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# Biodiversity Net Gain

## Waldegrave Mews

eight  
associates

+44 (0)207 0430 418

[www.eightassociates.co.uk](http://www.eightassociates.co.uk)  
[info@eightassociates.co.uk](mailto:info@eightassociates.co.uk)

### Document prepared for

Sam Sclater-Brooks  
MAA Architects  
The Boathouse Design Studio  
27 Ferry Road  
Teddington  
TW11 9NN

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### Document prepared by

Philippa Nicholls

### Quality assured by

Gemma Golding / Stacey Cougill

### Disclaimer

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# Executive Summary

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### Overview

Eight Associates has been commissioned by MAA Architects to carry out a Biodiversity Net Gain (BNG) Calculation for the proposed Waldegrave Mews development in the London Borough of Richmond upon Thames.

Using the Defra Biodiversity Metric 3.0 Calculator, the net biodiversity balance for the site was found to be a 639% net increase.

This is above the required value of 10% BNG that is proposed in The Environment Bill, which is currently going through Parliament, as a condition of planning permission in England (Schedule 14, Section 92). Habitats in the proposed plans of this development that contribute to this score include an extensive green roof, flower-rich perennial planting, hedgerows and green walls. These proposed habitats will significantly improve the predominantly hardstanding and building infrastructure present prior to development.

The Phase 1 Habitat Plan, showing the habitats present prior to development, can be found in Appendix A. Current proposals consist of a comprehensive redevelopment of the site including demolition of the existing single storey rear buildings to provide 16 new 1-bed apartments. 189 Waldegrave Road will be replaced with a new mixed-use building providing employment space on the ground floor with a 2-bed maisonette unit above. Post-development Landscape Plans can be found in Appendix B.

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# Introduction and Methodology

## Biodiversity Net Gain

### Waldegrave Mews

#### Introduction

Eight Associates has been commissioned by MAA Architects to carry out a Biodiversity Net Gain (BNG) Calculation for the proposed Waldegrave Mews development in the London Borough of Richmond upon Thames. This report provides evidence of the calculation and recommendations on how to improve the overall BNG score in response to the specific requirements of the development (where required).

#### Site Description

The site currently comprises building, hardstanding, bare ground, amenity grassland, tall ruderal vegetation and ephemeral/short perennial vegetation, with a line of broadleaf trees adjacent to the west boundary of the site. The site is bounded by residential buildings, mixed-use buildings (comprising local shops, services and restaurants with upper floor residential units and gardens) and Shacklegate Lane to the north, a railway line to the west, Waldegrave Road to the east and mixed-use commercial and residential buildings with gardens to the south. Prior to any work being carried out on site, the site was deemed to have low ecological value. The site covers an area of approximately 0.12ha, and the National Grid Reference (NGR) for the centre of the site is TQ 15550 71670 with postcode TW11 8LX.

#### Building Proposals

Current proposals consist of a comprehensive redevelopment of the site including demolition of the existing single storey rear buildings to provide 16 new 1-bed apartments. 189 Waldegrave Road will be replaced with a new mixed-use building providing employment space on the ground floor with a 2-bed maisonette unit above. Proposed habitat types on the completed site comprise buildings, permeable paving, an extensive green roof, amenity grassland, flower-rich perennial planting, hedgerows and green walls. The Landscape Plan of the scheme can be found in Appendix A.

#### Biodiversity Net Gain

Biodiversity Net Gain (BNG) is defined as “development that leaves biodiversity in a better state than before, and an approach where developers work with local governments, wildlife groups, landowners and other stakeholders in order to support their priorities for nature conservation” (Baker, 2016). The purpose is to encourage developers to provide an increase in natural habitat and ecological features over and above that being affected by proposals with an aim to halt the current loss of biodiversity through development to allow ecological networks to be restored.

The National Planning Policy Framework (NPPF) (2021) recommends Local Planning Authorities (LPAs) should seek a net gain for biodiversity when assessing any new planning applications.

