

Technical Briefing Note

Project: Land at Barnes Hospital (West), Richmond (1005222-05)

Technical Briefing Note: Biodiversity Net Gain Assessment

Date: 15 November 2021

1 Introduction

- 1.1.1 Aspect Ecology has been commissioned by Star Land Realty UK Ltd. in regard to ecological matters relating to the redevelopment of the site at Barnes Hospital (West), Richmond, London, centred at grid reference TQ 21210 75702 (see Plan 5222-05/ECO1), hereafter referred to as 'the site'.
- 1.1.2 During pre-application consultation, a Biodiversity Impact Assessment has been requested by London Borough of Richmond upon Thames Council (LBRUT) which has been carried out by Aspect Ecology Ltd in October 2021, and is reported here.
- 1.1.3 Outline Planning Permission ('OPP') was granted on 14th September 2020 for the redevelopment of the whole Barnes Hospital campus (ref. 18/3642/OUT), which comprised three development plots. However, the site will be brought forward on an individual site basis rather than through one outline permission and subsequent reserved matters. This planning application therefore relates only to the residential plot of the wider campus.
- 1.1.4 The revised proposals are for the demolition and redevelopment of the site, consisting of 109 new build residential units, the conversion of two of the retained buildings for use for up 3no. residential units (Use Class C3), car parking, bicycle storage and landscaping.
- 1.1.5 The site is located in west London, within the Borough of Richmond upon Thames, situated within an urban context. The site is bound by South Worple Way, to the north, beyond which lies the railway line, by South Worple Way to the east, by existing NHS buildings (forming the remaining eastern part of the hospital site) to the south and by Old Mortlake Burial Ground to the west. Beyond this there is extensive residential urban development on all sides.
- 1.1.6 Excerpts from the metric are included at Appendix 5222-05/1. This note provides a commentary on the assessment process and provides a summary of the results and justifies the choice of habitat definitions, distinctiveness, target habitat condition and temporal factors where appropriate.

2 Policy Background

- 2.1.1 The National Planning Policy Framework (NPPF)¹ describes the Government's national policies on 'conserving and enhancing the natural environment' (Chapter 15). NPPF is accompanied by

¹ Ministry of Housing, Communities & Local Government (2021) 'National Planning Policy Framework'

Planning Practice Guidance on 'Biodiversity, ecosystems and green infrastructure' and ODPM Circular 06/2005².

- 2.1.2 NPPF takes forward the Government's strategic objective to halt overall biodiversity loss³, as set out at Paragraph 174, which states that planning policies and decisions should contribute to and enhance the natural and local environment by:

'minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures'

- 2.1.3 The Environment Bill was passed on 10th November 2021 and sets out a plan of how to protect and improve the natural environment with specific reference to the use of Biodiversity Metrics to demonstrate that a Net Gain can be achieved. Further secondary legislation is likely to be required to implement the requirements, and suitable policy arrangements will be made by individual planning authorities. Nevertheless, a net gain assessment has been carried out as a matter of good practice.
- 2.1.4 The current London Borough of Richmond upon Thames Local Plan (2018) does not currently contain any formal requirement for achieving a biodiversity net gain in relation to habitats from proposed developments.

3 Biodiversity Net Gain Assessment

- 3.1.1 A Biodiversity Net Gain Assessment has been carried out using the DEFRA metric v3.0, using the habitat quanta and further details provided in the Landscape Masterplan (Exterior Architecture Drawing Ref. 1954-EXA-00-ZZ-DR-L-1000), and reference has also been made to the detailed landscaping plans which have been submitted with the recent Outline Planning Permission application. A copy of the BIA metric summary is presented in Appendix 5222-05/1, whilst a copy of the landscape Masterplan is provided at Appendix 5222-02/2.
- 3.1.2 The existing and proposed habitat plans used for the metric calculations are presented in Plans 5222-05/BIA1 and 5222-05/BIA2 respectively. Reference has been made to the 'Technical Supplement' that accompanies the v3.0 metric, as well as the 'Habitat Assessment Sheets with Instructions', both of which can be accessed from the Natural England website⁴.

