



CLEVE HILL SOLAR PARK

OTHER DEADLINE 4 SUBMISSIONS WRITTEN REPRESENTATION BY THE APPLICANT - BIODIVERSITY METRICS 2.0

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CLEVE HILL SOLAR PARK DEFRA BIODIVERSITY METRIC 2.0 CALCULATIONS

AUGUST 2019



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1 INTRODUCTION

This report has been prepared on behalf of Cleve Hill Solar Park Ltd (the Applicant) in relation to an application (the Application) made to the Secretary of State (SoS) for the Department for Business, Energy & Industrial Strategy (BEIS), under section 37 of the Planning Act 2008, seeking a Development Consent Order (DCO) for the Cleve Hill Solar Park (hereafter referred to as the Development). The application was accepted on 14th December 2018.

The updated National Planning Policy Framework¹ (NPPF) published in February 2019 states (paragraph 170) that:

"Planning Policies and decisions should contribute to and enhance the natural and local environment by... minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures."

The updated Planning Policy Guidance (PPG) for the Natural Environment², updated in July 2019 states (paragraph 020) that:

"Net gain in planning describes an approach to development that leaves the natural environment in a measurably better state than it was beforehand."

The updated PPG provides examples of how biodiversity net gain can be achieved. Measures suggested include "creating new habitats" and "enhancing existing habitats".

Relevant and Written Representations received in relation to the Application requested that the Applicant demonstrate a clear "net gain" in biodiversity for the Development, in line with the Department for Environment, Food and Rural Affairs (DEFRA) 25-year plan.

This report uses the DEFRA Biodiversity Metric 2.0 Calculation Tool Beta Test³ (published July 2019) to produce a quantifiable amount of biodiversity units produced post-construction, and compare them to the baseline biodiversity unit's pre-construction to determine if the Development would result in a net gain or net loss in biodiversity.

2 METHODOLOGY

This report has been produced in accordance with the methodology set out in the following guidance documents:

- The Biodiversity Metric 2.0 – User Guide – Beta Test⁴; and
- The Biodiversity Metric 2.0 – Technical Supplement – Beta Test⁵.

The following Application documents submitted as part of the application have been used to inform this report:

- Cleve Hill Solar Park Environmental Statement (ES): Chapter 8 – Ecology (APP-038) and associated figures (APP-055);
- Cleve Hill Solar Park Environmental Statement: Technical Appendix A5.2 Outline Landscape and Biodiversity Management Plan (LBMP) (REP3-005);

¹ Ministry of Housing, Communities and Local Government (February 2019). National Planning Policy Framework. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf [accessed 06/08/2019].

² Ministry of Housing, Communities and Local Government (July 2019). Natural Environment. Available at <https://www.gov.uk/guidance/natural-environment> [Accessed 06/08/2019].

³ Available at <http://publications.naturalengland.org.uk/publication/5850908674228224>

⁴ Department for Environment Food and Rural Affairs (DEFRA) (July 2019). The Biodiversity Metric 2.0 auditing and accounting for biodiversity user guide Beta version. Available at <http://publications.naturalengland.org.uk/publication/5850908674228224> [Accessed 06/08/2019].

⁵ Department for Environment Food and Rural Affairs (DEFRA) (July 2019). The Biodiversity Metric 2.0 Technical Supplement Beta Test. Available at Department for Environment Food and Rural Affairs (DEFRA) (July 2019). [Accessed 06/08/2019].

- Cleve Hill Solar Park Environmental Statement: Technical Appendix A8.1a Extended Phase 1 Habitat Survey (APP-212); and
- Cleve Hill Solar Park Environmental Statement: Technical Appendix A8.1b Updated Extended Phase 1 Habitat Survey (APP-213).

2.1 Data Sources

The area subject to this Biodiversity Metric 2.0 assessment is based upon the same Ecology Core Study Area used in the ES, as shown in Appendix 1 – Figure 1 of this report.

The Extended Phase 1 Habitat surveys undertaken in 2015 and 2018 have been used to determine the size and condition of each baseline habitat type. This was determined by a MCIEEM Ecologist.

2.2 Assumptions and Limitations

The list of habitats provided in the DEFRA calculator are not all directly comparable with the habitats within the Development both pre- and post-construction. As a result, professional judgement has been used to best match pre- and post-construction habitat types to those available within the DEFRA calculator.

The total area of the ditches onsite has been estimated using online mapping to estimate the total length. The average width has been estimated from site visits. A conservative approach has been taken.

The total area of habitat lost totals 350.94 hectares (ha). The total area of habitats created totals 294.53 ha. The reason for this large difference is due to the creation of the 55 ha Agricultural Habitat Management Area (AR HMA) which has been excluded from the biodiversity metric calculations as it falls under the mitigation requirements of the Habitat Regulations. The AR HMA is proposed in the fields in the northeast of Figure 1. Please refer to Application Figures [APP-055] for further detail on this. Taking into consideration the 55 ha of AR HMA, the difference between habitats lost and habitats created is 0.91 ha. This difference is due to limitations in the accuracy of site survey work and desk-based mapping across a large area. Given the small difference in habitats lost and habitats created (<1%), this is unlikely to make a significant difference to the biodiversity metric calculations.

3 RESULTS

Detailed calculation outputs produced by the calculator can be found in Appendix 2 of this report.

3.1 Baseline, Pre-construction Biodiversity Units

A summary of the results of the DEFRA biodiversity metric for existing baseline, pre-construction habitats and hedgerows is shown in Tables 3.1 and 3.2 respectively.

