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Biodiversity Net Gain Assessment

FORMER ST AIDAN'S CHURCH

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Mr Jagraj Singh

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Summary

OS Ecology Ltd were commissioned by Mr Jagraj Sing to provide a Biodiversity Net Gain Assessment for the proposed development of the former St Aidan's Church land in South Shields. The site is proposed for residential development with associated infrastructure.

Summary	
Habitat Overview	The site comprises a large block of other neutral grassland with a varying sward height. The grassland appears to have been left unmanaged.
Irreplaceable Habitat ¹	There are no irreplaceable habitats within the site.
Strategic Significance	The site lies does not lie within any designated biodiversity and geodiversity, wildlife or green infrastructure network. The site does also not lie within a designated open greenspace or green belt boundary. Therefore, the site has been considered to be of low strategic significance.
Baseline Biodiversity Units	The following biodiversity units are associated with the baseline habitats: Habitat Units – 0.68
Limitations of Baseline Assessment	Habitat survey has been undertaken outside the core botanical survey period. As such, at this stage, a precautionary assessment has been completed regarding habitat type and condition. Further survey is required during the optimum survey period to confirm the habitat type and condition and the number of baseline biodiversity units.
Target Biodiversity Units ²	To meet the Biodiversity Gain Objective of a 10% or greater gain in biodiversity units, measured against the baseline units, post-development the following number of biodiversity units is required within each element of the statutory metric: Habitat Units – 0.78
Post Development Net Unit Change (On-Site)	The development proposals result in an on-site net change of -0.61 habitat units (-90.29%).
Combined Net Unit Change	Proposals result in a combined net unit change of -0.61 habitat units (-90.29%). The 10% gain objective has not been met and purchase of additional units from an off-site provider is proposed (see below).
Trading Rules ³	The loss of the medium distinctiveness other neutral grassland requires compensation through habitat units of the same habitat type or a higher distinctiveness habitat. This is not feasible on site and the trading rules have not been met regarding this habitat type. To meet the trading rules the following additional units are required: Other Neutral Grassland: 0.68 Units

¹ As defined within The Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024

² Under the statutory framework for biodiversity net gain, every grant of planning permission is deemed to have been granted subject to a general biodiversity gain condition to secure the biodiversity gain objective. This objective is to deliver at least a 10% increase in relation to the pre-development biodiversity value of the development granted permission.

³ The metric trading rules set minimum habitat creation and enhancement requirements to compensate for specific habitat losses, up to the point of no net loss. They are based on the habitat type and distinctiveness of the lost habitat.

Summary	
Biodiversity Gain Hierarchy ⁴ (Step 1)	Avoiding Adverse Effects on Higher Distinctiveness Habitats Site design does not allow for the retention of any habitats.
Biodiversity Gain Hierarchy (Step 2)	Mitigating Adverse Effects There are no habitats within the site to be retained. Adjacent land comprised hard standing and existing houses as such no measures to buffer adjacent habitats are required.
Biodiversity Gain Hierarchy (Step 3)	Enhancement of On-Site Habitats All habitats on site are to be lost and as such no enhancement is proposed.
Biodiversity Gain Hierarchy (Step 4)	Creation of On-Site Habitats The following on-site habitat creation is proposed: • Vegetated garden: 0.034ha • Developed Land, Sealed Surface: 0.138ha • Artificial Unvegetated, Unsealed Surface: 0.008ha
Biodiversity Gain Hierarchy (Step 5)	Consideration of Off-site Biodiversity Gain To meet the 10% gain objective/satisfy the trading rules, it is proposed to purchase the following additional units: • Other Neutral Grassland: 0.68 units.
Biodiversity Gain Hierarchy (Step 6)	Biodiversity Credits The 10% gain objective can be met through the measures detailed above and the purchase of biodiversity credits is not required.

