2017-01(06)

5th October 2017

Brandon Estates Ltd
The Old School House
Forshaw Heath Lane
Earleswood
Solihull
B94 5LH

Dear Mr. Jon Burgwin

Re: Biodiversity Impact Assessment calculation for Coventry Stadium, Brandon

Ecolocation were instructed by Framptons Planning on behalf of Brandon Estates Ltd to undertake a Biodiversity Impact Assessment calculation for Coventry Stadium, Brandon, Coventry, CV8 3GJ (hereafter referred to as the 'Site').

This letter should be read in conjunction with the enclosed Biodiversity Impact Assessment spreadsheet for the Site dated 3rd October 2017 as well as the updated Ecological Appraisal letter report for the Site prepared by Ecolocation dated 11th May 2017.

Current Plans

The 'Illustrative Masterplan' drawing no: 9401, produced by Barton Willmore dated 25th August 2017 was used in the completion of the BIA calculation and production of this letter.

Habitat Biodiversity Impact Assessment

The existing Site was approximately 10.5ha in size and consisted mostly of an area of hardstanding and bare ground upon which the existing buildings and car parks were set. An area of dense woodland edge was located along the north-western edge of the Site, bordered by a large stretch of ephemeral vegetation and species rich hedgerow. The eastern and southern boundaries of the Site were lined by scattered trees and to the west were bands of semi-improved and improved grassland.

The buildings, hardstanding and bare ground within the Site were considered to be in poor condition, offering no value to wildlife. Long bands of amenity grassland situated between the existing buildings were also considered to be in poor condition. All other existing habitats on Site, with the exception of the plantation woodland and hedgerow, were considered to be in moderate condition when assessed against the relevant criteria and taking into account the temporary nature of the colonising vegetation.

The plans for the Site included the erection of up to 137 residential dwellings with associated gardens and car parking. Amenity grassland with scattered trees and informal pedestrian footpaths would surround the housing development on all sides. The woodland to the north-western boundary of the Site would be retained as well as additional landscaping added along the eastern, southern and western Site boundaries. Three attenuation ponds are also proposed to be created, two of which were located in the northern section of the Site, near the woodland edge. The third pond would be situated to the south of the Site, adjacent to the proposed access road.

Based on the current plans provided, the BIA calculation resulted in **-4.16 units of habitat biodiversity loss** and **0.50 units of linear habitat biodiversity gain**. The units gain shown in the linear calculation resulted mainly from the maximisation of opportunities to create new linear features around the Site

boundaries. The habitat units loss resulted mostly from the loss of grassland and ephemeral vegetation across the Site into amenity grassland, which although it covers a large proportion of the Site, is of low ecological value.

Under the proposed plans the habitats created following development of the Site would result in an overall loss of biodiversity value. The usage of the Site by fauna including reptiles and bats, as identified through the detailed ecological survey work in 2014 and 2016, could be negatively impacted as foraging and sheltering habitat is lost and replaced with amenity grassland of low ecological value.

Recommendations

To achieve a biodiversity gain for the Site, in accordance with the National Planning Policy Framework (2012), an additional BIA calculation, attached to this letter, has been produced which shows that a **2.7 units biodiversity gain** is achievable through a sensitive design. This calculation is based on the amended proposed development plans below which show a reduction in the area of habitat utilised as amenity grassland to 0.42ha, leaving the remaining habitat to be seeded with a wildflower mix, creating areas of semi-improved grassland.

Recommended plan to achieve biodiversity gain

The areas should be seeded with a wildflower meadow mix such as the EM2 meadow mixture provided by Emorsgate Seeds. These areas would need to be managed in line with the recommended maintenance for the mix, which includes biannual cutting (in spring and autumn) and removal of the cuttings from site.

The wildflower area would need to be monitored and any encroaching scrub be cut back. Invasive weeds such as creeping thistle can be spot-treated with glyphosate herbicide to ensure these do not spread throughout the sward. The grassland could be managed to moderate condition within 10 years following an appropriate Habitat Management Plan for the Site. In particular, seeding should be concentrated around the grassland towards the woodland edge in the north-west of the Site. This would help to create a buffer for wildlife between the adjacent high value ancient woodland, New Close Wood Local Wildlife Site (LWS), and the new housing development.

In addition to the enhancements needed to achieve a biodiversity unit gain in accordance with national and local planning policies, additional measures outlined below can be taken to further improve the ecological value of the Site:

The attenuation ponds to be created on Site could be seeded with a pond edge wildflower and grasses mixture such as the EP1 mixture from Emorsgate seeds. The pond edges would need to be managed in line with the recommended maintenance for the mix, which includes cutting back annual weed growth within the first year to encourage a good perennial ground cover. Once established, vegetation should be cut back in sections around the pond every 2-3 years in rotation, ideally between September and November. Dense stands of a single species can also be thinned out when needed. This will help to maintain structural diversity around the pond, therefore, attracting a variety of species. Vegetation around the ponds will also help to filter run off from the adjacent dwellings as well as provide a habitat for a number of species, in particular, amphibians such as great crested newts, smooth newts, toads and frogs.

