

Biodiversity Impact Assessment

Project: South Caldecotte, Milton Keynes

Technical Briefing Note TN06: Updated Biodiversity Impact Assessment

Date: 04 September 2020

1. Introduction

1.1. Aspect Ecology was commissioned by Hampton Brook in September 2020 to undertake an updated Biodiversity Impact Assessment (BIA) for the proposed new strategic employment development, including nine warehouses, with offices, parking and associated access and infrastructure at South Caldecotte, Milton Keynes, hereafter referred to as 'the site'.

2. Approach and Methodology

Metric and Baseline

- 2.1. The DEFRA 2.0 Biodiversity Impact Calculation Tool was used to conduct the BIA in accordance with Policy NE3 of the Milton Keynes Council Plan:MK 2016-2031 which states `Development proposals of 5 or more dwellings or non-residential floorspace in excess of 1,000 sq. m will be required to use the **Defra metric** or locally approved Biodiversity Impact Assessment Metric to demonstrate any loss or gain of biodiversity` [our emphasis].
- 2.2. The BIA calculation tool requires information on the site pre and post development to determine any change in 'biodiversity units' for 'Habitat units' and 'Hedgerow units' and 'River units'. Where a BIA calculates a net loss in biodiversity, and does not provide an offset compensation estimate for the re-creation/restoration of habitats off-site, this can be calculated by a suitable third-party biodiversity offsetting service provider such as the Environment Bank.
- 2.3. Pre development information used to inform the DEFRA 2.0 Biodiversity Impact Calculation Tool has been based on the results of the Phase 1 habitat survey set out within Aspect Ecology's Ecological Appraisal dated June 2019 and a more recent botanical assessment of grassland fields F3 and F4 undertaken by Blackstone Ecology (see Aspect Ecology's Technical Note TN02 Biodiversity Impact Assessment dated 06 July 2020). Whilst an update Phase 1 habitat survey of the remainder of the site was undertaken in April 2020, no significant changes to the habitats or their condition was recorded that would necessitate adjustment to the 2019 pre-development information (see Pre-development Metric Habitat Plan at Annex 5263/2). Post development information has been taken from the illustrative Master Plan Drg 10-048-01-SGP-XX-OO-DR-A-1006-P13, to which Aspect Ecology has applied indicative landscaping (see Post-development Metric Habitat Plan at Annex 5263/3).



Parameters, Input Updates, and Proxy Inputs

- 2.4. **Parameters and Input Updates**. The BIA Calculator has been completed following the guidance set out within 'The Biodiversity Metric 2.0 (Beta version) auditing and accounting for biodiversity user guide' published 29 July 2019 and 'The Biodiversity Metric 2.0 (Beta version) auditing and accounting for biodiversity technical supplement' published 29 July 2019.
- 2.5. A systematic review of the input information, referencing, justifying and discussing the habitat categories and their condition chosen from the drop-down menus of the BIA calculator, is provided within Technical Note TN02 Biodiversity Impact Assessment dated 06 July 2020. However, the following updates have been made to the BIA which focus on the enhancement of retained habitats, the potential for which arises under the current scheme due to the retention of an area in the south-west of the site for archaeological interest:

A-1 Site Habitat Baseline & A-3 Site Habitat Enhancement

- **Ref 3 Grassland Other Neutral Grassland:** 2.008ha of this habitat will be retained and enhanced from 'moderate' to 'good' condition.
- **Ref 4 Grassland Other Neutral Grassland:** 2.9962ha of this habitat will be retained and enhanced from 'moderate' to 'good' condition.
- **Ref 5 Grassland Modified Grassland:** 0.1592ha of this habitat will be retained and enhanced to `Grassland Other Neutral Grassland` of `good` condition.

B-1 Site Hedge Baseline & B-3 Site Hedge Enhancement

• **Ref 3 Native Hedgerow:** 0.1727km of `Native hedgerow` of `moderate condition will be retained and enhanced to `Native Species-rich Native Hedgerow` in `good` condition.

