



# Hillingdon Gardens

## Biodiversity Net Gain & Urban Greening Factor Calculations

October 2019

**Biodiversity Net Gain summary:** In principle<sup>1</sup>, the Proposed Development will achieve a positive net-gain in biodiversity producing a score of 1.4, from a baseline score of 3.8 habitat units and a proposed development scheme of 5.2 habitat units. This a 26% biodiversity net gain, which is above HM Government's draft recommendation of achieving 10% net gain. Summary tables and plans are provided at the back of this report.

**Urban Greening Factor summary:** In principle<sup>2</sup> the Proposed Development has achieved an urban greening factor of 0.4. Summary table is provided at the back of this report.

**Caveat:** The Biodiversity Net Gain and Urban Greening Factor scores are based on detailed information relating to habitat type<sup>3</sup> (area x distinctiveness x condition x spatial connectivity x location) and surface cover type<sup>4</sup> (area x surface cover factor) respectively. Any changes to the design, size or function of the development may affect scores. For this reason, these scores are valid for three months from the date of this report.

**Sources of information:** Information from the following key sources:

- Phase 1 Habitat Areas (BMD. 19. 020. DRE. 903, dated 04/09/2019)
- Ecological Assessment (BMD. 19.020.RPE/P1.801.RevA. Ecology, Dated 09,2019)
- Proposed Habitat Areas Plan (BMD.19.020. DR.903, dated 13/09/2019)
- Email communication between BMD landscape and ecology staff, during above dates).

### **The following assumptions need to be understood:**

- The existing site supports 10 distinct habitat types, which comprise.
  - Dry ditch and tree line
  - Broadleaf trees
  - Amenity grassland
  - Bare ground
  - Broadleaf plantation woodland
  - Hardstanding
  - Introduced shrub
  - Poor-semi-improved grassland
  - Scattered scrub
  - Tall ruderal
- The London and Hillingdon Biodiversity Action Plan Priority Habitats: Woodland<sup>5</sup> and Wasteland<sup>6</sup> occur on site. Based on the Ecological Assessment these habitats are in poor condition and are of low ecological value.

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<sup>1</sup> Recognising the assessment is based on information that might change through detailed design, reserved matters, construction and site management. The development and its net-gain score will need to be verified at each stage to ensure intended score and ecological value.

<sup>2</sup> Recognised the assessment is based on information that might change through detailed design and reserved matters. The development and its urban greening score will need to be verified at each stage to ensure intended score and ecological value.

<sup>3</sup><https://cieem.net/wp-content/uploads/2019/02/C776a-Biodiversity-net-gain.-Good-practice-principles-for-development.-A-practical-guide-web.pdf>

<sup>4</sup><https://www.london.gov.uk/what-we-do/planning/london-plan/new-london-plan/draft-new-london-plan/chapter-8-green-infrastructure-and-natural-environment/policy-g5>

<sup>5</sup> Woodland <http://downloads.gigl.org.uk/website/final%20woodland.pdf>

<sup>6</sup> Wasteland <http://downloads.gigl.org.uk/website/final%20wasteland.pdf>

