November 2019

Technical Note – Biodiversity Impact Assessment

8957 – Cecilly Mill, Cheadle

FPCR Environment and Design Ltd. were commissioned by Bellway Homes Ltd to undertake a biodiversity impact assessment of the proposed development at Cecilly mill, Cheadle.

Background

The site is proposed for residential housing, along with public open space. Part of the site has been already been granted planning permission for engineering works to an existing culvert and reprofiling of an existing ditch (ref: P/19/0981/2).

The council have requested that a Biological Impact Assessment (BIA) be undertaken.

Methodology

The BIA calculations completed on the scheme have been calculated in accordance with the Warwickshire, Coventry & Solihull Biodiversity Impact Assessment v.19.0.

The site boundary, Brook Enhancement Proposals (FPCR, ref: 8957-L-08 RevC, 2019) and the detailed on-plot planting plans (FPCR, Ref: 8957-L-02, Sheet 1 of 5)) were used for this assessment.

The condition assessments were undertaken using the Farm Environment Plan (FEP) condition assessments where appropriate.

Biodiversity Impact Assessment (BIA)

Habitats

Proposed habitat creation within the site is focused along the brook corridor with areas of meadow grassland and scattered scrub proposed.

In addition, the southern section of the brook will be de-canalised on the eastern bank with a sloping grassland bank created. In addition, a backwash will be created which will support shallow water.

Proposals within the brook corridor are partly focused on enhancing opportunities for faunal species, with these proposals not taken into account within the BIA metric. These include:

- Selective thinning of brook corridor habitats to enhance foraging opportunities for water vole;
- Provision of hibernacula suitable for use by a range of wildlife including herptiles and invertebrates;
- Creation of 'invertebrate banks' to provide sheltered microclimates for invertebrates;
- Creation of seasonal pools and scrapes;
- Removal of Himalayan balsam;
- Provision of bird and bat boxes;
- Sensitive design of the lighting strategy to minimise potential disturbance to nocturnal fauna.

Hedgerows

The hedgerows at the site boundaries are largely to be retained within the proposed development, albeit hedgerow H1 comprised solely of Leylandii and therefore is it not taken into account in the BIA metric.

A small section of hedgerow H2 will be lost for the access road into the development.

The length of hedgerow H6, which runs through the centre of the site is lost to the development. This was noted to be a defunct hedgerow largely comprising scrub and tall ruderal vegetation with large gaps.

Results and Conclusion

Habitats

The proposed development resulted in a minor ***net loss of -3.03*** habitat units.

The BIA calculator however does not take into account the enhancement proposed specifically in relation to water vole and other fauna.

Linear

The proposed development resulted in a minor ***net loss of -2.15*** habitat units.

It is recommended that these minor losses might be mitigated through the contribution of management work of neighbouring offsite habitats within the Cecilly Brook Local Nature Reserve. Initial correspondence with the Staffordshire Moorlands District Council Countryside Officer has been undertaken to identify suitable mechanisms. Although we are aware a formal mechanism does not exist.

Warwickshire, Coventry & Solihull - Habitat Impact Assessment Calculator

KEY	
	No action required
	Enter value
	Drop-down menu
	Calculation
	Automatic lookup
	Automatic Condition setting
	Result

Local Planning Authority:	
Site name:	Cecilly Mill, Cheadle
Planning application reference number:	
Assessor:	
Date:	

Please fill in both tables

Please do not edit the formulae or structure

To condense the form for display hide vacant rows, do not delete them

If additional rows are required, or to provide feedback on the calculator please contact WCC Ecological Services 01926 418060

	Existing habitats on site Please enter all habitats within the site boundary			**Habitat distinctiveness**		**Habitat condition**		**Habitat Biodiversity Value**						
								Habitats to be retained with no change within development		**Habitats to be retained and enhanced within development**		**Habitats to be lost within development**		
T. Note	code	Phase 1 habitat description	*Habitat area (ha)*	*Distinctiveness*	*Score*	*Condition*	*Score*	*Area (ha)*	*Existing value*	*Area (ha)*	*Existing value*	*Area (ha)*	*Existing value*	***Comment***
		Direct Impacts and retained habitats			A		B	C	A x B x C = D	E	A x B x E = F	G	A x B x G = H	
	J14	Other: Introduced shrub	0.02	Low	2	Poor	1					0.02	**0.04**	
	A21	Woodland: Dense continuous scrub	0.17	Medium-Low	3	Poor	1					0.17	**0.51**	
	n/a	Built Environment: Buildings/hardstanding	1.81	none	0	Poor	1	0.05	0.00			1.76	**0.00**	
	C31	Other: Tall ruderal	0.16	Medium-Low	3	Poor	1					0.16	**0.48**	
	B6	Grassland: Poor semi-improved grassland	1.40	Medium-Low	3	Poor	1					1.40	**4.20**	
	G2	Wetland: Running water	0.05	High	6	Moderate	2	0.05	0.60					
	G2	Wetland: Running water	0.03	High	6	Poor	1			0.03	0.18			
	A3	Woodland: Scattered trees	0.12	Medium	4	Moderate	2	0.12	0.96					
	J12	Grassland: Amenity grassland	0.02	Low	2	Poor	1			0.02	0.04			
		Total	3.78				Total	0.22	1.56	0.05	0.22	3.51	5.23	J
													∑D + ∑F + ∑H	
											Site habitat biodiversity value		7.01	

Before/after impact	**Indirect Negative Impacts** Including off site habitats	K	Value of loss from indirect impacts K x A x B = Li, Lii	Li - Lii
Before				
After				
Before				
After				
Before				
After				
Before				
After				
Before				
After				
	Total	0.00		0.00 M