An assortment of bat and bird boxes could be installed within retained trees along the Site boundaries in order to increase opportunities for nesting birds and roosting bats within the Site. Bird boxes installed should be those designed for species of conservation concern, such as house sparrows, to be of greater value to local wildlife. These should be sited away from prevailing wind and rain. A small number of bat boxes, such as the Schwegler 1FF, for species such as pipistrelle could provide additional opportunities for roosting bats within the Site. Bat boxes should be placed in a south-facing direction between 4 and 5m high.

Further details of this Biodiversity Impact Assessment calculation can be found in the enclosed calculation spreadsheets.

Please don't hesitate to contact me if you have any questions or queries.

Yours sincerely,

Ashleigh King

Ashleigh King BSc. (Hons)
Graduate Ecologist

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Warwickshire Coventry and Solihull - Biodiversity Impact Assessment Calculator

v. 18.3 08/08/2014
Amendment from v18.2 only affects green roofs, for o
Please fill in both tables

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

Local Planning Authority:	RBC
Site name:	Brandon Stadium
Planning application reference number:	
Assessor:	Ecolocation
Date:	03/10/2017

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

	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*
		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
	n/a	Built Environment: Buildings/hardstanding	0.61	none	0	Poor	1					0.61	**0.00**
	J12	Grassland: Amenity grassland	0.16	Low	2	Poor	1					0.16	**0.32**
	C31	Other: Tall ruderal	0.01	Medium-Low	3	Poor	1					0.01	**0.03**
	J4	Other: Bare ground	7.18	Low	2	Poor	1					7.18	**14.36**
	A111	Woodland: Broad-leaved semi-natural woodland	1.09	High	6	Good	3	1.09	19.62				
	B6	Grassland: Poor semi-improved grassland	0.18	Medium-Low	3	Moderate	2					0.18	**1.08**
	B4	Grassland: Improved grassland	0.30	Low	2	Poor	1					0.30	**0.60**
	J13	Other: Ephemeral/short perennial	0.71	Low	2	Moderate	2					0.71	**2.84**
	A21	Woodland: Dense continuous scrub	0.03	Medium-Low	3	Moderate	2	0.03	0.18				
		Total	10.27				Total	1.12	19.80	0.00	0.00	9.15	19.23
													∑D + ∑F + ∑H
											Site habitat biodiversity value		39.03

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					M	0.00
								HIS = J + M
								19.23

Habitat Impact Score (HIS)

	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*	(N x O x P) / Q / R
		Habitat Creation	N		O		P			Q		R	
	n/a	Built Environment: Buildings/hardstanding	2.57	none	0	Poor	1		5 years	1.2	Low	1	**0.00**
	n/a	Built Environment: Gardens (lawn and planting)	1.37	Low	2	Poor	1		5 years	1.2	Low	1	**2.28**
	G1	Wetland: Standing water	0.27	High	6	Good	3		5 years	1.2	Medium	1.5	**2.70**
	A112	Woodland: Broad-leaved plantation	0.52	Medium	4	Good	3		32+ years	3	Medium	1.5	**1.39**
	A3	Woodland: Scattered trees	0.80	Medium	4	Moderate	2		25 years	2.4	Low	1	**2.67**
	J12	Grassland: Amenity grassland	3.62	Low	2	Poor	1		5 years	1.2	Low	1	**6.03**
		Total	**9.15**										
		Habitat Enhancement						Existing value S (= F)					((N x O x P) - S) / Q / R
		Total	**0.00**										

	Trading down correction value	0.00
	Habitat Mitigation Score (HMS)	**15.07**
		HBIS = HMS - HIS
	Habitat Biodiversity Impact Score	**-4.16**
	Percentage of biodiversity impact loss	21.63

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

	Loss to biodiversity
	Gain to biodiversity

Warwickshire Coventry and Solihull - Biodiversity Impact Assessment Calculator - Linear Features

Please fill in both tables

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

Linear Features
Hedges and other linear features can offer a higher biodiversity value per length than a standard area of habitat due to factors such as connectivity and must therefore be compensated for in parallel to the standard metric.

