

Land South of Darton Lane, Darton, Staincross

Ecology Addendum

edp3487_r005

1. Introduction

- 1.1 This Ecology Addendum has been prepared by The Environmental Dimension Partnership Ltd (EDP) on behalf of the Church Commissioners for England (hereafter referred to as 'the Client'), to accompany the Ecology Appraisal produced for Land South of Darton Lane, Darton, Staincross (edp3487_r003). It sets out the details of the biodiversity offsetting required for the Application Site to achieve a biodiversity net gain.

Site Context

- 1.2 The Biodiversity Impact Assessment (BIA) that accompanied the Ecology Appraisal indicated that the loss of locally valuable grassland (albeit in poor condition) would result in a significant biodiversity loss of 34.99%.
- 1.3 For the Application Site to achieve biodiversity net gain, off-site compensation is required. The remainder of this addendum sets out the details of the off-site areas chosen and the habitat management required to achieve the net gain.

2. Selection of Offsetting Areas

- 2.1 Yorkshire Wildlife Trust (YWT) were contacted about areas of grassland habitat (similar to that which is being lost on the Application Site) that are in need of work to improve their condition and two areas were identified:
- A 1 hectare (ha) area of lowland meadow habitat on the Wilthorpe (Barnsley) Canal Nature Reserve; and
 - A 2.5ha area of wetter neutral grassland habitat on Smithies Marsh.
- 2.2 The 1ha area is part of the Wilthorpe (Barnsley) Canal reserve managed by YWT. It contains many meadow species such as common knapweed (*Centaurea nigra*), Common Bird's-foot-trefoil (*Lotus corniculatus*), meadow buttercup (*Ranunculus acris*) red clover (*Trifolium pratense*) and lesser trefoil (*Trifolium dubium*). However, the area is overgrazed and shows evidence of poaching and nutrient enrichment (from grazing animal manure) which is causing some more injurious and faster growing plants to become dominant.



- 2.3 The 2.5ha area of wetter grassland is part of the Smithies Marsh managed by YWT but grazed by a tenant grazier. There is not enough data (and none from before the current grazing level was established) to determine if there are enough indicator species present to be classed as a lowland meadow. It has been classed (for the purposes of this BIA) as 'other neutral grassland'. It is overgrazed and poached, and faster growing species have become dominant.
- 2.4 The location of both areas identified for work in relation to the wider reserves they are part of and to the Application Site boundary can be found on **Plan EDP 1**.

3. Works Required

Wilthorpe (Barnsley) Canal

- 3.1 This area of lowland meadow is in poor condition due to overgrazing. It requires 500m of stock proof fencing to surround it so that grazing levels on it can be managed appropriately. With grazing vastly reduced it will also require an annual cut with arisings removed as per traditional meadow management. This will also help to control potential scrub encroachment.
- 3.2 With the plant community base already present, once appropriate management is in place, YWT have confirmed that the condition of this lowland meadow will improve quickly from 'fairly poor' to 'fairly good'.

Smithies Marsh

- 3.3 This larger area of grassland is also in poor condition due to overgrazing. Grazing on this land is under the control of a tenant grazier. It requires 600m of stock proof fencing to surround it so that grazing levels can be appropriately managed.
- 3.4 As this area is not grazed directly by YWT, they will produce an appropriate grazing plan for the area to be followed by the tenant grazier. Once appropriate management is in place, YWT have confirmed that, due to the likely seed bank present within the soil, this grassland will improve quickly from 'other neutral grassland' in 'fairly poor' condition to 'lowland meadow' in 'moderate' condition. Condition could potentially become 'fairly good' or 'good', but a precautionary approach has been taken as YWT are not in direct control of grazing levels.

4. Updated Biodiversity Impact Assessment

- 4.1 Whilst the Application Site mitigation alone results in a 34.99% biodiversity loss, the off-site habitat enhancements described above will result in an overall biodiversity gain of **46.8%**. The updated BIA is appended to the rear of this document.