C-1 Site River Baseline & B-3 Site River Enhancement

- **Ref 1 River & Streams (other):** 0.29km of this habitat will be retained and enhanced from 'fairly poor' to 'good' condition.
- 2.6. **Proxy Input.** The non-functionality of the DEFRA metric when a habitat of `very high distinctiveness` results in loss and thus the requirement to utilise a proxy input to achieve an output is discussed in detail within Aspect Ecology's Technical Note TN02 Biodiversity Impact Assessment dated 06 July 2020, specifically in respect of Lowland Meadow. The approach has been replicated for this BIA.

3. DEFRA Metric Output

- 3.1. Worksheets from the completed DEFRA 2.0 Biodiversity Impact Assessment Calculation Tool are provided at Annex 5263/1. The completed calculator can be made available to Milton Keynes Council on request.
- 3.2. Based on the Illustrative Masterplan and Post-development Metric Habitat Plan at Annex 5263/2, the following net unit/% change in biodiversity would be achieved:
 - Total net unit change in **Habitat units** of -105.71, equating to a % change of -47.97%.
 - Total net unit change in Hedgerows units of -5.30, equating to a % change of -22.04%
 - Total net unit change in River units of -2.27, equating to a % change of -39.99%.



4. Consultation with the Environment Bank

- 4.1. The Environment Bank has been approached to provide a quotation for a biodiversity compensation scheme to offset the biodiversity impact of the proposals, based on the results of the metric calculations undertaken in November 2019, July 2020 and September 2020.
- 4.2. The DEFRA 2.0 Biodiversity Impact Calculation Tool has been provided to the Environment Bank, who have confirmed they are able to bring forward a scheme exceeding biodiversity units set out at para. 3.2 above and therefore achieving biodiversity net gain for the proposals. This would also include a 30 year costed management and monitoring plan and monitoring and oversight of the offset site over 30 years with reporting to the LPA.
- 4.3. The biodiversity compensation scheme proposes to target the creation/restoration of grassland to Lowland Meadow within the Milton Keynes authority, in combination with the enhancement of a wider mosaic of habitats. The Environment Bank has confirmed a minimum threshold for the extent of Lowland Meadow creation/restoration can be set, in order to achieve a minimum 33% increase over the calculated Lowland Meadow biodiversity units lost from the site. This would contribute to the local BAP target to increase Lowland Meadow in Buckinghamshire and Milton Keynes by 33%¹.

Annexes:

Annex 5263/1 - Completed BIA Calculator

Annex 5263/2 - 5263/BIA1 Pre-development Metric Habitat Plan

Annex 5263/3 – 5263/BIA2 Post-development Metric Habitat Plan Rev D

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5263 TN06 BIA Sept2020 vf

¹ Forward to 2020: Buckinghamshire and Milton Keynes Biodiversity Action Plan

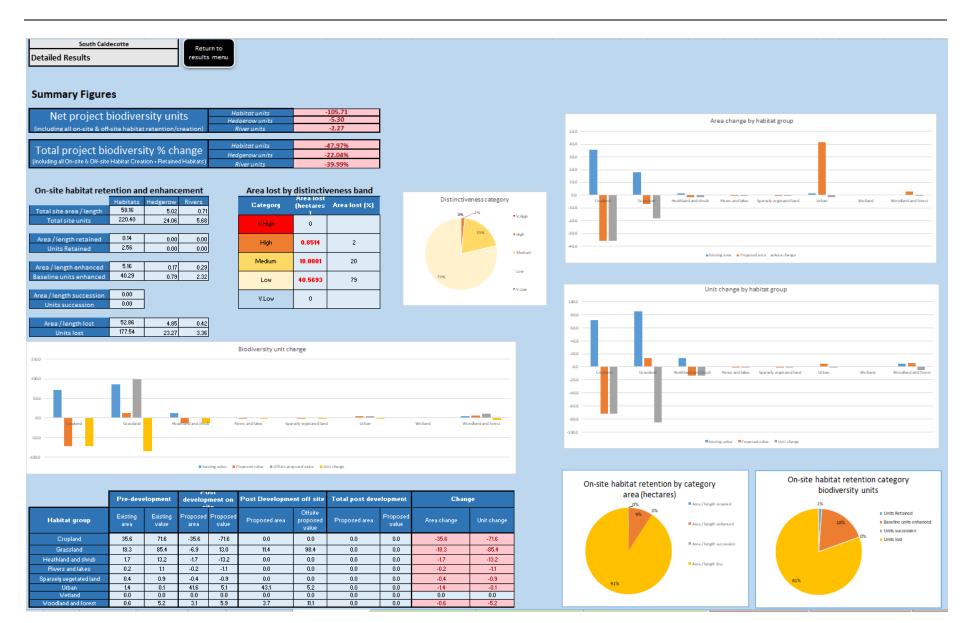


Annex 5263/1:

