



QA

Avondale Drive– Biodiversity Impact Assessment

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1.0 EXECUTIVE SUMMARY

- 1.1 Greengage Environmental Ltd was commissioned to undertake a Biodiversity Impact Assessment (BIA) by The London Borough of Hillingdon of a site known as Avondale Drive, within the London Borough of Hillingdon.
- 1.2 This document is a report of this assessment and has been produced to support a planning submission for the site which seeks:
- Development in outline (with all matters reserved) for residential floorspace (Class C3) to comprise: demolition of all existing buildings and structures; erection of new buildings; new pedestrian and vehicular accesses; associated amenity space, open space, landscaping; car and cycle parking spaces; plant, refuse storage, servicing area and other works incidental to the proposed development; and
 - Detailed planning consent for Block A comprising 30 residential units (Class C3); new pedestrian access; associated amenity space and landscaping; cycle parking, refuse storage, and other associated infrastructure.
- 1.3 This assessment aimed to quantify the predicted change in ecological value of the site in light of the proposed development, to assess compliance against national and local planning policy. This assessment has been undertaken using the Defra Metric 3.0 calculator tool.
- 1.4 The survey area extended approximately 1.07 hectares and predominantly comprised common and widespread habitats that included areas of hardstanding, buildings, amenity grassland, introduced shrub and scattered trees.
- 1.5 The baseline biodiversity value of the site stands at 1.99 in accordance with the Defra Metric 3.0.
- 1.6 Numerous new habitats are proposed for the scheme, including; amenity grassland, wildflower meadow, rain garden, introduced shrub and herbaceous planting; biodiverse green roof, intensive green roof vegetated and un-vegetated garden and ornamental hedge planting.
- 1.7 The proposal results in a net gain of +0.93 area based biodiversity units (46.62%), using the Defra Metric 3.0.
- 1.8 There is also a net gain of hedgerow on site post development, with the creation of hedgerow equating to 0.54 linear based biodiversity units. However, as there was not pre-development linear value a % gain cannot be attributed to this habitat creation.
- 1.9 Additional enhancement recommendations are made within the Preliminary Ecological Appraisal (PEA) report (Doc ref: 551711sb22jul21FV02_Avondale Drive_PEA), such as provision of bird and bat boxes and invertebrate habitat features. These features will
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contribute to the enhancement of the qualitative biodiversity value of the site, however they do not change the quantitative uplift described above.

- 1.10 Should these recommendations be adhered to, the proposals stand to be compliant with national policy (NPPF) which requires net gain.

2.0 INTRODUCTION

- 2.1 Greengage was commissioned to undertake a Biodiversity Impact Assessment (BIA) by The London Borough of Hillingdon of a site known as Avondale Drive, within the London Borough of Hillingdon.
- 2.2 This document is a report of this assessment and has been produced to support a planning submission for the site which seeks:
- Development in outline (with all matters reserved) for residential floorspace (Class C3) to comprise: demolition of all existing buildings and structures; erection of new buildings; new pedestrian and vehicular accesses; associated amenity space, open space, landscaping; car and cycle parking spaces; plant, refuse storage, servicing area and other works incidental to the proposed development; and
 - Detailed planning consent for Block A comprising 30 residential units (Class C3); new pedestrian access; associated amenity space and landscaping; cycle parking, refuse storage, and other associated infrastructure.
- 2.3 This assessment aimed to quantify the predicted change in ecological value of the site in light of the proposed development, to assess compliance against national and local planning policy which seeks a minimum 10% net gain in biodiversity value of site post development. This assessment has been undertaken using the Defra Metric 3.0 calculator tool.

SITE DESCRIPTION

- 2.4 The area surveyed extends to approximately 1.07 ha and is centred on National Grid Reference TQ 10706 80281.
- 2.5 The site predominantly comprised hardstanding, buildings, amenity grassland, introduced shrub and scattered trees.
- 2.6 The site is located to the east of Hayes, with Hayes & Harlington train station 1.2km to the south west and Southall train station 1.8km to the east.
- 2.7 Avondale Drive immediately borders to the south and the Paddington to Reading train line borders to the east. To the north of site lies the school playing fields and Yeading Brook Site of Importance for Nature Conservation (SINC).
- 2.8 The surrounding area is predominantly residential, with an abundance of playing fields, pocket parks, private gardens and tree lined streets forming a suburban green mosaic which connects the site to more substantial areas of greenspace, such as Minet Country Park, located 100m to the east.