⁴ As set out in Article 30A of the Development Management Procedure Order

1. Introduction

- 1.1 OS Ecology Ltd were commissioned by Mr Jagraj Singh to provide a Biodiversity Net Gain Assessment for a proposed development on land at the former St Aidans Church.

Site Location

- 1.1 The site is located in South Shields at an approximate central grid reference of NZ 36810 67614. The site location is illustrated within figure 1 in the appendices.

Site Description

- 1.2 The site is approximately 0.18ha in size and comprises a parcel of grassland that lies between residential housing and roads.

Objectives of the Study

- 1.3 The objectives of this report are:
- To assess and map the habitats present within the proposed development area using the UK Habitat Classification⁵ criteria.
 - To calculate the baseline 'Biodiversity Units' using Natural England's Statutory Biodiversity Metric⁶.
 - To use the above metric to assess the anticipated change in biodiversity resulting from the proposed development.

Development Proposals

- 1.4 It is proposed to develop the site for residential use with associated landscaping.

⁵ UKHab Ltd (2023) UK Habitat Classification Version 2.0 (at <http://www.ukhab.org>)

⁶ Department for Environment Food and Rural Affairs, The Statutory Biodiversity Metric User Guide, Updated July 2024

2. Methodology

Scope of Study

- 2.1 This study utilises the Natural England's Statutory Biodiversity Metric⁷ to provide a measure of the existing biodiversity value of the proposed development site and of the anticipated change in biodiversity units resulting from the development proposals.

Assessment of Baseline Conditions

Desk Study

- 2.2 A desk study has been undertaken to determine the 'strategic significance' of each habitat parcel within the site. Strategic significance is defined as the local significance of the habitat based on its location and the habitat type⁷.
- 2.3 Where a Local Nature Recovery Strategy (LNRS) has been published, a habitat parcel is considered of high strategic significance if the location of the habitat parcel has been mapped in the Local Habitat Map and the intervention proposed is consistent with the potential measure proposed within the strategy for that location. If these criteria are not met the habitat parcel is classed as being of low strategic significance.
- 2.4 Where a LNRS has not yet been published, strategic significance is assigned based on alternative documents specified by the local planning authority.

Habitat Mapping

- 2.5 The proposed development site was mapped as different habitat types using the habitat classifications detailed within the UK Habitat Classification User Manual⁸.
- 2.6 Habitat maps were digitised and area calculations for each UK Habitat Classification habitat type present within the site were undertaken using QGIS.
- 2.7 Where present, the area of individual trees was calculated using the 'tree helper' embedded within the metric. This tool calculates the total area for the number of trees within each size class and condition state, based on diameter at breast height as per the following table⁷.

Table 2.1: Tree Size Classes and Area Equivalents		
Size Class	Diameter at Breast Height (cm)	Biodiversity Metric Area Equivalent (ha)
Small	> 7.5cm and ≤ 30cm	0.0041
Medium	> 30cm and ≤ 60cm	0.0163
Large	> 60cm and ≤ 90cm	0.0366
Very Large	> 90cm	0.0765

⁷ Department for Environment Food and Rural Affairs, The Statutory Biodiversity Metric User Guide, Updated July 2024

⁸ UKHab Ltd (2023) UK Habitat Classification Version 2.0 (at <http://www.ukhab.org>)

2.8 Area measurements are provided in hectares with linear features measured in kilometres.

2.9 The survey was undertaken on the 30th October 2025 in the following weather conditions:

Table 2.2: Survey Conditions				
Date	Temperature	Cloud Cover	Precipitation	Wind Conditions
30.10.2025	9°C	25%	Dry	WF0

Condition Assessment

2.10 Each area of habitat was assigned a condition score based on the relevant statutory biodiversity metric condition assessment as per the Statutory Biodiversity Metric User Guide⁹.

2.11 Habitat parcels are assigned one of three categories: Good, Moderate or Poor. If condition varies across an area of the same habitat type, the habitat will be split into separate parcels, each assigned a different condition category.