Completed BIA Calculator

	E 200 0 0	
	Habitat units	220.40
On-site baseline	Hedgerow units	24.06
	River units	5.68
	W	**
On-site post-intervention	Habitat units	114.68
(Including habitat retention, creation, enhancement &	Hedgerow units	18.76
curression)	River units	3.41
	Habitat units	0.00
Off-site baseline	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention	Habitat units	0.00
Off-site post-intervention	Hedgerow units	0.00
(Including habitat retention, creation, enhancement &	River units	0.00
Total net unit change	Habitat units	-105.71
Total flet utilt change	Hedgerow units	-5.30
(including all on-site & off-site habitat retention/creation)	River units	-2.27
Total not % change	Habitat units	-47.97%
Total net % change	Hedgerow units	-22.04%
(including all on-site & off-site habitat creation + retained habitats)	River units	-39.99%







	h Caldecotte]																				
A-1	Site Habitat Bas	seline	J																				
	Condense / Show Column	Condense / Show Rows																					
	Main Menu	Instructions																					
		Habitats and areas		Habi distincti		Habitat e	condition		Ecological connec	Ecological connectivity		Strategic significance			Ecologic	Retention category biodiversity value							
Be			Area	Distinctive		Conditi	_	Ecologic	_	Connectivity		Strategic	Strategic	Suggested action to address habitat	Total	Area					Baseline		
f	Broad Habitat	Habitat type	(hectare	ness	Score	on	Score	al connecti	Connectivity	multiplier	Strategic significance	significance	position multiplier	losses	habitat units	retain ed	enhan ced		ne units	ne units	units successi	Area lost	Units lost
1	Cropland	Cropland - Cereal crops	35.5711	Low	2	N/A - Agricultur al	1	N/A	Assessment not appropriate	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required	71.14				0.00	0.00	0.00	35.57	71.14
2	Urban	Urban - Amenity grassland	0.0582	Low	2	Poor	1	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local	Low Strategic Significance	1	Same distinctiveness or better habitat required	0.12				0.00	0.00	0.00	0.06	0.12
3	Grassland	Grassland - Other neutral grassland	8.8335	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	70.67		2.0008		0.00	16.01	0.00	6.83	54.66
4	Grassland	Grassland - Other neutral grassland	4.0306	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	32.24		2.9962		0.00	23.97	0.00	1.03	8.28
5	Grassland	Grassland - Modified grassland	4.642	Low	2	Poor	1	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local	Low Strategic Significance	1	Same distinctiveness or better habitat required	9.28		0.1592		0.00	0.32	0.00	4.48	8.97
6	Cropland	Cropland - Traditional orchards	0.0293	High	6	Moderate	2	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy		1.15	Same habitat required	0.44				0.00	0.00	0.00	0.03	0.44
7	₩oodland and forest	Woodland and forest - Other woodland; broadleaved	0.302	Medium	4	Moderate	2	Low	Unconnected habitat	1	Within area formally identified in local strategy		1.15	Same broad habitat or a higher distinctiveness habitat required	2.78				0.00	0.00	0.00	0.30	2.78
8	Woodland and forest	Woodland and forest - Other woodland; broadleaved	0.2897	Medium	4	Moderate	2	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	2.67	0.029			0.26	0.00	0.00	0.26	2.40