Table 3.1: Baseline Habitat Biodiversity Units

Habitat Type	Area (ha)	Distinctiveness	Condition	Connectivity	Strategic Significance	Biodiversity Units
Cropland – Cereal Crop	349.96	Low	N/A Agricultural	N/A	Low	699.92
Urban – Developed Land – Sealed Land	10.79	Very Low	N/A Other	N/A	Low	N/A

Habitat Type	Area (ha)	Distinctiveness	Condition	Connectivity	Strategic Significance	Biodiversity Units
Urban – Amenity Grassland	4.32	Low	Moderate	Low	Low	17.28
Grassland – Tall Herb Communities	1.47	High	Moderate	Medium	Low	19.40
Woodland and Forest – Other Coniferous Woodland	0.02	Low	Moderate	Low	Low	0.08
Grassland – Other Neutral Grassland	22.28	Medium	Moderate	Low	Low	178.24
Grassland – Floodplain Wetland Mosaic	2.9	High	Moderate	Medium	Low	38.28
Lakes – Temporary Lakes, Ponds and Pool	0.19	High	Moderate	Medium	Low	2.51
Grassland – Floodplain Wetland Mosaic	0.14	High	Moderate	Medium	Low	1.85
Heathland and Scrub – Bramble Scrub	0.13	Medium	Moderate	Low	Low	1.04
Lakes - Ditches	9.748	Medium	Moderate	Low	Low	77.98
Total						1036.58

Table 3.2: Baseline Hedge Biodiversity Units

Habitat Type	Length (km)	Distinctiveness	Condition	Connectivity	Strategic Significance	Biodiversity Units
Native Hedgerow	0.1	Low	Poor	Low	Low	0.2
Total						0.2

The existing habitats onsite vary in their distinctiveness category with some assigned a very low distinctiveness category, for example the urban developed land, and some assigned a high distinctiveness category, for example the Grassland – Floodplain Wetland Mosaic. All baseline habitats and hedges were in moderate condition. The total habitat biodiversity units onsite at the baseline total **1036.58** with the baseline hedge totalling **0.2**.

3.2 Post Construction Biodiversity Units

A summary of the results of the DEFRA Biodiversity Metric for post-construction habitat enhancement is shown in Table 3.3. No enhancement measures are to be undertaken to the hedgerow onsite at baseline, but it will remain post-construction.

Table 3.3: Post Construction Habitat Enhancement

Habitat Type	Area Retained (ha)	Area Lost (ha)	Area Enhanced (ha)	Distinctiveness Change	Condition Change	Connectivity	Strategic Significance	Time to target condition (years)	Difficulty of enhancement category	Biodiversity Units	Change in Biodiversity Units from Baseline
Cropland – Cereal Crop	0	349.96	0	N/A	N/A	N/A	N/A	N/A	N/A	0	-699.92
Urban – Developed Land – Sealed Land	10.79	0	0	Very Low	N/A Other	N/A	Low	N/A	N/A	N/A	N/A
Urban – Amenity Grassland	4.32	0	0	No Change	No Change	Low	Low	N/A	N/A	17.28	0
Grassland – Tall Herb Communities	0	0	1.47	No Change	Moderate - Good	Medium	Low	10	High	21.65	+ 4.37
Woodland and Forest – Other Coniferous Woodland	0	0	0.02	No Change	Moderate - Good	Low	Low	15	Low	0.10	+0.02
Grassland – Other Neutral Grassland	0	0.98	21.3	No Change	Moderate - Good	Low	Low	15	Low	220.33	+42.09

Habitat Type	Area Retained (ha)	Area Lost (ha)	Area Enhanced (ha)	Distinctiveness Change	Condition Change	Connectivity	Strategic Significance	Time to target condition (years)	Difficulty of enhancement category	Biodiversity Units	Change in Biodiversity Units from Baseline
Grassland – Floodplain Wetland Mosaic	2.9	0	0	No Change	No Change	Medium	Low	N/A	N/A	38.28	0
Lakes – Temporary lakes, ponds and pools	0.19	0	0	No Change	No Change	Medium	Low	N/A	N/A	2.51	0
Grassland – Floodplain Wetland Mosaic	0	0	0.14	No Change	Moderate - Good	Medium	Low	10	High	2.06	+0.21
Heathland and Shrub – Bramble Scrub	0	0	0.13	No Change	Moderate - Good	Low	Low	2	Low	1.52	+0.48
Lakes - Ditches	0	0	9.748	No Change	No Change	Low	Low	N/A	N/A	77.98	0
Total										381.7	-652.78

Most of the existing terrestrial habitats will be improved in condition from moderate to good based on actions addressed within the Outline LBMP. The exceptions to this include the native hedgerow, amenity grassland, floodplain wetland mosaic, and all aquatic habitats including ditches and lakes. No active change in management of the hedge or amenity grassland has been outlined within the Application. No direct management of the aquatic habitats has been outlined within the Application, therefore no improvements in the condition of these has been predicted in Table 3.3. Whilst it is assumed that improvements in the condition of aquatic habitats will occur it will be indirectly, as a result of management of terrestrial habitats.

Through the management of the grassland, and the cessation of ploughing and agri-inputs, the habitat structure of grassland is anticipated to become more diverse with more botanical species, there will be a reduction in stress on pollinators and invertebrates, and there will be an improvement in root structure and healthier stem and leaf growth on trees.

A summary of the results of the DEFRA Biodiversity Metric for post-construction habitat and hedgerow creation is shown in Tables 3.4 and 3.5 respectively.