In addition, The Environment Bill, which is currently going through Parliament, will introduce a requirement for BNG as a condition of planning permission in England (Schedule 14, Section 92). It is expected that the biodiversity value attributable to the development will need to exceed the pre-development biodiversity value of the on-site habitat by at least 10%

#### Methodology for the Biodiversity Net Gain Calculation

The Natural England ‘Biodiversity Metric 3.0 (Beta Version)’ is a recent update on the Defra Biodiversity Metric which has been commonly used in the UK in the past. The Biodiversity Metric 3.0 provides a way of measuring and accounting for biodiversity losses and gains resulting from development and has been used within this report. Natural England provides a spreadsheet-based calculator for Biodiversity Metric 3.0, which has been used to complete the calculation within this report.

# Calculation

## Biodiversity Net Gain

### Waldegrave Mews

#### On-site habitat baseline

Habitats and areas			Distinctiveness		Condition		Strategic significance			Suggested action to address habitat losses	Ecological baseline
Broad habitat	Habitat type	Area (hectares)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic Significance multiplier		Total habitat units
Urban	Developed land; sealed surface	0.0684	V.Low	0	N/A – Other	0	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Compensation Not Required	0.00
Urban	Developed land; sealed surface	0.0682	V.Low	0	N/A – Other	0	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Compensation Not Required	0.00
Grassland	Modified grassland	0.0016	Low	2	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required	0.00
Urban	Artificial unvegetated, unsealed surface	0.0041	V.Low	0	N/A – Other	0	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Compensation Not Required	0.00
Sparsely vegetated land	Ruderal/Ephemeral	0.0043	Low	2	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required	0.02
Sparsely vegetated land	Ruderal/Ephemeral	0.0012	Low	2	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required	0.00
<b>Total</b>		<b>0.1478*</b>									<b>0.03</b>

\* Please note, the total area is larger than the actual area of the site (0.12ha) due to the vertical area of the green wall habitat increasing the total area figure for on-site habitat creation. Therefore, area was added to the 'Developed land; sealed surface' habitat in the baseline habitats to ensure pre-development habitat areas and post-development habitat areas were equal in order to allow the calculation of the BNG score.

# Calculation

## Biodiversity Net Gain

### Waldegrave Mews

#### On-site habitat creation

Proposed habitat	Area (hectares)	Distinctiveness	Condition	Strategic significance	Standard or adjusted time to target condition	Final time to target condition/years	Final difficulty of creation	Habitat units delivered
Developed land; sealed surface	0.0584	V.Low	N/A – Other	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	0	Medium	0.00
Developed land; sealed surface	0.0447	V.Low	N/A – Other	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	0	Medium	0.00
Extensive green roof	0.0250	Low	Good	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	5	Low	0.13
Ground based green wall	0.0113	Low	Moderate	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	3	Medium	0.03
Modified grassland	0.0009	Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.00
Ruderal/Ephemeral*	0.0061	Low	Moderate	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	3	Low	0.02
Mixed scrub	0.0015	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	5	Low	0.01
<b>Total</b>	<b>0.1478**</b>							<b>0.19</b>

\* This habitat type was selected to represent the proposed flower-rich perennial planting habitat because the specific planting plan had not been confirmed by the landscape architects at the time of production of this report. Consequently, this habitat type and/or condition, and subsequently the BNG score for this development, may change upon confirmation of the planting plan.

\*\* Please note, the total area is larger than the actual area of the site (0.12ha) due to the vertical area of the green wall habitat increasing the total area figure for on-site habitat creation. Therefore, area was added to the 'Developed land; sealed surface' habitat in the baseline habitats to ensure pre-development habitat areas and post-development habitat areas were equal in order to allow the calculation of the BNG score.

# Calculation

## Biodiversity Net Gain

### Waldegrave Mews

#### Summary

<b>Net project biodiversity units</b> (including all on-site & off-site habitat retention/creation)	Habitat units	0.16
	Hedgerow units	0.00
	River units	0.00

<b>Total project biodiversity % change</b> (including all on-site & off-site habitat retention/creation)	Habitat units	639%
	Hedgerow units	0.00%
	River units	0.00%

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# Evaluation and Conclusion

## Biodiversity Net Gain

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A BNG calculation was completed for the proposed Waldegrave Mews development, located in the London Borough of Richmond upon Thames.