PROPOSED HABITAT CREATION

- 2.9 Proposed habitat creation within the scheme includes the following:
- Newly planted scattered trees (equal to 0.1035ha of canopy cover);
 - 0.0261ha of amenity grassland;
 - 0.05ha of wildflower meadow;
 - 0.0102ha of rain garden;
 - 0.0347ha of introduced shrub and herbaceous planting;
 - 0.2872ha of biodiverse green roof;
 - 0.0378ha of intensive roof;
 - 0.0096ha of vegetated garden;
 - 0.0452ha of un-vegetated garden; and
 - 0.561km of ornamental hedge.
- 2.10 Additionally, several trees will be retained, equivalent to 0.0524ha of canopy cover.

3.0 METHODOLOGY

DEFRA METRIC 3.0

- 3.1 To calculate the ecological value of the pre- and post-development sites, the DEFRA Metric 3.0 methodology was utilised, following best practice guidance from DEFRA¹ and joint guidance from CIEEM, IEMA and CIRIA².
- 3.2 This metric uses Biodiversity Units as a proxy for the ecological value of area or linear based habitats. The areas of each habitat parcel are measured, with each parcel assigned a 'Distinctiveness' and 'Condition' score. Distinctiveness is a default score for that habitat classification, representing its inherent ecological value, whereas condition refers to the state each parcel is in relative to a predetermined set of criteria outlined in the supplementary Defra Metric 3.0 guidance.
- 3.3 For post-development habitat areas, additional multipliers are applied taking into account the time taken to reach maturity and difficulty of creation of the habitats, and whether the habitat creation is in a strategically beneficial location.
- 3.4 An assessment of the predicted change in ecological value is undertaken comparing the pre and post development Biodiversity Units and assessing percentage change. Changes in broader habitat types (for example, 'Urban', 'Woodland' and 'Grassland' habitats) are also tracked, and trading habitats is discouraged unless specifically targeted within a local strategy. Trading down of habitats is not permitted.

PRE-DEVELOPMENT CALCULATION

- 3.5 To calculate pre-development Biodiversity Units, data collected during a Preliminary Ecological Appraisal (PEA) (Doc Ref: 551711sb22jul21FV02_Avondale Drive_PEA), undertaken by Greengage on the 7th May 2021 was assessed. Areas of each habitat type were calculated using QGIS software and data relating to the condition of habitat parcels was collected in the field.

PROPOSED DEVELOPMENT CALCULATION

- 3.6 Areas of each proposed habitat type were provided by the landscape architect. The condition values of these habitats were allocated through the assumption that the habitats provided would be of high quality and attentively managed so that they maintain their ecological value over the long term.

COMPETENCIES

- 3.7 Jess Cole, who carried out this assessment, has a BSc degree in Ecology (Hons) and is a Graduate member of CIEEM. Jess holds a Natural England Great Crested Newt Licence

(2016-24975-CLS-CLS) and has over five years' experience in ecological survey and assessment.

3.8 Rosie Lodge has an undergraduate degree in Biological Sciences (BSc Hons), specialising in ecology and a Master's degree in Environmental Sustainability, specialising in climate change and conservation. Rosie is a full member of the Institution of Environmental Sciences (IES). She has 10 years' experience in sustainability and ecological consultancy and currently focuses on green infrastructure and ecosystem service provision for the built environment. .

3.9 This report was written by Jess Cole and reviewed and verified by Rosie Lodge who confirms in writing (see the QA sheet at the front of this report) that the report is in line with the following:

- Represents sound industry practice;
- Reports and recommends correctly, truthfully and objectively;
- Is appropriate given the local site conditions and scope of works proposed; and
- Avoids invalid, biased and exaggerated statements.