Table 3.4: Post Construction Habitat Creation

Proposed Habitat	Area (ha)	Distinctiveness	Condition	Connectivity	Strategic Significance	Time to target Condition (years)	Difficulty of Creation Category	Biodiversity Units
Grassland - Lowland Meadows	32.4	Very High	Good	Medium	Low	15	High	165.41
Woodland and Forest – other woodland; mixed	1.24	Medium	Good	Low	Low	32+	Medium	3.19
Woodland and Forest – other woodland; mixed	0.72	Medium	Good	Low	Low	32+	Medium	1.85
Woodland and Forest – other woodland; broadleaved	1.17	Medium	Good	Low	Low	32+	Medium	3.01
Heathland and Shrub – Mixed Scrub	4.2	Medium	Good	Low	Low	7	Low	39.28
Grassland – Lowland Meadows	74.8	Very High	Good	Medium	Low	15	High	381.88
Grassland – Lowland Meadows	180	Very High	Moderate	Medium	Low	10	High	732.10
Wetland - Reedbeds	0.5	High	Good	Medium	Low	15	Medium	3.89
Total								1330.61

Table 3.5: Post Construction Hedgerow Creation

Proposed Habitat	Length (km)	Distinctiveness	Condition	Connectivity	Strategic Significance	Time to target Condition (years)	Difficulty of Creation Category	Biodiversity Units
Native Species Rich Hedgerow with trees	3.6289	Medium	Good	Medium	Low	20	Medium	15.74

All new habitats to be created, with the exception of the grassland under the panels are expected to be maintained in good condition. The grassland under the panels is expected to be of moderate condition, as it will receive less sunlight. As detailed in **Section 2.2**, the AR HMA has been excluded from the biodiversity metric calculations. Whilst the reed bed proposed is within the AR HMA, it is not within the functional area calculated within the AR HMA and has therefore been included in the biodiversity metric calculations as an enhancement. The total number of biodiversity units produced from those habitats to be created post-construction, exceeds the baseline pre-construction biodiversity units without considering the additional biodiversity units created through baseline habitat enhancement.

4 CONCLUSION

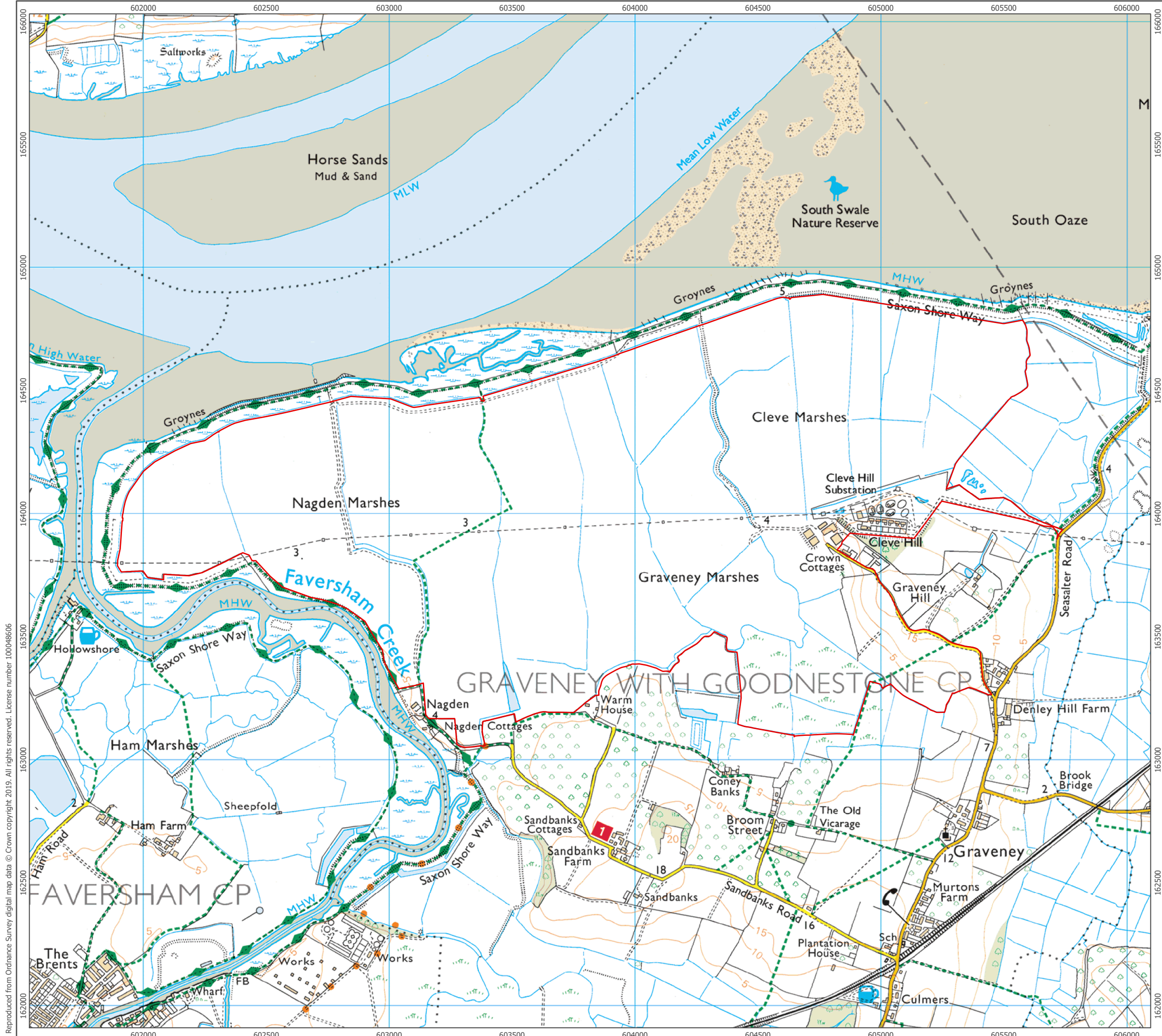
A **net gain** in biodiversity is predicted as a result of the Development using the DEFRA Biodiversity Metric Beta Test 2.0. The total net gain in biodiversity units from pre- to post-construction of the Development for habitats is 671.84 (65%) and 15.74 units (7870%) for hedgerows. Table 3.6 provides a summary of this.

