[14] and information on tree numbers for creation is taken from the landscape plan (**Appendix B**) and through consultation with Gillespies LLP. Tree sizes have been based on their dimeter at breast height (1.5m above ground level), taken from the Arboricultural Impact Assessment report[15]. The total number of 'urban trees' has been calculated separately through taking the total number of trees on Site and deducting the number of trees which are classified as 'Line of trees' thus not overvaluing the baseline.

It should be noted that the release of the 3.1 Metric has provided clarity in a common misunderstanding of determining baseline tree sizes, this resolve has been applied to this assessment that was not accounted for in the combined BNG assessment and would alter the BNG score if a combined assessment was re-run. As detailed above the combined BNG assessment has now been superseded by this TN.

It should be noted that the proposed habitat 'Semi natural vegetation' has been changed to other neutral grassland within this assessment with moderate condition due to re-assessment of 'best fit' UKHab category based on the Design and Access Statement (DAS).

It is assumed that the post development habitats presented in this document would be established to meet their target habitat category, sizing, and condition, following the agreed 30 year management plan. For instance, all 'Hardy Native Columnar Street Trees' as described within the Landscape DAS have been provided as 'medium' urban trees within the Metric, as this is what is reflective of average size of these tree species. For more information see Section 4 of this TN.

It is acknowledged that when completing the 3.0 Metric an error message has been flagged. The error message reads 'Check Areas – Area of development footprint and habitat creation exceeds the area of habitats lost'. The development footprint of Application B is 3.39 ha, 1.26ha of habitat is to be retained and 2.18 ha created. This has caused the error message, as when the retained and created habitat areas are added together it exceeds the development footprint of 3.39ha. However, this is due to a 'glitch' in the metric were retained urban trees (0.0525ha) are not automatically subtracted from the development footprint area, whereas this occurs automatically as part of the site habitat baseline and creation areas.

[13] Gillespies (2022) Stag Brewery Landscape Design And Access Statement
[14] Waterman IE (2022) Arboricultural Impact Assessment, The Former Stag Brewery, Mortlake (Ref: WIE18671-102-R-6-1-2-AIA)

3. Assessment

3.1 Baseline Value

3.1.1 Habitat baseline

Baseline ecology surveys found the Site to consist of parcel habitats including a large area of modified grassland along with buildings, hardstanding, urban trees (one small and six medium) and introduced shrub (**Figure 1**). It should be noted that the S278 works boundary contains a small area of modified grassland, hardstanding and urban trees (12 small eight medium) (see limitations section). Further details on habitat types and species present as part of the baseline can be found on the combined application BNG assessment[15] and the condition assessments at the Baseline and Post Development for the Site are provided in **Appendix C and D**.

Table 1 below details the pre-development habitats and their corresponding biodiversity value.

Table 1: Baseline Habitat Units

Habitat Type	Area (ha)	Habitat Distinctiveness	Condition	Strategic Significance	Total habitat units***
Urban – Developed land; sealed surface*	0.598	Very Low	N/A – Other**	No strategic significance.	**0.00**
Urban – Developed land; sealed surface*	1.158	Very Low	N/A – Other**	No strategic significance.	**0.00**
Urban – Urban tree	0.0249	Medium	Moderate	No strategic significance.	**0.20**
Urban – Urban tree	0.0371	Medium	Poor	No strategic significance.	**0.15**
Urban – Introduced shrub	0.004	Low	Poor	No strategic significance.	**0.01**
Urban – Introduced shrub	0.0025	Low	Poor	No strategic significance.	**0.01**
Grassland – Modified grassland	1.579	Low	Poor	No strategic significance.	**3.16**
Grassland – Modified grassland	0.048	Low	Poor	No strategic significance.	**0.10**
Total	**3.39 *****	**-**	**-**	**-**	**3.61 *****

* All 'Developed land' UKHab categories have been combined under 'Developed land; sealed surface'
** These habitats are assigned a default condition of 'N/A – Other' in the Metric.
*** The metric rounds to two decimal places.

3.1.2 Hedge baseline

Baseline ecology surveys found the Site to comprise of linear habitats including a line of trees and native hedgerow. Further details on hedgerow types and species present as part of the baseline can

[15] Waterman IE (2021) Biodiversity Net Gain Report, The Former Stag Brewery, Mortlake (RefWIE18761-103-R-2-1-10-BNG)

be found on the combined application BNG assessment[16] and the condition assessments at the Baseline for the Site are provided in **Appendix C**.

The total Hedgerow Units on the Site are presented in **Table 2** below.