9	Heathland and shrub	Heathland and shrub - Mixed scrub	1.1522	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	9.22				0.00	0.00	0.00	1.15	9.22
10	Heathland and shrub	Heathland and shrub - Mixed scrub	0.4978	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	3.98				0.00	0.00	0.00	0.50	3.98
11	Urban	Urban - Introduced shrub	0.0123	Low	2	Poor	1	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local	Low Strategic Significance	1	Same distinctiveness or better habitat required	0.02				0.00	0.00	0.00	0.01	0.02
12	Sparsely vegetated land	Sparsely vegetated land - Ruderal/Ephemeral	0.4449	Low	2	Poor	1	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local	Low Strategic Significance	1	Same distinctiveness or better habitat required	0.89				0.00	0.00	0.00	0.44	0.89
13	Lakes	Lakes - Ponds (Non- Priority Habitat)	0.1685	High	6	Poor	1	Medium	Moderately connected habitat	1.1	Area/compensation not in local strategy/ no local	Low Strategic Significance	1	Same habitat required	1.11				0.00	0.00	0.00	0.17	1.11
14	Urban	Urban - Developed land; sealed surface	1.3625	V.Low	0	N/A - Other	0	Low	Unconnected habitat	1	Area/compensation not in	Low Strategio	1	Compensation Not	0.00				0.00	0.00	0.00	1.36	0.00
15	Grassland	Grassland - Lowland calcareous grassland	0.7646	High	6	Good	3	Low	Unconnected habitat	1	local strategy/ no local Within area formally identified in local strategy	Significance High strategic significance	1.15	Required Same habitat required	15.83	0.111			2.30	0.00	0.00	0.65	13.53
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		Total site area ha	58.16											Total Site baseline	220.40	U. 14	5.16	0.00	2.56	40.29	0.00	52.86	177.54
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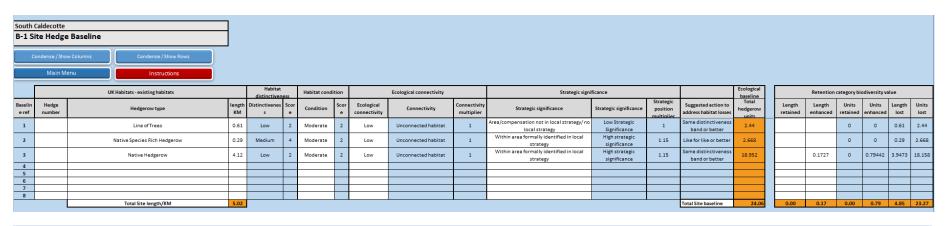
South Caldecotte											
A-2 Site Habitat Creation											
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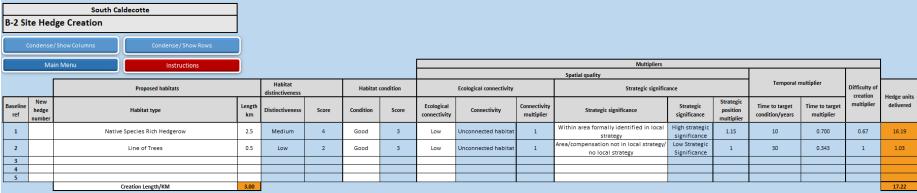
	Post development/ post intervention habitats															
							Ecological connectivity		Strategic sign	ificance		Temporal r	nultiplier	Difficulty	multipliers	
Proposed habitat	Area (hectares)	Distinctiveness	Score	Condition	Score	Ecological connectivity	Connectivity	Connectivity multiplier	Strategic significance	Strategic significance	Strategic position multiplier	Time to target condition/years	Time to target multiplier	Difficulty of creation category	Difficulty of creation multiplier	Habitat units delivered
Grassland - Other neutral grassland	2.9216	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	20.55
Grassland - Other neutral grassland	3.2141	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	22.60
Urban - Amenity grassland	1.362	Low	2	Poor	1	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	1	0.965	Low	1	2.63
Woodland and forest - Other woodland; broadleaved	3.6481	Medium	4	Good	3	Low	Unconnected habitat	1	Within area formally identified in local strategy	High strategic significance	1.15	32+	0.320	Medium	0.67	10.79
Urban - Sustainable urban drainage feature	0.778	Low	2	Good	3	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	5	0.837	Medium	0.67	2.62
Urban - Developed land; sealed surface	40.9394	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
Totals	52.86					l									Total Units	59.18