Using the Defra Biodiversity Metric 3.0 Calculator, the net biodiversity balance for the site was found to be a 639% net increase in habitats.

This is above the required value of 10% BNG that is due to be set out in The Environment Bill, which is currently going through Parliament, as a condition of planning permission in England (Schedule 14, Section 92). Habitats in the proposed plans of this development that contribute to this score include extensive green roof, green wall, hedgerow and flower-rich perennial planting. These proposed habitats will significantly improve the hardstanding and building infrastructure predominantly present prior to development.

# Validation

## Biodiversity Net Gain

### Waldegrave Mews

#### Report produced by Philippa Nicholls

Ecologist's Qualifications:	MSc – Conservation BA – Biological Sciences
Evidence of practicing Ecologist	Eight Associates, Assistant Ecologist, conducting habitat and protected species surveys (present); London Wildlife Trust, Technical Assistant, assisted in the production of Biodiversity Net Gain and Urban Greening Factor reports (2018–2019).

#### Report reviewed by Gemma Golding

Ecologist's Qualifications:	WML–CL08 Natural England Class Survey Licence (CLS) for great crested newt MSc – Ecology and Evolutionary Biology BSc – Zoology
Evidence of practicing Ecologist	Eight Associates, Ecologist and Sustainability Consultant, conducting habitat and protected species surveys (2019 to present date); Atkins, Assistant Ecologist. habitat and protected species surveys (2018 – 2019); Jacobs, Seasonal Ecologist, protected species surveys (2018).

#### Report verified by Stacey Cougill

Ecologist's Qualifications:	BSc – Environmental Science MSc – Conservation Biology UCert – Species Identification and Biological Recording
Evidence of practicing Ecologist	Eight Associates, Sustainability Consultant specialising in Ecology (2011 to present date), Open University, iSpot, Biodiversity Mentor (2009 – 2012) and Westminster City Council, Biodiversity Project Manager (2007–2010).
Professional Code of Conduct	I am a full member of the Chartered Institute of Ecology and Environmental Management.

#### Validation

I confirm the information provided in this document is truthful and accurate at the time of completion.

Suitably Qualified Ecologist	Stacey Cougill
Signature of Ecologist	SC
Date	01/10/2021



