

Warwickshire Coventry and Solihull - Biodiversity Impact Assessment Calculator

v. 18.3 08/08/2014
Amendment from v18.2 only affects green roofs, for other habitats v18.2 still usable.

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

Local Planning Authority:	Warwickshire
Site name:	Land at Berry Hill, Adderbury
Planning application reference number:	
Assessor:	
Date:	

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		Habitat distinctiveness		Habitat condition		Habitats to be retained with no change within development		Habitats to be retained and enhanced within development		Habitats to be lost within development		Comment		
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		E		G				
		A x B x C = D		A x B x E = F		A x B x G = H								
		Grassland: Poor semi-improved grassland	3.22	Medium-Low	3	Poor	1		1.16	3.48	2.06	6.18	Grassland understood to be regularly managed by landowner. Borderline overgrown improved/ poor semi improved..	
n/a		Built Environment: Buildings/hardstanding	0.11	none	0	Poor	1				0.11	0.00		
B4		Grassland: Improved grassland	0.37	Low	2	Poor	1				0.37	0.74	Area to centre of site used for horse grazing	
C31		Other: Tall ruderal	0.07	Medium-Low	3	Poor	1				0.07	0.21		
J4		Other: Bare ground	0.09	Low	2	Poor	1				0.09	0.18	Changed condition of bare ground from moderate to poor (LS)	
A3		Woodland: Scattered trees	0.14	Medium	4	Moderate	2				0.14	1.12	Scattered trees along boundary features etc	
Total			4.00					0.00	0.00	1.16	3.48	2.84	8.43 J	
Indirect Negative Impacts		K		Value of loss from indirect impacts		K x A x B = Lj, Lij		Lj - Lij		Site habitat biodiversity value		ΣD + ΣF + ΣH		
Before/after impact														
Before														
After														
Before														
After														
Before														
After														
Before														
After														
Total			0.00										11.91	
Habitat Impact Score (HIS)										HIS = J + M		8.43		

Proposed habitats on site (Onsite mitigation)		Target habitats distinctiveness		Target habitat condition		Time till target condition		Difficulty of creation / restoration		Habitat biodiversity value	Comment		
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 x O x P = S (= F)		S (= F)		S (= F)							
n/a		Built Environment: Gardens (lawn and planting)	0.38	Low	2	Poor	1	5 years	1.2	Low	1	0.63	
n/a		Built Environment: Buildings/hardstanding	1.80	none	0	Poor	1	5 years	1.2	Low	1	0.00	
J4		Other: Bare ground	0.06	Low	2	Poor	1	5 years	1.2	Low	1	0.10	
A112		Woodland: Broad-leaved plantation	0.24	Medium	4	Moderate	2	30 years	2.8	Medium	1.5	0.46	Management plan would detail how this status to be achieved and all management prescriptions etc. This would be conditioned
J12		Grassland: Amenity grassland	0.29	Low	2	Poor	1	5 years	1.2	Low	1	0.48	
A3		Woodland: Scattered trees	0.07	Medium	4	Moderate	2	30 years	2.8	Low	1	0.20	To be located within amenity areas
Total			2.84										
Habitat Enhancement		S (= F)		S (= F)		S (= F)							
B22		Grassland: Semi-improved neutral grassland	0.46	Medium	4	Moderate	2	10 years	1.4	Low	1	1.64	Management plan would detail how "moderate status" to be achieved over 10 years. This would be recommended as a condition.
B22		Grassland: Semi-improved neutral grassland	0.70	Medium	4	Good	3	10 years	1.4	Low	1	4.50	To be fenced off and protected to get "good" status
Total			1.16										
Trading down correction value										-0.30			
Habitat Mitigation Score (HMS)										7.72			
Habitat Biodiversity Impact Score										HBIS = HMS - HIS		-0.71 Loss	
Percentage of biodiversity impact loss										8.42			

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
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
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T, Note	code	Existing linear features on site		Linear distinctiveness		Linear condition		Linear features to be retained with no change within development		Linear Biodiversity Value		Linear features to be retained and enhanced within development		Linear features to be lost within development		Comment
		Phase 1 habitat description	Feature length (km)	Distinctiveness	Score	Condition	Score	Length (km)	Existing value	Length (km)	Existing value	Length (km)	Existing value	Length (km)	Existing value	
Direct Impacts and Retained Features																
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
J23		Hedges: Hedge with trees	4.10	Medium-High	5	Moderate	2			4.10	41.00					
Total			4.10					0.00	0.00	4.10	41.00	0.00	0.00	0.00	0.00	J
Indirect Neosative Impacts																
Value of loss from indirect impacts $K \times A \times B = L1 - L2$																
Site Linear Biodiversity Value $TD + TF + TH = 21.00$																
Linear Impact Score (LIS) $HS = J + M = 0.00$																

