

Site name: to be copied from the BIA sheet

Planning reference number: to be copied from the BIA sheet

	Habitat Area (ha)	Hedgerow impact (km)	Connectivity Features (km)	Habitat Biodiversity Value	Hedgerow Biodiversity Value	Connectivity Biodiversity Value
Existing						
Onsite Biodiversity Impact	0.00	0.00	0.00	0.00	0.00	0.00
Indirect Biodiversity Impact	0.00	0.00	0.00	0.00	0.00	0.00
Total habitat / linear features impacted	0.00	0.00	0.00	0.00	0.00	0.00
Retained / Created / Enhanced						
Onsite biodiversity retained	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Creation	0.00	0.00	0.00	0.00	0.00	0.00
Biodiversity retained and enhanced	0.00	0.00	0.00	0.00	0.00	0.00
Total biodiversity retained/enhanced	0.00	0.00	0.00	0.00	0.00	0.00
Trading Down	n/a	n/a	n/a	0.00	0.00	0.00
Biodiversity Impact	n/a	n/a	n/a	0.00	0.00	0.00

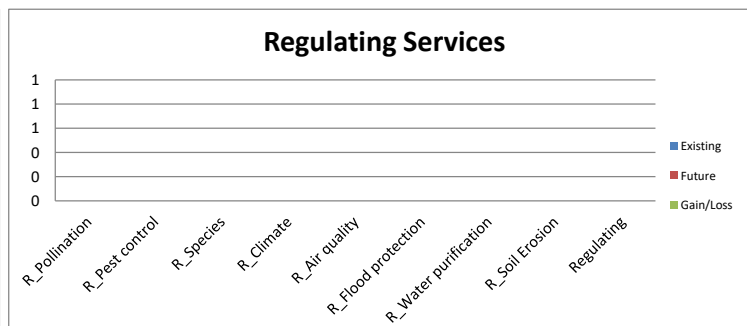
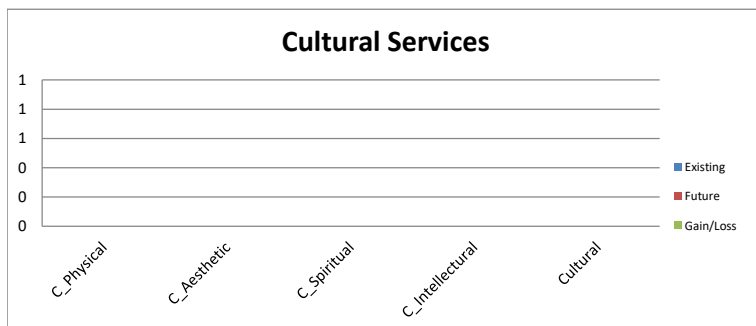
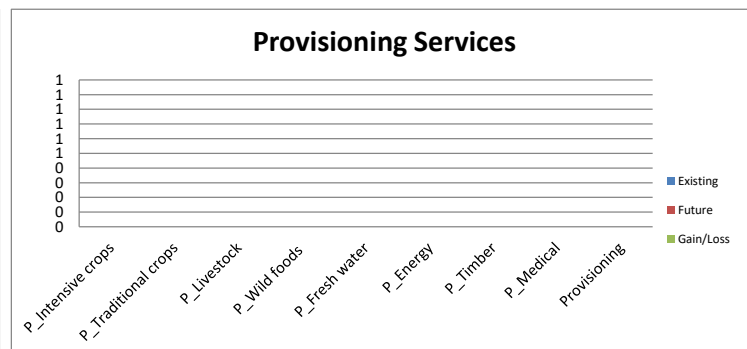
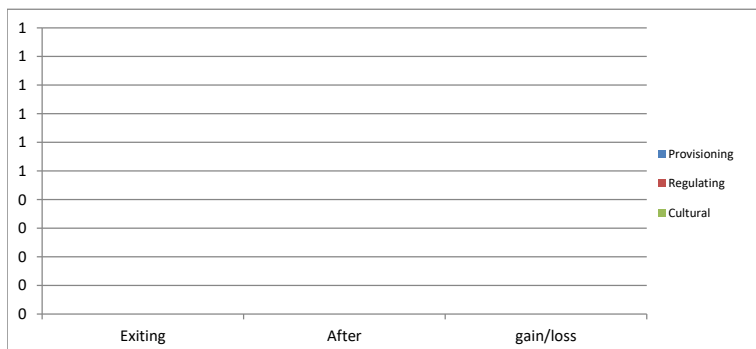
Habitat Impacts	Loss	Gain	Impact	%age losses	Compensatory Unit loss	Indicative Offset (ha)	WCC Offset units	WCC Indicative Offset Contribution
Woodland Habitat	0.00	0.00	0.00					
Grassland Habitat	0.00	0.00	0.00					
Wetland Habitat	0.00	0.00	0.00					
Other Habitat (incl. Built Env)	0.00	0.00	0.00					
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	£0
		Trading down	0.00					
			0.00					