Appendix EDP 1
Biodiversity Impact Assessment (Updated January 2021)

Headline Results

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On-site baseline

<i>Habitat units</i>	23.55
<i>Hedgerow units</i>	0.00
<i>River units</i>	0.00

On-site post-intervention

(Including habitat retention, creation, enhancement & succession)

<i>Habitat units</i>	15.31
<i>Hedgerow units</i>	0.00
<i>River units</i>	0.00

Off-site baseline

<i>Habitat units</i>	34.16
<i>Hedgerow units</i>	0.00
<i>River units</i>	0.00

Off-site post-intervention

(Including habitat retention, creation, enhancement & succession)

<i>Habitat units</i>	53.41
<i>Hedgerow units</i>	0.00
<i>River units</i>	0.00

Total net unit change

(including all on-site & off-site habitat retention/creation)

<i>Habitat units</i>	11.02
<i>Hedgerow units</i>	0.00
<i>River units</i>	0.00

Total net % change

(including all on-site & off-site habitat creation + retained habitats)

<i>Habitat units</i>	46.80%
<i>Hedgerow units</i>	0.00%
<i>River units</i>	0.00%

A-1 Site Habitat Baseline

Condense / Show Columns

Condense / Show Rows

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Habitats and areas				Habitat distinctiveness		Habitat condition		Ecological connectivity			Strategic significance			Suggested action to address habitat losses	Ecological baseline
Ref	Broad Habitat	Habitat type	Area (hectares)	Distinctiveness	Score	Condition	Score	Ecological connectivity	Connectivity	Connectivity multiplier	Strategic significance	Strategic significance	Strategic position multiplier		Total habitat units
1	Grassland	Grassland - Other neutral grassland	1.91	Medium	4	Moderate	2	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same broad habitat or a higher distinctiveness habitat required	15.28
2	Grassland	Grassland - Other neutral grassland	0.17	Medium	4	Fairly Poor	1.5	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same broad habitat or a higher distinctiveness habitat required	1.02
3	Grassland	Grassland - Other neutral grassland	1.51	Medium	4	Poor	1	Low	Unconnected habitat	1	Within area formally identified in local strategy	High strategic significance	1.15	Same broad habitat or a higher distinctiveness habitat required	6.95
4	Lakes	Lakes - Ponds (Non- Priority Habitat)	0.05	High	6	Poor	1	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same habitat required	0.30
5															
6															
7															
8															
9															
Total site area ha			3.64												
Total Site baseline															23.55

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
	0.75		0.00	6.00	0.00	1.16	9.28		Area mapped as semi improved neutral grassland. NVC MGS and U44. Has botanical interest and much better managed than other areas	
			0.00	0.00	0.00	0.17	1.02		Area mapped as marshy grassland in phase 1. of no real botanical interest in the NVC survey. Fairly poor condition as not many species of botanical interest and some undesirable species present	
			0.00	0.00	0.00	1.51	6.95		Area mapped as species poor semi improved grassland in phase 1. of no real botanical interest in the NVC survey. Poor condition due to presence of scrub and bare ground and excessive poaching	
			0.00	0.00	0.00	0.05	0.30		three ephemeral ponds in very poor condition. Little or no emergent or submerged vegetation. Excessive poaching from horses	
0.00	0.75	0.00	0.00	6.00	0.00	2.89	17.55			

A-2 Site Habitat Creation

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Post development/ post intervention habitats																		
Proposed habitat	Area (hectares)	Distinctiveness	Score	Condition	Score	Ecological connectivity			Strategic significance			Temporal multiplier		Difficulty multipliers		Habitat units delivered	Comments	
						Ecological connectivity	Connectivity	Connectivity multiplier	Strategic significance	Strategic significance	Strategic position multiplier	Time to target condition/years	Time to target multiplier	Difficulty of creation category	Difficulty of creation multiplier		Assessor comments	Reviewer comments
Grassland - Other neutral grassland	0.03	Medium	4	Good	3	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	15	0.586	Low	1	0.21	Area around SUDs pond to be sown with bespoke seed mix to match the MG5 communities of the retained grassland. No public access and will be managed as a meadow.	
Lakes - Ponds (Priority Habitat)	0.1	High	6	Good	3	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	10	0.700	Medium	0.67	0.84	areas of SUDS to be permanent open water. Planted with pond edge mix and managed in perpetuity for wildlife as in EMP.	
Heathland and shrub - Mixed scrub	0.02	Medium	4	Moderate	2	Medium	Moderately connected habitat	1.1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	3	0.899	Low	1	0.16	Some scrub planting in attenuation area - connected to that on the dismantled railway line. No public access and managed prescribed in EMP	
Urban - Vegetated garden	1.57	Low	2	Poor	1	N/A	Assessment not appropriate	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	1	0.965	Low	1	3.03		
Urban - Developed land; sealed surface	1.1	V.Low	0	N/A - Other	0	N/A	Assessment not appropriate	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0	1.000	Low	1	0.00		
Grassland - Other neutral grassland	0.07	Medium	4	Fairly Poor	1.5	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	5	0.837	Low	1	0.35	public open space - sown with same bespoke mix as for the attenuation are but with public access so will not attain good condition.	
Totals	2.89															Total Units	4.60	