CONSTRAINTS

3.10 The assessment methodology does not incorporate ecological features beyond area and linear based habitats on site. The potential for the site to support protected species, for example, is not captured by this assessment. As such this report should be read in conjunction with all other ecological reports for the site. The mitigation hierarchy in relation to protected and notable habitats and species must be followed. This report should accordingly be read in conjunction with the PEA (Doc Ref: 551675sm08Apr21FV02_PEA)

3.11 To ensure delivery of BNG, requirements outlined within this report must be adhered to, and a rigorous programme of monitoring and maintenance must be implemented, without which this assessment would become invalid.

4.0 RESULTS

SUTTON BIODIVERSITY IMPACT CALCULATOR

Baseline Conditions

- 4.1 The baseline biodiversity value of the site is calculated to be 1.99 area based biodiversity units. A breakdown of this calculation is provided in Table 4.1 below:

Table 4.1 Area Based Baseline Biodiversity Units Using the Defra Metric 3.0 Calculator

Habitat type	Area (Hectares)	Distinctiveness	Condition	Biodiversity Units
Urban- Sealed surface	0.84	Very Low	N/A	0.00
Urban- Introduced shrub	0.06	Low	Poor	0.12
Urban- street Tree	0.19*	Medium	Moderate	1.53
Grassland- Modified grassland**	0.16	Low	Poor	0.32
Sparsely vegetated land- Ruderal/Ephemeral	0.01	Low	Poor	0.02
			Total:	1.99

*Not included in total site area

**Amenity Grassland

- 4.2 All condition target criteria are outlined in Appendix 1.
- 4.3 Buildings and hardstanding are automatically given 'very low' distinctiveness and do not require a condition assessment.
- 4.4 As with much of the green habitats on site, the species diversity of the introduced shrub was considered to be low, with many non-native ornamental plants present, rather than native, pollinator friendly species, meaning the value of these habitats to wildlife, in particular pollinators, is limited. There were also some invasive/non-native species present. Species present include cherry laurel (*Prunus laurocerasus*), cotoneaster (*Cotoneaster sp.*), ivy (*Hedera helix*), Therefore, overall, the condition of the introduced shrub on site is assessed as 'Low'.
- 4.5 Over 25 semi-mature broadleaved trees were scattered across the site. Three larger sycamore (*Acer pseudoplatanus*) were identified within the area of amenity grassland in the south east of the site, these were the most mature specimens on site. The other trees recorded on site were predominantly associated with the areas of ornamental planting and included wild cherry (*Prunus avium*), copper beech (*Fagus sylvatica f.*

purpurea), sycamore and silver birch (*Betula pendula*). All trees appeared to be in fairly decent condition with no obvious sign of disease or decay. The canopy cover of the trees appeared healthy. With this in mind the condition of the trees on site is considered to be 'moderate'.

- 4.6 The amenity grassland on site is heavily maintained with short sward height (<5cm) and low species diversity, with the sward dominated by only a few grass and wildflower species (see PEA report for full habitat description). With these factors in mind the grassland offers little value to wildlife, hence the 'poor' condition assessment allocation.
- 4.7 There are some areas of ephemeral/short perennial vegetation along the western boundary of the site. Species include common nettle (*Urtica dioica*) and herb Robert (*Geranium Robertianum*). Due to the small extent and limited number of species present this habitat has been given a 'poor' condition assessment.

Proposed Site Layout (Area based)

- 4.8 Based on the finalised landscape drawings, the proposed development is predicted to provide 2.92 area-based biodiversity units. This includes the total biodiversity value of the area-based habitats created (2.5 units) and the 0.0524 ha (0.42 units) of scattered trees to be retained. See table 4.2 below for the value of habitats created.