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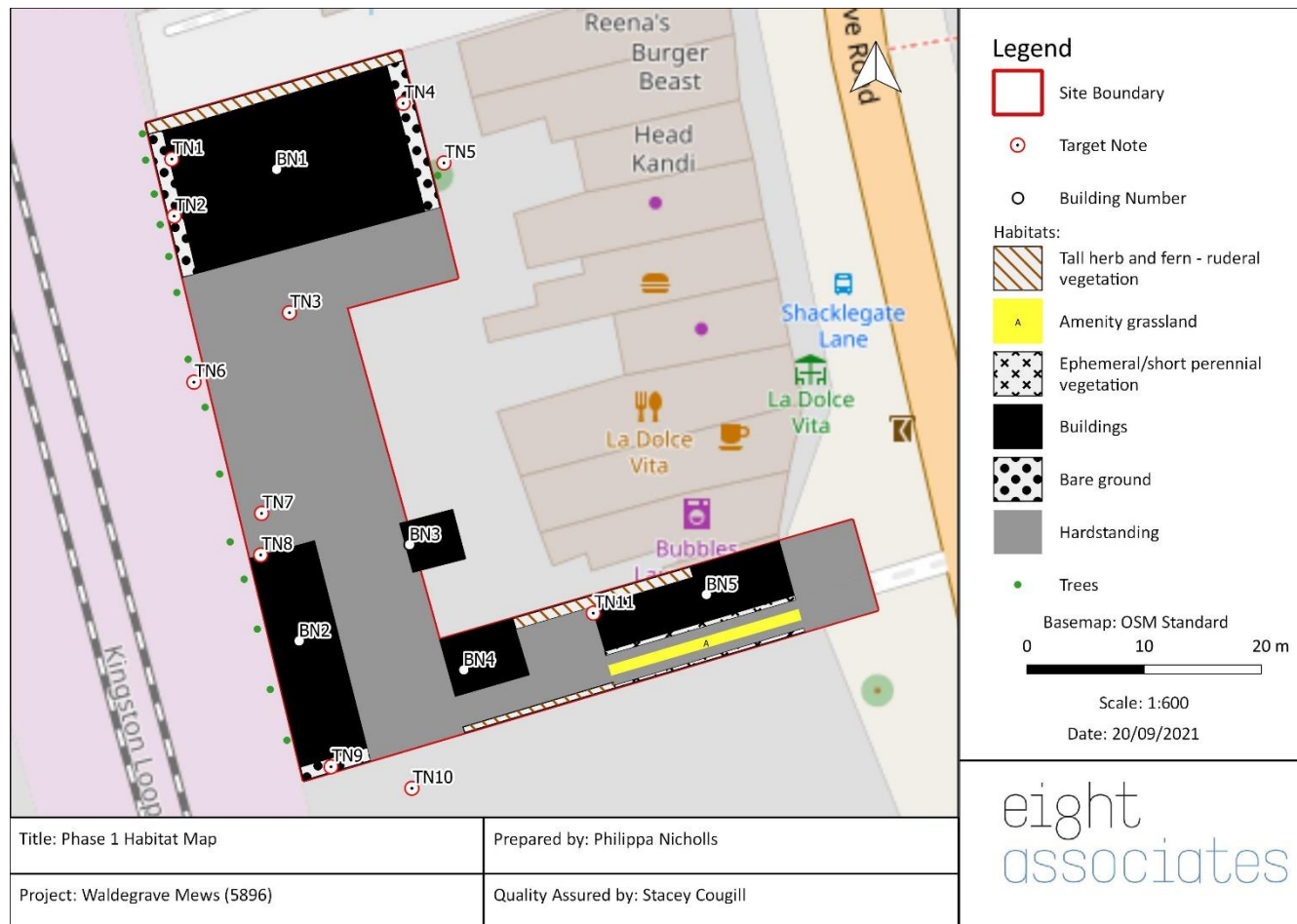
# References

## Biodiversity Net Gain

### Waldegrave Mews

Document	Reference
Biodiversity Net Gain: Good Practice Principles for Development	Baker, Julia. (2016). Biodiversity Net Gain: Good Practice Principles for Development. 10.13140/RG.2.2.24841.85608.
The Biodiversity Metric 3.0 (JP039)	Natural England (2021) The Biodiversity Metric 3.0 (JP039). Information on the metric can be found at <a href="http://publications.naturalengland.org.uk/publication/6049804846366720">http://publications.naturalengland.org.uk/publication/6049804846366720</a> [last accessed on date of issue]
Biodiversity Metric 3.0 Calculator Tool	The Biodiversity Metric 3.0 – Calculation Tool. This can be found at <a href="http://publications.naturalengland.org.uk/publication/6049804846366720">http://publications.naturalengland.org.uk/publication/6049804846366720</a> [last accessed on date of issue]
The National Planning Policy Framework (2021)	Ministry of Housing, Communities & Local Government (2021) National Planning Policy Framework. This can be found at <a href="https://www.gov.uk/government/publications/national-planning-policy-framework--2">https://www.gov.uk/government/publications/national-planning-policy-framework--2</a> [last accessed on date of issue]
Appendix A – Phase 1 Habitat Plan	Created by Philippa Nicholls using QGIS 3.8. Base map: OpenStreetMap, 2021. Contains OS data © Crown Copyright [OS Open Map – Local] (2021)
Appendix B – Landscape Plans	MAA Architects (2021) MA014_SitePlanGraphic_Flat

# Appendix A – Phase 1 Habitat Plan Biodiversity Net Gain Waldegrave Mews



# Appendix B – Landscape Plans

BREEAM 2014. Ecology

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