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7807: LAND AT OAKLEY FARM, BATTLEDOWN, CHELTENHAM

BRIEFING NOTE: DEFRA BIODIVERSITY METRICS

INTRODUCTION

1. The information presented in this Briefing Note is for the proposed residential development at Land at Oakley Farm, Battledown, Cheltenham hereafter referred to as 'the site'.
2. In order to assess biodiversity net gain as part of the proposed development, a calculation was undertaken using the DEFRA Biodiversity Metric 2.0 Calculation Tool Beta (see Appendix 1). Plan ECO5 shows the measurements of existing habitats within the site, while Plan ECO6 shows the measurements of proposed habitats within the site.
3. The habitat calculation has been based on the Illustrative Masterplan for the site (Plan no.333.P.3.9 [rev E]). The proposals result in the loss of areas of other neutral grassland, modified grassland, amenity grassland, ruderal ephemeral and bramble scrub, while areas of other neutral grassland and modified grassland are to be enhanced, with some areas created into woodland. The majority of trees within the site are to be retained and the majority of the hedgerow network is to be retained and enhanced. Proposed habitats include species-rich other neutral grassland, amenity grassland, a SUDS feature, woodland, species-rich native hedgerows, ruderal / ephemeral and vegetated gardens.
4. Following calculations undertaken using the DEFRA Biodiversity Metric 2.0 Calculation Tool Beta, it can be seen that a net gain in biodiversity will be delivered as a result of the proposed development. Specifically, an increase in habitat units from approximately 58.84 units to 118.28 units (which equates to a 101.03% increase) and an increase in hedgerow units from approximately 15.44 units to 15.85 units (which equates to a 2.63% gain).
5. It should be noted that the DEFRA Biodiversity Metric calculation does not take into consideration measures relating to protected or notable species. The provision of new wildflower grassland will provide enhanced foraging opportunities for bats, birds and Badgers, terrestrial habitat for amphibians, as well as opportunities for invertebrates, while the new SUDS features will provide enhanced foraging opportunities for bats, Badgers and birds, as well as aquatic habitat for amphibians and invertebrates. Enhanced hedgerows and new landscape planting will provide enhanced foraging and navigational opportunities for bats, foraging opportunities for Badgers, foraging and nesting opportunities for

birds and hibernation opportunities for amphibians, as well as enhanced habitat for invertebrates.

6. A number of additional enhancements will also be provided as part of the proposed development, that are not accounted for within the net gain calculation. This includes bat boxes providing enhanced roosting opportunities for bats and bird boxes providing enhanced nesting opportunities for birds, as well as the provision of log piles that will provide enhanced hibernation opportunities for amphibians and invertebrates post-development.



- KEY:**
- SITE BOUNDARY - 14.99 HA
 - OTHER NEUTRAL GRASSLAND (MODERATE) - 3.237 HA (HIGH SPECIES DIVERSITY SEMI-IMPROVED GRASSLAND)
 - MODIFIED GRASSLAND (MODERATE) - 8.972 HA (SEMI-IMPROVED GRASSLAND)
 - MODIFIED GRASSLAND (MODERATE) - 0.169 HA (DRY DEPRESSION)
 - BRAMBLE SCRUB (POOR) - 0.38 HA
 - RUDERAL / EPHERMAL (FAIRLY POOR) - 0.237 HA (RUDERAL VEGETATION)
 - RUDERAL / EPHERMAL (FAIRLY POOR) - 0.42 HA (RUDERAL-DOMINATED GRASSLAND)
 - RUDERAL / EPHERMAL (POOR) - 1.21 HA (HEDGEROW AREA)
 - DEVELOPED LAND; SEALED SURFACE - 0.232 HA
 - AMENITY GRASSLAND (POOR) - 0.133 HA
 - NATIVE SPECIES RICH HEDGEROW - ASSOCIATED WITH DITCH - 0.554 KM
 - NATIVE SPECIES RICH HEDGEROW - 0.871 KM
 - NATIVE HEDGEROW - 0.456 KM