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- The Biodiversity Net-Gain score is based on the creation of 8 distinct habitat types comprising:
  - Sealed surfaces (hardstanding)
  - Broadleaved woodland
  - Mixed native scrub
  - Modified grassland (amenity lawn)
  - Street trees (in hard-surfacing)
  - Open mosaic habitat
  - Introduced shrubs (including herbaceous planting)
  - Flower rich/species-rich neutral grassland
- How these habitat types are managed will influence their value to wildlife and therefore their habitat unit score. At present, the management of these habitats are not known and so they have been assessed as achieving poor condition<sup>7</sup>, until such time further information is provided.
- The assessment has been undertaken using Defra's Biodiversity Net Gain Calculator, a toolkit that is undergoing review, testing and consultation. Any outputs are provisional until the finalised new version is released later this year.
- The proposed design has worked hard to provide new wildlife-rich habitats, and these include predominantly native species mixes replicating, as best possible, locally characteristic woodland habitat within the development boundary.
- In principle, the Proposed Development will also achieve a net gain in relation to linear features. The existing dry-ditch and tree line, being replaced with a native-species hedgerow with additional trees approximately 289m in length.
- The Urban Greening Factor score is based on the creation of 12 distinct surface cover types comprising:
  - Buildings (excluding green roofs/podiums)
  - Sealed surfaces
  - Permeable paving
  - Semi-natural vegetation
  - Hedgerow
  - Ground cover
  - Flower rich grassland
  - Standard trees in connected pits
  - Standard trees in individual pits
  - Rain gardens and SUD's
  - Extensive green roof
  - Intensive green roof
- **Recommendations:**
  - The landscape plan in its current form does not visualise the habitats (e.g. woodland) or ecosystem functions (e.g. surface water management) of the proposed scheme. A revised plan would be beneficial for planning and future management.
  - If existing broadleaf woodland habitat can be retained and enhanced (rather than be removed and recreated) – this would improve the Biodiversity Net Gain score.

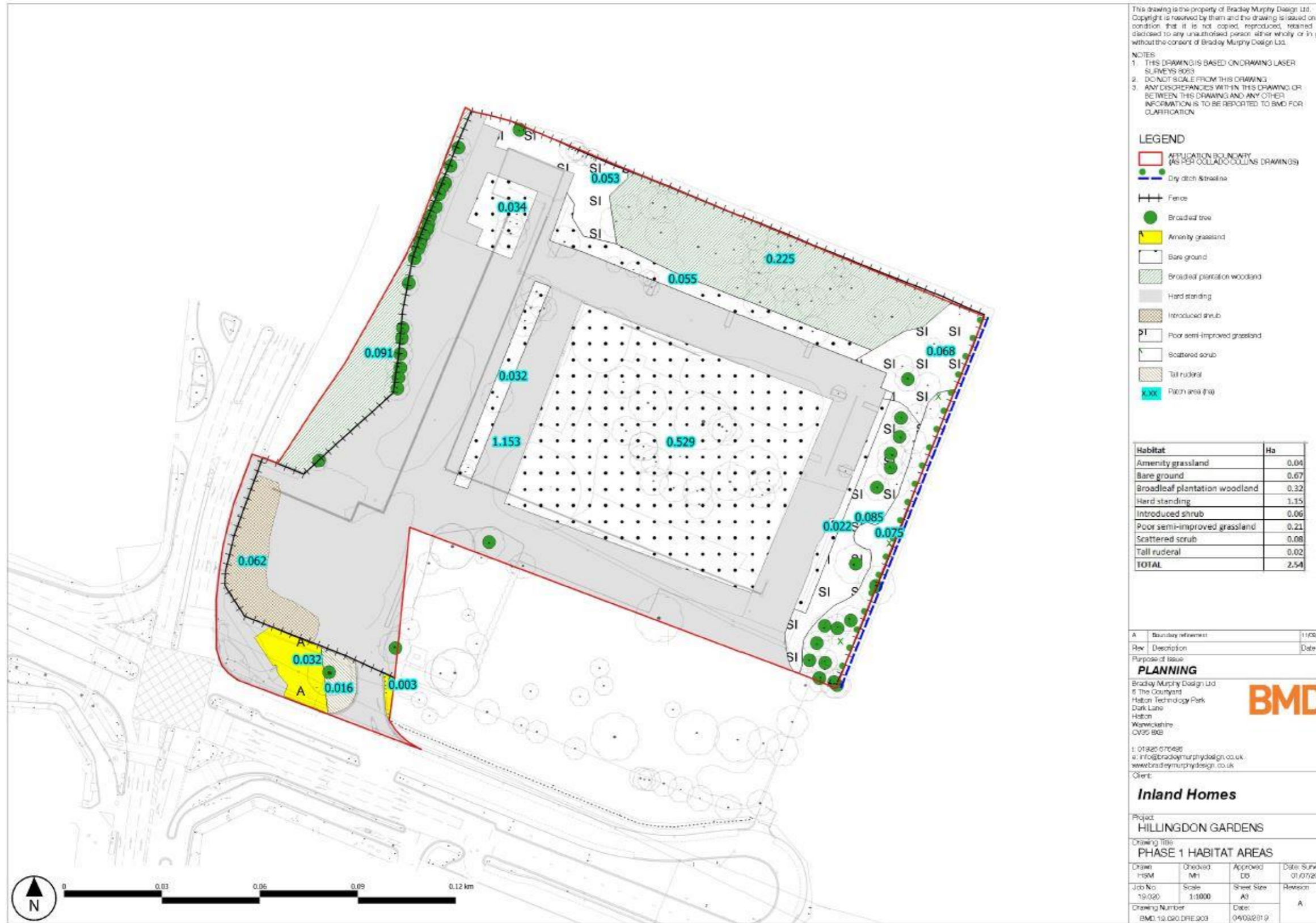
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<sup>7</sup> Condition varies between different habitat types. Some factors that can affect condition include land management practices, disturbance (from humans and cats), compaction, presence and spread of invasive species.