Table 4.2 Area Based Post-Development Biodiversity Units to be created Using The Defra Metric 3.0 Calculator

Proposed habitat	Area (Hectares)	Distinctiveness	Condition	Biodiversity Units
Urban- street Tree	0.1035*	Medium	Moderate	0.32
Urban- Introduced shrub	0.0347	Low	Poor	0.07
Urban – Extensive green roof	0.2872	Medium	Good	1.62
Urban- Intensive green roof	0.0378	Low	Poor	0.07
Grassland- Modified grassland**	0.0261	Low	Poor	0.05
Grassland- Other neutral grassland***	0.05	Medium	Moderate	0.33
Urban- Vegetated garden	0.0096	Low	Poor	0.02
Urban- Un-vegetated garden	0.0452	Very Low	N/A	0.00
Urban- Rain garden	0.0102	Low	Poor	0.02
Urban- Sealed surface	0.5692	Very Low	N/A	0.00
			Total:	2.5

*not included in total site area

**Amenity Grassland

***Wildflower Meadow

- 4.9 All condition target criteria is outlined in Appendix 1.
- 4.10 The trees to be planted on site will be mainly native saplings however some larger, semi-mature trees, are also proposed. As these trees are to be managed in the same manner as the existing trees on site their condition target is also 'moderate'.
- 4.11 The areas of proposed introduced shrub will use mostly native shrub and herbaceous species chosen from the Royal Horticultural Society (RHS) Good for Pollinators Guide³. These species will provide a nectar resource for pollinator species all year round, However, large portions of this planting (0.0122ha) will comprise on non-native ornamental species with limited value to wildlife. Regardless of species composition, under the Defra metric 3.0, 'poor' is the highest possible condition score for Introduced shrub.
- 4.12 Extensive biodiverse roof will be included on the areas of flat roof on top of the new builds. These living roofs will be substrate based, plug planted and seeded with a wildflower mix, such as the Emorsgate wildflower mix for green roofs⁴ which includes 20 wildflower species with value to pollinators. The substrate will be composed of recycled crushed brick, expanded clay shale and recycled organic content (for example Bauder's

Biodiverse Substrate⁵) which would mimic the mosaic habitat of recently disturbed land, and allow for the growth of early successional communities such as mosses and lichens, as well as allow for bare patches. These roofs will also feature additional habitat features such as log piles, sandy piles, rope coils and stone piles in order to increase the interest for a wider range of invertebrates, including rare saprophytic Beetles and solitary bee species. It is also expected that these roofs will be regularly and periodically managed by a dedicated and specialised contractor meaning it is highly likely that these roofs will achieve a condition score of 'Good'.

- 4.13 As the proposed area of intensive roof will provide introduced shrub at roof level the same assessment principle as described in paragraph 4.11 above have been applied when estimating the condition value of this habitat. The Target score for this roof is therefore 'poor'.
- 4.14 The amenity grassland to be provided on site will consist of a hardier, more species diverse turf, with a greater density of wildflower species, particularly white clover (*Trifolium repens*). This will mean the grassland will have a greater value for biodiversity, in particular pollinators, in the long term, and will be less prone to bare patches even after heavy footfall levels. Nonetheless the grassland will still be heavily used by residents and children for recreation, and despite providing a modest biodiversity enhancement, the grassland is unlikely to reach a condition above 'poor'.
- 4.15 Wildflower meadow is to be created on site, for the purposes of this assessment the meadow has been classified as 'semi improved neutral grassland'. This habitat aims to provide areas of grassland with high diversity of grass and wildflower species, which is to be managed less intensively, at a longer/rougher sward height. Given the longer sward height it is expected to be less likely to be impacted on by recreation, therefore this meadow is expected to remain a high percentage of coverage with little to no bare areas. Therefore, given the above factors, the post-development condition value of this habitat is predicted to be 'moderate'. Owing to its difficulty of creation and maintenance, it was considered unrealistic to target 'Good' condition for this habitat.
- 4.16 Given the nature of private garden spaces and the variation in maintenance and care they will receive from household to household, 'poor' is the highest reasonable condition score for this habitat.
- 4.17 As the un-vegetated gardens will comprise sealed surface they are automatically given 'very low' distinctiveness and do not require a condition assessment.
- 4.18 The rain gardens to be provided on site will comprise a mix of native, wildlife friendly species and ornamental species, similar to the areas of introduced shrub. Therefore, the same condition target has been applied, 'poor'.
- 4.19 Buildings and hardstanding are automatically given 'very low' distinctiveness and do not require a condition assessment.