	HIS = J + M
Habitat Impact Score (HIS)	**5.23**

	Proposed habitats on site (Onsite mitigation)			Target habitats distinctiveness		Target habitat condition			Time till target condition		Difficulty of creation / restoration		*Habitat biodiversity value*	
T. Note	code	Phase 1 habitat description	*Area (ha)*	*Distinctiveness*	*Score*	*Condition*	*Score*		*Time (years)*	*Score*	*Difficulty*	*Score*		***Comment***
		Habitat Creation	N		O		P			Q		R	(N x O x P) / Q / R	
	J14	Other: Introduced shrub	0.05	Low	2	Poor	1		3 Years	1.1	Low	1	**0.09**	
	B22	Grassland: Semi-improved neutral grassland	0.33	Medium	4	Moderate	2		10 years	1.4	Medium	1.5	**1.26**	
	n/a	Built Environment: Buildings/hardstanding	2.09	none	0	Poor	1		3 Years	1.1	Low	1	**0.00**	
	J12	Grassland: Amenity grassland	0.17	Low	2	Poor	1		3 Years	1.1	Low	1	**0.31**	
	n/a	Built Environment: Gardens (lawn and planting)	0.77	Low	2	Poor	1		3 Years	1.1	Low	1	**1.40**	
	G2	Wetland: Running water	0.01	High	6	Moderate	2		3 Years	1.1	Medium	1.5	**0.07**	
	A22	Woodland: Scattered scrub	0.09	Medium	4	Good	3		15 years	1.7	Low	1	**0.64**	
		Total	**3.51**											
		Habitat Enhancement						Existing value S (= F)					((NxOxP)-S)/Q/R	
	B22	Grassland: Semi-improved neutral grassland	0.02	Medium	4	Moderate	2	**0.04**	10 years	1.4	Low	1	**0.09**	
	G2	Wetland: Running water	0.03	High	6	Moderate	2	**0.18**	5 years	1.2	Medium	1.5	**0.10**	
		Total	**0.05**								Trading down correction value		-1.76	
											Habitat Mitigation Score (HMS)		**2.20**	

	HBIS = HMS - HIS
Habitat Biodiversity Impact Score	**-3.03** Loss
Percentage of biodiversity impact loss	57.93

	Loss	Gain	Impact
Woodland Habitat	0.51	0.64	**0.13**
Grassland Habitat	4.20	1.66	**-2.54**
Wetland Habitat	0.00	0.17	**0.17**
Other Habitat (including Built Environment)	0.52	1.49	**0.97**
Total	5.23	3.96	**-1.27**
		Trading down	**-1.76**
			-3.03

Warwickshire, Coventry & Solihull - Hedge Impact Assessment Calculator

KEY
No action required
Enter value
Drop-down menu
Calculation
Automatic lookup
Result

This sheet calculates the impacts to hedges and lines of trees in and around the site.

These units are not transferable as compensation for either the Habitat or Connectivity Impact Assessment scores.

Please fill in both tables

Please do not edit the formulae or structure
To condense the form for display hide vacant rows, do not delete them
If additional rows are required,
or to provide feedback on the calculator
please contact WCC Ecological Services

T. Note	Code	Hedgerow habitat description	Feature length (km)	Distinctiveness	Score	A1	A2	B1	B2	C1	C2	D1	D2	Condition Score	Length (km)	Existing value	Length (km)	Existing value	Length (km)	Existing value	Comment
		Direct impacts and hedgerow features	J		A										L	A x B x L = M	N	A x B x N = O	M	A x B x M = P	
H2	Site	Hedges: non_species rich hedge with trees	0.09	Medium-High	5	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	3	0.03	0.45			0.03	0.45	
H3	Site	Hedges: non_species rich hedge	0.17	Low	2	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	3					0.17	1.02	
Defunct	Site	Hedges: non_species rich hedge	0.17	Low	2	Pass	Pass	Fail	Fail	Pass	Fail	Pass	Pass	2					0.17	0.68	
		Total	0.43											Totals	0.03	0.45	0.00	0.00	0.34	1.47	
																				2D + 2F + 2H	
																		Site Hedge Biodiversity Value			2.45	
Before/after impact		**Indirect Negative Impacts**	K												Value of loss from indirect impacts K x A x B = L1, L2	L1 - L2					
Before																					
After																					
Before																					
After																					
Before																					
After																					
Before																					
After																					
		Total	0.00													0.00	M			HIS = J + M	
																		Hedge Impact Score (HIS)			2.47	

CAUTION - Destruction of features high distinctiveness may be against local policy. Has the mitigation hierarchy been followed, can impact to these habitats be avoided?
Any unavoidable loss of valuable habitats must be replaced like-for-like. All newly planted hedges should be native species-rich hedgerows idolly with trees.

T. Note	Code	Phase 1 habitat description	Length (km)	Distinctiveness	Score	A1	A2	B1	B2	C1	C2	D1	D2	Condition Score	Time till target condition	Score	Difficulty of creation / restoration	Score	Linear biodiversity value (N x O x P) / Q / R	Comment
		Hedgerow Creation	N		O										P	Q		R		
	Site	Hedges: species rich hedge	0.09	Medium	4	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	3	10 years	1.4	Low	1	0.09	
		Total	0.09																	
		Hedgerow Enhancement																	((N x O x P) - 5) / Q / R	
		Total	0.00																	

Existing value S (= F) =

Tooling down correction value: -0.09
Hedge Mitigation Score (HMS): 1.91
HMS = HMS - HBIS
Hedge Biodiversity Impact Score: -0.56 Loss
Percentage of linear impact lost: 100.0%

KEY
No action required
Action required
Drop-down menu
Calculation
Automatic lookup
Overall Gain
Overall Loss