Hedgerow Impacts	Loss	Gain	Trading down	Impact	Unit loss	Indicative Offset (km)	WCC Offset units	WCC Offset Contribution
Hedgerow	0.00	0.00		0.00				

SUMMARY

This development will result in 0 Habitat Biodiversity Units loss; 0 Hedgerow Units loss and 0 Connectivity Biodiversity Units loss

ECOSYSTEM SERVICES ANALYSIS



For any questions with regard to biodiversity impact and this development please contact Warwickshire County Council Ecological Services:
email: planningecology@warwickshire.gov.uk or telephone 01926 418060

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:	
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, display them

If additional rows are required, or to provide feedback calculator please contact WCC Ecological Services 0418060

							Habitat Biodiversity Value						
	<div>Existing habitats on site Please enter <u>a</u>ll habitats within the site boundary</div>			<div>Habitat distinctiveness</div>		<div>Habitat condition</div>		<div>Habitats to be retained with no change within development</div>		<div>Habitats to be retained and enhanced within development</div>		<div>Habitats to be lost within development</div>	
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
B													
		Total	0.00				Total	0.00	0.00	0.00	0.00	0.00	0.00
													$\sum D + \sum F + \sum H$
													Site habitat biodiversity value
													0.00
		Indirect Negative Impacts	K					Value of loss from indirect impacts					
	Before/after impact	Including off site habitats	K					$K \times A \times B = Li, Lii$	$Li - Lii$				
	Before												
	After												
	Before												
	After												
	Before												
	After												
	Before												
	After												
	Before												
	After												
	Total		0.00						0.00 M				HIS = J + M

[illegible]

[illegible]

Warwickshire, Coventry & Solihull - Hedge Impact Assessment

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

Existing Hedgerow features on site			
T. Note	code	Hedgerow habitat description	Feature length (km)
		Direct Impacts and retained features	
Total			0.00
	Before/after impact	Indirect Negative Impacts	K
	Before		
	After		
	Before		
	After		
	Before		
	After		
	Before		
	After		
	Before		
	After		
Total			0.00

Proposed hedge features on site (Onsite mitigation)
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T. Note	code	Phase 1 habitat description	Length (km)
Hedgerow Creation			N
Total			0.00
Hedgerow Enhancement			
Total			0.00

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

Assessment Calculator

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

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

[illegible]

Target hedge distinctiveness	Hedgerc
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[illegible]

ow condition assessments					Hedgerow fe retained with within dev
C1	C2	D1	D2	Condition Score	Length (km)
					C
Totals					0.00
					Value of loss fr K x A x B = Li, Lii

ow condition assessments	
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[illegible]

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

Hedgerow Biodiversity Value					
Features to be <u>lost</u> with no change in development	Hedgerow features to be retained and <u>enhanced</u> within development		Hedgerow features to be <u>lost</u> within development		Comment
Existing value	Length (km)	Existing value	Length (km)	Existing value	
A x B x C = D	E	A x B x E = F	G	A x B x G = H	
0.00	0.00	0.00	0.00	0.00	J
				$\sum D + \sum F + \sum H$	
	Site Hedge Biodiversity Value			0.00	
From indirect impacts					
$L_i - L_{ii}$					
0.00	M			$HIS = J + M$	
		Hedge Impact Score (HIS)		0.00	