Proposed Site Layout (Linear based)

- 4.20 The proposed creation of 0.561km of ornamental, non-native hedge will equate to a post development linear based biodiversity value of 0.54. as shown in table 4.3 below.

Table 4.3 Linear Based Post-Development Biodiversity Units to be created Using The Defra Metric 3.0 Calculator

Proposed habitat	Length (Kilometres)	Distinctiveness	Condition	Biodiversity Units
Hedgerow- ornamental/non-native	0.561	Very Low	Poor	0.54
			Total:	0.54

- 4.21 The use of a single species hedging to create property/boundary lines will be provided. This is expected to be less than 1.5m in height and less than 1.5m in width and therefore this hedgerow is also not expected to reach the required height and width specifications stated in Appendix 1, nor will there be any form of understory planting. Therefore, the condition cannot be assessed to be above 'poor'.

Summary

- 4.22 Given the assessment of the above figures the difference in the pre and post development area based biodiversity units on site is +0.93 which is equal to a 46.62%, area based biodiversity net gain.
- 4.23 There is also a net gain of hedgerow on site post development, with the creation of hedgerow equating to 0.54 linear based biodiversity units. However, as there was not pre-development linear value an % gain cannot be attributed to this habitat creation.

5.0 DISCUSSION

- 5.1 The calculators have shown that the proposed development will lead to a net gain in biodiversity value of 46.62%.
- 5.2 There is also a net gain of hedgerow on site post development, with the creation of hedgerow equating to 0.54 linear based biodiversity units. However, as there was not pre-development linear value an % gain cannot be attributed to this habitat creation.
- 5.3 This net gain is in compliance with national and local planning policy which seeks a minimum 10% net gain in biodiversity value of site post development.
- 5.4 These proposals will leave the site in a measurably better state for biodiversity and ecosystem service provision (well-being, shading, flood risk reduction, carbon sequestration etc), with the creation flower rich pollinator friendly habitat, which will support invertebrates and in turn priority species such as bats and birds.

6.0 SUMMARY AND CONCLUSION

- 6.1 Greengage was commissioned to undertake a BIA by The London Borough of Hillingdon of a site known as Avondale Drive, within the London Borough of Hillingdon.
- 6.2 This report demonstrates that the finalised development proposals will result in a net gain of +0.93 area based biodiversity units (46.62%) assuming all proposed landscapes are implemented and reach their targeted condition value.
- 6.3 There is also a net gain of hedgerow on site post development, with the creation of hedgerow equating to 0.54 linear based biodiversity units. However, as there was not pre-development linear value an % gain cannot be attributed to this habitat creation.
- 6.4 Additional enhancement recommendations are made within the Preliminary Ecological Appraisal (PEA) report (Doc ref: 551711sb22jul21FV02_Avondale Drive_PEA), such as provision of bird and bat boxes and invertebrate habitat features. These features will contribute to the enhancement of the quantitative biodiversity value of the site however they do not change the qualitative uplift described above.
- 6.5 This net gain is in compliance with national and local planning policy which seeks a minimum 10% net gain in biodiversity value of site post development.

FIGURE 1 HABITAT MAP SHOWING EXISTING SITE CONDITION



Avondale Drive

- Red Line Boundary
- Target Note
- Fence
- Scattered Tree
- Feature with Low Bat Roosting Potential
- Buildings
- Ephemeral Short Perennial Vegetation
- Introduced Shrub
- Amenity grassland
- Hardstanding



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Fig 1.0 Site Plan and Habitat Map

APPENDIX 1 CONDITION ASSESSMENT CRITERIAS

Condition assessment criteria for Sparsely vegetated land habitats

1. The appearance and composition of the vegetation closely matches characteristics of the specific sparsely vegetated habitat type (see UKHab definition linked above). Indicator species for the specific sparsely vegetated habitat type are very clearly and easily visible.
2. Cover of bracken, scrub and trees less than 25%.
3. There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and undesirable species¹ make up less than 5% of vegetated ground cover.
4. Vegetation cover of vascular and non-vascular plants between 5 and 50%.