T, Note	code	Proposed linear features on site (Onsite mitigation)		Target linear distinctiveness		Target linear condition		Time till target condition		Difficulty of creation / restoration		Linear biodiversity value $(N \times O \times P) / Q / R$	Comment
		Phase 1 habitat description	Length (km)	Distinctiveness	Score	Condition	Score	Time (years)	Score	Difficulty	Score		
Linear Creation													
		N	O	P	Q	R							
				Good	3	5 years	1.2						
Total			0.00										
Linear Enhancement													
J23		Hedges: Hedge with trees	4.10	Medium-High	5	Good	3	41.00	10 years	1.4	Low	1	$((N \times O \times P) - S) / Q / R = 14.64$
Total			4.10										
Trading down correction value = 0.00													
Linear Mitigation Score (LMS) = 14.64													
Linear Biodiversity Impact Score $LBS = LMS - LIS = 14.64$													
Percentage of linear impact loss = Gain													

KEY
No action required
Action required
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Automatic lookup
Overall Result
Loss to biodiversity
Gain to biodiversity

Biodiversity Impact Assessment Summary

Site name:	Land at Berry Hill, Adderbury
Planning reference number:	

Habitats	Area (ha)	Habitat Biodiversity Value
Total existing area onsite	4.00	11.91
Habitats negatively impacted by development Habitat Impact Score	2.84	8.43
On site habitat mitigation Habitat Mitigation Score	4.00	7.72
Habitat Biodiversity Impact Score		
If -ve further compensation required		-0.71
Percentage of biodiversity impact		8.42
Linear features	Length (km)	Linear Biodiversity Value
Total existing length onsite	4.10	41.00
Linear features negatively impacted by development Linear Impact Score	0.00	0.00
On site linear mitigation Linear Mitigation Score	4.10	14.64
Linear Biodiversity Impact Score		
If -ve further compensation required		14.64
Percentage of linear biodiversity impact		

For any questions with regard to biodiversity impact and this development please contact Warwickshire County Council Ecological Services:

email: planningecology@warwickshire.gov.uk
tel: 01926 418060

If there is an anticipated loss to biodiversity and no further ecological enhancements can be incorporated within the development it may be possible to compensate for this loss through a biodiversity offsetting scheme.

Please contact The Environment Bank for discussions on potential receptor sites in your area:

email: lmartland@environmentbank.com
tel: 01926 412772



Phase 1 Habitat Descriptions	Phase 1 Habitat Codes	Distinctiveness	Difficulty of creation	Difficulty of restoration
Built Environment: Buildings/hardstanding	n/a	none 0	Low 1	Low 1
Built Environment: Gardens (lawn and planting)	n/a	Low 1	Low 1	Low 1
Woodland: Broad-leaved semi-natural woodland	A111	High 6	n/a -	Low 1
Woodland: Broad-leaved plantation	A112	Medium 4	Medium 1.5	Low 1
Woodland: Coniferous semi-natural woodland	A121	Medium 4	n/a -	Low 1
Woodland: Coniferous plantation	A122	Low 2	Medium 1.5	Low 1
Woodland: Mixed semi-natural woodland	A131	Medium 4	n/a -	Low 1
Woodland: Mixed plantation	A132	Low 2	Medium 1.5	Low 1
Woodland: Wet woodland	n/a	High 6	Medium 1.5	Medium 1.5
Woodland: Dense continuous scrub	A21	Medium-Low 3	Low 1	Low 1
Woodland: Scattered scrub	A22	Medium 4	Low 1	Low 1
Woodland: Scattered trees	A3	Medium 4	Low 1	Low 1
Woodland: Broad-leaved parkland	A31	High 6	Medium 1.5	Low 1
Woodland: Coniferous parkland	A32	Medium 4	Medium 1.5	Low 1
Woodland: Recently felled woodland	A4	Low 2	n/a -	n/a -
Woodland: Orchard	A5	High 6	Low 1	Low 1
Grassland: Unimproved acidic grassland	B11	High 6	Medium 1.5	Low 1
Grassland: Semi-improved acidic grassland	B12	Medium-High 5	Medium 1.5	Low 1
Grassland: Unimproved neutral grassland	B21	High 6	Medium 1.5	Low 1
Grassland: Semi-improved neutral grassland	B22	Medium 4	Medium 1.5	Low 1
Grassland: Unimproved calcareous grassland	B31	High 6	Medium 1.5	Low 1
Grassland: Semi-improved calcareous grassland	B32	Medium-High 5	Medium 1.5	Low 1
Grassland: Poor semi-improved grassland	B6	Medium-Low 3	Medium 1.5	Low 1
Grassland: Improved grassland	B4	Low 2	n/a -	Low 1
Grassland: Marsh / Marshy grassland	B5	High 6	High 3	Medium 1.5
Grassland: Dry heath / Acidic grassland mosaic	D5	High 6	Medium 1.5	Medium 1.5
Grassland: Set-aside / Arable field margins	J113	High 6	Low 1	Low 1
Grassland: Amenity grassland	J12	Low 2	Low 1	Low 1
Wetland: Standing water	G1	High 6	Medium 1.5	Medium 1.5
Wetland: Running water	G2	High 6	Medium 1.5	Medium 1.5
Wetland: Reedbed	n/a	High 6	low 1	low 1
Wetland: Sphagnum Bog	E11	High 6	Very High 10	High 3
Wetland: Acid/neutral flush	E21	High 6	High 3	Medium 1.5
Wetland: Basin Mire	E32	High 6	High 3	Medium 1.5
Wetland: Swamp	F1	High 6	High 3	Medium 1.5
Wetland: Inundation vegetation	F22	High 6	Low 1	Low 1
Other: Arable	J11	Low 2	n/a -	n/a -
Other: Continuous bracken	C11	Low 2	Low 1	Low 1
Other: Tall ruderal	C31	Medium-Low 3	Low 1	Low 1
Other: Non-ruderal	C32	Medium 4	Low 1	Low 1
Other: Ephemeral/short perennial	J13	Low 2	Low 1	Low 1
Other: Allotments	J112	Low 2	Low 1	Low 1
Other: Quarry	I21	Low 2	Low 1	Low 1
Other: Spoil	I22	Low 2	Low 1	Low 1
Other: Refuse tip	I24	Low 2	Low 1	Low 1
Other: Introduced shrub	J14	Low 2	Low 1	Low 1
Other: Bare ground	J4	Low 2	Low 1	Low 1
Other: Green roof	n/a	Low 2	Low 1	Low 1
Linear features				
Hedges: Intact hedge	J21	Medium 4	Low 1	Low 1
Hedges: Native species rich intact hedge	J211	High 6	Low 1	Low 1
Hedges: Hedge with trees	J23	Medium-High 5	Low 1	Low 1
Hedges: Native species rich hedge with trees	J231	High 6	Low 1	Low 1
Hedges: Defunct hedge	J22	Low 2	n/a -	n/a -
Hedges: Linear scrub	A21	Medium 4	Low 1	Low 1
Hedges: Linear trees	A3	Medium 4	Low 1	Low 1
Hedges: Introduced shrub	J14	Low 2	Low 1	Low 1
Ditches: Standing water	G1	High 6	Medium 2	Low 1
Ditches: Running water	G2	High 6	Medium 2	Low 1
Ditches: Dry ditch	J26	Low 2	Low 1	Low 1
Boundaries: Fence	J24	None 0	Low 1	Low 1
Boundaries: Wall	J25	Low 2	Low 1	Low 1
Boundaries: Dry stone wall	J25	Medium 4	Low 1	Low 1
Other: Inland cliff	I1	Medium 4	Low 1	Low 1
Other: Earth bank	J28	Low 2	Low 1	Low 1
Other: Green wall	n/a	Low 2	Low 1	Low 1