Table 3.6: Summary of Biodiversity changes pre- to post-construction

	Habitat Biodiversity Units	Hedgerow Biodiversity Units
Pre-Construction Baseline	1036.58	0.20
Post Construction	1712.31	15.94
Total Net Unit Change	+675.73	+ 15.74
Net % Change	65%	7870%

Whilst there will be a loss of all biodiversity units associated with the cropland and some loss of other neutral grassland, the post-construction habitats that will be created in its place will be of a good condition and have a medium or higher distinctiveness category. Additionally, there will be an improvement in the condition of most existing terrestrial habitats onsite as a result of management practices set out within the Outline LBMP. This will result in a substantial overall net gain for biodiversity.

APPENDIX 1 – FIGURES



 Ecology Core Study Area



Produced By: KE	Ref: 2238-REP-336
Checked By: MB	Date: 26/03/2019

Ecology Core Study Area
Figure 1

Cleve Hill Solar Park
Biodiversity Metric Calculations

APPENDIX 2 – DETAILED CALCULATIONS

Cleve Hill Solar Park

A-1 Site Habitat Baseline

Condense / Show Columns

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Habitats and areas				Habitat distinctiveness		Habitat condition		Ecological connectivity	
Ref	Broad Habitat	Habitat type	Area (hectares)	Distinctiveness	Score	Condition	Score	Ecological connectivity	Connectivity
1	Cropland	Cropland - Cereal crops	349.96	Low	2	N/A - Agricultural	1	N/A	Assessment not appropriate
2	Urban	Urban - Developed land; sealed surface	10.79	V.Low	0	N/A - Other	0	N/A	Assessment not appropriate
3	Urban	Urban - Amenity grassland	4.32	Low	2	Moderate	2	Low	Unconnected habitat
4	Grassland	Grassland - Tall herb communities	1.47	High	6	Moderate	2	Medium	Moderately connected habitat
5	Woodland and forest	Woodland and forest - Other coniferous woodland	0.02	Low	2	Moderate	2	Low	Unconnected habitat
6	Grassland	Grassland - Other neutral grassland	22.28	Medium	4	Moderate	2	Low	Unconnected habitat
7	Grassland	Grassland - Floodplain Wetland Mosaic (CFGM)	2.9	High	6	Moderate	2	Medium	Moderately connected habitat
8	Lakes	Lakes - Temporary lakes, ponds and pools	0.19	High	6	Moderate	2	Medium	Moderately connected habitat
9	Grassland	Grassland - Floodplain Wetland Mosaic (CFGM)	0.14	High	6	Moderate	2	Medium	Moderately connected habitat
10	Heathland and shrub	Heathland and shrub - Bramble scrub	0.13	Medium	4	Moderate	2	Low	Unconnected habitat
11	Lakes	Lakes - Ditches	9.748	Medium	4	Moderate	2	Low	Unconnected habitat
12									
13									
14									
15									
16									
Total site area ha			401.95						

		Bespoke compensation agreed for unacceptable losses	Comments	
Area lost	Units lost		Assessor comments	Reviewer comments
349.96	699.92	Yes		
0.00	0.00	No		
0.00	0.00	No		
0.00	0.00	No		
0.00	0.00	No		
0.98	7.84	Yes		
0.00	0.00	No		
0.00	0.00	No		
0.00	0.00	No		
0.00	0.00	No		
0.00	0.00	No		
350.94	707.76			

Cleve Hill Solar Park

A-3 Site Habitat Enhancement

Condense / Show Columns

Condense / Show Rows

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Instructions

[illegible]

[illegible]

Post development/ post intervention habitats									
Distinctiveness and condition		Area (hectares)	Distinctiveness	Score	Condition	Score	Ecological connectivity		
Distinctiveness change	Condition change						Ecological connectivity score	Connectivity	Connectivity multiplier
High - High	Moderate - Good	1.47	High	6	Good	3	Medium	Moderately connected habitat	1.1
Low - Low	Moderate - Good	0.02	Low	2	Good	3	Low	Unconnected habitat	1
Medium - Medium	Moderate - Good	21.3	Medium	4	Good	3	Low	Unconnected habitat	1
High - High	Moderate - Good	0.14	High	6	Good	3	Medium	Moderately connected habitat	1.1
Medium - Medium	Moderate - Good	0.13	Medium	4	Good	3	Low	Unconnected habitat	1
					Good		Low	Unconnected habitat	1
	Total site area	23.06							

Strategic significance			Temporal multiplier		Difficulty multipliers		Habitat units delivered	Com
Strategic significance	Strategic significance	Strategic position multiplier	Time to target condition/years	Time to target multiplier	Difficulty of enhancement category	Difficulty of enhancement multiplier		Assessor comments
Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	10	0.700	High	0.33	21.65	
Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	15	0.586	Low	1	0.10	
Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	15	0.586	Low	1	220.33	
Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	10	0.700	High	0.33	2.06	
Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	2	0.931	Low	1	1.52	
Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1						
					Enhancement total		245.66	

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Cleve Hill Solar Park

A-2 Site Habitat Creation

Condense / Show Columns

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Post development/ post intervention habitats								
Proposed habitat	Area (hectares)	Distinctiveness	Score	Condition	Score	Ecological connectivity		
						Ecological connectivity	Connectivity	Connectivity multiplier
Grassland - Lowland meadows	32.4	V.High	8	Good	3	Medium	Moderately connected habitat	1.1
Woodland and forest - Other woodland; mixed	1.24	Medium	4	Good	3	Low	Unconnected habitat	1
Woodland and forest - Other woodland; broadleaved	0.72	Medium	4	Good	3	Low	Unconnected habitat	1
Woodland and forest - Other woodland; broadleaved	1.17	Medium	4	Good	3	Low	Unconnected habitat	1
Heathland and shrub - Mixed scrub	4.2	Medium	4	Good	3	Low	Unconnected habitat	1
Grassland - Lowland meadows	74.8	V.High	8	Good	3	Medium	Moderately connected habitat	1.1
Grassland - Lowland meadows	180	V.High	8	Moderate	2	Medium	Moderately connected habitat	1.1
Wetland - Reedbeds	0.5	High	6	Good	3	Medium	Moderately connected habitat	1.1
Totals	295.03							