Table 2: Baseline Hedgerow Units

Hedgerow Type	Length (KM)	Habitat Distinctiveness	Condition	Strategic Significance	Total habitat units
Line of Trees	0.047	Low	Poor	No strategic significance	**0.09**
Lie of Trees	0.081	Low	Moderate	No strategic significance	**0.32**
Total	**0.13***	**-**	**-**	**-**	**0.42***

*The metric rounds to two decimal places.

3.2 Post-development Biodiversity Value

3.2.1 Habitat and Hedgerow Loss

A total of 52 urban trees (43 medium and nine small) would be planted as part of the Development.

27 urban trees (22 medium and five small sized) would be retained from the baseline within Application B and Hedgerow features would be retained apart from a small section of the native hedgerow.

All habitats within the S278 works boundary are to be retained with the exception of two small trees.

Table 3 below details the habitats lost and retained as a result of the proposed Development and the corresponding biodiversity values.

Table 3: Habitat Losses

Habitat Type	Area Lost (ha)*	Area retained (ha)*	Habitat Distinctiveness	Condition	Habitat Units Lost
Urban – Urban tree	0.01	0.0163	Medium	Moderate	**0.07**
Urban – Introduced shrub	0.00	0.00	Low	Poor	**0.01**
Urban – Developed land; sealed surface*	0.60	0.00	Very Low	N/A – Other**	**0.00**
Urban – Developed land; sealed surface*	0.00	1.158	Very Low	N/A – Other**	**0.00**
Urban – Introduced shrub	0.01	0.0025	Low	Poor	**0.00*****

[16] Waterman IE (2021) Biodiversity Net Gain Report, The Former Stag Brewery, Mortlake (RefWIE18761-103-R-2-1-10-BNG)

Habitat Type	Area Lost (ha)*	Area retained (ha)*	Habitat Distinctiveness	Condition	Habitat Units Lost
Grassland- Modified grassland	1.58	0.00	Low	Poor	**3.16**
Grassland- Modified grassland	0.00	0.048	Low	Poor	**0.00**
Urban – Urban tree	0.00	0.04	Medium	Moderate	**0.00**
Total	**2.19***	**1.26***	**-**	**-**	**3.24***

*The metric rounds to two decimal places

Table 4 below details the hedgerow lost and retained as a result of the proposed Development and the corresponding biodiversity values.

Table 4: Hedgerow losses

Hedge type	Length (km) retained	Length (km) lost	Habitat Distinctiveness	Habitat Condition	Habitat Units Lost
Line of trees	0.047	0.00	Low	Poor	**0.00**
Line of trees	0.00	0.08	Low	Moderate	**0.32**
Total	**0.13***		-	-	**0.32***

*The metric rounds to two decimal places

3.2.2 Habitat and Hedgerow Creation

The landscaping plans (**Appendix B**) for the Site comprised the following habitats provided within an Urban Greening Factor (UGF) calculator, these have been converted to a best-fit UKHab category (**Table 5**) using the species descriptions provided in the 'Planting and Biodiversity' section of the Landscape Design and Access Statement (DAS)[17]. A total of 52 urban trees (43 medium and nine small) would be planted as part of the Development. Further species descriptions and rationale can be found in the combined application BNG report[18].

Table 5: UGF to UKHab Conversion Table

UGF	UKHab
Sealed surfaces	Developed land; sealed surface
Permeable paving'	Artificial unvegetated, unsealed surface
Semi-natural vegetation (species rich grassland)	Other neutral grassland
Flower-rich perennial planting	Vegetated Garden
Standard trees	Urban trees
Amenity grassland	Modified grassland
Hedges	Hedge Ornamental Non-Native

[17] Gillespies (2022) Stag Brewery Landscape Design and Access Statement
[18] Waterman IE (2022) Biodiversity Net Gain Report, The Former Stag Brewery, Mortlake (Ref: WIE18761-103-R-2-1-10-BNG)

Table 6 below details the habitats to be created post-development and the corresponding biodiversity values.

Table 6: Post-development habitat creation

Habitat	Area (ha)	Habitat Distinctiveness	Habitat Condition	Habitat units delivered
Urban – Artificial unvegetated, unsealed surface	0.89	Very Low	N/A – Other*	**0.00**
Grassland- other neutral grassland	0.0417	Medium	Moderate	**0.28**
Urban – Vegetated garden	0.0387	Low	Poor	**0.07**
Grassland – Modified grassland	0.1705	Low	Poor	**0.33**
Urban – Developed land; sealed surface	1.04	Very Low	N/A – Other*	**0.00**
Urban – Urban tree	0.1791	Medium	Moderate	**0.55**
Total	**2.18****	**-**	**-**	**1.23****

* These habitats are assigned a default condition of 'N/A – Other' in the Metric.
** The metric rounds to two decimal places.

