

Calculation of Biodiversity Net Gain using Defra Metric 3.1

For

The Barn Hotel, West End Road, Ruislip

February 2023

Status: For planning

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	Report Author:	Reviewed by:	Approved by:
Author:	Jess Grundy	Emily Costello MCIEEM	Nick Sibbett CEcol CEnv MCIEEM CMLI
Job title:	Assistant Ecologist	Senior Ecologist	Associate Director

Client Details	
Client:	Chase New Homes
Client Address:	8 Parkway Welwyn Garden City Hertfordshire AL8 6HG

Contact Details
<p>The Landscape Partnership Ltd</p> <p>Greenwood House 15a St Cuthberts Street Bedford MK40 3JG Tel: 01234 261315</p> <p>92 St Faith's Lane Norwich NR1 4NE Tel: 01603 230777</p> <p>The Granary Sun Wharf Deben Road Woodbridge IP12 1AZ Tel: 01394 380509</p> <p>Ensign House (E&F) Tavern Quay Sweden Gate Surrey Quays London SE16 7TX Tel: 020 3092 4141</p> <p>The Landscape Partnership Ltd is a practice of Chartered Landscape Architects, Chartered Ecologists and Chartered Environmentalists, registered with the Landscape Institute and a member of the Institute of Environmental Management & Assessment & the Arboricultural Association.</p> <p>Registered Office: Greenwood House 15a St Cuthberts Street Bedford MK40 3JG Registered in England No 2709001</p>

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Contents

1	Introduction	1
1.1	Commission	1
1.2	Legislation and policy background	1
1.3	Site location and context	1
1.4	Acknowledgements	1
1.5	Description of the project	1
1.6	Objectives of this report	2
2	Biodiversity Net Gain calculation	3
2.1	Data sources	3
2.2	Calculation methodology	5
2.3	Biodiversity Impact calculation results	16
2.4	Conclusions	16

Figures

01	Phase 1 habitat Survey
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Appendices

1	Summary of relevant legislation
2	Landscape proposals
3	Biodiversity Net Gain results

1 Introduction

1.1 Commission

- 1.1.1 The Landscape Partnership was commissioned by Chase New Homes to assess whether the proposed development Land at The Barn Hotel, West End Road, Ruislip would provide a biodiversity net gain. This was calculated using the Defra Metric 3.1.

1.2 Legislation and policy background

- 1.2.1 There is a range of protection given to sites and species. Sites may be designated for local, national, European or global importance for nature conservation. Species may be protected by European-scale legislation or varying levels of national regulation. Further information is given in Appendix 1.
- 1.2.2 The Local Planning Authority has a policy to protect features of nature conservation value within its Local Plan. Other regulators have policies relating to the consents issued by them.
- 1.2.3 Hillingdon Local Plan¹ has policy EM7: Biodiversity and Geological Conservation. This policy has no set amount of net gain that needs to be achieved and does not require a net gain to be quantified using a metric.
- 1.2.4 Part 2 of the local plan² states the following *'Where appropriate, the Council will require the use of the approved DEFRA biodiversity impact calculator (as updated) to inform decisions on no net loss and net gain.'*
- 1.2.5 The Local Plan does not set the magnitude of the measurable net gain required nor does it state that no net loss needs to be quantified using a metric. The Environment Bill (which is subject to secondary legislation due in 2023, which will make BNG compulsory) has set a minimum 10% net gain, although this is currently not mandatory. It is anticipated that calculation of Biodiversity Net Gain will become mandatory in autumn 2023. If the planning application is not yet determined by that time, a calculation to demonstrate Biodiversity Net Gain would probably be required.

1.3 Site location and context

- 1.3.1 The site is located to the south of Ruislip. Access is from West End Road to the west. The site consists of several buildings that are associated within the existing hotel. Hardstanding roads, car parking areas and footpath were present across the site with areas of amenity grassland. The site was demarcated by hedgerow along the western site boundary and fences and wall along the northern, eastern and southern boundaries.
- 1.3.2 A railway line and its corridor are adjacent to the northern site boundary. Residential areas of Ruislip immediately surrounded the site. Yeading Brook was located approximately 1.3km south-east of the site.
- 1.3.3 The Ordnance Survey Grid Reference for the approximate centre of the proposed development site is TQ 0947 8692. A plan showing the existing habitats within site is provided at Figure 01.

1.4 Acknowledgements

- 1.4.1 Useful discussions were held with Owen Terry (Landscape Architect at The Landscape Partnership) which helped formulate the proposals in the landscape proposals.
- 1.4.2 The Phase 1 Habitat survey was carried out by Emily Costello (FISC level 3) on 5th January 2023.

1.5 Description of the project

- 1.5.1 The proposed development is for residential purposes with a mixture of houses and flats proposed. It is proposed to demolish all existing buildings, with the exception of the farm house, oak room and leaning barn. These existing buildings that are being retained will be refurbished.

¹ Hillingdon London (Adopted November 2012) A vision for 2026 Local Plan: Part 1 Strategic Policies

² London Borough of Hillingdon (Adopted 16 January 2022) Local Plan Part 2 Development Management Policies

The existing site access is proposed for retention. The development proposals are shown in Appendix 2.

1.6 Objectives of this report

1.6.1 The objectives of the biodiversity calculations are:

- Calculate the existing biodiversity units as existing, prior to the development being implemented.
- Calculate the proposed biodiversity units according to the landscape proposals provided at the time of the planning application.
- Assess the net change in biodiversity units resulting from the development.

2 Biodiversity Net Gain calculation

2.1 Data sources

2.1.1 The areas and lengths of existing habitats and liner features were calculated using the habitat map produced by The Landscape Partnership (January 2023) as part of the Preliminary Ecological Appraisal and using the site topographic survey to calculate the habitat areas. It was necessary to convert these habitats recorded into the UK Habitat Classification which is a different system of habitat classification used by the Defra Metric 3.1. The 'UK Habs/Phase 1 translation' tab in the 'Technical Data' on the Defra Metric was used to convert the habitats. The existing pre-development habitat areas and linear features are listed in the tables below.

Site habitats baseline

Phase 1 habitat survey habitats pre-development	UK Habitat Classification	Area / ha
A3.1 Broad-leaved scattered trees	Urban – Urban tree	0.69 (25No. small, 16No. medium)
A2.1 Dense/continuous scrub C3.1 Tall ruderal vegetation J1.2 Amenity grassland J1.4 Introduced shrubs	Urban – Vegetated Garden	0.21
G1 Standing water	Lakes – Ornamental lakes or ponds	0.00 (40m ²)
B6 Semi-improved grassland (Poor quality)	Grassland - Modified grassland	0.09
J3.6 Buildings J4 Hardstanding	Urban – Developed land; sealed surface	0.61
Total (excluding trees)		0.91

Linear features baseline

Phase 1 habitat survey linear habitat pre-development	UK Habitat Classification	Length / km
J2.1.2 Species-poor intact hedgerow	Native hedge – Associated bank or ditch	0.14
J2.1.2 Species-poor intact hedgerow	Hedge Ornamental Non-Native	0.03
Total length		0.17

2.1.2 Retained and proposed habitats were measured from the landscape proposals drawing produced by The Landscape Proposals (drawing number: B22138-101A, February 2023) using AutoCAD. It was necessary to convert the proposed habitats into the UK Habitat Classification. Retained and proposed habitats and linear features are listed in the tables below.