3.2 Methodology

General Assumptions

- 3.2.1 An element of strategic significance is built into the biodiversity metric. It gives additional unit value to habitats that are located in preferred locations for biodiversity and other environmental objectives. The metric 3.0 User Guide explains that 'Such priorities are drawn from relevant published local plans and objectives to identify local priorities for targeting biodiversity and nature improvement, such as Nature Recovery Areas, local biodiversity plans, National Character Area objectives and green infrastructure strategies'.
- 3.2.2 The scheme is not located in any particular area of strategic significance as defined under the Technical Supplement, such as Biodiversity Opportunity Areas, or other strategic biodiversity areas such as those that might be defined under Local Plan Policy or regional Biodiversity Actions Plans. The 'strategic significance' of the majority of habitats included within the metric

² ODPM (2006) 'Circular 06/2005: Planning for Biodiversity and Geological Conservation – A Guide to Good Practice'

³ DEFRA (2011) 'Biodiversity 2020: A strategy for England's wildlife and ecosystem services'

⁴ The Biodiversity Metric 3.0 - JP039 (naturalengland.org.uk)

is therefore given as 'Area/Compensation not in Local Strategy/no local strategy'. The only exemption relates to the 'Intensive Green Roof' habitat creation which is noted specifically under the local planning policy LP17 and therefore this habitat is denoted as 'Within area formally identified in local strategy'.

Baseline Habitat Assumptions

3.2.3 When calculating the biodiversity loss/gain, the following has been assumed regarding the baseline habitats which are present at the site:

- **Built Developed Land:** the majority of land within the application comprises disused hospital buildings surrounded by access roads and parking which is categorised as 'Urban developed Land, Sealed Surface' under the metrics. The total area for both buildings and hard standing amounts to 0.67ha with two buildings to be retained and converted, amounting to an area of 0.02ha.
- **Introduced Shrub:** Scattered sections of ornamental shrub planting are associated with the amenity grassland and surrounding the disused buildings comprising native and non-native species which are previously heavily managed. The habitat is categorised as 'Poor Condition' under the 'Urban – Introduced Shrub' habitat. Approximately 0.03ha of the shrub planting will be retained, with further biodiverse planting along the boundary.
- **Amenity Grassland:** Narrow margins exist around the edges of the parking bays and access roads of which is heavily managed and species poor, amounting to a total area of 0.05ha and classified as 'Grassland – Modified Grassland'. According to the condition assessment criteria provided in the Defra Metric v3.0 Technical Supplement the habitat is categorised as 'Fairly Poor' based upon the lack of species diversity recorded within the habitat on site.
- **Bare Ground:** Small sections of bare ground are present along the northern and north-western boundary which amounts to 0.005ha and is categorised as 'Urban - Vacant/derelict land/ bareground' in 'poor condition'.

Proposed Habitat Assumptions:

3.2.4 When calculating the biodiversity loss/gain, the following has been assumed regarding the proposed habitats which are present at the site. Please refer to Plan 5222-05/BIA2:

- **Intensive Green Roof:** Three sections of the proposed new buildings are to be incorporated with green roof's creating an area of 0.1ha, categorised as 'Urban – Intensive green roof' and denoted within the landscape proposal plans providing a deep substrate composition. It is assumed that the green roofs will be planted with a diverse range of flowering plants and provide opportunities for breeding insects, birds and bats with appropriate management of invasive non-native species covering less than 5% of the total area, in order to achieve species richness and therefore allow this habitat area to be categorised as 'good condition' under the assessment criteria.
- **Allotments:** Small allotment plots located along the western boundary will be created as a part of the Public Open Space amounting to an area of 0.005ha, categorised as 'Urban – Allotments'. The condition criteria for this habitat also assumes that the three main aims noted above within the green roof will be achieved to allow this habitat to be categorised as 'good condition'.
- **Traditional Orchard:** A community garden comprising of orchard planting and wildflower grassland is proposed within the eastern area of Public Open Space within the development

comprising 0.027ha in total. The area is categorised as 'Grassland – Traditional orchard' and based upon the assessment criteria and the consideration of the urban context in which the habitat will be created it is categorised as 'moderate condition'. This condition is based upon the following assumptions that; standard rootstock will be planted with under-seeding of species-rich grassland, deadwood features will be present and variation in sward heights will be attained within the habitat.