2.12 Certain habitat categories are allocated a fixed condition score and do not need the condition assessed as per the User Guide⁹.

2.13 Where appropriate, completed habitat condition sheets for each parcel of habitat are provided within the appendices.

Use of the Calculation Tool

2.14 The Statutory Biodiversity Metric Calculation Tool is used to calculate biodiversity units for the existing baseline.

2.15 Habitat type, area (ha), strategic significance and condition score as calculated above are entered into the metric for each parcel of habitat present.

2.16 The metric assigns a 'Distinctiveness' category and score to each habitat parcel.

2.17 Based on the above information, the metric then calculates Biodiversity Units for each habitat parcel and a total number of Biodiversity Units for the proposed development area.

Limitations of Baseline Assessment

2.18 Habitat survey has been undertaken outside the core botanical survey period. As such, at this stage, a precautionary assessment has been completed regarding habitat type and condition. **Further survey is required during the optimum survey period to confirm the condition of the grassland and the number of baseline biodiversity units.**

Post Development Conditions

2.19 The areas of habitat to be retained within the proposed development are specified within the metric. Data is then entered into the metric with respect to enhanced habitats and new areas

⁹ Department for Environment Food and Rural Affairs, The Statutory Biodiversity Metric User Guide, Updated July 2024

of habitat to be created as part of the development, in the same way as for the baseline conditions.

- 2.20 The same criteria detailed above are input for each habitat parcel, as well as an additional criterion for any off-site creation/enhancement proposed. A spatial risk category is associated with any off-site works. This spatial risk category specifies whether the proposed off-site mitigation is within the same local authority as the proposed development site, within an adjacent local authority or beyond the neighbouring authority.
- 2.21 The metric tool automatically applies an appropriate difficulty level associated with each type of habitat creation proposed and a temporal category based on the likely time taken to reach the assigned target condition.
- 2.22 For habitat enhancement the metric identifies the change in distinctiveness and condition of the habitat. Full details are provided within the Statutory Biodiversity Metric User Guide¹⁰.

Biodiversity Metric Calculation

- 2.23 Once both the pre-development and post-development habitat calculations have been assessed, the metric provides the results in a range of tables and graphs. These highlight whether biodiversity losses or gains have been achieved based on pre and post development Biodiversity Units. The metric presents a total net unit change and a total net percentage change.

Personnel

- 2.24 Baseline habitat survey, condition assessment and biodiversity Net Gain assessment has been completed by Mandy Rackham MCIEEM FISC Level 4.

¹⁰ Department for Environment Food and Rural Affairs, The Statutory Biodiversity Metric User Guide, February 2024

3. On-Site Baseline Habitat Assessment

Desk Study Results

3.1 The site lies does not lie within any designated biodiversity and geodiversity, wildlife or green infrastructure network. The site does also not lie within a designated open greenspace or green belt boundary. Therefore, the site has been considered to be of low strategic significance.

On-Site Baseline Habitat Types and Condition Assessment

3.2 The following table details the results of the habitat survey of the proposed development site and assigns the relevant UK Habitat Classification to each parcel of habitat, the metric category to which this relates and the condition of the habitat. Full survey information is provided within the Preliminary Ecological Appraisal report for this site¹¹. Figures illustrating the habitat within the site are provided within the appendices with relevant condition assessment forms.

Table 3.1: On-Site Baseline Habitat Types (Habitat Module)				
Ref	Habitat Description	UK Habs. Category	Metric Category	Condition
1	A large block of other neutral grassland with a varying sward height. The grassland appears to have been left unmanaged.	G3c – other neutral grassland	Other Neutral grassland	Poor
				
2	A footpath comprising pavement slabs is present running up the western boundary of the site.	U1b – Developed Land, Sealed Surface	Developed land, Sealed Surface.	N/A

¹¹ 25476 EcIA, Former St Aidans Church, November 2025, OS Ecology

3.3 The following tables detail the condition assessment criteria for each habitat type and provide justification for whether these criteria are met. Criteria for each habitat type are provided within the appendices.