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# Existing Habitats: Habitat Types (Phase 1 Methodology)



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**LEGEND**

- APPLICATION BOUNDARY (AS PER COLLADO/COLLINS DRAWINGS)
- Dry ditch/Stradine
- Fence
- Broadleaf tree
- Amenity grassland
- Bare ground
- Broadleaf plantation woodland
- Hard standing
- Introduced shrub
- SI Poor semi-improved grassland
- Scattered scrub
- Tall ruderal
- Pitch area (ha)

Habitat	Ha
Amenity grassland	0.04
Bare ground	0.67
Broadleaf plantation woodland	0.32
Hard standing	1.15
Introduced shrub	0.06
Poor semi-improved grassland	0.21
Scattered scrub	0.08
Tall ruderal	0.02
<b>TOTAL</b>	<b>2.54</b>

A	Boundary refinement	11/06/19
Rev	Description	Date

Purpose of Issue  
**PLANNING**  
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**Inland Homes**

Project  
**HILLINGDON GARDENS**

Drawing Title  
**PHASE 1 HABITAT AREAS**

Drawn HSM	Checked MH	Approved DB	Date Survey 01/07/2019
Job No. 19-02	Scale 1:1000	Sheet Size A3	Revision A
Drawing Number BMD-19-020-DRE-003		Date: 04/03/2019	

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## Existing Habitats: Biodiversity Units (Defra Net Gain)

### Area

Ref	UK Habitats - Existing habitats			Habitat Distinctiveness		Habitat Condition		Spatial Connectivity			strategic significance			Suggested Action	Ecological Baseline
	Broad Habitat	Enter Baseline Habitat Data Below	Area ha	Distinctiveness	Score	Condition	Score	Spatial Connectivity Rang	Connectivity	Connectivity Multiplier	Strategic Significance	Strategic Significan	Strategic Position Multiplier		
1	Grassland	Grassland - Modified grassland	0.04	Low	2	Poor	1	Score 33-56	Moderate aggregation / connectivity	1.1	Area/compensation not in local policy/ no local policy	Low Strategic Significance	1	Potential to Develop	0.088
2	Urban	Urban - Vacant/derelict land/ bareground	0.67	Low	2	Poor	1	Score 33-56	Moderate aggregation / connectivity	1.1	Area/compensation not in local policy/ no local policy	Low Strategic Significance	1	Potential to Develop	1.474
3	Woodland and forest	Woodland and forest - Other woodland; broadleaved	0.32	Medium	4	Poor	1	Score 33-56	Moderate aggregation / connectivity	1.1	Area/compensation not in local policy/ no local policy	Low Strategic Significance	1	Mitigate or Compensate	1.41
4	Urban	Urban - Developed land; sealed surface	1.15	V.Low	0	Poor	1	Score 33-56	Moderate aggregation / connectivity	1.1	Area/compensation not in local policy/ no local policy	Low Strategic Significance	1	Potential to Develop	0.00
5	Urban	Urban - Introduced shrub	0.06	Low	2	Poor	1	Score 33-56	Moderate aggregation / connectivity	1.1	Area/compensation not in local policy/ no local policy	Low Strategic Significance	1	Potential to Develop	0.13
6	Grassland	Grassland - Modified grassland	0.21	Low	2	Poor	1	Score 33-56	Moderate aggregation / connectivity	1.1	Area/compensation not in local policy/ no local policy	Low Strategic Significance	1	Potential to Develop	0.46
7	Heathland and shrub	Heathland and shrub - Mixed scrub	0.08	Low	2	Poor	1	Score 33-56	Moderate aggregation / connectivity	1.1	Area/compensation not in local policy/ no local policy	Low Strategic Significance	1	Potential to Develop	0.18
8	Grassland	Grassland - Tall herb communities	0.02	Low	2	Poor	1	Score 33-56	Moderate aggregation / connectivity	1.1	Area/compensation not in local policy/ no local policy	Low Strategic Significance	1	Potential to Develop	0.04