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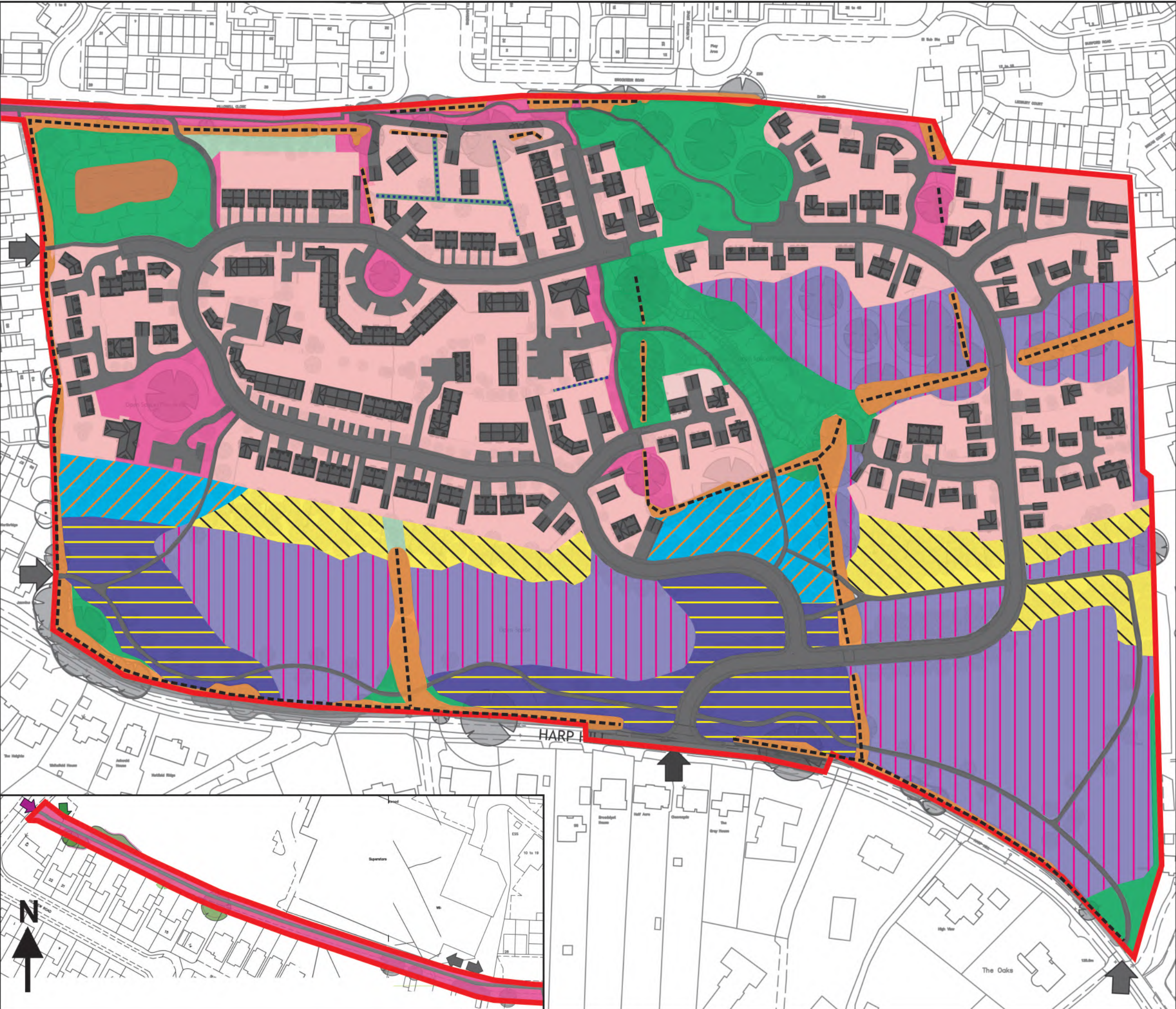
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**7807: LAND AT OAKLEY FARM,
BATTLEDOWN, CHELTENHAM**

**PLAN ECO5: EXISTING HABITAT
MEASUREMENTS**

Rev: A
Mar
2021



KEY:

SITE BOUNDARY - 14.99 HA

RETAINED AND ENHANCED

ENHANCED OTHER NEUTRAL GRASSLAND - 1.003 HA

SUCCESSION OTHER NEUTRAL GRASSLAND TO WOODLAND - 0.445 HA

ENHANCED MODIFIED GRASSLAND - 3.179 HA

SUCCESSION MODIFIED GRASSLAND TO WOODLAND - 0.734 HA

RETAINED RUDERAL / EPHERMAL - 0.808 HA (HEDGEROW AREA)

ENHANCED NATIVE SPECIES RICH HEDGEROW - 1.45 KM

HABITAT CREATION

VEGETATED GARDEN - 3.019 HA

OTHER NEUTRAL GRASSLAND - 1.297 HA

AMENITY GRASSLAND - 0.596 HA

OTHER WOODLAND; BROADLEAVED - 0.02 HA

RUDERAL/EPHEMERAL - 0.033 HA (NEW HEDGEROW AREA)