A-3 Site Habitat Enhancement

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		Post development/ post intervention habitats													
Baseline habitats		Change in distinctiveness and condition				Area (hectares)	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Temporal multiplier	Difficulty multipliers	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 - Lowland meadows	Medium - V.High	Lower Distinctiveness Habitat - Good	0.75	V.High	Good	Low	Area/compensation not in local strategy/ no local strategy	15	Medium	10.71	previously mapped as semi improved neutral grassland - MG5. In moderate condition. Will be enhanced through management prescriptions in the EMP in perpetuity to become in good condition. No public access and management as a meadow		
				Total site area	0.75							Enhancement total	10.71		

D-1 Off Site Habitat Baseline

Condense / Show Columns

Condense / Show Rows

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Instructions

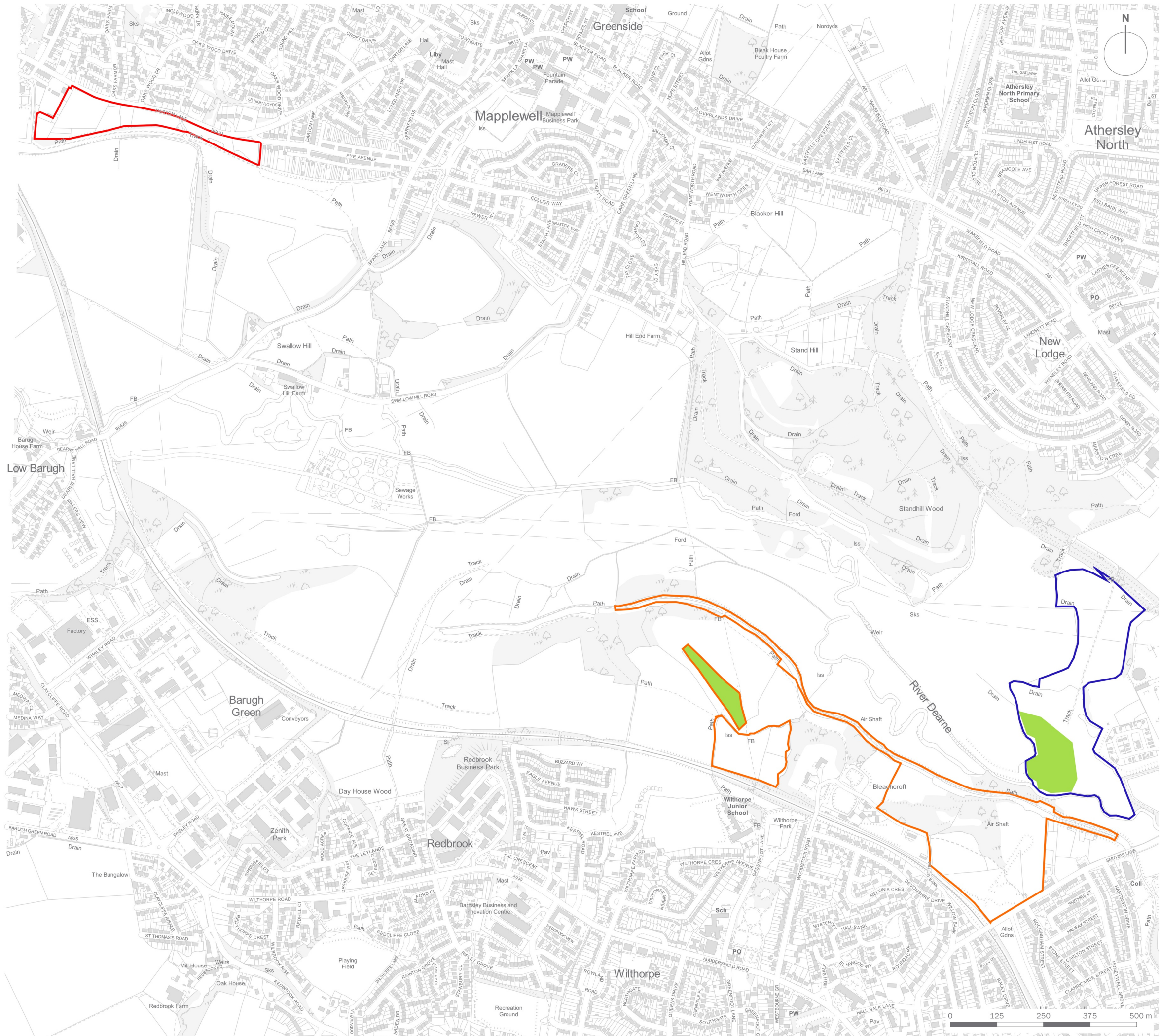
Baseline ref	Habitats and areas			Habitat distinctiveness		Habitat condition		Ecological connectivity			Strategic significance			Suggested action to address habitat losses	Ecological baseline
	Broad habitat	Habitat type	Area (hectares)	Distinctiveness	Score	Condition	Score	Ecological connectivity	Connectivity	Connectivity multiplier	Strategic significance	Strategic significance	Strategic position multiplier		Total habitat units
1	Grassland	Grassland - Other neutral grassland	2.5	Medium	4	Fairly Poor	1.5	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	Same broad habitat or a higher distinctiveness habitat required	18.98
2	Grassland	Grassland - Lowland meadows	1	V.High	8	Fairly Poor	1.5	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	Bespoke compensation likely to be required	15.18
3															
4															
5															
6															
7															
Total site area ha			3.50												
Total Site baseline														34.16	