Distinctiveness	
High	6
Medium-High	5
Medium	4
Medium-Low	3
Low	2
none	0

Condition	
Good	3
Moderate	2
Poor	1

Time	
5 years	1.2
10 years	1.4
15 years	1.7
20 years	2
25 years	2.4
30 years	2.8
32+ years	3

Difficulty	
Very high	10
High	3
Medium	1.5
Low	1
n/a	0

Linear trading down correction calculator

Existing Site

Existing linear features	length of loss (km)	Distinctiveness	High distinctiveness linear loss biodiversity value	Medium-High distinctiveness linear loss biodiversity value	Medium distinctiveness linear loss biodiversity value	Medium-Low distinctiveness linear loss biodiversity value	Low distinctiveness linear loss biodiversity value
Direct impacts	-		0.00	0.00	0.00	0.00	0.00
Hedges: Hedge with trees		Medium-High	0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
Indirect impacts	-		0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
TOTAL	0.00		0.00	0.00	0.00	0.00	0.00

Proposed Site

Proposed linear creation	Length of feature (km)	Distinctiveness	High distinctiveness proposed linear biodiversity value	Medium-High distinctiveness proposed linear biodiversity value	Medium distinctiveness proposed linear biodiversity value	Medium-Low distinctiveness proposed linear biodiversity value	Low distinctiveness proposed linear biodiversity value
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
Proposed linear enhancement	Length	Distinctiveness	High	Medium-High	Medium	Medium-Low	Low
Hedges: Hedge with trees	4.10	Medium-High	0.00	14.64	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
TOTAL	4.10		0.00	14.64	0.00	0.00	0.00

Linear trading down correction

	High	Medium-High	Medium	Medium-Low	Low	Total
Value of existing habitat loss per distinctiveness	0.00	0.00	0.00	0.00	0.00	
Value of created habitats per distinctiveness	0.00	14.64	0.00	0.00	0.00	
Would this result in trading down habitats?	Never	No	No	No	No	
If no, value each distinctiveness still requiring compensation	0	0	0	0	0.00	
Surplus gain to be carried over to compensate loss of lower habitats (rolls over)	0	14.64	14.64	14.64	n/a	
Trading down correction value	n/a	0	0	0	0	0.00

This calculator assess whether there is any down trading in linear habitats. E.g. loss of high distinctiveness habitat and surplus creation of medium or low habitats. It calculates a correction value which enters into the primary calculator to take this into account. Such that the full level of high habitat loss compensation is required. However if additional medium gain is generated above the value of the high loss, this surplus is still be taken into account with on site gain.

CAUTION - Destruction of each habitat of medium distinctiveness and above should be mitigated for with creation/restoration of a similar habitat. Trading up of habitat type is encouraged.