Table 7 below details the hedgerow to be created post-development and the corresponding biodiversity values.

Table 7: Post-development hedgerow creation

Hedgerow	Length (ha)	Habitat Distinctiveness	Habitat Condition	Strategic Significance	Habitat units delivered
Hedge Ornamental Non Native	0.092	V.Low	Poor	No strategic significance.	**0.09**
Native Hedgerow	0.115	Low	Moderate	No strategic significance.	**0.38**
Total	**0.21***	**-**	**-**	**-**	**0.47***

*The metric rounds to two decimal places.

3.3 Biodiversity Net Gain Assessment

Following its completion, the Metric[19] calculation has confirmed that the proposed Development of the Site at Application B would result in a **net loss of 2.01 habitat units (-55.55%)** and a **net gain of 0.15 hedgerow units (35.82%)**. A screenshot of the headline results is provided in **Appendix E**. The full Metric can be provided upon request.

For completeness and with the omittance of the S278 works boundary, Application B would achieve a net loss of 2.00 habitat units (-59.56%) and net gain of 0.15 hedgerow units (46.21%).

[19] Waterman (2022), Stag Brewery - Application B, Biodiversity Metric 3.0 Calculation Tool, Ref. WIE15642-100-XLS-21-1-1-BNGMetric

The results at the Site for habitats units do not comply with the proposed targeted minimum of 10% in line with the Environment Act 2021 (mandatory requirements are expected to come into force in the autumn of 2023)

The main reason for Application B not achieving the targeted minimum of 10% is due to the loss of 1.58ha of modified grassland equating to 3.16 habitat units that would be replaced with a 3D plastic sports pitch as required by Sports England. It should be noted that the Metric for Application B does not include for the provision of a potential intensive green roof 0.0589ha in area. However, should this habitat creation be provided, there would still be a shortfall of -1.70 habitat units (-47.15%).

Trading rules which are applied by the Metric require that any loss of habitat is replaced on a 'like for like' or 'like for better' principle. The trading rules applied for individual habitats are based on their distinctiveness. The Trading Rules for this BNG Assessment at Application B have currently not been met (**Table 8**), as there is a large area of habitat lost which relates to 'modified grassland' of Low distinctiveness, which is not being adequately compensated in terms of compensation of created habitat area/size by a habitat type of the same distinctiveness or a higher distinctiveness habitat.

Table 8: Trading Rule Summary

Distinctiveness Group	Trading Rule	Trading Satisfied?
Very High	Bespoke compensation likely to be required	Yes
High	Same habitat required	Yes
Medium	Same broad habitat or a higher distinctiveness habitat required	Yes
Low	Same distinctiveness or better habitat required	No

The BNG Good Practice Principles[20] have been considered within this assessment and can be found within the combined application BNG assessment[21]. It should however be noted that Principles 5-7 have not been met within this assessment as a result of the Site achieving a net loss.

4. Addressing the Shortfall in BNG

As detailed above Application B would result in an overall loss of -2.01 habitat units (-55.55%) and is therefore under the minimum 10% BNG targeted by the Environment Act 2021. Application A however would result in a net gain of 9.39 habitat units (201.73%) representing a significant exceedance of the minimum 10% target. Both Applications are exceeding the minimum 10% BNG targeted for hedgerow units.

Application A has a baseline of 3.11 habitat units and therefore 3.421 units are required to achieve the minimum targeted 10% BNG. This would result in an exceedance of 5.969 units.

Application B has a baseline of 3.61 habitat units and therefore 3.971 units are required to achieve the minimum 10% BNG targeted.

[20] Baker, J., Hoskin, R., Butterworth, T., (2019) Biodiversity net gain. Good practice principles for development. Part A: A practical guide (CIRIA C776b); CIRIA, CIEEM, IEMA, London, UK. ISBN 978-0-86017-791-3

[21] Waterman IE (2021) Biodiversity Net Gain Report, The Former Stag Brewery, Mortlake (RefWIE18761-103-R-2-1-10-BNG)

This demonstrates that the shortfall at Application B **could** be fully met by the exceedance of habitat units from Application A. This approach does not need to rely on the potential intensive green roof as detailed above.