Table 3.2: Condition Assessment: Grassland (Medium, High and Very High Distinctiveness)								
Habitat Type	Parcel Ref.	Criteria						
		A	B	C	D	E	F	G
Other Neutral Grassland	1	No – characteristic species do not present in high proportions	Yes – sward height is varied across the parcel	Yes – bare ground between 1 and 5%	No - less than 1% scrub	No – sub optimal species more than 5%	No – less than 10sp/m2	Poor

On-Site Baseline Biodiversity Units

3.4 The following table details the baseline Biodiversity Units within the habitat module of the metric.

Table 3.3: On-Site Baseline Biodiversity Units (Habitat Module)									
Ref	Broad Habitat	Habitat Type	Irreplaceable Habitat	Area (hectares)	Distinctiveness	Condition	Strategic Significance	Required Action to Meet Trading Rules	Total habitat units
1	Grassland	Other Neutral Grassland	No	0.169	Medium	Poor	Low	Same broad habitat or a higher distinctiveness habitat required ($\geq$)	0.68
2	Urban	Developed Land, Sealed Surface	No	0.007	V. Low	N/A Other	Low	Compensation Not Required	0.00
Total Habitat Area:				0.18	Total Habitat Units:				0.68
Site Area (Excluding area of individual trees, green walls, intertidal hard structures):				0.18					

4. Proposed Post Development Habitats (On-Site)

On-Site Post Development – Baseline Habitat Retention Category

- 4.1 The following table details for each of the baseline habitat features on site the relevant retention category (retained, enhanced or lost) as a result of the proposed development. Where habitat is to be lost the number of Biodiversity Units to be lost is provided.

Table 4.1: On-Site Baseline Retention Category (Habitat Module)							
Ref	Habitat Type	Area retained	Area enhanced	Baseline units retained	Baseline units enhanced	Area habitat lost	Units lost
1	Other neutral grassland	0	0	0.00	0.00	0.17	0.68
2	Developed land; sealed surface	0	0	0.00	0.00	0.01	0.00
Total Units Lost:							0.68

Post Development – Habitat Enhancement (On-Site)

- 4.2 Given the nature of the existing site and the current development proposals, the existing habitats are anticipated to be lost and no habitat enhancement is proposed.

Post Development – Habitat Creation (On-Site)

- 4.3 The following table details the post development habitats proposed within the site and the metric category considered to match the proposed habitat types most closely.

Table 4.2: Proposed On-Site Post Development Habitats		
Habitat Type	Metric Category	Area.¹
Urban	Vegetated garden	0.034
Urban	Developed land; sealed surface	0.138
Urban	Artificial unvegetated, unsealed surface	0.008
1. Area measurements calculated on GIS package		

- 4.4 A figure illustrating the location of habitat creation proposals is provided within the appendices. The following table details each element of the habitat creation proposed, including the target condition, other criteria assigned by the metric and the associated biodiversity units delivered by each element.

Table 4.3: On-Site Units Delivered Through Habitat Creation (Habitat Module)

Proposed Habitat	Area (ha)	Distinctiveness	Condition	Strategic Significance	Time to target condition (years)	Difficulty of Creation	Biodiversity Units Delivered
Vegetated garden	0.034	Low	N/A	Low	1	Low	0.07
Developed land; sealed surface	0.138	V. Low	N/A - Other	Low	0	Low	0.00
Artificial unvegetated, unsealed surface	0.008	V. Low	N/A - Other	Low	0	Low	0.00
Habitat Units:							0.07

5. Net Gain Assessment

Biodiversity Gain Hierarchy

5.1 The following table summarises the Biodiversity Gain Hierarchy¹² and how the hierarchy has been applied in relation to this development proposal.