- **Wildflower Grassland:** A long section of wildflower grassland creation is proposed as part of Public Open Space amounting to an approximate area of 0.018ha. It is assumed that grassland here will be managed to achieve species richness sufficient to meet the criteria for 'Grassland – Other Neutral Grassland' of 'moderate condition'. This assumes that it will achieve a minimum of 9 species per m², moving it from the 'low' to the 'moderate' distinctiveness grassland category.
- **Amenity Grassland:** There are areas of amenity grassland throughout the proposed development along mainly on the internal corridors and other verges within the site which are categorised as 'Grassland – Modified Grassland' in 'moderate' condition. It is assumed that they will contain <9 species per m², and that it will not be possible to manage in such a way as to achieve the additional two criteria required to bring it to 'good condition'.
- **Introduced Shrub:** There are also several areas of introduced scrub planting within the proposed landscape planting, which have been categorised as 'Heathland and Scrub – Mixed Scrub' as they will comprise a range of native species. It is assumed that they will be managed to achieve 'good condition'.
- **Urban Trees:** A total of 47 small trees have been allowed for, using the Urban tree calculator, which contribute an additional number of Biodiversity units over and above those derived from habitat areas alone. For the purposes of the metric a small tree is assumed to be one that it's planted as a Standard tree or smaller to achieve the required size within the 30 years assumed development period.
- **Hedgerows:** The landscape proposals include approximately 0.02km of new native hedgerows, mostly in small sections surrounding the housing development and along the various 'green street' corridors within the development.

3.3 Results

- 3.3.1 The BIA metric calculates that the baseline habitats within the site have an ecological value of 1.23 biodiversity units, the largest part of which is provided by urban trees amounting to 0.91 units, together with smaller contributions from amenity grassland and introduced shrubs and bare ground which contribute a further 0.31 units.
- 3.3.2 By comparison, the proposed habitat creation contributes 2.21 biodiversity units, of which 0.65 units are contributed by green roofs, 0.39 from amenity grassland (modified grassland), 0.16 units from traditional orchard and 0.12 units from wildflower grassland (other neutral grassland), together with smaller amounts from other habitat types.
- 3.3.3 The BIA metric calculates a Net gain of 79.63% Biodiversity Units from the Biodiversity Impact Assessment tab (Habitats), over and above the original Site Biodiversity Value, which is largely achieved due to the low value of the ecological baseline habitats, comprising almost entirely buildings and hard standing, and the relatively large amount of proposed open greenspace areas comprising semi-natural habitats (especially species-rich grassland).

- 3.3.1 The BIA metric calculates there to be a net gain of 100% linear biodiversity units (Hedgerows), over and above the original Site Biodiversity Value.

Table 3.1 Biodiversity Net Gain and Net Loss for each Habitat and Feature

Habitat / Feature	Comment	Net Loss / Gain
Buildings and Hardstanding	Four large buildings will be lost with two buildings retained and converted	Neutral
Introduced Shrub	A large section along the southern boundary is to be retained within the Public Open Space. There will be a net increase in the amount of scrub habitat available throughout the site.	Neutral
Hedgerows	A significant quanta of new native hedges will be planted throughout landscaped areas, and within the proposed residential areas.	Net Gain
Trees	Approximately 47 small new trees will be provided through landscape planting with the retention of 22 trees.	Net Gain (long term)
Amenity Grass	Small areas of amenity grass will be lost and replaced with new species-rich wildflower mixtures within Public Open Space, which have a higher biodiversity value.	Net Gain

- 3.3.1 The assessment offers a substantial net gain and exceeds the 10% target value which is expected to emerge once the mandatory requirements for net gain are introduced by the Environment Bill.