**Total Habitat Units (Existing): 3.8**

### Linear

Ref	UK Habitats - Existing habitats			Habitat Distinctiveness		Habitat Condition		Spatial Connectivity			strategic significance				Ecological Baseline	retention category Biodiversity value			
	hedge number	Hedgerow type	length KM	Distinctiveness	Score	Condition	Score	Spatial Connectivity Range	Connectivity	Connectivity Multiplier	Strategic Significance	Strategic Significan	Strategic Position Multiplier	Suggested Action		Total Hedgero	Length Retained	Units Retained	Length Lost
1	1	Line of Trees	0.179	Low	2	Poor	1	Score 57-81	Highly aggregated / connected	1.15	Within area formally identified in local policy	High strategic significance	1.15	Potential to Develop	0.473455	0	0	0.179	0.47346
2																			
3																			

**Total Linear Habitat Units (Existing): 0.5**

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# Proposed Habitats: Landscape Planting Areas



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## Proposed Habitats: Biodiversity Units (Defra Net Gain)

### Area

Proposed Habitat	Change in Distinctiveness and Condition				Spatial Quality						Risk Multipliers				Habitat Units Delivered			
	Distinctiveness Movement	Condition movement	Area ha	Distinctiveness	Score	Condition	Score	Spatial Connectivity			Strategic significance			Temporal Multiplier		Difficulty Multipliers		
								Spatial Connectivity Score	Connectivity	Connectivity Multiplier	Strategic Significance	Strategic Significance	Strategic Position Multiplier	Time to Target Condition/Years		Time to Target Multiplier	Difficulty of Creation Category	Difficulty of Creation Multiplier
Urban - Developed land; sealed surface			1.35	V.Low	0	Poor	1	Score 57-81	Highly aggregated / connected	1.15	Within area formally identified in local policy	High strategic significance	1.15	0	1.000	Low	1	0.00
Woodland and forest - Other woodland; broadleaved			0.15	Medium	4	Poor	1	Score 57-81	Highly aggregated / connected	1.15	Within area formally identified in local policy	High strategic significance	1.15	20	0.490	Medium	0.67	0.26
Heathland and shrub - Mixed scrub			0.03	Low	2	Poor	1	Score 57-81	Highly aggregated / connected	1.15	Within area formally identified in local policy	High strategic significance	1.15	1	0.965	Low	1	0.08
Grassland - Modified grassland			0.3	Low	2	Poor	1	Score 57-81	Highly aggregated / connected	1.15	Within area formally identified in local policy	High strategic significance	1.15	1	0.965	Low	1	0.77
Urban - Street Tree			0.01	Low	2	Poor	1	Score 57-81	Highly aggregated / connected	1.15	Within area formally identified in local policy	High strategic significance	1.15	20	0.490	Low	1	0.01
Urban - Open Mosaic Habitats on Previously Developed Land			0.36	High	6	Poor	1	Score 57-81	Highly aggregated / connected	1.15	Within area formally identified in local policy	High strategic significance	1.15	2	0.931	Low	1	2.66
Urban - Introduced shrub			0.11	Low	2	Poor	1	Score 33-56	Moderate aggregation /	1.1	Within area formally identified in local policy	High strategic significance	1.15	1	0.965	Low	1	0.27
Grassland - Other neutral grassland			0.21	High	6	Poor	1	Score 33-56	Moderate aggregation /	1.1	Within area formally identified in local policy	High strategic significance	1.15	1	0.965	Medium	0.67	1.03
Grassland - Modified grassland			0.07	Low	2	Poor	1	Score 33-56	Moderate aggregation /	1.1	Within area formally identified in local policy	High strategic significance	1.15	1	0.965	Low	1	0.17