Retained site habitats

Landscape Proposals (drawing number: B22138-101A)	UK Habitat Classification	Area / ha
A3.1 Broad-leaved scattered trees	Urban – Urban tree	0.48 (18No. small, 11No. medium)
J3.6 Buildings	Urban – Developed land; sealed surface	0.03
Total (excluding trees) retained		0.03
Site areas less area of retained habitats = area for habitat creation		0.88

Retained linear features

Landscape Proposals (drawing number: B22138-101A)	UK Habitat Classification	Length / km
J2.1.2 Species-poor intact hedgerow	Native hedge – Associated bank or ditch	0.14
Total length		0.14

Proposed habitat creation

Landscape Proposals (drawing number: B22138-101A)	UK Habitat Classification	Area / ha
Proposed sedum roof	Urban – other green roof	0.01
Proposed asphalt surfacing Proposed block paved surfacing Proposed pedestrian path Buildings	Urban - Developed land; sealed surface	0.46
Proposed wildlife pond	Lakes - Ornamental lake or pond	0.00 (79m ²)
Proposed amenity grass	Grassland – Modified grassland	0.22
Proposed mixed native shrub planting	Heathland and shrub – Mixed scrub	0.06
Proposed ornamental shrub/perennial planting	Urban – Introduced shrub	0.12
Proposed bulbs within flowering lawn mix	Grassland – Modified grassland	0.01
Proposed native tree. Proposed ornamental tree	Urban – Urban tree	1.33
Total (excluding trees)		0.88

Proposed linear feature creation

Landscape Proposals (drawing number: B22138-101A)	UK Habitat Classification	Length / km
Proposed native hedgerow	Native hedgerow	0.10
Proposed single species hedgerow	Hedge Ornamental Non-Native	0.34
Total length		0.44

2.2 Calculation methodology

2.2.1 The Defra Metric 3.1 spreadsheet (Biodiversity Metric 3.1 Auditing and accounting for biodiversity Calculation tool) calculation tool was downloaded from the Natural England website on 31st January 2023. Data was entered from the sources above. Each habitat was assessed for its condition using condition sheets in Annex 1 within the technical guidance³. Reasonable assumptions were made about the proposed condition of new habitats.

Sites habitat baseline

Urban trees

2.2.2 Several trees both broadleaved and coniferous were located within the site, predominantly at the site boundaries. Tree species included ash *Fraxinus excelsior*, silver birch *Betula pendula*, elm *Ulmus* sp., holly *Ilex aquifolium*, false acacia *Robinia pseudoacacia*, goat willow *Salix caprea*, Norway spruce *Picea abies*, Scots pine *Pinus sylvestris*, Lawson cypress *Chamaecyparis lawsoniana* and sycamore *Acer pseudoplatanus*.

2.2.3 The trees within the development have been classified as 'Urban – Urban trees' because, according to the Biodiversity Metric 3.1 User Guide, 'Urban tree' applies to those situated in urban habitats such as private gardens and private land. These trees are located in an urban environment and are associated with the existing hotel. The trees to the south of the main hotel building (Building 1) and the tree between Building 1 and Building 5 (as on Figure 01) were considered to be medium trees due to their size and maturity, with the remaining trees on site considered to be small sized trees.

2.2.4 None of the trees within the site offered bat roost potential; however, all trees offered bird nesting opportunities. These trees only passed three of the criteria stated within the technical guidance note and therefore are considered to be in moderate condition (see table taken from The Biodiversity Metric 3.1 – Technical Supplement).

Condition Assessment Criteria – urban trees		
1	The tree is a native species (or more than 70% within the block are native species).	Pass
2	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	Pass
3	The tree is mature or veteran (or more than 50% within the block are mature or veteran).	Fail
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.	Pass
5	Micro-habitats for birds, mammals and insects are present e.g. presence of deadwood, cavities, ivy or loose bark	Fail
6	More than 20% of the tree canopy area is oversailing vegetation beneath.	Fail
Condition Assessment Score		
Passes 5 or 6 of 6 criteria		Good (3)
Passes 3 or 4 of 6 criteria		Moderate (2)
Passes 0, 1 or 2 of 6 criteria		Poor (1)

³ Panks S., White N., Newsome A., Potter J., Heydon M., Mayhew E., Alvarez M., Russell T., Cashion C., Goddard F., Scott S.J., Heaven M., Scott S.H., Treweek J., Butcher B. and Stone D., 2022. Biodiversity metric 3.1: Auditing and accounting for biodiversity – User Guide. Natural England. First published 21st April 2022.

Urban – Vegetated garden

- 2.2.5 The grounds of the hotel mainly consisted of amenity grassland and introduced shrubs, with a small area of ruderal vegetation. These habitat types were classified as urban – vegetated garden, as this was considered to be the best fit for this selection of habitats. The management of the habitats above were managed as garden habitats, with the introduced shrubs and amenity grassland regularly maintained. The ruderal vegetation had recently established on a composting pile that consisted of arising from the garden maintenance.
- 2.2.6 The condition of the vegetated garden habitat type is automatically set as 'Condition assessment N/A' within the metric.

Lakes – Ornamental lakes or ponds

- 2.2.7 Two ornamental ponds were located within the site boundary.
- 2.2.8 Pond 1, approximately 30m², was a koi carp pond with several koi carp present at the time of the survey. This pond was surrounded by introduced shrubs and amenity grassland. There were limited macrophytes within the pond.
- 2.2.9 Pond 2, approximately 10m², was located beneath the second storey of Building 5. This pond was likely created when this building was constructed in 2006. This pond contained several fish. There was no macrophytes within this pond and a water pump was present within the pond.
- 2.2.10 The ponds have been assessed as being in poor condition due to being stocked with non-native fish species, being heavily shaded and non-natural water levels (see table taken from The Biodiversity Metric 3.1 – Technical Supplement).