CREATED NATIVE SPECIES RICH HEDGEROW - 0.158 KM

SUSTAINABLE URBAN DRAINAGE FEATURE - 0.087 HA

DEVELOPED LAND; SEALED SURFACE - 3.769 HA



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7807: LAND AT OAKLEY FARM,
BATTLEDOWN, CHELTENHAM

PLAN ECO6: POST
DEVELOPMENT HABITAT
MEASUREMENTS

Rev: A
Mar
2021

Headline Results

Return to
results menu

On-site baseline	Habitat units	58.84
	Hedgerow units	15.44
	River units	0.00
On-site post-intervention (Including habitat retention, creation, enhancement & succession)	Habitat units	118.28
	Hedgerow units	15.85
	River units	0.00
Off-site baseline	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention (Including habitat retention, creation, enhancement & succession)	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00
Total net unit change (including all on-site & off-site habitat retention/creation)	Habitat units	59.44
	Hedgerow units	0.41
	River units	0.00
Total net % change (including all on-site & off-site habitat creation + retained habitats)	Habitat units	101.03%
	Hedgerow units	2.63%
	River units	0.00%

A-1 Site Habitat Baseline

Condense / Show Columns

Condense / Show Rows

Main Menu

Instructions

Ref	Habitats and areas			Habitat dsthctiveness	Habitat condition	Ecological connectivity	Strategic significance	Suggested action to address habitat losses	Ecological baseline
	Broad Habitat	Habitat type	Area (hectares)	Distinctiveness	Condition	Ecological connectivity	Strategic significance		Total habitat units
1	Grassland	Grassland - Other neutral grassland	3.237	Medium	Moderate	Low	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required	25.90
2	Grassland	Grassland - Modified grassland	8.972	Low	Fairly Poor	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	26.92
3	Grassland	Grassland - Modified grassland	0.169	Low	Fairly Poor	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.51
4	Heathland and shrub	Heathland and shrub - Bramble scrub	0.38	Medium	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required	1.52
5	Sparsely vegetated land	Sparsely vegetated land - Ruderal/Ephemeral	0.237	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.47
6	Sparsely vegetated land	Sparsely vegetated land - Ruderal/Ephemeral	0.42	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.84
7	Sparsely vegetated land	Sparsely vegetated land - Ruderal/Ephemeral	1.21	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	2.42
8	Urban	Urban - Developed land, sealed surface	0.232	V.Low	N/A - Other	Low	Area/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00
9	Urban	Urban - Amenity grassland	0.133	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.27
10									
11									
12									
Total site area ha			14.99					Total Site baseline	58.84

Retention category biodiversity value								Bespoke compensation agreed for unacceptable losses	Comments	
Area retained	Area enhanced	Area succession	Baseline units retained	Baseline units enhanced	Baseline units succession	Area lost	Units lost		Assessor comments	Reviewer comments
	1.003	0.445	0.00	8.02	3.56	1.79	14.31		Higher Species Diversity Semi-improved	
	3.179	0.734	0.00	9.54	2.20	5.06	15.18		Semi-improved Grassland	
			0.00	0.00	0.00	0.17	0.51		Dry Depression	
			0.00	0.00	0.00	0.38	1.52		Cleared Bramble and Bramble	
			0.00	0.00	0.00	0.24	0.47		Ruderal	
			0.00	0.00	0.00	0.42	0.84		Ruderal dominated Grassland	
0.808			1.62	0.00	0.00	0.40	0.80		Bare Ground (Hedgerow Area)	
			0.00	0.00	0.00	0.23	0.00		Buildings, Hardstanding and Track	
			0.00	0.00	0.00	0.13	0.27		F1	
0.81	4.18	1.18	1.62	17.56	5.76	8.82	33.90			

A-2 Site Habitat Creation

Condense / Show Columns

Condense / Show Rows

[Main Menu](#)