Error - Area of development and habitat creation must match the area of habitats lost

[illegible]

Cleve Hill Solar Park

B-1 Site Hedge Baseline

Condense / Show Columns

Condense / Show Rows

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Instructions

	UK Habitats - existing habitats			Habitat distinctiveness		Habitat condition		Ecological connectivity		
Baseline ref	Hedge number	Hedgerow type	length KM	Distinctiveness	Score	Condition	Score	Ecological connectivity	Connectivity	Connectivity multiplier
1		Native Hedgerow	0.1	Low	2	Poor	1	Low	Unconnected habitat	1
2										
3										
4										
5										
		Total Site length/KM	0.10							

Strategic significance				Ecological baseline
Strategic significance	Strategic significance	Strategic position multiplier	Suggested action to address habitat losses	Total hedgerow units
Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	0.2
			Total Site baseline	0.20

Retention category biodiversity value					
Length retained	Length enhanced	Units retained	Units enhanced	Length lost	Units lost
0.1	0	0.2	0	0	0
0.10	0.00	0.20	0.00	0.00	0.00

Comments	
Assessor comments	Reviewer comments

Cleve Hill Solar Park
B-2 Site Hedge Creation

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		Proposed habitats		Habitat distinctiveness		Habitat condition		Ecological connectivity		
Baseline ref	New hedge number	Habitat type	Length km	Distinctiveness	Score	Condition	Score	Ecological connectivity	Connectivity	Connectivity multiplier
1		Native Species Rich Hedgerow with trees	3.6289	Medium	4	Good	3	Medium	Moderately connected habitat	1.1
2										
3										
4										
5										
		Creation Length/KM	3.63							

Multipliers							
Spatial quality			Temporal multiplier		Difficulty of creation multiplier		
Strategic significance						Hedge units delivered	Comments
Strategic significance	Strategic significance	Strategic position multiplier	Time to target condition/years	Time to target multiplier			
Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	20	0.490	0.67	15.74	
						15.74	

ments
Reviewer comments

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On-site baseline	Habitat units	1036.58
	Hedgerow units	0.20
	River units	0.00
On-site post-intervention (Including habitat retention, creation, enhancement & succession)	Habitat units	1712.33
	Hedgerow units	15.94
	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	811.79
	Hedgerow units	15.94
	River units	0.00
Total net % change (including all on-site & off-site habitat creation + retained habitats)	Habitat units	78.31%
	Hedgerow units	7969.37%
	River units	0.00%

Summary Figures

Net project biodiversity units (including all on-site & off-site habitat retention/creation)	Habitat units	811.79
	Hedgerow units	15.94
	River units	0.00

Total project biodiversity % change (including all On-site & Off-site Habitat Creation + Retained Habitats)	Habitat units	78.31%
	Hedgerow units	7969.37%
	River units	0.00%

On-site habitat retention and enhancement

	Habitats	Hedgerows	Rivers
Total site area / length	401.95	0.10	0.00
Total site units	1036.58	0.20	0.00