Condition Assessment Criteria – Pond		
1	The pond is of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution. Turbidity is acceptable if the pond is grazed by livestock.	Pass
2	There is semi-natural habitat (i.e. moderate distinctiveness or above) for at least 10 m from the pond edge.	Fail
3	Less than 10% of the pond is covered with duckweed or filamentous algae.	Pass
4	The pond is not artificially connected to other waterbodies, either via streams, ditches or artificial pipework.	Pass
5	Pond water levels should be able to fluctuate naturally throughout the year. No obvious dams, pumps or pipework.	Fail
6	There is an absence of non-native plant and animal species ² .	Fail
7	The pond is not artificially stocked with fish. If the pond naturally contains fish, it is a native fish assemblage at low densities.	Fail
8	In non-woodland ponds, plants, be they emergent, submerged or floating (excluding duckweeds) ³ , should cover at least 50% of the pond area that is less than 3 m deep.	Fail
9	The surface of non-woodland ponds is no more than 50% shaded by woody bankside species.	Fail
Condition Assessment Score		
Passes 9 of 9 criteria		Good (3)
Passes 6, 7 or 8 of 9 criteria		Moderate (2)
Passes 0, 1, 2, 3, 4 or 5 of 9 criteria		Poor (1)

Grassland – Modified grassland (poor quality semi-improved grassland)

- 2.2.11 An area of grassland towards the western site boundary consisted of grassland that did not appear to be as regularly managed as the amenity grassland. The sward height of this grassland was uniform and was approximately 10-15cm in height. Species within this grassland included red deadnettle *Labium purpureum*, common chickweed *Stellaria media*, speedwell *Veronica* sp. and some encroaching bramble, as well as those recorded within the amenity grassland. Due to cessation of management of this area of grassland, it is likely that this grassland is transitioning from amenity grassland to semi-improved grassland.
- 2.2.12 The areas of bramble scrub within this grassland have been included within the area measurement of grassland, as these areas consisted of small areas of bramble scrub that was scattered throughout the grassland, see Condition Assessment Criteria 3, below. The area of bramble scrub within the grassland consisted of less than 20% of the total area of grassland.
- 2.2.13 The grassland sward has been assessed as being in moderate condition due to a low species diversity and the management of the grassland (see table taken from The Biodiversity Metric 3.1 – Technical Supplement).

Condition Assessment Criteria – grassland		
1	There must be 6-8 species per m2. If a grassland has 9 or more species per m2 it should be classified as a medium distinctiveness grassland habitat type. NB - this criterion is essential for achieving moderate condition.	Fail
2	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.	Fail
3	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.	Pass
4	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	Pass
5	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	Fail
6	Cover of bracken less than 20%.	Pass
7	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981).	Pass
Condition Assessment Score		
Passes 6 or 7 of 7 criteria including non-negotiable criterion 7		Good (3)
Passes 4 or 5 of 7 criteria; OR Passes 6 of 7 criteria excluding non-negotiable criterion 7		Moderate (2)
Passes 0, 1, 2 or 3 of 7 criteria		Poor (1)

Urban –Developed land; sealed surface

- 2.2.14 The condition of the developed land, sealed surface habitat type is automatically set as 'N/A – other' within the metric.
- 2.2.15 Trees were formally identified within the local strategy. The rest of the baseline habitats were situated within a local strategy nor were they ecologically desirable due to their poor condition, unsuitability for the support of protected species and isolation from good quality habitat.

2.2.16 The habitats that will be retained included the trees at the boundaries of the site.

Linear feature baseline

Native hedgerow – Associated bank or ditch

2.2.17 A hawthorn *Crataegus monogyna* hedgerow was located along the western site boundary. This hedgerow appeared to be managed and had a height of approximately 2m and a width of approximately 1m, at the time of the survey. Ivy *Hedera helix* was growing within this hedgerow. Towards the northern end of this hedgerow was a row of immature ash growing through the hedgerow. This hedgerow is situated on top of a bank, with a footpath beyond the hedgerow.

2.2.18 This hedgerow has been assessed as being in moderate condition (see table taken from The Biodiversity Metric 3.1 – Technical Supplement). This hedgerow is proposed for retention under current design proposals.

Condition Assessment Criteria – hedgerow without trees			
A1. Height	>1.5 m average along length	<p>The average height of woody growth estimated from base of stem to the top of shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees.</p> <p>Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).</p> <p>A newly planted hedgerow does not pass this criterion (unless it is > 1.5 m height).</p>	Pass
A2 Width	>1.5 m average along length	<p>The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees.</p> <p>Outgrowths (e.g. blackthorn suckers) are only included in the width estimate when they >0.5 m in height.</p> <p>Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice4).</p>	Fail
B1 Gap – hedge base	Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')	<p>This is the vertical gappiness of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth.</p> <p>Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).</p>	Pass
B2 Gap – hedge canopy continuity	Gaps make up <10% of total length and No canopy gaps >5 m	<p>This is the horizontal gappiness of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small).</p> <p>Access points and gates contribute to the overall gappiness but are not subject to the >5 m criterion (as this is the typical size of a gate).</p>	Pass
C1 Undisturbed ground and	>1 m width of undisturbed ground with perennial	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedge.	Fail

Condition Assessment Criteria – hedgerow without trees			
perennial vegetation	herbaceous vegetation for >90% of length: measured from outer edge of hedgerow, and is present on one side of the hedge (at least)	Undisturbed ground should be present for at least 90% of the hedgerow length, greater than 1m in width and must be present along at least one side of the hedge. This criterion recognises the value of the hedge base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches."	
C2 Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	The indicator species used are nettles (<i>Urtica</i> spp.), cleavers (<i>Galium aparine</i>) and docks (<i>Rumex</i> spp.). Their presence, either singly or together, should not exceed the 20% cover threshold.	Fail
D1 Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	Neophytes are plants that have naturalised in the UK since AD 1500. For information on neophytes see the JNCC website and for information on invasive non-native species see the GB Non-Native Secretariat website.	Pass
D2 Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (e.g. excessive hedge cutting).	Pass
Condition Assessment Score (hedgerow without trees)			
No more than 2 failures in total; AND No more than 1 in any functional group.		Good	
No more than 4 failures in total; AND Does not fail both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & C2 = Moderate condition).		Moderate	
Fails a total of more than 4 attributes; OR Fails both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & B2 = Poor condition).		Poor	

Hedge ornamental non native

- 2.2.19 A row of Leyland cypress *Cupressus x leylandii* was located to the east of the hawthorn hedgerow and separated a road from amenity areas of the hotel. This row of tree did not appear to have been recently managed, this was thought to be due to the age of these trees.
- 2.2.20 The condition of this hedgerow is automatically assigned to poor condition within the metric because it is non-native.
- 2.2.21 This hedgerow will be removed under current design plans.

Habitats created

- 2.2.22 All habitat listed below are habitats to be created.

Urban – other green roof

2.2.23 A green roof is proposed on the proposed building in the northern area of the site.

2.2.24 The condition of this roof is automatically set as 'N/A – other' within the metric.

Urban – Developed land; sealed surface

2.2.25 The proposed buildings and hard works within the proposed development have been classified as this habitat type, as it best fits.

2.2.26 The condition of the developed land, sealed surface habitat type is automatically set as 'N/A – other' within the metric.

Ornamental lake or pond

2.2.27 One wildlife pond is proposed near the centre of the site.

2.2.28 This pond will be in moderate condition due to non-natural water levels and lack of semi-natural habitat around the pond edge (see table taken from The Biodiversity Metric 3.1 – Technical Supplement).