Table 5.1: Application of the Biodiversity Gain Hierarchy	
Biodiversity Gain Hierarchy ¹³ (Step 1)	Avoiding Adverse Effects on Higher Distinctiveness Habitats Site design does not allow for the retention of any habitats within the site.
Biodiversity Gain Hierarchy (Step 2)	Mitigating Adverse Effects There are no habitats within the site to be retained. Adjacent land comprised hard standing and existing houses as such no measures to buffer adjacent habitats are required.
Biodiversity Gain Hierarchy (Step 3)	Enhancement of On-Site Habitats All habitats within the site are to be lost and as such no enhancement is proposed.
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Biodiversity Gain Hierarchy (Step 5)	Consideration of Off-site Biodiversity Gain To meet the 10% gain objective/satisfy the trading rules, it is proposed to purchase the following additional units: • Other Neutral Grassland: 0.68 units
Biodiversity Gain Hierarchy (Step 6)	Biodiversity Credits The 10% gain objective can be met through the measures detailed above and the purchase of biodiversity credits is not required.

Change in Units

5.2 The following extract details the anticipated change in Biodiversity Units resulting from the proposed development, including the associated habitat creation/enhancement proposals. The full results broken down per habitat type, are detailed within the Statutory Biodiversity Metric Calculation Tool for this site which can be provided on request.

¹² As set out in Article 30A of the Development Management Procedure Order

¹³ As set out in Article 30A of the Development Management Procedure Order

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	<i>Habitat units</i>	-0.61
	<i>Hedgerow units</i>	0.00
	<i>Watercourse units</i>	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	<i>Habitat units</i>	-90.29%
	<i>Hedgerow units</i>	0.00%
	<i>Watercourse units</i>	0.00%
Trading rules satisfied?	No - Check Trading Summaries ▲	

- 5.3 Proposals result in a combined net unit change of -0.61 habitat units (-90.29%). The 10% gain objective has not been met and purchase of additional units from an off-site provider is proposed (see below).

Trading Rules

- 5.4 The loss of the medium distinctiveness habitat other neutral grassland requires compensation through habitat units of the same broad habitat type or a habitat of higher distinctiveness. This is not feasible on site, and the trading rules have not been met regarding this habitat type.

- 5.5 **To meet the trading rules the following additional units are required:**

- Other Neutral grassland: 0.68 Units

6. Recommended Next Steps

- 6.1 A Biodiversity Gain Plan will be required to satisfy the Biodiversity Net Gain pre-commencement condition. A template to be completed is provided on the government website¹⁴. This document demonstrates how BNG will be achieved and incorporates detail of any biodiversity units to be secured from third party providers and/or statutory credits to be purchased.

¹⁴ <https://www.gov.uk/government/publications/biodiversity-gain-plan>

Appendix 1: Condition Assessment Criteria

Condition Assessment: Grassland (Medium, High and Very High Distinctiveness)	
Condition Assessment Criteria	
A	The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type (and relative to Footnote 3 suboptimal species which may be listed in the UKHab description). ¹ Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens ² .
D	Cover of bracken <i>Pteridium aquilinum</i> is less than 20% and cover of scrub (including bramble <i>Rubus fruticosus</i> agg.) is less than 5%.
E	Combined cover of species indicative of suboptimal condition ³ and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species ⁴ (as listed on Schedule 9 of WCA ⁵) are present, this criterion is automatically failed.
F	There are 10 or more vascular plant species per m ² present, including forbs that are characteristic of the habitat type (species referenced in Footnote 3 and 5 cannot contribute towards this count). Note - this criterion is essential for achieving Good condition for non-acid grassland types only.
Passes 5 or 6 criteria, including essential criterion A and additional criterion F.	
Good (3)	
Passes 3 - 5 criteria, including essential criterion A.	
Moderate (2)	
Passes 2 or fewer criteria; OR Passes 3 or 4 criteria excluding criterion A and F.	
Poor (1)	

Appendix 2: Figures