Area / length retained	27.95	0.10	0.00
Units Retained	136.05	0.20	0.00

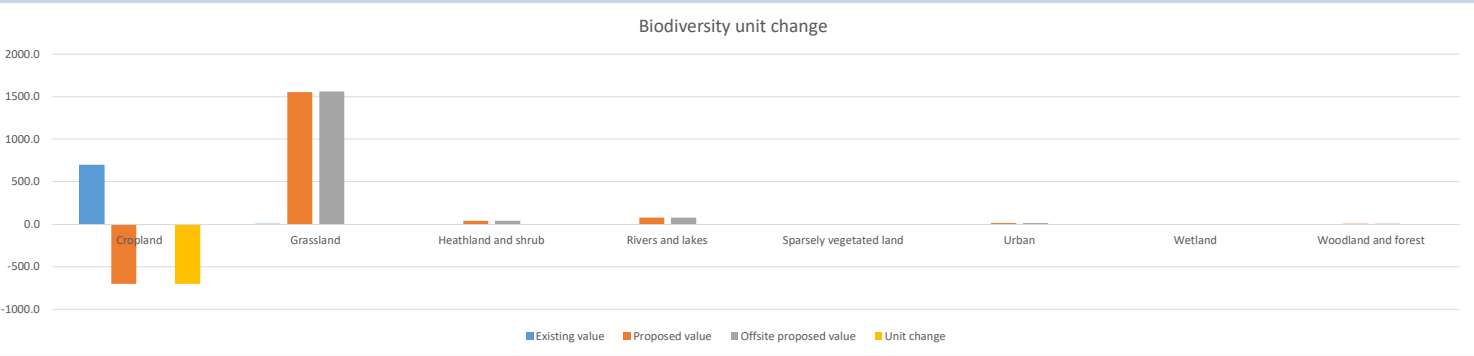
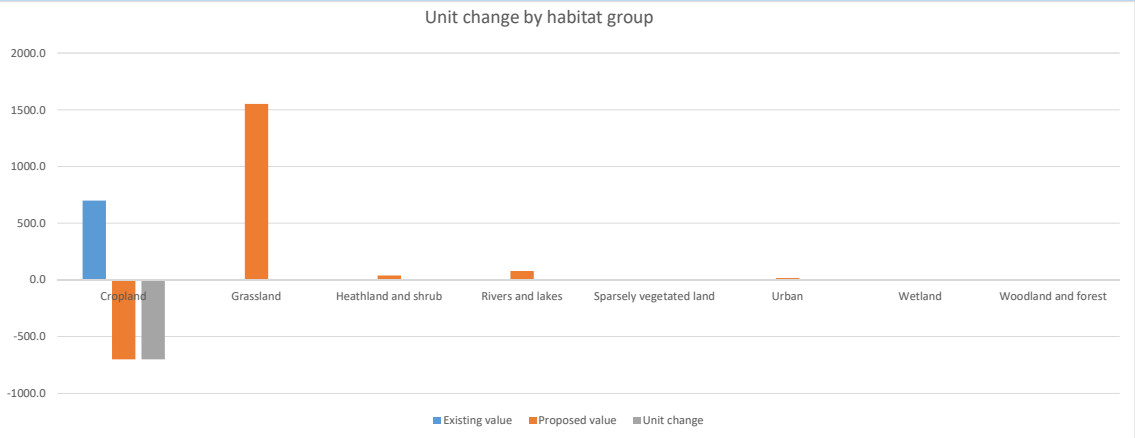
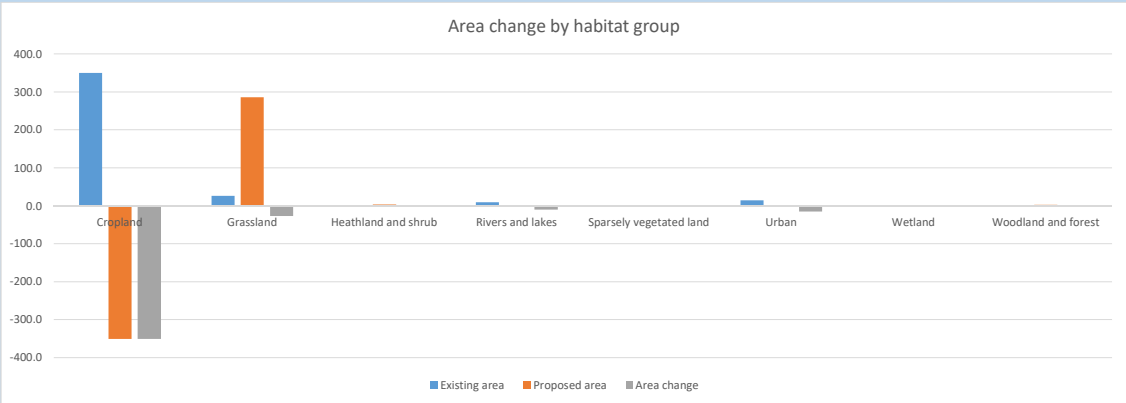
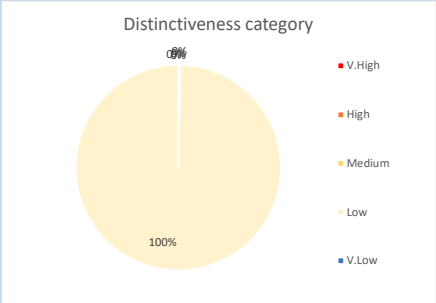
Area / length enhanced	23.06	0.00	0.00
Baseline units enhanced	192.77	0.00	0.00

Area / length succession	0.00
Units succession	0.00

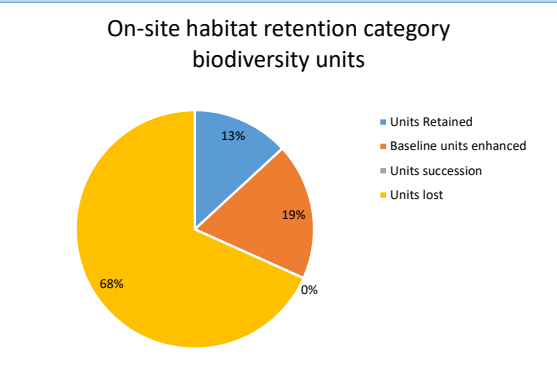
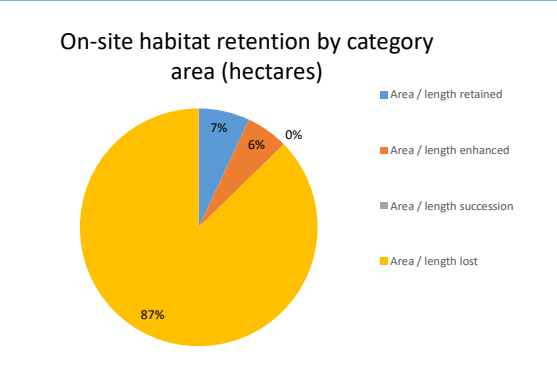
Area / length lost	350.94	0.00	0.00
Units lost	707.76	0.00	0.00

Area lost by distinctiveness band

Category	Area lost (hectares)	Area lost (%)
V.High	0	
High	0	
Medium	0.98	0
Low	349.96	100
V.Low	0	



	Pre-development		Post development on site		Post Development off site		Total post development		Change	
Habitat group	Existing area	Existing value	Proposed area	Proposed value	Proposed area	Offsite proposed value	Proposed area	Proposed value	Area change	Unit change
Cropland	350.0	699.9	-350.0	-699.9	0.0	0.0	0.0	0.0	-350.0	-699.9
Grassland	26.8	7.8	286.2	1553.9	313.0	1561.7	0.0	0.0	-26.8	-7.8
Heathland and shrub	0.1	0.0	4.2	40.8	4.3	40.8	0.0	0.0	-0.1	0.0
Rivers and lakes	9.9	0.0	0.0	80.5	9.9	80.5	0.0	0.0	-9.9	0.0
Sparsely vegetated land	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Urban	15.1	0.0	0.0	17.3	15.1	17.3	0.0	0.0	-15.1	0.0
Wetland	0.0	0.0	0.5	3.9	0.5	3.9	0.0	0.0	0.0	0.0
Woodland and forest	0.0	0.0	3.1	8.2	3.2	8.2	0.0	0.0	0.0	0.0