Condition Assessment Criteria – Pond		
1	The pond is of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution. Turbidity is acceptable if the pond is grazed by livestock.	Pass
2	There is semi-natural habitat (i.e. moderate distinctiveness or above) for at least 10 m from the pond edge.	Fail
3	Less than 10% of the pond is covered with duckweed or filamentous algae.	Pass
4	The pond is not artificially connected to other waterbodies, either via streams, ditches or artificial pipework.	Pass
5	Pond water levels should be able to fluctuate naturally throughout the year. No obvious dams, pumps or pipework.	Fail
6	There is an absence of non-native plant and animal species ² .	Pass
7	The pond is not artificially stocked with fish. If the pond naturally contains fish, it is a native fish assemblage at low densities.	Pass
8	In non-woodland ponds, plants, be they emergent, submerged or floating (excluding duckweeds) ³ , should cover at least 50% of the pond area that is less than 3 m deep.	Fail
9	The surface of non-woodland ponds is no more than 50% shaded by woody bankside species.	Pass
Condition Assessment Score		
Passes 9 of 9 criteria		Good (3)
Passes 6, 7 or 8 of 9 criteria		Moderate (2)
Passes 0, 1, 2, 3, 4 or 5 of 9 criteria		Poor (1)

Grassland – Modified grassland

2.2.29 The proposed amenity grassland has been categorised as 'Grassland– Modified grassland' as the criteria for these habitat types are the best fit. This habitat has been assessed as providing poor condition as it will be regularly maintained to a uniform height, used for recreational purposes, will not contain microclimates and will not be of significant ecological benefit to wildlife, with the exception of minor benefit to common/widespread foraging birds (see table taken from The Biodiversity Metric 3.1 – Technical Supplement).

Condition Assessment Criteria – grassland		
1	There must be 6-8 species per m ² . Note - if a grassland has 9 or more species per m ² it should be classified as a moderate distinctiveness grassland habitat type.	Fail
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.	Fail
3	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.	Fail
4	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.	Pass
5	Cover of bare ground between 1% and 5%, including localized areas, for example, rabbit warrens.	Fail
6	Cover of bracken less than 20%.	Pass
7	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and undesirable species make up less than 5% of ground cover.	Pass
Condition Assessment Result		
Passes 6 or 7 of 7 criteria including non-negotiable criterion 7		Good (3)
Passes 4 or 5 of 7 criteria; OR Passes 6 of 7 criteria excluding non-negotiable criterion 7		Moderate (2)
Passes 0, 1, 2 or 3 of 7 criteria		Poor (1)

Heathland and shrubs

2.2.30

Proposed native shrub planting has been classified as 'Heathland and shrub – Mixed scrub' as this habitat best fits the proposed habitat. The proposed habitat will be a mixture of native shrubs and will be managed for wildlife. This habitat has been classified as poor condition, see table taken from The Biodiversity Metric 3.1 – Technical Supplement.

Condition Assessment Criteria – Mixed scrub		
1	Habitat is representative of UKHab description (where in its natural range). There are at least three woody species, with no one species comprising more than 75% of the cover (except common juniper, sea buckthorn or box, which can be up to 100% cover).	Pass
2	There is a good age range – all of the following are present: seedlings, young shrubs and mature shrubs.	Fail
3	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and species indicative of sub-optimal condition make up less than 5% of ground cover.	Pass
4	The scrub has a well-developed edge with scattered scrub and tall grassland and/or herbs present between the scrub and adjacent habitat(s).	Fail
5	There are clearings, glades or rides present within the scrub, providing sheltered edges.	Fail
Condition Assessment Score		

Condition Assessment Criteria – Mixed scrub	
Passes 5 of 5 criteria	Good (3)
Passes 3 or 4 of 5 criteria	Moderate (2)
Passes 0, 1 or 2 of 5 criteria	Poor (1)

Urban – Introduced shrubs

- 2.2.31 The best habitat type for proposed ornamental shrubs planting is 'Urban – Introduced Shrubs'. This is because the species that will be used are non-native and ornamental species. The condition of these habitats was assessed as poor. Although there will be a high proportion of species used will be nectar-rich and berry-producing, these habitats will be managed for amenity value and therefore be neat and trimmed. Furthermore, the only option available for condition on the metric under this habitat type is poor.

Grassland – Modified grassland

- 2.2.32 The flowering lawn has been categorised as 'Grassland– modified grassland'. This category has been chosen due to the types of grass species proposed within the sward and the regularly management that is recommended by the supplier. The grassland has been assessed as providing moderate condition, as it provides additional nectaring and pollen sources than the amenity grassland above and would provide better foraging opportunities for invertebrate and birds (see table taken from The Biodiversity Metric 3.1 – Technical Supplement).

Condition Assessment Criteria – grassland		
1	There must be 6-8 species per m ² . Note - if a grassland has 9 or more species per m ² it should be classified as a medium distinctiveness grassland habitat type.	Pass
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.	Fail
3	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.	Fail
4	Physical damage evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	Pass
5	Cover of bare ground between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens.)	Fail
6	Cover of bracken less than 20%.	Pass
7	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981).	Pass
Condition Assessment Score		
Passes 6 or 7 of 7 criteria including non-negotiable criterion 7		Good (3)
Passes 4 or 5 of 7 criteria; OR Passes 6 of 7 criteria excluding non-negotiable criterion 7		Moderate (2)
Passes 0, 1, 2 or 3 of 7 criteria		Poor (1)

Urban trees

2.2.33 The proposed trees have been classified as 'Urban – Urban trees' as these will be in an urban setting and managed for amenity value. The condition of the medium sized native trees will be moderate given the management proposed, quantity of native species proposed and vegetation proposed underneath the trees.

2.2.34 The proposed ornamental trees have been classified as small trees due to the species chosen for these locations and the management proposed. These small trees have been classified as being of poor condition due to proposed management and use of non-native species (see table taken from The Biodiversity Metric 3.1 – Technical Supplement).

Condition Assessment Criteria – urban trees		Native species	Ornamental species
1	The tree is a native species (or more than 70% within the block are native species).	Pass	Fail
2	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	Pass	Pass
3	The tree is mature or veteran (or more than 50% within the block are mature or veteran).	Fail	Fail
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.	Fail	Fail
5	Micro-habitats for birds, mammals and insects are present e.g. presence of deadwood, cavities, ivy or loose bark	Fail	Fail
6	More than 20% of the tree canopy area is oversailing vegetation beneath.	Pass	Pass
Condition Assessment Score			
Passes 5 or 6 of 6 criteria		Good (3)	
Passes 3 or 4 of 6 criteria		Moderate (2) – Native trees	
Passes 0, 1 or 2 of 6 criteria		Poor (1) – Ornamental trees	

Linear feature proposed

Native hedgerows

2.2.35

The proposed native hedgerows will contain native species and have been categorised as 'native hedgerow' under the UK Habitat Classification, as this was the best fit for these proposed native hedgerows. The condition of the hedgerow has been classified as moderate condition, due to the likely management of the hedgerows and species they will contain (see table taken from The Biodiversity Metric 3.1 – Technical Supplement).