Condition	Assessment Criteria	Score
Good	• Passes 4 of 4 criteria	3
Moderate	• Passes 3 of 4 criteria	2
Poor	• Passes 0, 1, or 2 of 4 criteria	1

Condition Assessment Criteria for Urban Trees

1. More than 70% of trees are native species.
2. Tree canopy is predominantly continuous with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide.
3. More than 50% of trees are mature or veteran.
4. There is little or no evidence of an adverse impact on tree health by anthropogenic activities such as vandalism or herbicide use. There is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.
5. Management regime has encouraged micro habitat sites for birds, mammals and insects e.g. presence of deadwood, cavities or loose bark etc.
6. Trees are immediately adjacent to other vegetation, and tree canopies are oversailing vegetation beneath.

Condition	Assessment Criteria	Score
Good	Passes 5 or 6 of 6 criteria	3
Moderate	Passes 3 or 4 of 6 criteria	2
Poor	Passes 0, 1 or 2 of 6 criteria	1

Condition Assessment Criteria for Grassland Habitat (Low distinctiveness)

- There must be 6-8 species per m2 . Note - if a grassland has 9 or more species per m2 it should be classified as a moderate distinctiveness grassland habitat type.
- Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.
- Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.
- Physical damage evident in less than 5% of total grassland area, such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities.
- Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.
- Cover of bracken less than 20%.
- There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and undesirable species¹ make up less than 5% of ground cover.

Condition	Assessment Criteria	Score
Good	Passes 6 or 7 of 7 criteria including non-negotiable criterion 7	3
Moderate	Passes 4 or 5 of 7 criteria; OR Passes 6 of 7 criteria excluding non-negotiable criterion 7	2
Poor	Passes 0, 1, 2 or 3 of 7 criteria	1

Condition Assessment Criteria for Grassland Habitat (Medium, High & Very High Distinctiveness)

1. The appearance and composition of the vegetation closely matches characteristics of the specific grassland habitat type (see UKHab definition). Wildflowers, sedges and indicator species for the specific grassland habitat type are very clearly and easily visible throughout the sward.
2. Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.
3. Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.
4. Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%.
5. There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981). Combined cover of undesirable species¹ 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.

Condition	Assessment Criteria	Score
Good	• Passes 5 of 5 criteria	3
Moderate	• Passes 3 or 4 of 5 criteria	2
Poor	• Passes 0, 1 or 2 of 5 criteria	1

Condition Assessment for Urban Habitats

1. Vegetation structure is varied, providing opportunities for insects, birds and bats to live and breed. A single ecotone (i.e. scrub, grassland, herbs) should not account for more than 80% of the total habitat area.
2. There is a diverse range of flowering plant species, providing nectar sources for insects. These species may be either native, or non-native but beneficial to wildlife. NB - To achieve GOOD condition, criterion 2 must be satisfied by native species only (rather than non-natives beneficial to wildlife).

3. Invasive non-native species (Schedule 9 of WCA) cover less than 5% of total vegetated area. NB - To achieve GOOD condition, criterion 3 must be satisfied by a complete absence of invasive non-native species (rather than

Condition	Assessment Criteria	Score
Good	- Passes 3 of 3 core criteria; AND - Meets the requirements for good condition within criteria 2 and 3	3
Moderate	- Passes 2 of 3 core criteria; OR - Passes 3 of 3 core criteria but does not meet the requirements for good condition within criteria 2 and 3	2
Poor	Passes 0 or 1 of 3 core criteria	1

Condition Assessment Criteria for Hedgerows (without trees)

1. >1.5 m height average along length
2. >1.5 m width average along length.
3. Gap between ground and base of canopy <0.5% for >90% of length.
4. Gaps make up <10% and no canopy gaps (<5%)
5. >1m width of undisturbed ground with perennial herbaceous vegetation for >90% of length measured from outer edge of hedgerow, and is present on one side of the hedge (at least)
6. Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground
7. >90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species.
8. >90% of the hedgerow or undisturbed ground is free of damage caused by human activities.