Very high		
Habitat group	Group	Existing area lost
Grassland - Lowland dry acid grassland	Grassland	0.00
Heathland and shrub - Mountain heaths and willow scrub	Heathland and shrub	0.00
Sparsely vegetated land - Limestone pavement	Sparsely vegetated land	0.00
Wetland - Blanket bog	Wetland	0.00
Wetland - Depressions on Peat Substrates (H7150)	Wetland	0.00
Wetland - Fens (upland and lowland)	Wetland	0.00
Wetland - Lowland raised bog	Wetland	0.00
Wetland – Oceanic Valley Mire[1] (D2.1)	Wetland	0.00
Wetland - Purple moor grass and rush pastures	Wetland	0.00
Wetland - Transition mires and quaking bogs (H7140)	Wetland	0.00
Grassland - Lowland meadows	Grassland	0.00
Grassland - Upland hay meadows	Grassland	0.00
lakes - Aquifer fed naturally fluctuating water bodies	Lakes	0.00
Sparsely vegetated land - Calaminarian grasslands	Sparsely vegetated land	0.00
Total impact to be adressed through separate mechanism		0.00

High								
Habitat group	Group	On-Site units lost	Units delivered on-site	On Site Unit Change	Units delivered off-site	Project wide Unit Change	Percentage change above loss	losses not yet accounted for
Cropland - Traditional orchards	Cropland	0.00	0.00	0.00	0.00	0.00		
Grassland - Floodplain Wetland Mosaic (CFGM)	Grassland	0.00	40.34	40.34	0.00	40.34		
Grassland - Lowland calcareous grassland	Grassland	0.00	0.00	0.00	0.00	0.00		
Grassland - Tall herb communities	Grassland	0.00	21.65	21.65	0.00	21.65		
Grassland - Upland calcareous grassland	Grassland	0.00	0.00	0.00	0.00	0.00		
Heathland and shrub - Lowland Heathland	Grassland	0.00	0.00	0.00	0.00	0.00		
Heathland and shrub - Sea buckthorn scrub (Annex 1)	Heathland and shrub	0.00	0.00	0.00	0.00	0.00		
Heathland and shrub - Upland Heathland	Heathland and shrub	0.00	0.00	0.00	0.00	0.00		
Lakes - High alkalinity lakes	Lakes	0.00	0.00	0.00	0.00	0.00		
Lakes - Low alkalinity lakes	Lakes	0.00	0.00	0.00	0.00	0.00		
Lakes - Marl Lakes	Lakes	0.00	0.00	0.00	0.00	0.00		
Lakes - Moderate alkalinity lakes	Lakes	0.00	0.00	0.00	0.00	0.00		
Lakes - Peat Lakes	Lakes	0.00	0.00	0.00	0.00	0.00		
Lakes - Ponds (Priority Habitat)	Lakes	0.00	0.00	0.00	0.00	0.00		
Lakes - Temporary lakes, ponds and pools	Lakes	0.00	2.51	2.51	0.00	2.51		
Sparsely vegetated land - Coastal sand dunes	Sparsely vegetated land	0.00	0.00	0.00	0.00	0.00		
Sparsely vegetated land - Coastal vegetated shingle	Sparsely vegetated land	0.00	0.00	0.00	0.00	0.00		
Sparsely vegetated land - Inland rock outcrop and scree habitats	Sparsely vegetated land	0.00	0.00	0.00	0.00	0.00		
Sparsely vegetated land - Maritime cliff and slopes	Sparsely vegetated land	0.00	0.00	0.00	0.00	0.00		
Urban - Open Mosaic Habitats on Previously Developed Land	Urban	0.00	0.00	0.00	0.00	0.00		
Wetland - Reedbeds	Wetland	0.00	3.89	3.89	0.00	3.89		
Woodland and forest - Lowland beech and yew woodland	Woodland and forest	0.00	0.00	0.00	0.00	0.00		
Woodland and forest - Lowland mixed deciduous woodland	Woodland and forest	0.00	0.00	0.00	0.00	0.00		
Woodland and forest - Native pine woodlands	Woodland and forest	0.00	0.00	0.00	0.00	0.00		
Woodland and forest - Upland birchwoods	Woodland and forest	0.00	0.00	0.00	0.00	0.00		
Woodland and forest - Upland mixed ashwoods	Woodland and forest	0.00	0.00	0.00	0.00	0.00		
Woodland and forest - Upland oakwood	Woodland and forest	0.00	0.00	0.00	0.00	0.00		
Woodland and forest - Wet woodland	Woodland and forest	0.00	0.00	0.00	0.00	0.00		
Woodland and forest - Wood-pasture and parkland	Woodland and forest	0.00	0.00	0.00	0.00	0.00		
				68.38		68.38		0.00

Any rows highlighted in red within this table highlight habitat types that require further compensation in order to deliver the required number of units to reach no net loss

cumulative positive - this sums only the positive values in order for them to be utilised to offset any deficit in lower distinctiveness bands	68.38
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Trading Acceptable

Trading Down Liability High Distinctiveness/Units	0
Not Like For Like/Units	0

Medium								
Habitat Group	Group	On-Site units lost	Units delivered on-site	On site unit change	Units delivered off-site	Project wide unit change	Percentage change above loss	losses not yet accounted for
Cropland - Arable field margins cultivated annually	Cropland	0.00	0.00	0.00	0.00	0.00		
Cropland - Arable field margins game bird mix	Cropland	0.00	0.00	0.00	0.00	0.00		
Cropland - Arable field margins pollen & nectar	Cropland	0.00	0.00	0.00	0.00	0.00		
Cropland - Arable field margins tussocky	Cropland	0.00	0.00	0.00	0.00	0.00		
Cropland - Cereal crops winter stubble	Cropland	0.00	0.00	0.00	0.00	0.00		
Grassland - Bracken	Grassland	0.00	0.00	0.00	0.00	0.00		
Grassland - Other lowland acid grassland	Grassland	0.00	0.00	0.00	0.00	0.00		
Grassland - Other neutral grassland	Grassland	7.84	220.33	212.49	0.00	212.49		
Grassland - Upland acid grassland	Grassland	0.00	0.00	0.00	0.00	0.00		
Heathland and shrub - Blackthorn scrub	Heathland and shrub	0.00	0.00	0.00	0.00	0.00		
Heathland and shrub - Bramble scrub	Heathland and shrub	0.00	1.52	1.52	0.00	1.52		
Heathland and shrub - Gorse scrub	Heathland and shrub	0.00	0.00	0.00	0.00	0.00		
Heathland and shrub - Hawthorn scrub	Heathland and shrub	0.00	0.00	0.00	0.00	0.00		
Heathland and shrub - Hazel scrub	Heathland and shrub	0.00	0.00	0.00	0.00	0.00		

medium cumulative ofset plus high surplus, this number must be a positive when offsite compensation is factored in	407.70
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Trading Acceptable