Condition Assessment Criteria - hedgerow without trees			
A1. Height	>1.5 m average along length	<p>The average height of woody growth estimated from base of stem to the top of shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees.</p> <p>Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).</p> <p>A newly planted hedgerow does not pass this criterion (unless it is > 1.5 m height).</p>	Fail
A2 Width	>1.5 m average along length	<p>The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees.</p> <p>Outgrowths (e.g. blackthorn suckers) are only included in the width estimate when they >0.5 m in height.</p> <p>Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice4).</p>	Pass
B1 Gap – hedge base	Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')	<p>This is the vertical gappiness of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth.</p> <p>Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).</p>	Pass
B2 Gap – hedge canopy continuity	Gaps make up <10% of total length and No canopy gaps >5 m	<p>This is the horizontal gappiness of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small).</p> <p>Access points and gates contribute to the overall gappiness, but are not subject to the >5 m criterion (as this is the typical size of a gate).</p>	Pass
C1 Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: measured from outer edge of hedgerow, and is	<p>This is the level of disturbance (excluding wildlife disturbance) at the base of the hedge.</p> <p>Undisturbed ground should be present for at least 90% of the hedgerow length, greater than 1m in width and must be</p>	Fail

Condition Assessment Criteria - hedgerow without trees			
	present on one side of the hedge (at least)	present along at least one side of the hedge. This criterion recognises the value of the hedge base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches."	
C2 Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	The indicator species used are nettles (<i>Urtica</i> spp.), cleavers (<i>Galium aparine</i>) and docks (<i>Rumex</i> spp.). Their presence, either singly or together, should not exceed the 20% cover threshold.	Pass
D1 Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	Neophytes are plants that have naturalised in the UK since AD 1500. For information on neophytes see the JNCC website and for information on invasive non-native species see the GB Non-Native Secretariat website.	Pass
D2 Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (e.g. excessive hedge cutting).	Pass
Condition Assessment Score (hedgerow without trees)			
No more than 2 failures in total; AND No more than 1 in any functional group.		Good	
No more than 4 failures in total; AND Does not fail both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & C2 = Moderate condition).		Moderate	
Fails a total of more than 4 attributes; OR Fails both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & B2 = Poor condition).		Poor	

Hedge Ornamental Non-Native

- 2.2.36 The proposed evergreen hedgerows and single species have been grouped together as they are both ornamental non-native hedgerow. These have been categorised as being in poor condition. This is because in the metric 'Poor' condition is the only option available for this linear feature.

Existing and proposed habitats and local strategies

- 2.2.37 Hillingdon Council Local Plan Policy EM7 describes important habitats that are to be protected, maintained and enhanced which includes trees. The existing and proposed trees have been classified in the metric as 'Formally identified in local strategy'. These habitats will provide nesting habitats for birds and in time, roosting features for bats.
- 2.2.38 The other baseline habitats/linear features and proposed habitats/linear features were not described within the local strategy nor were they ecologically desirable due to their poor condition, unsuitability for the support of protected species and isolation from good quality habitat.

2.3 Biodiversity Impact calculation results

- 2.3.1 The existing site value was calculated at 7.13 Habitat units and 1.15 Hedgerow Units. There are no river units before or after development.
- 2.3.2 Based on the landscape proposals drawing which includes retained and created vegetation, the proposed value is 9.95 Habitat Units and 1.78 Hedgerow Units. This represents a gain in 2.82 Habitat Units and a gain in 0.63 Hedgerow Units as rounded to 2 decimal places in the 'Results' tab of the metric. There is therefore a net gain of 39.56% of habitat units and a net gain of 55.03% of hedgerow units.
- 2.3.3 A large number of trees are proposed for retention and the native hawthorn hedgerow along the western site boundary.. Proposed tree and hedgerow planting will mitigate and enhance the site for the small losses of existing trees. Furthermore, native scrub planting is also proposed to provide benefits to wildlife.
- 2.3.4 All of the proposed habitats are on-site and no biodiversity off-setting is proposed.
- 2.3.5 The headline and detailed results are shown in Appendix 3. The Results page says '*Trading rules Satisfied? Yes - Check Trading Summary*'.

2.4 Conclusions

- 2.4.1 The development would achieve a biodiversity net gain, which has been calculated at 39.56% for habitats and 55.03% for hedgerows. These net gain percentages meet the need for no net loss as required in the Hillingdon Council Local Plan.

Figures



Key	
	Site Boundary
	A2.1 Dense / continuous scrub
	A3.1 Broad-leaved scattered trees
	B6 Poor semi-improved grassland
	C3.1 Tall ruderal
	G1 Standing water
	J1.2 Amenity grassland
	J1.4 Introduced shrub
	J2.1.2 Species-poor intact hedge
	J2.4 Fence
	J2.5 Wall
	J3.6 Buildings
	J4 Hardstanding
	Areas not accessible at the time of the survey

B22138 - The Barn Hotel, Ruislip

Phase 1 Habitat Survey

Figure 01

Scale: NTS

January 2023



Appendix 1

Legislative and policy context

There is a number of pieces of legislation, regulations and policies specific to ecology which underpin this assessment. These may be applicable at a European, National or Local level. References to legislation are given as a summary for information and should not be construed as legal advice.

Birds Directive

The European Community Council Directive on the Conservation of Wild Birds (79/409/EEC), normally known as the Birds Directive, sets out general rules for the conservation of all naturally occurring wild birds, their nests, eggs and habitats. It was superseded by the 'new' Birds Directive (2009/147/EC) which generally updated the previous directive.

These requirements are interpreted into English law by the Wildlife and Countryside Act 1981 (as amended) with regard to protection of birds, and the Conservation of Habitats and Species Regulations 2017 with regard to the registration and regulation of Special Protection Areas.

Habitats Directive

The European Community Council Directive on the Conservation of Natural Habitats of Wild Fauna and Flora (92/43/EEC), normally known as the Habitats Directive, aims to protect the European Union's biodiversity. It requires member states to provide strict protection for specified flora and fauna (i.e. European Protected Species) and the registration and regulation of Special Areas of Conservation.

These requirements are interpreted into English law by the Conservation of Habitats and Species Regulations 2017 with regard to European Protected Species and the registration and regulation of Special Areas of Conservation.

Conservation of Habitats and Species Regulations 2017

The Conservation of Habitats and Species Regulations 2017 interpret the Birds Directive and Habitats Directive into English and Welsh law. For clarity, the following paragraphs consider the case in England only, with Natural England given as the appropriate nature conservation body. In Wales, the Countryside Council for Wales is the appropriate nature conservation body.

Special Protection Areas and Special Areas of Conservation are defined in the regulations as 'European sites'. The Regulations regulate the management of land within European sites, requiring land managers to have the consent of Natural England before carrying out management. Byelaws may also be made to prevent damaging activities and if necessary land can be compulsorily purchased to achieve satisfactory management.

The Regulations define competent authorities as public bodies or statutory undertakers. Competent authorities are required to make an appropriate assessment of any plan or project they intend to permit or carry out, if the plan or project is likely to have a significant effect upon a European site. The permission may only be given if the plan or project is ascertained to have no adverse effect upon the integrity of the European site. If the competent authority wishes to permit a plan or project despite a negative assessment, imperative reasons of over-riding public interest must be demonstrated, and there should be no alternative to the scheme. The permissions process would involve the Secretary of State and the option of consulting the European Commission. In practice, there will be very few cases where a plan or project is permitted despite a negative assessment. This means that a planning application has to be assessed by the Local Planning Authority, based on information provided by the applicant, and the assessment must either decide that it is likely to have no significant effect on a European site or ascertain that there is no adverse effect upon the integrity of the European site.

