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LAND AT READING ROAD, ARBORFIELD

Biodiversity Net Gain Assessment

November 2024

Report ref: SWE-P24-0078-R2

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PROJECT: Land at Reading Road, Arborfield

CLIENT: Dandara Southern Ltd and Elstree Land

REPORT REF: SWE-P24-0048-R2

PREPARED BY: Sam Watson BSc (Hons) MCIEEM

DATE OF ISSUE: 29th November 2024

PROJECT DESCRIPTION: Outline planning application for the erection of up to 111 dwellings, with associated works, parking, landscaping and publicly accessible open space, with access from Reading Road

REPORT SCOPE: Biodiversity Net Gain assessment

BIODIVERSITY NET GAIN STATEMENT

Will the biodiversity gain condition apply? - yes

Pre-development biodiversity value on date of application? – 33.95 habitat units, 6.06 hedge units and 0.61 watercourse units.

Date of assessment – April 2020

Has an earlier date been used? - Yes

Is the completed Metric attached? - Yes, version published on 23.7.24

Has degradation occurred? - Yes

Does the site contain irreplaceable habitats? – Yes – 4No veteran trees

Is a scaled habitat map included? - Yes, see Drawing 0078-2711-1



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0078-2711-1 UKHabs habitat map

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1.0 BIODIVERSITY NET GAIN ASSESSMENT

Introduction

- 1.1 In order to assess the probable impact of the proposal on the measured biodiversity value of the site, a quantitative assessment of the likely change has been carried out using the Statutory Biodiversity Metric Calculation Tool, published by the Government on 23.7.24.

Baseline assessment

- 1.2 The existing habitats on the site are outlined in the Ecological Impact Assessment and Shadow Habitats Regulation Assessment report prepared by SWE (report ref: SWE-P24-0078-R1, dated November 2024). In order to facilitate the completion of the statutory Biodiversity Net Gain (BNG) Metric, the results of the Phase 1 habitat survey have been adapted to follow the UKHabs approach. The result of this is shown on Drawing 0078-2711-1.
- 1.3 In addition, the BNG user guide (dated February 2024) and Schedule 7A, section 6 of the Town and Country Planning Act 1990 (as amended), require that degradation that has occurred on site since 30th January 2020 outwith a planning consent, be taken into account in the assessment. On this basis, Drawing 0078-2711-1 has also been modified based on an aerial photo of the site dated April 2020 so that degradation is included in the assessment (photo included at Appendix 1). The only significant difference between the April 2020 photo and the current on-site habitats, is the extent of mixed scrub habitat at the centre of the site. Some areas currently containing neutral grassland where previously mixed scrub which is understood to have been cleared in early 2024.