4 Conclusion

- 4.1 The Biodiversity Impact Assessment has been carried out using the DEFRA metric v3.0 which demonstrates that a 79.63% increase in biodiversity area units will result following implementation of the proposals. There will be an increase of approximately 100% in linear units.

5 Plans and Appendices

Plan 5222-05/BIA1 – Existing Habitats

Plan 5222-05/BIA2 – Proposed Habitats

Appendix 5222-05/1 – Excerpts from DEFRA v3.0 metric

Appendix 5222-05/2 – Exterior Architecture Drawing Ref. 1954-EXA-00-ZZ-DR-L-1000

Plan 5222-05/BIA1:

Existing Habitats



Key:

- Site Boundary
- Developed Land - Buildings
- Developed Land - Hard Standing
- Introduced Shrub - Ornamental Planting
- Modified grassland- Amenity Grass
- Bare Ground



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Barnes Hosptial (West)

Biodiversity Net Gain - Existing Habitats

5222-05/BIA1



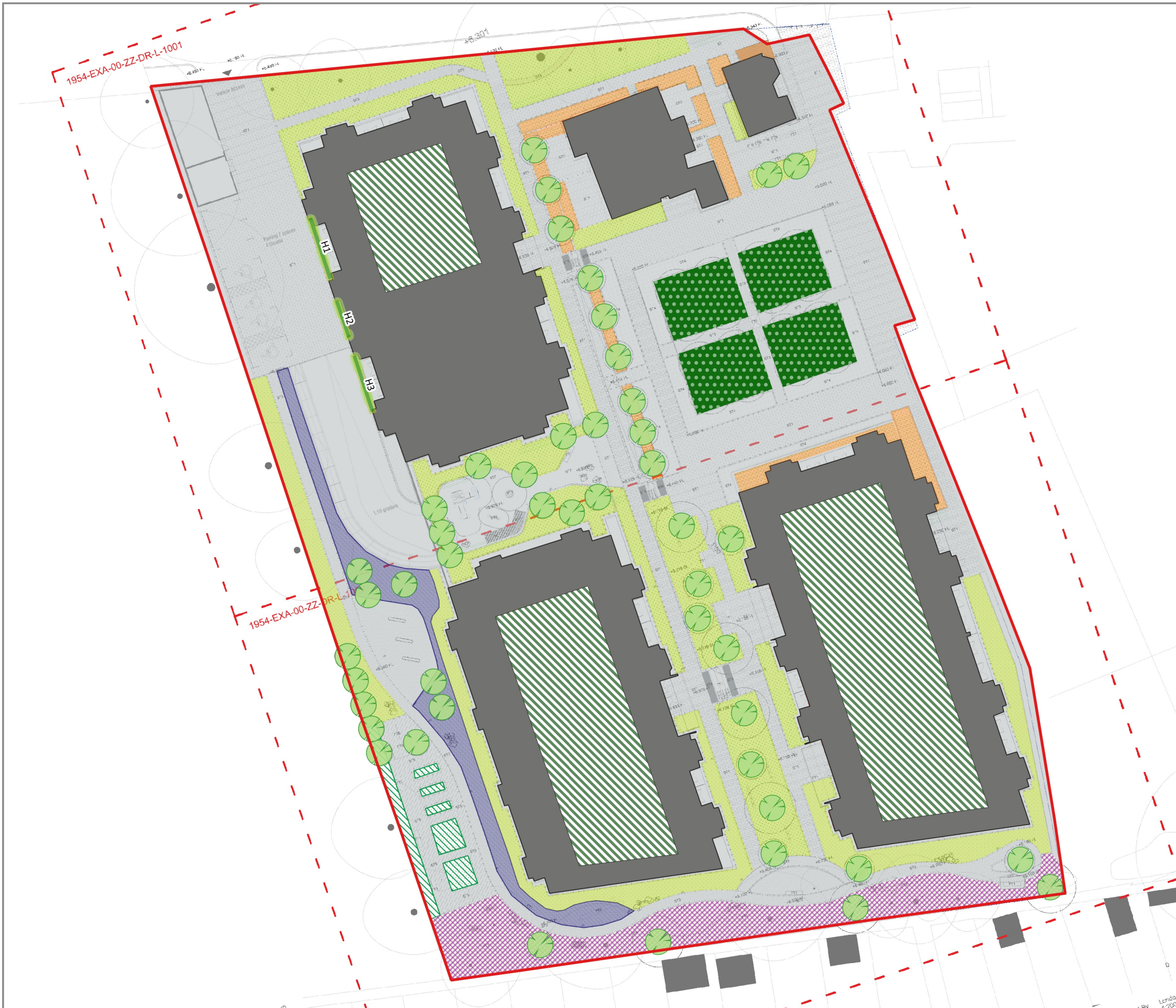
FM/B

November 2021

PROJECT
TITLE
DRAWING NO.
REV
DATE

Plan 5222-05/BIA2:

Proposed Habitats



- Key:**
- Site Boundary
 - Proposed Habitats**
 - Modified Grassland
Amenity Grass (Good Condition)