Government policy is for Ramsar sites (wetlands of global importance) to be treated as if they were European sites within the planning process.

Appropriate Assessment

Appropriate Assessment is required in certain instances under the Conservation of Habitats and Species Regulations 2017. Regulation 63 says that:

63.— (1) A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which-

(a) is likely to have a significant effect on a European site or a European offshore marine site

(either alone or in combination with other plans or projects), and
(b) is not directly connected with or necessary to the management of the site,
must make an appropriate assessment of the implications for that site in view of that site's conservation objectives.

(2) A person applying for any such consent, permission or other authorisation shall provide such information as the competent authority may reasonably require for the purposes of the assessment or to enable them to determine whether an appropriate assessment is required.

(3) The competent authority shall for the purposes of the assessment consult the appropriate nature conservation body and have regard to any representations made by that body within such reasonable time as the authority may specify.

(4) They must also, if they consider it appropriate, take the opinion of the general public, and if they do so, they must take such steps for that purpose as they consider appropriate.

(5) In the light of the conclusions of the assessment, and subject to regulation 64 (considerations of overriding public interest), the competent authority shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site or the European offshore marine site (as the case may be).

(6) In considering whether a plan or project will adversely affect the integrity of the site, the authority must have regard to the manner in which it is proposed to be carried out or to any conditions or restrictions subject to which they propose that the consent, permission or other authorisation should be given.

The competent authority is typically the local planning authority. The appropriate assessment contains the information the council requires for the purposes of its assessment under the Habitat Regulations.

The Habitat Regulations also are applicable to local authority land use plans and policies. If a policy or plan is likely to have a significant effect upon a European site, the permission may only be given if the policy or plan is ascertained to have no adverse effect upon the integrity of the European site. This approach gives rise to a hierarchy of plans each with related appropriate assessments. For example, the appropriate assessment of a Regional Spatial Strategy will affect policies within a Core Strategy, which will then need its own appropriate assessment, and so on.

European Protected Species

European Protected Species of animals are given protection from deliberate capture, injury, killing, disturbance or egg taking/capture. Their breeding sites or resting places are also protected from damage or destruction, which does not have to be deliberate. A number of species are listed as European Protected Species, with those most likely to be considered in planning applications being bats, dormouse, great crested newt and otter. Natural England may give a licence for actions that are otherwise illegal, subject to them being satisfied on the three tests of no alternative, over-riding public interest, and maintenance of the species in favourable condition.

European Protected Species of plant are also listed and given protection. These species are generally very rare and unlikely to be present in proposed development sites.

Wildlife and Countryside Act 1981

The Wildlife and Countryside Act 1981 has been amended many times, including by the Countryside and Rights of Way Act 2000. It contains provisions for the notification and regulation of Sites of Special Scientific Interest, and for protected species.

The Regulations regulate the management of land within Sites of Special Scientific Interest, requiring land managers to have the consent of Natural England before carrying out management.

All public bodies are defined as 'S28G' bodies, which have a duty to further the nature conservation of Sites of Special Scientific Interest in the undertaking of their functions. In practice, this prevents planning applications being permitted if they would harm Sites of Special Scientific Interest, as it would be a breach of that duty.

The Act makes it an offence intentionally to kill, injure, or take any wild bird, take, damage or destroy the nest of any wild bird, while that nest is in use or being built, or take or destroy an egg of any wild bird. Special penalties are available for offences related to birds listed on Schedule 1, for which there are additional offences of disturbing these birds at their nests, or their dependent young.

The Act makes it an offence intentionally to kill, injure or take any wild animal listed on Schedule 5, and prohibits interference with places used for shelter or protection, or intentionally disturbing animals occupying such places. Some species have lesser protection under this Act, for example white-clawed crayfish, common frog and toads are only protected from sale, and reptile species, other than smooth snake and sand lizard, are protected from intentional killing or injury, but they are not protected from disturbance and their habitat is not protected. It is also an offence intentionally to pick, uproot or destroy any wild plant listed in Schedule 8.

National Planning Policy Framework

The National Planning Policy Framework (NPPF) dated February 2019 replaces previous Government Policy in relation to nature conservation and planning expressed in the NPPF dated March 2012.

Chapter 15 paragraph 170(d) of the NPPF 2018 says that the planning system should contribute to and enhance the natural and local environment by minimising impacts on and providing net gains for biodiversity.

Paragraphs 171 and 172 relate to policy for designated sites of biodiversity or landscape importance. Proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged against Local Plans policies which will distinguish between the hierarchy of international, national and locally designated sites and allocate land with the least environmental or amenity value and maintain and enhance networks of habitats and green infrastructure. Further policy is within paragraph 174, where Local Planning Authorities should within their Local Plans aim to protect and enhance biodiversity by:

- Identifying, mapping and safeguarding components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
- Promoting the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

When determining planning applications Local Planning Authorities should apply the following principles:

- If significant harm resulting from a development cannot be avoided (through locating it on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused,
- development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
- development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

Paragraph 176 adds protection to candidate sites of European or International importance (Special Protection Areas, Special Areas of Conservation and Ramsar sites) and also to those sites identified or required as compensatory measures for adverse effects on habitats sites, potential SPA, possible SAC listed or proposed Ramsar sites.

Paragraph 177 clarifies that the presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

Government circular 'Biodiversity and Geological Conservation – Statutory Obligations and their Impact Within the Planning System' referenced ODPM 06/2005 has not been replaced and remains valid. It sets out the legislation regarding designated and undesignated sites and protected species and describes how the planning system should take account of that legislation. It does however pre-date the NERC Act 2006 (see below), which includes a level of protection for a further list of habitats and species regardless of whether they are on designated sites or elsewhere.

Natural Environment and Rural Communities (NERC) Act 2006

This Act includes a list of habitats and species of principal importance in England. Local Authorities are required to consider the needs of these habitats and species when making decisions, such as on planning application.

Local Planning Authority's planning policy

The Local Planning Authority will have policies relating to biodiversity conservation.

Species Legislation

The following table provides an overview of legislation with regard to species.

Protected Species	Legislation			
	Wildlife & Countryside Act, 1981	The Conservation of Habitats and Species Regulations, 2017	Natural Environment & Rural Communities (NERC) Act, 2006	Protection of Badgers Act, 1992
Plants (certain 'rare' species)	✓	✓ ⁴	✓	
Invertebrates (certain 'rare' species)	✓	✓ ⁵	✓	
White-clawed crayfish	✓		✓	
Great crested newt, natterjack toad, pool frog	✓	✓	✓	
Other amphibians	✓ ⁶		✓	
Sand lizard, smooth snake	✓	✓ ⁷	✓	
Other reptiles	✓ ⁸		✓	
Breeding birds	✓	✓	✓	
Wintering birds (certain 'rare' species)	✓	✓	✓	
Bats	✓	✓	✓	
Dormouse	✓	✓	✓	
Water vole	✓		✓	
Otter	✓	✓	✓	
Badger				✓

⁴ Nine species present in the UK, with very specialised habitat requirements, are European Protected Species.