Condition	Assessment Criteria	Score
Good	- No more than 2 failures in total; AND - No more than 1 in any functional group.	3
Moderate	- No more than 4 failures in total; AND - Does not fail both attributes in more than one functional group	2
Poor	- Fails a total of more than 4 attributes; OR - Fails both attributes in more than one functional group	1

APPENDIX 2 RELEVANT POLICY

PLANNING POLICY

National

National Planning Policy Framework

The National Planning Policy Framework (NPPF) 2019⁶ sets out the Government's planning policies for England, including how plans and decisions are expected to apply a presumption in favour of sustainable development. Chapter 15 of the NPPF focuses on conservation and enhancement of the natural environment, stating plans should 'identify and pursue opportunities for securing measurable net gains for biodiversity'.

It goes on to state: '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'. Alongside this, it acknowledges that planning should be refused where irreplaceable habitats such as ancient woodland are lost.

Regional

The London Plan: Spatial Development Strategy for Greater London⁷ –

The London Plan is comprised of separate chapters relating to a number of areas, including London's Places, People, Economy and Transport. The following policies have been identified within the London Plan, which relate specifically to ecology and this development.

Policy 2.18 Green Infrastructure

Policy 2.18 aims to protect, promote, expand and manage the extent and quality of, and access to, London's network of open and green spaces.

Policy 5.10 Urban Greening

This policy encourages the 'greening of London's buildings and spaces and specifically those in central London by including a target for increasing the area of green space (including green roofs etc) within the Central Activities Zone'.

Policy 5.11 Green Roofs and Development Site Environs

Policy 5.11 specifically supports the inclusion of planting within developments and encourages boroughs to support the inclusion of green roofs.

Policy 5.13 Sustainable Drainage

Policy 5.13 promotes the inclusion of sustainable urban drainage systems in developments and sets out a drainage hierarchy that developers should follow when designing their schemes.

Policy 7.19 Biodiversity and Access to Nature

'The Mayor will work with all the relevant partners to ensure a proactive approach to the protection, enhancement, creation, promotion and management of biodiversity in support of the Mayors Biodiversity Strategy.'

The London Plan 2021

Policy G1 Green infrastructure

- A. London's network of green and open spaces, and green features in the built environment such as green roofs and street trees, should be protected, planned, designed and managed as integrated features of green infrastructure.
- B. Boroughs should prepare green infrastructure strategies that integrate objectives relating to open space provision, biodiversity conservation, flood management, health and wellbeing, sport and recreation.
- C. Development Plans and Opportunity Area Planning Frameworks should:
 - 1. identify key green infrastructure assets, their function and their potential function
 - 2. identify opportunities for addressing environmental and social challenges through strategic green infrastructure interventions.

Policy G2 London's Green Belt

- A. The Green Belt should be protected from inappropriate development:
 - 1. development proposals that would harm the Green Belt should be refused
 - 2. the enhancement of the Green Belt to provide appropriate multi-functional uses for Londoners should be supported.

Policy G5 Urban greening

- A. Major development proposals should contribute to the greening of London by including urban greening as a fundamental element of site and building design, and by incorporating measures such as high-quality landscaping (including trees), green roofs, green walls and nature-based sustainable drainage.

-
- B. Boroughs should develop an Urban Greening Factor (UGF) to identify the appropriate amount of urban greening required in new developments. The UGF should be based on the factors set out in Table 8.2, but tailored to local circumstances. In the interim, the Mayor recommends a target score of 0.4 for developments that are predominately residential, and a target score of 0.3 for predominately commercial development.

Policy G6 Biodiversity and access to nature

- C. Sites of Importance for Nature Conservation (SINCs) should be protected.
- D. Boroughs, in developing Development 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
 - 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
 - E. ensure designated sites of European or national nature conservation importance are clearly identified and impacts assessed in accordance with legislative requirements.
- E. 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:
- A. avoid damaging the significant ecological features of the site
 - B. minimise the overall spatial impact and mitigate it by improving the quality or management of the rest of the site
 - C. deliver off-site compensation of better biodiversity value.
- F. 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.
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- G. Proposals which reduce deficiencies in access to nature should be considered positively.