 - Other Neutral Grassland Wildflower
Planting (Moderate Condition)
 - Cropland - Intensive Orchard Planting
 - Retained Ornamental Vegetation
 - Introduced Shrub Planting
(Poor Condition)
 - Allotments (Good Condition)
 - Extensive Green Roof
(Good Condition)
 - Developed Land - Buildings
(Standard Roof)
 - Developed Land - Hard Standing
 - P - Newly Planted Hedgerow
 - Newly Planted Trees



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Barnes Hospital (West)		PROJECT
Proposed Habitats - Biodiversity Net Gain Assessment		TITLE
5222-05/BIA2		DRAWING NO.
November 2021		REV
November 2021		DATE



Appendix 5222-05/1:

Excerpts from DEFRA v3.0 metric

The Biodiversity Metric 3.0 - Calculation Tool

Start page

Project details	
Planning authority:	Richmond Borough Council
Project name:	(5222-05) Barnes Hosptial - West
Applicant:	Starland Realty Ltd
Application type:	Outline
Planning application reference:	
Assessor:	Freya McCarthy
Reviewer:	Mark Doughty
Metric version:	1
Assessment date:	08/10/2021
Planning authority reviewer:	

Instructions

Main menu

Results

(5222-05) Barnes Hosptial - West

Headline Results

[Return to results menu](#)