**Total Habitat Units delivered: 5.2**

### Linear

Existing habitats		Habitat Distinctiveness		Habitat Condition		Spatial Quality			strategic significance		Temporal Multiplier		Difficulty of Creation Category	Difficulty of Creation Multiplier	Hedge Units Delivered	
Habitat Type	Length km	Distinctiveness	Score	Condition	Score	Spatial Connectivity Score	Connectivity	Connectivity Multiplier	Strategic Significance	Strategic Significance	Strategic Position Multiplier	Time To Target Condition/Years				Time to Target Multiplier
Native Hedgerow with trees	0.289	Low	2	Poor	1	Score 9-32	Low aggregation / connectivity	1	Within area formally identified in local policy	High strategic significance	1.15	1	0.965	Low	1	0.64

**Total Linear Units delivered: 0.64**

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## Urban Greening Factor

Proposed Habitats (as per landscape plan)	Surface cover types *	Area (m2)	ha	Factor	Score	*
Buildings	Buildings	4404	0.440	0	0	Interpreted Surface cover type from London Plan, G5 Table 1.
hardstanding	Sealed surface	4105	0.411	0	0	
Permeable paving	Permeable paving	4524	0.452	0.1	0.04524	
<b>Located on solid ground</b>						
Native Species Rich Shrub/scrub planting	semi-natural vegetation	248	0.025	1	0.0248	
Naturalistic /Native Planting	semi-natural vegetation	1262	0.126	1	0.1262	
Native Hedge Planting	hedge	289	0.029	0.6	0.01734	
Amenity Hedge Planting	hedge	0	0.000	0.6	0	
Garden Planting	ground cover	0	0.000	0.5	0	
Amenity lawns	Flower rich grassland	2766	0.277	1	0.2766	
Trees in connected tree pits + below ground cells	Standard trees in connected pits	60	0.006	0.8	0.0048	
Trees in individual pits	Standard trees in individual pits	6	0.001	0.6	0.00036	
Species Rich Wildflower Meadow	semi-natural vegetation	910	0.091	1	0.091	
Species Rich Wet Wildflower Meadow	Rain gardens and SUDs	1220	0.122	0.7	0.0854	
<b>Located above ground (e.g. podium level or roof)</b>						
hardstanding	hardstanding	489	0.049	0	0	
Permeable paving	Permeable paving	0	0.000	0.1	0	
biodiverse green roof	Extensive green roof (80-150mm)	3649	0.365	0.7	0.25543	
Ornamental Planting	Intensive green roof (150mm >)	0	0.000	0.8	0	
Native Hedge Planting	Intensive green roof (150mm >)	0	0.000	0.8	0	
Amenity Hedge Planting	Intensive green roof (150mm >)	279	0.028	0.8	0.02232	
Garden Planting	Intensive green roof (150mm >)	847	0.085	0.8	0.06776	
Amenity Lawns	Intensive green roof (150mm >)	190	0.019	0.8	0.0152	
Trees in connected tree pits + below ground cells	Standard trees in connected pits	0	0.000	0.8	0	
Trees in individual pits	Standard trees in individual pits	0	0.000	0.6	0	
Species Rich Wildflower Meadow	Rain gardens and SUDs	0	0.000	0.7	0	
Species Rich Wet Wildflower Meadow	Rain gardens and SUDs	0	0.000	0.7	0	
		<b>Total site area</b>	<b>25248</b>	<b>2.525</b>	<b>0.408923</b>	

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