⁵ Fisher's estuarine moth, large blue butterfly and lesser whirlpool ram's-horn snail are European Protected Species.

⁶ The four other native amphibian species (smooth and palmate newts, common frog and common toad) are only protected against trade under this act.

⁷ Smooth snake and sand lizard are European Protected Species.

⁸ The four other native reptile species (common lizard, slow worm, grass snake and adder) are protected against intentional killing, injury and trade under this act.

Appendix 2



Key					
	Existing trees and vegetation to be retained		Proposed native hedgerow		Proposed block paved surfacing
	Existing tree to be removed		Proposed amenity grass		Proposed pedestrian path
	Proposed native tree		Proposed bulbs within flowering lawn mix		Existing wall to be retained
	Proposed ornamental tree		Proposed sedum roof		Proposed wall
	Proposed specimen shrubs		Proposed wildlife pond		Proposed knee rail
	Proposed mixed native shrub planting		Proposed natural play space		
	Proposed ornamental shrub/perennial planting		Proposed close board fence (with 13x13cm hedgehog holes)		
	Proposed single species hedgerow		Proposed asphalt surfacing		

Project The Barn Hotel, West End Road Ruslip Drawing Landscape Proposals	A	Site Boundary updated	OT	09.02.2023
	Letter	Revision	By	Date
Status Planning	the landscape partnership planning and designing environments for life			
Do not scale off drawing. All dimensions & Levels are to be checked on site. Any discrepancies must be reported to the landscape architect immediately. Copyright THE LANDSCAPE PARTNERSHIP LTD	Bedford 01234 261315			
	Woodbridge 01394 380509			
	London 020 3092 4141			
	Norwich 01603 230777			
North	Job No. B22138			
	Dwg. No. 101A			
	Scale 1:250@A1			
	Drawn DT/EF			
	Checked OT			
	Date 06.02.2023			

Appendix 3

On-site baseline	Habitat units	7.13
	Hedgerow units	1.15
	River units	0.00
On-site post-intervention <small>(Including habitat retention, creation & enhancement)</small>	Habitat units	9.95
	Hedgerow units	1.78
	River units	0.00
On-site net % change <small>(Including habitat retention, creation & enhancement)</small>	Habitat units	39.56%
	Hedgerow units	55.03%
	River units	0.00%
Off-site baseline	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention <small>(Including habitat retention, creation & enhancement)</small>	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00
Total net unit change <small>(including all on-site & off-site habitat retention, creation & enhancement)</small>	Habitat units	2.82
	Hedgerow units	0.63
	River units	0.00
Total on-site net % change plus off-site surplus <small>(including all on-site & off-site habitat retention, creation & enhancement)</small>	Habitat units	39.56%
	Hedgerow units	55.03%
	River units	0.00%
Trading rules Satisfied?	Yes ✓	

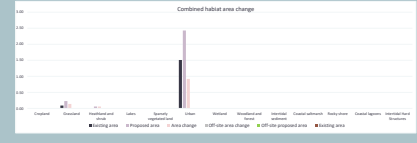
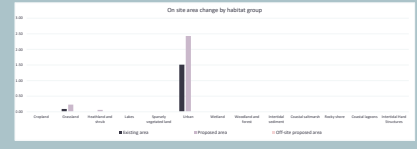
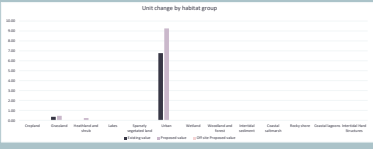
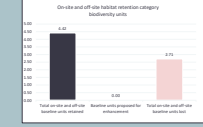
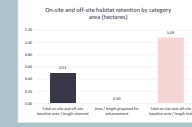
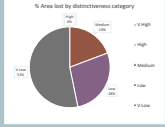
The Sun Hotel, Kildip		
Detailed Results		
Summary Figures		
Net project biodiversity units (including all on-site & off-site habitat enhancement)	Pre-development	2.88
	Post-development	2.90
Total project biodiversity % change (including all on-site & off-site habitat enhancement)	Pre-development	100.00%
	Post-development	100.35%
Combined habitat retention and enhancement		
Total on-site and off-site habitat area (length)	Pre-development	1.00
Total on-site and off-site habitat area (length)	Post-development	1.00
Total on-site and off-site habitat area (length) - retained	Pre-development	1.00
Total on-site and off-site habitat area (length) - retained	Post-development	1.00
Total on-site and off-site habitat area (length) - retained	Pre-development	1.00
Total on-site and off-site habitat area (length) - retained	Post-development	1.00
Total on-site and off-site habitat area (length) - retained	Pre-development	1.00
Total on-site and off-site habitat area (length) - retained	Post-development	1.00

On-site changes by broad habitat type						
Habitat group	Existing area	Existing value	Post-development area	Post-development value	Area change	Value change
Grassland	0.00	0.00	0.00	0.00	0.00	0.00
Woodland	0.00	0.00	0.00	0.00	0.00	0.00
Water	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00

Off-site changes by broad habitat type						
Habitat group	Existing area	Existing value	Post-development area	Post-development value	Area change	Value change
Grassland	0.00	0.00	0.00	0.00	0.00	0.00
Woodland	0.00	0.00	0.00	0.00	0.00	0.00
Water	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00

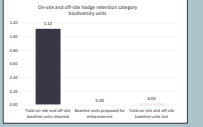
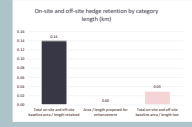
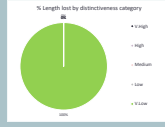
Combined on-site and off-site changes by broad habitat type						
Habitat group	Existing area	Existing value	Post-development area	Post-development value	Area change	Value change
Grassland	0.00	0.00	0.00	0.00	0.00	0.00
Woodland	0.00	0.00	0.00	0.00	0.00	0.00
Water	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00

Combined area lost by disturbance category		
Category	Area lost (hectares)	Area lost (%)
High	0.00	0.00
Medium	0.00	0.00
Low	0.00	0.00
Total	0.00	0.00

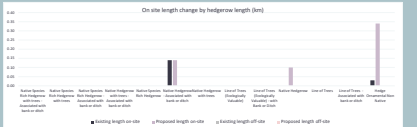
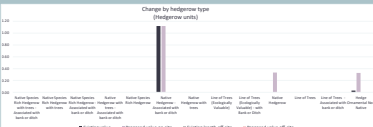


On-site changes by hedgerow type						
Hedgerow type	Existing area	Existing value	Post-development area	Post-development value	Area change	Value change
Grassland	0.00	0.00	0.00	0.00	0.00	0.00
Woodland	0.00	0.00	0.00	0.00	0.00	0.00
Water	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00