A-3 S	Caldecotte Ite Habitat Enhancement denie / Show Columns Condense / Show Rous Main Menu Instructions					Post danalo	opment <i>i</i> post	internentic	on babitate											
	Baseline habitats	Change in distin				OSK GETER				ogical connecti	rity	Strategic sig	nificance		Temporal multiplier		Difficulty m		Habitat	
Baseli ne ref	Baseline habitat	Proposed habitat (Pre-populated but can be overridden)	Distinctiveness change	Condition change	(hectar es)	Distinctiven ess	Score Score	re Condition	Score	Ecological connectivit y score	Connectivity	Connectiv ity multiplier	Strategic significance	Strategic significance		Time to target condition/year s	Time to target multiplier	of enhancem	Difficulty	units delivered
3	Grassland - Other neutral grassland	Grassland - Other neutral grassland	Medium - Medium	Moderate - Good	2.0008	Medium	4	Good	3	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	15	0.586	Lov	1	20.70
4	Grassland - Other neutral grassland	Grassland - Other neutral grassland	Medium - Medium	Moderate - Good	2.9962	Medium	4	Good	3	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy		1	15	0.586	Lov	1	30.99
5	Grassland - Modified grassland	Grassland - Other neutral grassland	Lov - Medium	Lover Distinctiveness Habitat - Good	0.1592	Medium	4	Good	3	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	15	0.586	Lov	1	1.25
_				Total site area	5.16													Enhancem ent total		52.94

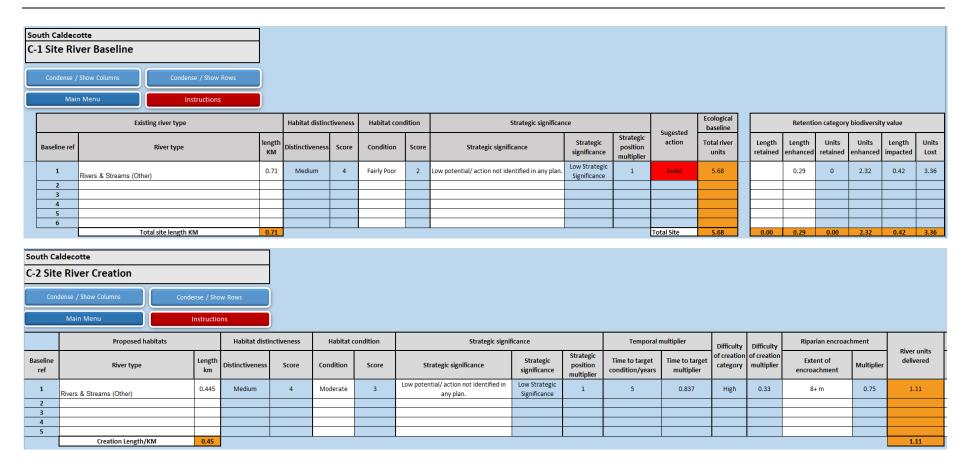






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	Baseline Habitats		Change in distincitis	reness and condition			atiuan			Паркасэ	iabrats		Strategio sig	nificance	Temporal multiplier		Difficulty P	Multipliers	Hedge	
Baselin e ref	Baseline habitat	Proposed	Distinctiveness movement		Lengt h KM	Distinctiven ess	Score	Condition	Score	Ecological connectivity			Strategic significance	Strategio		Time to target condition/years	Time to target multiplier	of enhancem	Of Enhance	units
3	Native Hedgerov	Native Species Rich Hedgerov	Low - Medium	Lower Distinctiveness Habitat - Good	0.173	Medium	4	Good	3	Low	Unconnected habitat	1	Within area formally identified in local strategy	High strategic significance	1.15	10	0.700	Medium	0.67	1.54
				Total site length	0.17													_		1.54