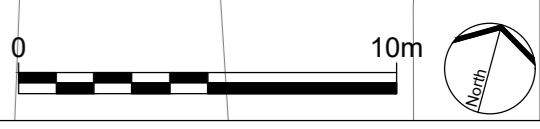
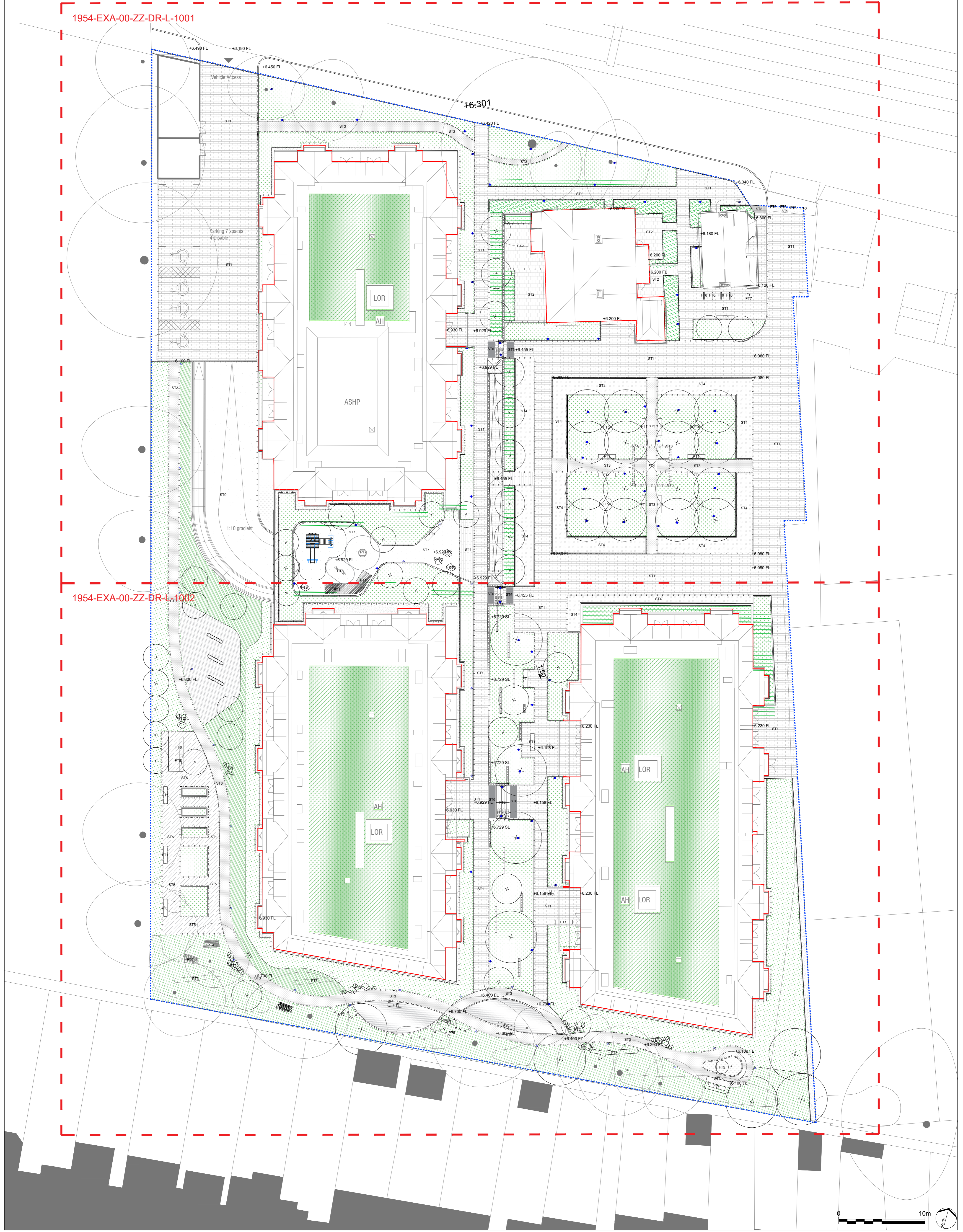
On-site baseline	<i>Habitat units</i>	1.23
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
On-site post-intervention <small>(Including habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	2.21
	<i>Hedgerow units</i>	0.13
	<i>River units</i>	0.00
On-site net % change <small>(Including habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	79.63%
	<i>Hedgerow units</i>	100.00%
	<i>River units</i>	0.00%
Off-site baseline	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Off-site post-intervention <small>(Including habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Total net unit change <small>(including all on-site & off-site habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	0.98
	<i>Hedgerow units</i>	0.13
	<i>River units</i>	0.00
Total on-site net % change plus off-site surplus <small>(including all on-site & off-site habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	79.63%
	<i>Hedgerow units</i>	100.00%
	<i>River units</i>	0.00%
Trading rules Satisfied?	Yes	

Appendix 5222-05/2:

Exterior Architecture Drawing Ref. 1954-EXA-00-ZZ-DR-L-1000

1954-EXA-00-ZZ-DR-L-1001

1954-EXA-00-ZZ-DR-L-1002



EXTERIOR ARCHITECTURE

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MANCHESTER
Studio 537, The Royal Exchange, St Ann's Square, Manchester, M2 7DH

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Client
LS ESTATES

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Rev	Description	Date
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P1	FOR PLANNING	15.11.2021
P0	FOR PLANNING	15.11.2020
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Project title
BARNES HOSPITAL

Drawing title
GENERAL ARRANGEMENT PLAN

Issued By	London	T: 020 7978 2101
Scale	1:200 @ A1	Drawn DF
Status	PLANNING	Checked ExA
Date	08.07.2021	Approved ExA
Drawing number	1954-EXA-00-ZZ-DR-L-1000	Revision P1

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