Please do not edit the formulae or structure
To condense the form for display hide vacant rows, do not delete them
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	Existing linear features on site			Linear distinctiveness		Linear condition		Linear Biodiversity Value: Linear features to be retained with no change within development		Linear features to be retained and enhanced within development		Linear features to be lost within development	
T. Note	code	Phase 1 habitat description	*Feature length (km)*	*Distinctiveness*	*Score*	*Condition*	*Score*	*Length (km)*	*Existing value*	*Length (km)*	*Existing value*	*Length (km)*	*Existing value*
		Direct Impacts and retained features			A		B	C	A x B x C = D	E	A x B x E = F	G	A x B x G = H
	J21	Hedges: Intact hedge	0.15	Medium	4	Good	3	0.00				**0.15**	**1.80**
	A3	Hedges: Linear trees	0.56	Medium	4	Moderate	2	0.56	**4.48**				
		Total	0.71				Total	0.56	4.48	0.00	0.00	0.15	1.80
													∑D + ∑F + ∑H
												Site Linear Biodiversity Value	6.28

Before/after impact		Indirect Negative Impacts	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				M	0.00
								HIS = J + M
								Linear Impact Score (LIS) **1.80**

CAUTION - Destruction of features of medium or high distinctiveness, e.g. hedgerows and streams, 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. E.G. Loss of hedgerows must be replaced with similar or better hedgerows. All newly planted hedges should be native species-rich hedgerows.

		Proposed linear features on site (Onsite mitigation)		**Target linear distinctiveness**		**Target linear condition**			**Time till target condition**		**Difficulty of creation / restoration**		***Linear biodiversity value***
T. Note	code	Phase 1 habitat description	*Length (km)*	*Distinctiveness*	*Score*	*Condition*	*Score*		*Time (years)*	*Score*	*Difficulty*	*Score*	
		Linear Creation	N		O		P			Q		R	(N x O x P) / Q / R
	A3	Hedges: Linear trees	0.69	Medium	4	Moderate	2		25 years	2.4	Low	1	**2.30**
		Total	**0.69**										
		Linear Enhancement						Existing value S (= F)					((N x O x P) - S) / Q / R
		Total	**0.00**								Trading down correction value		0.00
											Linear Mitigation Score (LMS)		**2.30**
													LBIS = LMS - LIS
											Linear Biodiversity Impact Score		**0.50**
											Percentage of linear impact loss		

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

	Loss to biodiversity
	Gain to biodiversity

Warwickshire Coventry and Solihull - Biodiversity Impact Assessment Calculator

v. 18.3 08/08/2014
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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*
		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
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	J12	Grassland: Amenity grassland	0.16	Low	2	Poor	1					0.16	**0.32**
	C31	Other: Tall ruderal	0.01	Medium-Low	3	Poor	1					0.01	**0.03**
	J4	Other: Bare ground	7.18	Low	2	Poor	1					7.18	**14.36**
	A111	Woodland: Broad-leaved semi-natural woodland	1.09	High	6	Good	3	1.09	19.62				
	B6	Grassland: Poor semi-improved grassland	0.18	Medium-Low	3	Moderate	2					0.18	**1.08**
	B4	Grassland: Improved grassland	0.30	Low	2	Poor	1					0.30	**0.60**
	J13	Other: Ephemeral/short perennial	0.71	Low	2	Moderate	2					0.71	**2.84**
	A21	Woodland: Dense continuous scrub	0.03	Medium-Low	3	Moderate	2	0.03	0.18				
		Total	10.27				Total	1.12	19.80	0.00	0.00	9.15	19.23
													∑D + ∑F + ∑H
											Site habitat biodiversity value		39.03

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					M	0.00
								HIS = J + M
								19.23

Habitat Impact Score (HIS)

	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*	(N x O x P) / Q / R
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	G1	Wetland: Standing water	0.27	High	6	Good	3		5 years	1.2	Medium	1.5	**2.70**
	A112	Woodland: Broad-leaved plantation	0.52	Medium	4	Good	3		32+ years	3	Medium	1.5	**1.39**
	J12	Grassland: Amenity grassland	0.42	Low	2	Poor	1		5 years	1.2	Low	1	**0.70**
	B22	Grassland: Semi-improved neutral grassland	3.20	Medium	4	Moderate	2		10 years	1.4	Medium	1.5	**12.19**
	A3	Woodland: Scattered trees	0.80	Medium	4	Moderate	2		25 years	2.4	Low	1	**2.67**
		Total	**9.15**										
		Habitat Enhancement						Existing value S (= F)					((N x O x P) - S) / Q / R
		Total	**0.00**										

	Trading down correction value	0.00
	Habitat Mitigation Score (HMS)	**21.93**
		HBIS = HMS - HIS
	Habitat Biodiversity Impact Score	**2.70**
	Percentage of biodiversity impact loss	

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