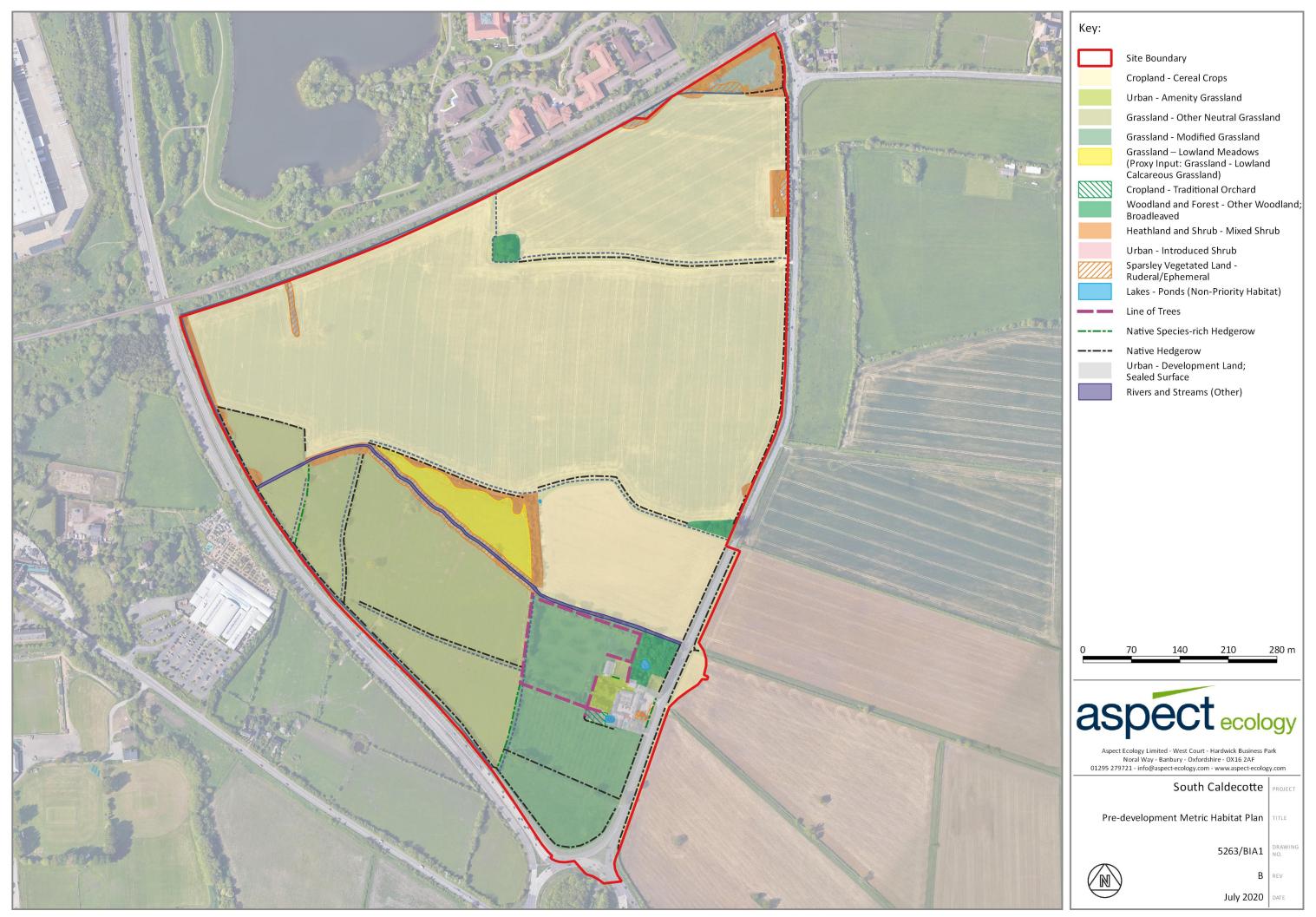


C-3 Site F Condense / Si			Post	development/	ost intervent	iion habitats													
	Baseline habitats		Change in distinctiv	inge in distinctiveness and condition						Strategic signi	Temporal m	ultiplier	Difficulty multipliers		Riparian encroachment		\Box		
Baseline ref	Baseline habitat	Proposed (Pre- populated can be overridden)	Distinctiveness movement	Condition movement	Length KM	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic position multiplier	Time to target condition/years	Time to target multiplier	Difficulty of enhancement category	Difficulty of enhancement multiplier	Extent of encroachment	Multiplier	River units delivered
1	Rivers & Streams (Other)	Rivers & Streams (Other)	Medium - Medium	Fairly Poor - Moderate	0.29	Medium	4	Moderate	3	Low potential/action not identified in any plan.	Low Strategic Significance	1	1	0.965	Medium	0.67	8+m	0.75	2.30
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					0.29												Enhancement total		2.30