Time till target condition	Difficulty of creation / restoration	
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<i>Time (years)</i>	<i>Score</i>	<i>Difficulty</i>	<i>Score</i>	<i>Linear biodiversity value</i>	<i>Comment</i>
	Q		R	(N x O x P) / Q / R	

[illegible]

[illegible]

Please fill in both tables

Connectivity Features
This sheet gives an indication as to whether the development will enhance connectivity through or around the site.

These units are not transferrable as compensation for either the Habitat or Hedgerow Impact Assessment scores.

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
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[illegible]

Proposed linear features on site (Onsite mitigation)							Target Connectivity distinctiveness		Target Connectivity condition		Time till target condition		Difficulty of creation / restoration		Connectivity biodiversity value
T. Note	code	Phase 1 habitat description	Length (km)	Distinctiveness	Score	Condition	Score			Time (years)	Score	Difficulty	Score		$\frac{N \times O \times P}{Q/R}$
		Connectivity Creation	N		O		P								
		Total	0.00												
		Connectivity Enhancement						Existing value S (= F)							$\left(\frac{N \times O \times P}{Q/R} - S \right)$
		Total	0.00												
												Trading down correction value		0.00	
												Connectivity Mitigation Score (CMS)		0.00	
												Connectivity Biodiversity Impact Score		CBIS = CMS - CIBS	
												Percentage of linear impact loss		0.00	

[illegible]

[illegible]

Existing Site

[illegible]

[illegible]

This calculator assess whether there is any down trading in habitats value. E.g. loss of high distinctiveness habitat cannot be compensated for by surplus medium mitigation. It calculates the 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 gained to offset the value of the high loss, this surplus is still be taken into account with on site gain.

CAUTION - Destruction of habitats of high distinctiveness, e.g. lowland meadow or ancient woodland, may be against local policy. Has the mitigation hierarchy been followed, can impact to these habitats be avoided?
Any unavoidable loss of habitats of high distinctiveness must be replaced like-for-like.

Hedgerow trading

Existing Site

[illegible]

Proposed Site

[illegible]

-	0.00	
-	0.00	
-	0.00	
-	0.00	
-	0.00	
-	0.00	
-	0.00	
-	0.00	
-	0.00	
-	0.00	
-	0.00	
Proposed hedgerow enhancement	Length	Distinctiveness
-	0.00	
-	0.00	
-	0.00	
-	0.00	
-	0.00	
-	0.00	
-	0.00	
-	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	

Hedgerow trading down correction

Value of existing habitat loss per distinctiveness
Value of created habitats per distinctiveness
Would this result in trading down habitats?
If no, value each distinctiveness still requiring compensation
Surplus gain to be carried over to compensate loss of lower habitats (rolls over)
Trading down correction value

This calculator assess whether there is any down trading in Hedgerow habitats. E.g. loss of high distinctiveness from the primary calculator to take this into account. Such that the full level of high habitat loss compensation can be taken into account with on site gain.

CAUTION - Destruction of each habitat of medium distinctiveness and above should be mitigated for

g down correction calculator

[illegible][illegible]

[illegible][illegible]

High	Medium-High	Medium	Medium-Low
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
Never	No	No	No
0	0	0	0
0	0	0	0
n/a	0	0	0

ictiveness habitat and surplus creation of medium or low habitats. It calculates a correction v_i on is required. However if additional medium gain is generated above the value of the high lo

with creation/restoration of a similar habitat. Trading up of habitat type is encouraged.

Existing Site

[illegible]

[illegible]

Linear trading down correction	High	Medium-High	Medium	Medium-Low	Low
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	0.00	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	0	0	0	n/a
Trading down correction value	n/a	0	0	0	0

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.