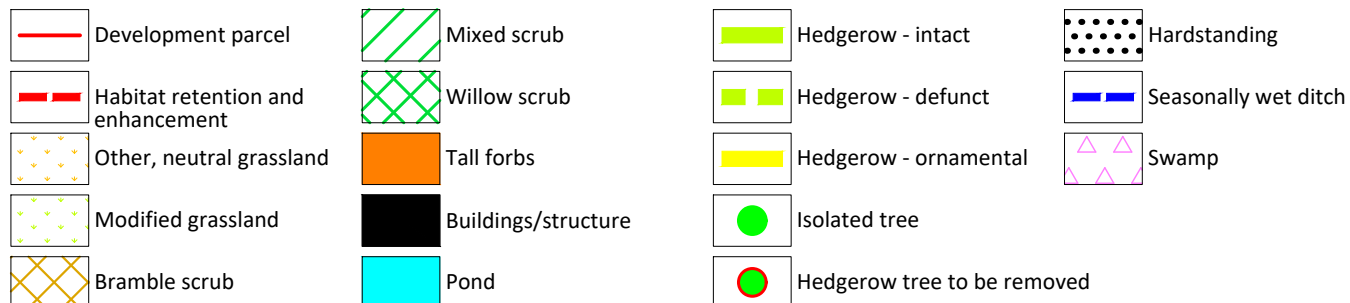
Condition assessments

- 1.4 Condition assessments have been prepared for each habitat, hedge and watercourse to inform the BNG assessment and these are included at Appendices 2, 3 and 4 respectively. The condition of 'bramble scrub' and 'developed land, sealed surface' is locked in the Metric and so a condition assessment is not required for these. Due to degradation, the condition of the habitat 'mixed scrub' has been set at 'good'.
- 1.5 Trees T39 (Lime), T50 (oak), T56 (oak) and T72 (oak) are identified as veteran and are retained in accordance with the mitigation hierarchy.
- 1.6 Whilst watercourse D1 is identified as a Main River, it has not contained flowing water, being dry for most of its length. It would therefore be assessed as being a 'ditch' within the UKHabs V2. The condition of this feature has therefore been assessed using the condition assessment for ditches.



Biodiversity net gain assessment

- 1.7 The completed Metric is provided together with this report. This indicates that the site has a pre-development baseline value of 33.95 habitat units, 6.06 hedge units and 0.61 watercourse units.
- 1.8 To assist with the review of the BNG assessment, the possible post-development site value has also been completed based on the illustrative landscape masterplan prepared by Green Landscape Studio (included at Appendix 5). Enhancements proposed include two areas of retained grassland being managed to achieve good condition 'other, neutral grassland' and creation of a wet basin as part of the SuDS strategy. As recommended in the user guide, as the detail of the development is not known at this stage, the development parcel has been divided between 'developed land, sealed surface' and 'vegetated garden' at a ratio of 70:30. The internal roads are separate to this and are also included as 'developed land, sealed surface'.
- 1.9 It is assumed that the planning consent for the proposal, if granted, will be subject to the statutory Biodiversity Condition. As such, details of how the proposal will achieve the mandatory 10% net gain in biodiversity required by the Environment Act 2021, will be agreed via the approval of a Biodiversity Gain Plan submitted pursuant to this condition. Nevertheless, it is envisaged at this stage that a minimum 10% net gain will be achieved through a combination of on-site and off-site habitat enhancements.



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Project - Land at Reading Road, Arborfield			
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Title - UKHabs habitat map			
Date - November 24	Drawing - 0078-2711-1	Rev -	



Appendix 1



Approximate site boundary 

APPENDIX 2 - HABITAT CONDITION ASSESSMENTS

Other, neutral grassland condition assessment

Condition Assessment Criteria		Criterion passed	Notes
A	The parcel represents a good example of its habitat type	No	Sward lacks sufficient floral diversity to meet this criterion
B	Sward height is varied	Yes	
C	Cover of bare ground is between 1% and 5%,	Yes	
D	Cover of bracken <i>Pteridium aquilinum</i> is less than 20% and cover of scrub (including bramble <i>Rubus fruticosus</i> agg.) is less than 5%.	Yes	No bracken was recorded and scrub is limited
E	Combined cover of species indicative of suboptimal condition and physical damage accounts for less than 5% of total area.	Yes	Whilst present, these species are not a significant part of the sward
F	There are 10 or more vascular plant species per m ² present	No	
Score		4 of 6 criteria passed, but not essential criterion A = poor condition	

Willow scrub condition assessment

Condition Assessment Criteria		Criterion passed	Notes
A	The parcel represents a good example of its habitat type	Yes	
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran) shrubs are all present.	No	The habitat lacks seedlings and mature trees
C	There is an absence of invasive non-native plant species and species indicative of suboptimal condition make up less than 5% of ground cover.	Yes	
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	Yes	
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	No	Not recorded
Score		3 of 6 criteria passed = moderate condition	

Tall forbs condition assessment

Core Criteria - must be assessed for all urban habitat types:		Criterion passed	Notes
A	Vegetation structure is varied	Y	
B	The habitat parcel contains different plant species	Y	
C	Invasive non-native and undesirable plant species	Y	
Score		3 of 3 criteria passed = good condition	