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
	2.5		0	18.98	0.00	0.00	0.00	Yes		Smithy's Marsh. Grassland in poor condition due to over grazing. Fencing required to surround are to allow appropriate management of grazing levels. A grazing plan will be produced for the tenant/grazier	
	1		0	15.18	0.00	Unacceptable Loss	Alternative Compensation	Yes		Wiltorpe (Barnsley) Canal. Grassland in poor condition due to over grazing. Fencing required to surround are to allow appropriate management of grazing levels. An annual cut will also be required.	
0.00	3.50	0.00	0.00	34.16	0.00	0.00	0.00				

D-3 Off Site Habitat Enhancement															
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Post development/ post intervention habitats															
Baseline habitats		Change in distinctiveness and condition			Area ha	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Temporal multiplier	Difficulty multipliers	Spatial risk multiplier		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	Spatial risk category	Habitat units delivered	Assessor comments	Reviewer comments
1	Grassland - Other neutral grassland	Grassland - Lowland meadows	Medium - V.High	Lower Distinctiveness Habitat - Moderate	2.5	V.High	Moderate	Medium	Within area formally identified in local strategy	10	Medium	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	33.81	Fencing required to surround are to allow appropriate management of grazing levels. A grazing plan will be produced for the tenant/grazier. Client will pay for this	
2	Grassland - Lowland meadows	Grassland - Lowland meadows	V.High - V.High	Fairly Poor - Fairly Good	1	V.High	Fairly Good	Medium	Within area formally identified in local strategy	12	Medium	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	19.60	Fencing required to surround are to allow appropriate management of grazing levels. An annual cut will also be required. Client will pay for this under agreement with YWT	
					Total site area	3.50						Total off-site area	53.41		



Plan EDP 1
Biodiversity Offsetting Areas
(edp3487_d005 07 January 2021 MH/VF)



- Site Boundary
- Barnsley Canal
- Smithies Marsh
- Areas for Target Work

client	Church Commissioners for England		
project title	Land south of Darton Lane, Darton, Staincross		
drawing title	Plan EDP 1: Biodiversity Offsetting Areas		
date	07 JANUARY 2021	drawn by	MH
drawing number	edp3487_d005	checked	VF
scale	1:10,000 @ A3	QA	RB



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