Total
0.00

Phase 1 Habitat Type		Phase 1 Habitat Codes	Distinctiveness		Difficulty of creation		Preset Time to Target Condition (Moderate)	Preset Time to Target Condition (Good)	Difficulty of restoration		Preset Time to Target Condition (Moderate)
	Built Environment: Buildings/hardstanding	n/a	none	0	Low	1	n/a	n/a	Low	1	n/a
	Built Environment: Gardens (lawn and planting)	n/a	Low	1	Low	1	n/a	n/a	Low	1	n/a
	Woodland: Broad-leaved semi-natural woodland	A111	High	6	n/a	-	n/a	n/a	Low	1	W_in_P
	Woodland: Broad-leaved plantation	A112	Medium	4	Medium	1.5	32+ years	n/a	Low	1	W_in_P
	Woodland: Coniferous semi-natural woodland	A121	Medium	4	n/a	-	n/a	n/a	Low	1	n/a
	Woodland: Coniferous plantation	A122	Low	2	Medium	1.5	n/a	n/a	Low	1	n/a
	Woodland: Mixed semi-natural woodland	A131	Medium	4	n/a	-	n/a	n/a	Low	1	W_in_P
	Woodland: Mixed plantation	A132	Low	2	Medium	1.5	32+years	n/a	Low	1	W_in_P
	Woodland: Wet woodland	n/a	High	6	Medium	1.5	32+years	n/a	Medium	1.5	W_in_P

	Woodland: Dense continuous scrub	A21	Medium-Low	3	Low	1	10 years	15 years	Low	1	W_in_P
	Woodland: Scattered scrub	A22	Medium	4	Low	1	10 years	15 years	Low	1	W_in_P
	Woodland: Scattered trees	A3	Medium	4	Low	1	32+ years	n/a	Low	1	W_in_P
	Woodland: Broad-leaved parkland	A31	High	6	Medium	1.5	n/a	n/a	Low	1	W_in_P
	Woodland: Coniferous parkland	A32	Medium	4	Medium	1.5	n/a	n/a	Low	1	W_in_P
	Woodland: Recently felled woodland	A4	Low	2	n/a	-	n/a	n/a	n/a	-	n/a
	Woodland: Orchard	A5	High	6	Low	1	W_in_P	W_in_P	Low	1	W_in_P

	Grassland: Unimproved acidic grassland	B11	High	6	Medium	1.5	n/a	n/a	Low	1	W_in_P
	Grassland: Semi-improved acidic grassland	B12	Medium-High	5	Medium	1.5	15 years	W_in_P	Low	1	W_in_P
	Grassland: Unimproved neutral grassland	B21	High	6	Medium	1.5	n/a	n/a	Low	1	W_in_P
	Grassland: Semi-improved neutral grassland	B22	Medium	4	Medium	1.5	15 years	W_in_P	Low	1	15 years

	Grassland: Unimproved calcareous grassland	B31	High	6	Medium	1.5	n/a	n/a	Low	1	W_in_P
	Grassland: Semi-improved calcareous grassland	B32	Medium-High	5	Medium	1.5	15 years	W_in_P	Low	1	15 years
	Grassland: Poor semi-improved grassland	B6	Medium-Low	3	Medium	1.5	n/a	n/a	Low	1	n/a
	Grassland: Improved grassland	B4	Low	2	n/a	-	n/a	n/a	Low	1	n/a
	Grassland: Marsh / Marshy grassland	B5	High	6	High	3	15 years	W_in_P	Medium	1.5	W_in_P
	Grassland: Dry heath / Acidic grassland mosaic	D5	High	6	Medium	1.5	W_in_P	W_in_P	Medium	1.5	W_in_P
	Grassland: Set-aside / Arable field margins	J113	High	6	Low	1	W_in_P	W_in_P	Low	1	W_in_P