Pond condition assessments

Core Criteria		Criterion passed	Notes	Criterion passed	Notes
		Pond P1		Pond P4	
A	Water quality	Y		Y	
B	Presence of semi-natural habitat	Y		Y	
C	Cover of duckweed or filamentous algae	Y		N	Extensive duckweed recorded
D	Pond connections	Y		Y	
E	Pond water level	Y		Y	
F	Non-native plant and animal species ³	Y		Y	
	Presence of fish	Y	Fish not recorded or likely to occur	Y	Fish not recorded or likely to occur
Additional Criteria - must be assessed for all non-woodland ponds:					
H	Emergent, submerged or floating plants	Y		N	Not present
I	Extent of shading	y		N	Adjacent tree creates greater than 50% shading
Score		9 of 9 criteria passed = good condition		6 of 9 criteria passed = moderate condition	

Reedbed condition assessment

Core Criteria - must be assessed for all wetland habitat types:		Criterion passed	Notes
A	Water table	Y	
B	The parcel represents a good example of its habitat type	N	It is markedly small are for this habitat type
C	Good quality water supplies	Y	
D	Cover of scrub and scattered trees are less than 10%.	Y	
E	Cover of bare ground is less than 5%.	Y	
F	There is an absence of invasive non-native plant species ²	Y	
Additional Criterion - must be assessed for Reedbed habitats only:			
I	The reedbed has a diverse structure	N	It is greater than 80% common reed
Score		5 of 6 core criteria passed, including essential criterion A, but not additional criterion I = moderate condition	

Modified grassland condition assessment

Condition Assessment Criteria		Criterion passed	Notes
A	There are 6-8 vascular plant species per m ² present	No	
B	Sward height is varied	No	The grassland is uniformly short due to grazing
C	Any scrub present accounts for less than 20% of the total grassland area	Yes	No significant amount of scrub was recorded
D	Physical damage is evident in less than 5% of total grassland area	No	The grassland has been poached due to horses
E	Cover of bare ground is between 1% and 10%	Yes	Some bare ground due to poaching
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%	Yes	Bracken was not recorded
G	There is an absence of invasive non-native plant species ³	Yes	No such species were recorded in the grassland
Score		4 of 7 criteria passed, but failed essential criterion A = poor condition	

Individual tree condition assessment

Tree No*	T5	T11	G12	T13	T14	T23	T24	T25	T26	T41	T42-1	T42-2	T42-3	T42-4	T42-5	T43	T44	T45
The tree is a native species	Yew	Ash	Goat Willow	Oak	Oak	Ash	Ash	Blackthorn	Goat Willow	Hornbeam	Ash	Ash	Ash	Ash	Ash	Oak	Oak	Oak
	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
The tree is mature*	Y	N	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
There is little or no evidence of an adverse impact on tree	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Natural ecological niches - all tree greater than 'large' is assumed to meet this criterion automatically	N	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	Y	Y	N
Canopy oversailing vegetation	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Condition	Moderate	Moderate	Moderate	Good	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Good	Good	Moderate
Tree size class*	Small	Small	Small	Large	Medium	Small	Small	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Large	Large	Small
	200	100	150	640	540	150	180	300	350	540	400	400	400	400	400	800	800	200

*based on the information in Arboricultural Impact Assessment and Tree Condition Survey report prepared by Riskins Tree Consultancy ref: 1024-100809, dated November 2024

Tree No*	G73-1	G73-2	G73-3	G73-4	G73-5	G73-6	G73-7	T74	T75	T76	G83-1	G83-2	G83-3	G83-4	G83-5	G83-6	G83-7
The tree is a native species	Oak	Oak	Oak	Oak	Oak	Oak	Oak	Oak	Red Horse Chestnut	Horse Chestnut	Goat Willows	Goat Willows	Goat Willows	Goat Willows	Goat Willows	Goat Willows	Goat Willows
	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y
The tree is mature*	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
There is little or no evidence of an adverse impact on tree	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Natural ecological niches - all tree greater than large assumed to meet this criterious automatically	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Canopy oversailing vegetation	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Condition	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Poor	Poor	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Tree size class*	Small	Small	Small	Small	Small	Small	Small	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
	270	270	270	270	270	270	270	350	300	340	300	301	302	303	304	305	306