As the Applications are linked through a Section 106 agreement (one cannot proceed without the other), it is proposed that the exceedance of habitat units at Application A could be **reserved to address the shortfall in BNG at Application B only.** This approach is assessed to be line with the Environment Act 2021 as a net gain exceeding 10% would be achieved at both sites and would be subject to a 30 Habitat Management and Monitoring Plan (HMMP) or similar, as detailed in section 5 below. In addition and if combined the Applications could meet the Trading Rules and BNG Good Practice Principles, in particular Principles 5-7 detailed above in section 3.3.

5. Long-term Management of Habitats

In line with current guidance[22] the lifetime of the BNG commitment and therefore Habitat Management and Monitoring requirements is taken to be 30 years, which is expected to be secured through an appropriately worded condition of the planning consent. The HMMP or similar would confirm how the habitats would meet the target conditions (as outlined in **Appendix E**). Subsequent management visits would confirm if these target conditions are being met, with additional measures implemented if required.

[22] CIEEM (2021) Biodiversity Net Gain Report and Audit Templates at CIEEM-BNG-Report-and-Audit-templates2.pdf

FIGURES

Planning Application Boundary A - 7.065ha

Planning Application Boundary B - 2.181ha

Section 278 Works Boundary - 2.417ha

Urban Tree - u - 1170

Habitats Planning Application B

g4 - Modified grassland - 64, 66, 75, 76 - 1.579ha

h3h - Mixed scrub - 1160 - 0.004ha

u1b6 - Hardstanding - 111 - 0.364ha

u1b5 - Buildings - 97 - 0.234ha

Linear Habitats Planning Application B

Line of Trees w1g6 - 76 - 0.081km

Linear Habitats Section 278 Works

Line of Trees w1g6 - 76 - 0.094km

Habitats Section 278 Works

g4 - Modified grassland - 64, 66, 75, 76 - 0.096ha

h3h - Mixed scrub - 1160, 0.005ha

u1b6 - Hardstanding - 2.316ha

N

0 25 50 100 m

Project Details	WIE18671-114: Stag Brewery
Figure Title	Figure 2: Habitat Features (BNG Areas) Planning Application B
Figure Ref	WIE18671-114-GIS-BNG-2A
Date	February 2023
File Location	\\s-lncs\wiel\projects\wie18671\100\gis\ec

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APPENDICES

A. Relevant Legislation and Policies

Environment Act (2021)

The Environment Bill was given Royal Assent in November 2021 and is now the Environment Act 2021. The Act establishes a framework for several new policies and targets, of which many of the details would be set in secondary legislation as a Statutory Instrument (SI). The Act includes a target to halt the decline of nature by 2030 and to strengthen the existing biodiversity duty through the introduction of a mandatory requirement to achieve at least 10% biodiversity net gain (BNG) for new developments in England. These requirements are expected to come into force in the autumn of 2023. It is understood that the BNG information would need to be provided by the Applicant as part of the planning application submission.

National Planning Policy

National Planning Policy Framework, 2021

The National Planning Policy Framework (NPPF) was published in 2012 and last updated on 20th July 2021[23]. Section 15 (outlined below) of the NPPF, 'Conserving and Enhancing the Natural Environment', replaces Section 11 of the previous NPPF 2012 revision and NPPF 2018[24]. No significant changes to Section 15 are noted between the 2019[25] and 2021 update. The Government Circular 06/2005[26] - Biodiversity and Geological Conservation: Statutory Obligations and Their Impact within the Planning System, remains valid and is still referenced within the NPPF.

Of particular significance with respect to biodiversity in the NPPF revision, is the amendment to para 175(d) of the NPPF 2019 (now para 180(d) of the NPPF 2021), which now requires opportunities to incorporate biodiversity improvements in and around development, rather than simply making it optional. This demonstrates further steps taken by the government towards achieving the 25 Year Environment Plan (2018). Otherwise there have been no further changes to the wording of "Conserving and enhancing the natural environment" Chapter of the NPPF.

The NPPF encourages the planning system to contribute to and enhance the natural and local environment. This should be achieved by:

- *"Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan)*;
- *recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*
- *maintaining the character of the undeveloped coast, while improving public access to it where appropriate*;
- *minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*
- *preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability.*

[23] Ministry of Housing, Communities and Local Government (2021): National Planning Policy Framework.
[24] Ministry of Housing, Communities and Local Government (2018): National Planning Policy Framework.
[25] Ministry of Housing, Communities and Local Government. (2019): National Planning Policy Framework
[26] Department of Communities and Local Government (2005): Circular 06/05: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System.

Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

- *Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate".*

The NPPF also stipulates that Local Planning Authorities (LPAs), when determining planning applications, should apply the following principles:

- *"If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- *development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
- *development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and*
- *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity."*

National Planning Practice Guidance, 2021

- The Government's National Planning Practice Guidance 2016[27], updated in 2019[28] (NPPG) is intended to provide guidance to local planning authorities and developers on the implementation of the planning policies set out within the NPPF. The guidance of most relevance to ecology and biodiversity is the Natural Environment Chapter, which explains key issues in implementing policy to protect biodiversity, including local requirements.

Regional Planning Policy

The London Plan: The Spatial Development Strategy for Greater London, 2021

The new London Plan 2021[29] sets out the overall strategic plan, setting out a framework for development over the next 20 to 25 years and includes several policies relating to ecology. Key to the London Plan is Policy G6 'Biodiversity and Access to Nature' which sets out the Mayor's policy in relation to biodiversity and access to nature. This states:

- *"Sites of Importance for Nature Conservation (SINCs) should be protected.*
- *Boroughs, in Developing Plans, should:*
  - *a) use up-to-date information about the natural environment and the relevant procedures to identify SINCs and ecological corridors to identify coherent ecological networks;*

[27] Department for Communities and Local Government. (2016). *National Planning Practice Guidance*. DCLG, London.
[28] Department for Communities and Local Government. (2019). *National Planning Practice Guidance*. DCLG, London.
[29] Greater London Authority (March 2021) The London Plan The Spatial Development Strategy for Greater London

b) *identify areas of deficiency in access to nature (i.e. areas that are more than 1km walking distance from an accessible Metropolitan or Borough SINC) and seek opportunities to address them;*

c) *support the protection and conservation of priority species and habitats that sit outside the SINC network, and promote opportunities for enhancing them using Biodiversity Action Plans;*

d) *seek opportunities to create other habitats, or features such as artificial nest sites, that are of particular relevance and benefit in an urban context; and*

e) *ensure designated sites of European or national nature conservation importance are clearly identified and impacts assessed in accordance with legislative requirements.*

- *Where harm to a SINC is unavoidable, and where the benefits of the development proposal clearly outweigh the impacts on biodiversity, the following mitigation hierarchy should be applied to minimise development impacts:*
- *avoid damaging the significant ecological features of the site;*

f) *minimise the overall spatial impact and mitigate it by improving the quality or management of the rest of the site; and*

g) *deliver off-site compensation of better biodiversity value.*

- *Development proposals should manage impacts on biodiversity and aim to secure net biodiversity gain. This should be informed by the best available ecological information and addressed from the start of the development process.*
- *Proposals which reduce deficiencies in access to nature should be considered positively.*

Mayor of London: Environment Strategy, 2018

The London Environment Strategy, 2018[30] compliments the London Plan. It sets out how London's biodiversity can be protected and enhanced and contains a list of Priority Habitats and Species within the city. Priority species (SAPs) and habitats (HAPs) related to the Site are listed below:

- *Birds, house sparrow, and bats (SAPs);*
- *Rivers and Streams (HAPs).*

The relevant policy within the strategy is Policy 5.2.1 'Protect a core network of nature conservation sites and ensure a net gain in biodiversity'.

Local Planning Policy

London Borough of Richmond upon Thames: Local Plan, adopted 2018 and 2020

LBRuT will set out policies and guidance for the development of the borough over the next 15 years. It looks ahead to 2033 and identifies where the main developments will take place, and how places within the borough will change, or be protected from change, over that period. The following strategic visions, objectives and policies within the final draft of the Local Plan are of relevance to biodiversity:

Policy LP 12 'Green Infrastructure' states:

"Green infrastructure is a network of multi-functional green spaces and natural elements, which provides multiple benefits for people, nature and the economy.

A) *To ensure all development proposals protect, and where opportunities arise enhance, green infrastructure, the following will be taken into account when assessing development proposals:*

[30] Mayor of London (2018) London Environment Strategy

- *the need to protect the integrity of the green spaces and assets that are part of the wider green infrastructure network; improvements and enhancements to the green infrastructure network are supported;*
- *its contribution to the wider green infrastructure network by delivering landscape enhancement, restoration or re-creation;*
- *incorporating green infrastructure features, which make a positive contribution to the wider green infrastructure network*

B) *The hierarchy of open spaces, as set out in the table below (*refer to original document*), will be protected and used in accordance with the functions shown."*

Policy LP 15 'Biodiversity' states:

"A) The Council will protect and enhance the borough's biodiversity, in particular, but not exclusively, the sites designated for their biodiversity and nature conservation value, including the connectivity between habitats. Weighted priority interms of their importance will be afforded to protected species and priority species and habitats including National Nature Reserves, Sites of Special Scientific Interest (SSSI) and Other Sites of Nature Importance as set out in the Biodiversity Strategy for England, and the London and Richmond upon Thames Biodiversity Action Plans. This will be achieved by:

1) *protecting biodiversity in, and adjacent to, the borough's designated sites for biodiversity and nature conservation importance (including buffer zones), as well as other existing habitats and features of biodiversity value;*
2) *supporting enhancements to biodiversity;*
3) *incorporating and creating new habitats or biodiversity features, including trees, into development sites and into the design of buildings themselves where appropriate; major developments are required to deliver net gain for biodiversity, through incorporation of ecological enhancements, wherever possible;*
4) *ensuring new biodiversity features or habitats connect to the wider ecological and green infrastructure networks and complement surrounding habitats;*
5) *enhancing wildlife corridors for the movement of species, including river corridors, where opportunities arise; and*
6) *maximising the provision of soft landscaping, including trees, shrubs and other vegetation that support the borough-wide Biodiversity Action Plan.*

B) Where development would impact on species or a habitat, especially where identified in the relevant Biodiversity Action Plan at London or local level, or the Biodiversity Strategy for England, the potential harm should:

1) *firstly be avoided (the applicant has to demonstrate that there is no alternative site with less harmful impacts);*
2) *secondly be adequately mitigated; or*
3) *as a last resort, appropriately compensated for."*

Policy LP 17 'Green Roofs and Walls' states:

1) *"Green roofs and / or brown roofs should be incorporated into new major developments with roof plate areas of 100sqm or more where technically feasible and subject to considerations of visual impact. The aim should be to use at least 70% of any potential roof plate area as a green / brown roof.*

2) *The onus is on an applicant to provide evidence and justification if a green roof cannot be incorporated. The Council will expect a green wall to be incorporated, where appropriate, if it has been demonstrated that a green / brown roof is not feasible.*

3) *The use of green / brown roofs and green walls is encouraged and supported in smaller developments, renovations, conversions and extensions."*

London Borough of Richmond upon Thames: Supplementary Planning Documents and Guidance

A series of Supplementary Planning Guidance (SPG) and Supplementary Planning Documents (SPDs) has been produced by LBRuT to provide greater detail on existing local planning policies to support decisions on planning applications. LBRuT no longer produces SPGs as they have been replaced with SPDs since 2004. However, they remain material considerations in planning decisions. With regards to biodiversity, a SPG titled 'Nature Conservation and Development'[31] has been published by LBRuT. This SPG states:

i. *"It is important that nature conservation should be integrated at the planning stage with all new development. Schemes should be designed to retain existing features and habitats of wildlife value on site, and to create new habitats where appropriate."*

Currently, the only parts of the UDP that remain saved and have not been superseded are those Proposal sites that were originally saved. The eastern part of the Site is allocated on the Proposals Map as site S4 (Budweiser Stag Brewery)[32].

The LBRuT adopted a planning brief for the Site in July 2011 with SPD[33] status. This document sets out opportunities and constraints regarding the redevelopment of the Site. With regard to biodiversity, this SPD states:

"Opportunities should be taken to enhance biodiversity throughout the site and particularly along the River."

Action Plans

UK Post-2010 Biodiversity Framework

The Environment Departments of all four governments in the UK work together through the Four Countries Biodiversity Group. Together they have agreed, and Ministers have signed, a framework of priorities for UK-level work for the Convention on Biological Diversity. Published on 17 July 2012, the 'UK Post-2010 Biodiversity Framework'[34] covers the period from 2011 to 2020. This now supersedes the UK Biodiversity Action Plan (UK BAP)[35]. However, many of the tools developed under UK BAP remain of use, for example, background information about the lists of priority habitats and species. The lists of priority species and habitats agreed under UK BAP still form the basis of much biodiversity work in the countries.

Although the UK Post-2010 Biodiversity Framework does not confer any statutory legal protection, in practice many of the species listed already receive statutory legal protection under UK and / or European

[31] London Borough of Richmond upon Thames (no-date); 'Design Guidelines for Nature Conservation & Development'.
[32] London Borough of Richmond upon Thames (2005); 'Unitary Development Plan. Chapter 12 – Local Strategies and Plan Proposals'.
[33] London Borough of Richmond upon Thames (2011); 'Stag Brewery, Mortlake, SW14 Planning Brief. Supplementary Planning Guidance'.
[34] JNCC and DEFRA (on behalf of the Four Countries' Biodiversity Group). (2012). UK Post-2010 Biodiversity Framework.
[35] HMSO. (1994) Biodiversity The UK Action Plan.

legislation. In addition, the majority of Priority national (English) BAP habitats and species are now those listed as Habitats of Principal Importance (HoPI) and Species of Principal Importance (SoPI) in England listed under Section 41 (S41) of the NERC Act 2006. For the purpose of this report, habitats and species listed under S41 of the NERC Act are referred to as having superseded the UK BAP. All public bodies have a legal obligation or 'biodiversity duty' under Section 40 of the NERC Act 2006 to conserve biodiversity by having particular regard to those species and habitats listed under S41.