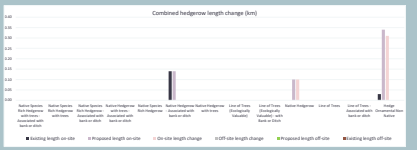
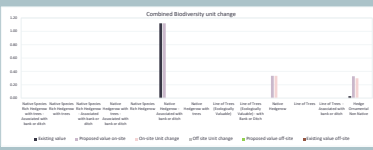
Combined length lost by disturbance category		
Category	Length lost (m)	Length lost (%)
High	0.00	0.00
Medium	0.00	0.00
Low	0.00	0.00
Total	0.00	0.00



Off-site changes by hedgerow type						
Hedgerow type	Existing area	Existing value	Post-development area	Post-development value	Area change	Value change
Grassland	0.00	0.00	0.00	0.00	0.00	0.00
Woodland	0.00	0.00	0.00	0.00	0.00	0.00
Water	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00

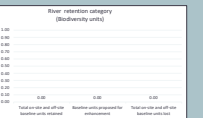
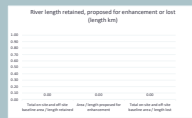


Combined on-site and off-site changes by hedgerow type						
Hedgerow type	Existing area	Existing value	Post-development area	Post-development value	Area change	Value change
Grassland	0.00	0.00	0.00	0.00	0.00	0.00
Woodland	0.00	0.00	0.00	0.00	0.00	0.00
Water	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00

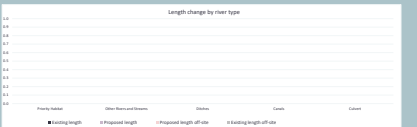


On-site changes by river type						
River type	Existing area	Existing value	Post-development area	Post-development value	Area change	Value change
Grassland	0.00	0.00	0.00	0.00	0.00	0.00
Woodland	0.00	0.00	0.00	0.00	0.00	0.00
Water	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00

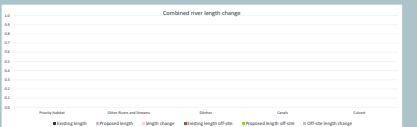
Combined length lost by disturbance category		
Category	Length lost (m)	Length lost (%)
High	0.00	0.00
Medium	0.00	0.00
Low	0.00	0.00
Total	0.00	0.00



Off-site changes by river type						
River type	Existing area	Existing value	Post-development area	Post-development value	Area change	Value change
Grassland	0.00	0.00	0.00	0.00	0.00	0.00
Woodland	0.00	0.00	0.00	0.00	0.00	0.00
Water	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00



Combined on-site and off-site changes by river type						
River type	Existing area	Existing value	Post-development area	Post-development value	Area change	Value change
Grassland	0.00	0.00	0.00	0.00	0.00	0.00
Woodland	0.00	0.00	0.00	0.00	0.00	0.00
Water	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00



[Return to results menu](#)

Trading Summary		
Defectiveness Group	Trading Rule	Trading Result?
Very High	Stop-loss contract required 1 day required 5x	Yes ✓
High	Same contract required 4x	Yes ✓
Medium	Same contract required 3x or higher, short-term contract required 2x	Yes ✓
Low	Same short-term or better contract required 2x	Yes ✓

[illegible]

Very High Distinctiveness Summary	
Very High Distinctiveness Units available to offset lower distinctiveness deficit	0.00

Habitat group	Group	On Site Total Change	Off Site Total Change	Project wide Total Change	Losses not yet accounted for
Cleared - Traditional orchards	Orchardland	0.00	0.00	0.00	
Cleared - Paddock/Village/Marine/Urban/Other	Orchardland	0.00	0.00	0.00	
Cleared - Lowland oakwood or mixed	Orchardland	0.00	0.00	0.00	
Orchard - Tall herb communities (HRH)	Orchardland	0.00	0.00	0.00	
Cleared - Upland temperate grassland	Grassland	0.00	0.00	0.00	
Heathland and shrub - Lowland Heathland	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Sea hacks/burn scrub (Karee)	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - (Karee) Heathland	Heathland and shrub	0.00	0.00	0.00	
Lake - High albedo lakes	Lakes	0.00	0.00	0.00	
Lake - Low albedo lakes	Lakes	0.00	0.00	0.00	
Lake - Salt Lakes	Lakes	0.00	0.00	0.00	
Lake - Moderate albedo lakes	Lakes	0.00	0.00	0.00	
Lake - Shrub Lakes	Lakes	0.00	0.00	0.00	
Lake - Ponds (Private) Lakes	Lakes	0.00	0.00	0.00	
Lake - Temporary lakes ponds and pools	Lakes	0.00	0.00	0.00	
Sparcely vegetated land - Coastal scrub & dunes	Sparcely vegetated land	0.00	0.00	0.00	
Sparcely vegetated land - Openly vegetated coastal	Sparcely vegetated land	0.00	0.00	0.00	
Sparcely vegetated land - Island rock country and wet forests	Sparcely vegetated land	0.00	0.00	0.00	
Sparcely vegetated land - Wetlands and swamps	Sparcely vegetated land	0.00	0.00	0.00	
Urban - Open Mosaic Habitats on Previously Developed Land	Urban	0.00	0.00	0.00	
(Wooded - Bushland)	Woodland	0.00	0.00	0.00	
Woodland and forest - Lowland bush and low woodlands	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Lowland medium density woodlands	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Native palm woodlands	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Upland bushwoods	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Upland mixed rainforests	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Upland kauris	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - New woodland	Woodland and forest	0.00	0.00	0.00	
Coastal lagoons - Coastal lagoons	Coastal lagoons	0.00	0.00	0.00	
Rocky shores - High energy littoral rock	Rocky shores	0.00	0.00	0.00	
Rocky shores - Moderate energy littoral rock	Rocky shores	0.00	0.00	0.00	
Rocky shores - Low energy littoral rock	Rocky shores	0.00	0.00	0.00	
Rocky shores - Features of littoral rock	Rocky shores	0.00	0.00	0.00	
Intertidal sediment - Littoral mud	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Littoral silt/mudflats	Intertidal sediment	0.00	0.00	0.00	
Coastal saltmarsh - Saltmarsh and saline ricefields	Coastal saltmarsh	0.00	0.00	0.00	
Intertidal sediment - Littoral bays/marshes - Humans	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Littoral bays/marshes - Subhumans	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Features of littoral sediments	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Littoral mixed areas	Intertidal sediment	0.00	0.00	0.00	
		0.00	0.00	0.00	0.00

High Distinctiveness Summary	
High Distinctiveness Units available to offset lower distinctiveness deficit	0.00
Unit Deficit: Allow for like not satisfied	0.00

[illegible]

Medium Distinctiveness Summary	
Medium Distinctiveness Units available to offset lower distinctiveness deficit	2.89
Medium Distinctiveness Broad Habitat Deficit to be offset by trading up	0.00
Higher distinctiveness surplus units minus Medium Distinctiveness Broad Habitat Deficit	0.00
Calculation surplus of units	2.89

[illegible]

Low Distinctiveness Summary	
Low Distinctiveness Not Changes in Units	-0.07
Cumulative surplus of units	2.82