Policy G7 Trees and woodlands

- A. Development proposals should ensure that, wherever possible, existing trees of quality are retained [Category A and B]. If it is imperative that trees have to be removed, there should be adequate replacement based on the existing value of the benefits of the trees removed, determined by, for example, i-tree or CAVAT. The planting of additional trees should generally be included in new developments – particularly large-canopied species which provide a wider range of benefits because of the larger surface area of their canopy.

Supplementary Planning Guidance (SPG): Sustainable Design and Construction 2014

As part of the London Plan 2011 implementation framework, the SPG, relating to sustainable design and construction, was adopted in April 2014 and includes the following sections detailing Mayoral priorities in relation to biodiversity of relevance to The Site.

Nature conservation and biodiversity

The Mayor's priorities include ensuring 'developers make a contribution to biodiversity on their development Site'.

Overheating

Where priorities include the inclusions of 'measures, in the design of schemes, in line with the cooling hierarchy set out in London Plan policy 5.9 to prevent overheating over the scheme's lifetime'

Urban greening

A Priority is for developers to 'integrate green infrastructure into development schemes, including by creating links with wider green infrastructure network'.

Use less energy

'The design of developments should prioritise passive measures' which can include 'green roofs, green walls and other green infrastructure which can keep buildings warm or cool and improve biodiversity and contribute to sustainable urban drainage'.

London Environment Strategy 2018⁸

The Mayor's Environment Strategy was published in May 2018. This document sets out the strategic vision for the environment throughout London. Although not primarily a planning guidance document, it does set strategic objectives, policies and proposals that are of relevance to the delivery of new development in a planning context, including:

Objective 5.1 Make more than half of London green by 2050

Policy 5.1.1 Protect, enhance and increase green areas in the city, to provide green infrastructure services and benefits that London needs now.

This policy states:

"New development proposals should avoid reducing the overall amount of green cover and, where possible, seek to enhance the wider green infrastructure network to increase the benefits this provides. [...] New developments should aim to avoid fragmentation of existing green space, reduce storm water run-off rates by using sustainable drainage, and include new tree planting, wildlife-friendly landscaping, or features such as green roofs to mitigate any unavoidable loss".

This supports the 'environmental net gain' approach promoted by government in the 25 Year Environment Plan.

Proposal 5.1.1.d The London Plan includes policies to green streets and buildings, including increasing the extent of green roofs, green walls and sustainable drainage.

Objective 5.2 conserving and enhancement wildlife and natural habitats

Policy 5.2.1 Protect a core network of nature conservation sites and ensure a net gain in biodiversity

This policy requires new development to include new wildlife habitat, nesting and roosting sites, and ecologically appropriate landscaping will provide more resources for wildlife and help to strengthen ecological corridors. It states:

"Opportunities should be sought to create or restore priority habitats (previously known as UK Biodiversity Action Plan habitats) that have been identified as conservation priorities in London [and] all land managers and landowners should take BAP priority species into account".

Local

Hillingdon Local Plan (Adopted 2012)⁹

Policy EM7: Biodiversity and Geological Conservation

Hillingdon's biodiversity and geological conservation will be preserved and enhanced with particular attention given to:

1. The conservation and enhancement of the natural state of:
 - Harefield Gravel Pits
 - Colne Valley Regional Park
 - Fray's Farm Meadows
 - Harefield Pit
2. The protection and enhancement of all Sites of Importance for Nature Conservation. Sites with Metropolitan and Borough Grade 1 importance will be protected from adverse impacts and loss. Borough Grade 2 sites and Sites of Local Importance will be protected from loss with harmful impacts mitigated through appropriate compensation.
3. The protection and enhancement of populations of protected species as well as priority species and habitats identified within the UK and London Biodiversity Action Plans.
4. Appropriate contributions from developers to help enhance Sites of Importance for Nature Conservation in close proximity to development and to deliver/assist in the delivery of actions within the Biodiversity Action Plan.
5. The provision of biodiversity improvements from all development, where feasible.
6. The provision of green roofs and living walls which contribute to biodiversity and help tackle climate change.
7. The use of sustainable drainage systems that promote ecological connectivity and natural habitats.

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- ⁴ Emorsgate ER1F- Wild flowers for green roofs species mix
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