Based on the results of the PEA the following HoPIs and SoPIs listed under S41 are considered to be of potential value on and/or immediately adjacent to the Site:

- Birds, House Sparrow, Bats (SoPI);
- Rivers and Streams (HoPI);
- Noctule bat (SoPI);
- Soprano pipistrelle bat *Pipistrellus pygmaeus* (SoPI);
- Starling *Sturnus vulgaris* (SoPI).

Regional Biodiversity Action Plan (London Environment Strategy)

Regionally, the Site is covered by the London Environment Strategy (LES), this strategy is also adopted by the LPA as its local BAP. The LES covers greater London and was published in May 2018. The strategy includes a list of priority species and habitats. Priority species (SAPs) and habitats (HAPs) related to the Site are listed below:

- Birds, House Sparrow, Bats (SAP);
- Rivers and Streams (HAPs).

Richmond Biodiversity Action Plan

At a local level, the Site is covered by the London Borough of Richmond upon Thames (LBRuT)[36]. This document identifies habitats and species of importance locally and contains local targets relevant for planning and mitigation within Haringey.

Based on the results of the PEA a number of LBAP priority species (SAPs) and habitats (HAPs) are considered to be of potential value on and/or immediately adjacent to the Site, including:

- Tidal Thames (HAP);
- House sparrow (SAP).
- Song thrush (SAP)
- Swift (SAP)
- Stag beetle (SAP)

Guidance

Biodiversity 2020: A strategy for England's wildlife and ecosystem services

In October 2010, over 190 countries signed an historic global agreement in Nagoya, Japan to take urgent and effective action to halt the alarming global declines in biodiversity. This agreement recognised just how important it is to look after the natural world. It established a new global vision for biodiversity, including a set of strategic goals and targets to drive action. England's response to this agreement was the publication

[36] Richmond Biodiversity Partnership (2019): 'London Borough of Richmond Upon Thames. Biodiversity Action Plan)

of ‘Biodiversity 2020: A strategy for England’s wildlife and ecosystem services’37. The mission for this strategy is:

- *“to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people.”*

BS 42020: 2013 Biodiversity: Code of Practice for Planning and Development

The UK commitment to halt overall loss of biodiversity by 2020 in line with the European Biodiversity Strategy and UN Aichi targets38, is passed down to local authorities to implement, mainly through planning policy. To assist organizations affected by these commitments, BSI has published BS 42020 which offers a coherent methodology for biodiversity management.

This British Standard sets out to assist those concerned with ecological issues as they arise through the planning process in matters relating to permitted development and activities involved in the management of land outside the scope of land use planning, which could have site-specific ecological implications.

The standard has been produced with input from a number of organisations including the Chartered Institute of Ecology and Environmental Management (CIEEM) and the Association of Local Government Ecologists (ALGE) and provides:

- Guidance on how to produce clear and concise ecological information to accompany planning applications;
- recommendations on professional ethics, conduct, competence and judgement to give confidence that proposals for biodiversity conservation, and consequent decisions/actions taken, are sound and appropriate; and
- direction on effective decision-making in biodiversity management a framework to demonstrate how biodiversity has been managed during the development process to minimize impact.

[37] Defra. (2011) Biodiversity 2020: A strategy for England’s wildlife and ecosystem services.