Tree No*	T46	T47	T48	T49	T51	T55	T57	T58	T59	T62	T63	T64	T65	T66	T69	T70	T71
The tree is a native species	Hawthorn	Oak	Hornbeam	Scots Pine	Hornbeam	Oak	Oak	Oak	Goat Willow	Oak	Ash	Oak	Ash	Oak	Oak Turkey	Oak	Oak Turkey
	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	N
The tree is mature*	N	Y	N	Y	Y	N	Y	N	N	N	N	N	N	N	Y	N	N
There is little or no evidence of an adverse impact on tree	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Natural ecological niches - all tree greater than large assumed to meet this criterious automatically	N	N	N	Y	N	Y	N	N	N	N	N	N	N	N	N	N	N
Canopy oversailing vegetation	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Condition	Moderate	Moderate	Moderate	Good	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Poor
Tree size class*	Small	Small	Medium	Large	Small	Large	Small	Small	Small	Medium	Medium	Medium	Medium	Medium	Small	Medium	Medium
	200	80	560	720	220	850	200	250	250	350	300	490	400	590	140	420	350

[illegible]

APPENDIX 3 - HEDGE CONDITION ASSESSMENTS

Hedge condition assessment

Attributes and functional groupings		Criteria - the minimum requirements for 'favourable condition'	Criteria description	H1	H2
A1.	Height	>1.5 m average along length	The average height of woody growth	Yes	Yes
A2.	Width	>1.5 m average along length	The average width of woody growth	Yes	Yes
B1.	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length	Vertical 'gappiness' of woody growth	Yes	Yes
B2.	Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	This is the horizontal 'gappiness' of woody growth	Yes	Yes
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 present on one side of the hedgerow (at least).	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedgerow.	Yes	No
C2.	Nutrient-enriched 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.	Yes	Yes
D1.	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species	For information on invasive non-native species see the GB Non-Native Secretariat website ⁷ .	Yes	Yes
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.	Yes	No
E1.	Tree class	There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient ⁸), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow.	This criterion addresses if there are a range of age-classes or morphologies which allow for replacement of trees and provide opportunities for different species.	Yes	Yes
E2.	Tree health	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens.	Yes	Yes
Hedgerow category				Good	Good

Line of trees condition assessment

Condition Assessment Criteria		H3
A	At least 70% of trees are native species.	Yes
B	Tree canopy is predominantly continuous with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide.	No
C	One or more trees has veteran features and or natural ecological niches for vertebrates and invertebrates, such as presence of standing and attached deadwood, cavities, ivy or loose bark.	No
D	There is an undisturbed naturally-vegetated strip of at least 6 m on both sides to protect the line of trees from farming and other human activities (excluding grazing). Where veteran trees are present, root protection areas should follow standing advice ² .	No
E	At least 95% of the trees are in a healthy condition (deadwood or veteran features valuable for wildlife are excluded from this). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	Yes
Score		2 of 5 criteria passed = poor condition

APPENDIX 4 - WATERCOURSE CONDITION ASSESSMENTS

Ditches condition assessment

Condition Assessment Criteria		Criterion passed	
		D1	D2
A	The ditch is of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution.	Yes	Yes
B	A range of emergent, submerged and floating-leaved plants are present. As a guide >10 species of emergent, floating or submerged plants present in a 20 m ditch length.	No	No
C	There is less than 10% cover of filamentous algae and or duckweed <i>Lemna</i> spp. (these are signs of eutrophication).	Yes	Yes
D	A fringe of aquatic marginal vegetation is present along more than 75% of the ditch.	No	No
E	Physical damage is evident along less than 5% of the ditch, with examples of damage including: excessive poaching, damage from machinery use or storage, or any other damaging management activities.	Yes	Yes
F	Sufficient water levels are maintained - as a guide a minimum summer depth of approximately 50 cm in minor ditches and 1 m in main drains.	No	No
G	Less than 10% of the ditch is heavily shaded.	Yes	No
H	There is an absence of non-native plant and animal species ¹ .	Yes	Yes
Score		5 of 8 criteria passed = poor condition	4 of 8 criteria passed = poor condition

APPENDIX 5 - ILLUSTRATIVE LANDSCAPE MASTERPLAN