Trading Down Liability High Distinctiveness/Units	0
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Heathland and shrub - Mixed scrub	Heathland and shrub	0.00	39.28	39.28	0.00	39.28		
Heathland and shrub - Sea buckthorn scrub (other)	Heathland and shrub	0.00	0.00	0.00	0.00	0.00		
Lakes - Ditches	Lakes	0.00	77.98	77.98	0.00	77.98		
Lakes - Reservoirs	Lakes	0.00	0.00	0.00	0.00	0.00		
Sparsely vegetated land - Calaminarian grasslands	Sparsely vegetated land	0.00	0.00	0.00	0.00	0.00		
Sparsely vegetated land - Other inland rock and scree	Sparsely vegetated land	0.00	0.00	0.00	0.00	0.00		
Urban - Allotments	Urban	0.00	0.00	0.00	0.00	0.00		
Urban - Artificial lake or pond	Urban	0.00	0.00	0.00	0.00	0.00		
Urban - Brown roof	Urban	0.00	0.00	0.00	0.00	0.00		
Urban - Cemeteries and churchyards	Urban	0.00	0.00	0.00	0.00	0.00		
Urban - Extensive green roof	Urban	0.00	0.00	0.00	0.00	0.00		
Urban - Orchard	Urban	0.00	0.00	0.00	0.00	0.00		
Urban - Woodland	Urban	0.00	0.00	0.00	0.00	0.00		
Woodland and forest - Felled	Woodland and forest	0.00	0.00	0.00	0.00	0.00		
Woodland and forest - Other Scot's Pine woodland	Woodland and forest	0.00	0.00	0.00	0.00	0.00		
Woodland and forest - Other woodland; broadleaved	Woodland and forest	0.00	4.86	4.86	0.00	4.86		
Woodland and forest - Other woodland; mixed	Woodland and forest	0.00	3.19	3.19	0.00	3.19		
Woodland and forest - Other woodland; Young Trees planted	Woodland and forest	0.00	0.00	0.00	0.00	0.00		
			339.32		339.32			0.00

Not Like For Like or Better/Units	0
Cumulative Trading Error	0

Low								
Habitat group	Group	On-site units lost	Units delivered on-site	On site unit change	Units delivered off-site	Project wide unit change	Percentage change above loss	losses not yet accounted for
Cropland - Cereal crops	Cropland	699.92	0.00	-699.92	0.00	-699.92		-699.92
Cropland - Cereal crops other	Cropland	0.00	0.00	0.00	0.00	0.00		
Cropland - Horticulture	Cropland	0.00	0.00	0.00	0.00	0.00		
Cropland - Intensive orchards	Cropland	0.00	0.00	0.00	0.00	0.00		
Cropland - Non-cereal crops	Cropland	0.00	0.00	0.00	0.00	0.00		
Cropland - Temporary grass and clover leys	Cropland	0.00	0.00	0.00	0.00	0.00		
Grassland - Modified grassland	Grassland	0.00	0.00	0.00	0.00	0.00		
Heathland and shrub - Rhododendron scrub	Grassland	0.00	0.00	0.00	0.00	0.00		
Sparsely vegetated land - Ruderal/Ephemeral	Heathland and shrub	0.00	0.00	0.00	0.00	0.00		
Urban - Bioswale	Sparsely vegetated land	0.00	0.00	0.00	0.00	0.00		
Urban - Façade-bound green wall	Urban	0.00	0.00	0.00	0.00	0.00		
Urban - Ground based green wall	Urban	0.00	0.00	0.00	0.00	0.00		
Urban - Ground level planters	Urban	0.00	0.00	0.00	0.00	0.00		
Urban - Intensive green roof	Urban	0.00	0.00	0.00	0.00	0.00		
Urban - Introduced shrub	Urban	0.00	0.00	0.00	0.00	0.00		
Urban - Amenity grassland	Urban	0.00	17.28	17.28	0.00	17.28		
Urban - Rain garden	Urban	0.00	0.00	0.00	0.00	0.00		
Urban - Sand pit quarry or open cast mine	Urban	0.00	0.00	0.00	0.00	0.00		
Urban - Street Tree	Urban	0.00	0.00	0.00	0.00	0.00		
Urban - Suburban/ mosaic of developed/ natural surface	Urban	0.00	0.00	0.00	0.00	0.00		
Urban - Sustainable urban drainage feature	Urban	0.00	0.00	0.00	0.00	0.00		
Urban - Vacant/derelict land/ bareground	Urban	0.00	0.00	0.00	0.00	0.00		
Urban - Vegetated garden	Urban	0.00	0.00	0.00	0.00	0.00		
Woodland and forest - Other coniferous woodland	Urban	0.00	0.10	0.10	0.00	0.10		
Woodland and forest - Other coniferous woodland	Woodland and forest	0.00	0.10	0.10	0.00	0.10		
				-682.43		-682.43		-699.92

medium cumulative ofset plus high surplus, this number must be a positive when offsite compensation is factored in	17.49
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Error - Trading Down & Not Like For Like

Trading Down Liability High Distinctiveness/Units	-664.946
Not Like For Like or Better	-699.92