Annex 5263/2:

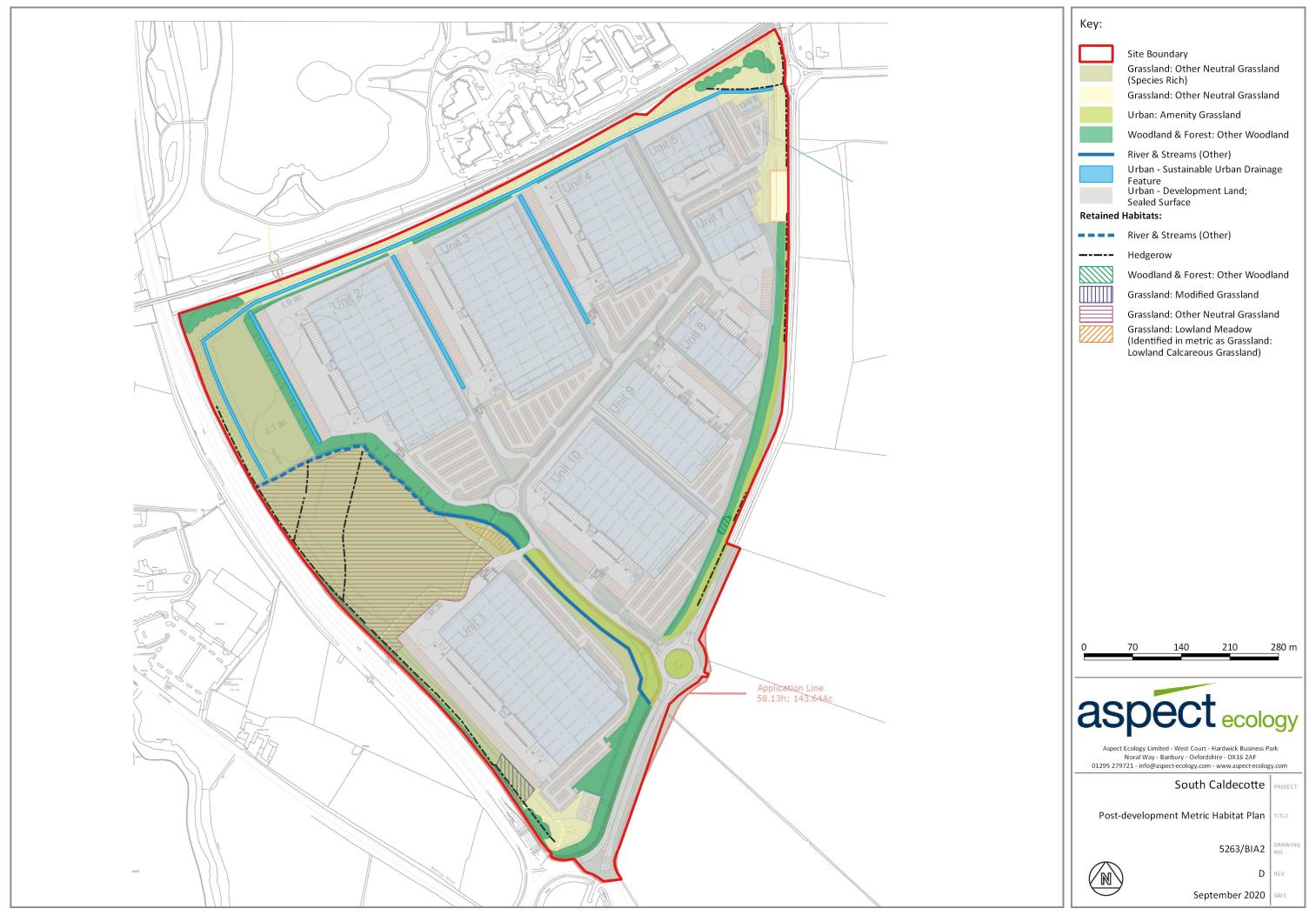
Plan 5263/BIA1 – Pre-development Metric Habitat Plan





Annex 5263/3:

Plan 5263/BIA2 – Post-development Metric Habitat Plan



ecology • landscape planning • arboriculture



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