Instructions

Post development/ post intervention habitats										
Proposed habitat	Area (hectares)	Distinctiveness	Condition	Ecological	Strategic significance	Temporal multiplier	Difficulty	Habitat units delivered	Comments	
				Ecological connectivity	Strategic significance	Time to target condition/years	Difficulty of creation category		Assessor comments	Reviewer comments
Urban - Vegetated garden	3.019	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	1	Low	5.83	Gardens (Front and Back)	
Grassland - Other neutral grassland	1.297	Medium	Good	Low	Area/compensation not in local strategy/ no local strategy	15	Low	9.12	Open Space Grassland	
Woodland and forest - Other woodland; broadleaved	0.02	Medium	Good	Low	Area/compensation not in local strategy/ no local strategy	32+	Medium	0.05	Woodland Planting	
Sparsely vegetated land - Ruderal/Ephemeral	0.033	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	1	Low	0.06	Bare Ground (New Hedgerow Area)	
Urban - Sustainable urban drainage feature	0.087	Low	Good	Low	Area/compensation not in local strategy/ no local strategy	5	Medium	0.29	Attenuation Feature	
Urban - Developed land; sealed surface	3.769	V.Low	N/A - Other	Low	Area/compensation not in local strategy/ no local strategy	0	Low	0.00	Buildings and Hardstanding	
Urban - Amenity grassland	0.596	Low	Moderate	Low	Area/compensation not in local strategy/ no local strategy	3	Low	2.14	Amenity Grassland	
Totals	8.82							17.50		

Condense / Show Columns Condense / Show Rows
Main Menu Instructions

		Post development/ post intervention habitats													
Baseline habitats		Change in distinctiveness and condition				Area (hectares)	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Temporal multiple	Difficulty multiples	Habitat units delivered	Comments	
Baseline ref	Baseline habitat	Proposed habitat (Pre-populated but can be overridden)	Distinctiveness change	Condition change	Ecological connectivity score				Strategic significance	Time to target condition/years	Difficulty of enhancement category	Assessor comments		Reviewer comments	
1	Grassland - Other neutral grassland	Grassland - Other neutral grassland	Medium - Medium	Moderate - Good	1.003	Medium	Good	Low	Area/compensation not in local strategy/ no local strategy	15	Low	10.38			
2	Grassland - Modified grassland	Grassland - Other neutral grassland	Low - Medium	Lower Distinctiveness Habitat - Good	3.179	Medium	Good	Low	Area/compensation not in local strategy/ no local strategy	15	Low	26.30			
				Total site area	4.18						Enhancement total	36.68			

A-4 Site Habitat Succession

Condense / Show Columns

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[Main Menu](#)

Instructions

[illegible]

B-1 Site Hedge Baseline

Condense / Show Columns

Condense / Show Rows

Main Menu

Instructions

		UK Habitats - existing habitats			Habitat distinctiveness		Habitat condition		Ecological connectivity			Strategic significance				Ecological baseline	Retention category biodiversity value						Comments	
Baseline ref	Hedge number	Hedgerow type	length KM	Dis tinctiveness	Score	Condition	Score	Ecological connectivity	Connectivity	Connectivity multiplier	Strategic significance	Strategic significance	Strategic position	Suggested action to address habitat losses	Total hedgerow length		Length retained	Length enhanced	Units retained	Units enhanced	Length lost	Units lost	Assessor comments	Reviewer comments
1	W1, W7, W9, H12	Native Species Rich Hedgerow - Associated with bank or ditch	0.554	High	6	Moderate	2	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Like for like	6.048			0.318	0	3.816	0.236	2.832		
2	W2, W3, W5, W11, H13	Native Species Rich Hedgerow	0.871	Medium	4	Moderate	2	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Like for like or better	6.968			0.706	0	5.648	0.165	1.32		
3	H2a, H4, H5, H12a	Native Hedgerow	0.456	Low	2	Moderate	2	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	1.824			0.422	0	1.688	0.034	0.136		
4																								
5																								
6																								
7																								
8																								
Total Site length/KM			2.88												25.4		0.00	2.45	0.00	11.15	0.44	4.39		

B-2 Site Hedge Creation

Condense / Show Columns

Condense / Show Rows

Main Menu

Instructions

Main Menu		Instructions						Multipliers														
		Proposed habitats			Habitat distinctiveness		Habitat condition		Ecological connectivity			Spatial quality			Strategic significance		Temporal multiplier		Difficulty of creation multiplier	Hedge units delivered	Comments	
Baseline ref	New hedge number	Habitat type	Length km	Distinctiveness	Score	Condition	Score	Ecological connectivity	Connectivity	Connectivity multiplier	Strategic significance		Strategic significance	Strategic position multiplier	Time to target condition/years	Time to target multiplier	Assessor comments	Reviewer comments				
1		Native Species Rich Hedgerow	0.158	Medium	4	Good	3	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy		Low Strategic Significance	1	10	0.700	0.67	0.89				
2																						
3																						
4																						
5																						
6																						
			Creation Length/KM	0.16																0.89		

B-3 Site Hedge Enhancement

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Condense / Show Rows

[Main Menu](#)

Instructions

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