[38] https://www.cbd.int/sp/targets/

B. Landscape Design

P10736-00-004 Stag Brewery Planning Application

Urban Greening Factor Calculator - Application B (school only)				
Surface Cover Type	**Factor**	**Area (m²)**	**Contribution**	**Notes**
Semi-natural vegetation (e.g. trees, woodland, species-rich grassland) maintained or established on site.	1	417	417	
Wetland or open water (semi-natural; not chlorinated) maintained or established on site.	1		0	
Intensive green roof or vegetation over structure. Substrate minimum settled depth of 150mm.	0.8		0	
Standard trees planted in connected tree pits with a minimum soil volume equivalent to at least two thirds of the projected canopy area of the mature tree.	0.8	3204	2563.2	
Extensive green roof with substrate of minimum settled depth of 80mm (or 60mm beneath vegetation blanket) – meets the requirements of GRO Code 2014.	0.7		0	
Flower-rich perennial planting.	0.7	387	270.9	
Rain gardens and other vegetated sustainable drainage elements.	0.7		0	
Hedges (line of mature shrubs one or two shrubs wide).	0.6	108	64.8	
Standard trees planted in pits with soil volumes less than two thirds of the projected canopy area of the mature tree.	0.6		0	
Green wall –modular system or climbers rooted in soil.	0.6		0	
Groundcover planting.	0.5		0	
Amenity grassland (species-poor, regularly mown lawn).	0.4	1705	682	
Extensive green roof of sedum mat or other lightweight systems that do not meet GRO Code 2014.	0.3		0	
Water features (chlorinated) or unplanted detention basins.	0.2		0	
Permeable paving.	0.1	8895	889.5	
Sealed surfaces (e.g. concrete, asphalt, waterproofing, stone).	0	10296	0	
Total contribution			**4887.4**	
Total site area (m²)			21809	
Urban Greening Factor			**0.224100142**	

C. Baseline Condition Assessment

Habitat	Condition	Justification
Developed land, sealed surface	N/A	Artificial habitats such as this do not require a condition assessment.
Introduced shrub	Poor	This habitat does not require a condition assessment as part of the Metric.
Urban trees	Moderate	Tree passes 3 out of 6 condition assessment criteria. Less than 70% of the trees are native species, there are no microhabitats and trees are not close to other vegetation. more than 50% of the trees have mature status and tree canopy is continuous.
Urban trees	Poor	Tree passes 2 out of 6 condition assessment criteria. Less than 70% of the trees are native species, there are no microhabitats, trees are not close to other vegetation and tree canopy is not continuous.
Modified grassland	Poor	Grassland fails 6 of the 7 criteria, the grassland does not have 6-8 species per m^2 is regularly mown and contains no bare ground.
Line of trees	Moderate	This habitat fails 1 of the 5 criteria whereby there is no undisturbed vegetated strip of 6m on both sides to protect the line of trees. However, trees are > 70% native, with a continuous canopy and in healthy condition.
Line of trees	Poor	This habitat fails 2 of the 5 criteria whereby there is no undisturbed vegetated strip of 6m on both sides to protect the line of trees and there is evidence of damage from human activity.

D. Habitat Creation Condition Assessment

Habitat	Condition	Justification
Artificial unvegetated, unsealed surface	N/A	Artificial habitats such as this do not require a condition assessment.
Developed land; sealed surface	N/A	Artificial habitats such as this do not require a condition assessment.
Urban tree	Moderate	In line with the management plan it is assumed that urban trees are likely to satisfy 3 criteria. Although unlikely to contain 50% mature or veteran trees. Due to the public use of the area, trees are likely to be highly managed with little presence of deadwood or cavities for wildlife. Trees however are likely to overhang vegetation beneath, and more than 70% are native species.
Modified grassland	Poor	Grassland planted for amenity space is likely to fail 6 of the 7 criteria, the grassland is unlikely to have 6-8 species per m^2 would be regularly mown and would contain no bare ground. A worst-case scenario approach adopted.
Other neutral grassland	Moderate	In line with the management plan it is assumed that grassland would achieve 4 out of the 5 criteria and likely to fail on the presence of bare ground.
Vegetated garden	Poor	This habitat does not require a condition assessment as part of the Metric.
Native hedgerow	Moderate	This habitat is likely to reach moderate condition in line with the management plan however likely to fail on gaps between the hedge base and canopy. A worst case scenario approach is adopted.
Hedge ornamental non native	Poor	This habitat does not require a condition assessment as part of the Metric.

E. Completed Biodiversity Metric 3.0 Calculation Tool Headline Results

Stag Brewery - Application B

Headline Results

Return to results menu

On-site baseline	*Habitat units*	3.61
	Hedgerow units	0.42
	River units	0.00
On-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	1.61
	Hedgerow units	0.57
	River units	0.00
On-site net % change (Including habitat retention, creation & enhancement)	*Habitat units*	-55.55%
	Hedgerow units	35.82%
	River units	0.00%
Off-site baseline	*Habitat units*	0.00
	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	0.00
	Hedgerow units	0.00
	River units	0.00
Total net unit change (including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	-2.01
	Hedgerow units	0.15
	River units	0.00
Total on-site net % change plus off-site surplus (including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	-55.55%
	Hedgerow units	35.82%
	River units	0.00%
Trading rules Satisfied?		No - Check Trading Summary