	Grassland: Amenity grassland	J12	Low	2	Low	1	n/a	n/a	Low	1	n/a
	Wetland: Standing water	G1	High	6	Medium	1.5	W_in_P	W_in_P	Medium	1.5	W_in_P
	Wetland: Running water	G2	High	6	Medium	1.5	W_in_P	W_in_P	Medium	1.5	W_in_P
	Wetland: Reedbed	F1	High	6	low	1	W_in_P	W_in_P	low	1	W_in_P
	Wetland: Sphagnum Bog	E11	High	6	Very High	10	n/a	n/a	High	3	n/a
	Wetland: Acid/neutral flush	E21	High	6	High	3	W_in_P	W_in_P	Medium	1.5	W_in_P
	Wetland: Basin Mire	E32	High	6	High	3	n/a	n/a	Medium	1.5	n/a

	Wetland: Swamp	F1	High	6	High	3	W_in_P	W_in_P	Medium	1.5	W_in_P
	Wetland: Inundation vegetation	F22	High	6	Low	1	W_in_P	W_in_P	Low	1	W_in_P
	Other: Arable	J11	Low	2	n/a	-	n/a	n/a	n/a	-	n/a
	Other: Continuous bracken	C11	Low	2	Low	1	W_in_P	W_in_P	Low	1	W_in_P
	Other: Tall ruderal	C31	Medium-Low	3	Low	1	W_in_P	W_in_P	Low	1	W_in_P
	Other: Non-ruderal	C32	Medium	4	Low	1	W_in_P	W_in_P	Low	1	W_in_P
	Other: Ephemeral/short perennial	J13	Low	2	Low	1	W_in_P	W_in_P	Low	1	W_in_P
	Other: Allotments	J112	Low	2	Low	1	n/a	n/a	Low	1	n/a
	Other: Quarry	I21	Low	2	Low	1	n/a	n/a	Low	1	n/a
	Other: Spoil	I22	Low	2	Low	1	n/a	n/a	Low	1	n/a
	Other: Refuse tip	I24	Low	2	Low	1	n/a	n/a	Low	1	n/a
	Other: Introduced shrub	J14	Low	2	Low	1	n/a	n/a	Low	1	n/a
	Other: Bare ground	J4	Low	2	Low	1	n/a	n/a	Low	1	n/a
	Other: Vertical face (correction factor)	n/a	none	0	Low	1	W_in_P	W_in_P	Low	1	W_in_P
	Other: Living Wall	n/a	Medium-Low	3	Medium	1.5	W_in_P	W_in_P	Low	1	W_in_P
	Other: Living roof - Extensive	n/a	Low	2	Low	1	W_in_P	W_in_P	Low	1	W_in_P
	Other: Living roof - Semi-intensive	n/a	Medium-Low	3	Medium	1.5	W_in_P	W_in_P	Low	1	W_in_P

Other: Living roof - Intensive	n/a	Low	2	Low	1	W_in_P	W_in_P	Low	1	W_in_P
Other: Living roof - Brown	n/a	Medium-Low	3	Low	1	W_in_P	W_in_P	Low	1	W_in_P
Other: Living roof - Mosaic	n/a	Medium	4	Medium	1.5	W_in_P	W_in_P	Low	1	W_in_P
Linear features										
Hedges: Intact hedge	J21	Medium	4	Low	1	W_in_P	W_in_P	Low	1	W_in_P
Hedges: Native species rich intact hedge	J211	High	6	Low	1	W_in_P	W_in_P	Low	1	W_in_P
Hedges: Hedge with trees	J23	Medium-High	5	Low	1	W_in_P	W_in_P	Low	1	W_in_P
Hedges: Native species rich hedge with trees	J231	High	6	Low	1	W_in_P	W_in_P	Low	1	W_in_P
Hedges: Defunct hedge	J22	Low	2	n/a	-	W_in_P	W_in_P	n/a	-	W_in_P
Hedges: Linear scrub	A21	Medium	4	Low	1	W_in_P	W_in_P	Low	1	W_in_P
Hedges: Linear trees	A3	Medium	4	Low	1	W_in_P	W_in_P	Low	1	W_in_P
Hedges: Introduced shrub	J14	Low	2	Low	1	W_in_P	W_in_P	Low	1	W_in_P
Ditches: Standing water	G1	High	6	Medium	2	W_in_P	W_in_P	Low	1	W_in_P
Ditches: Running water	G2	High	6	Medium	2	W_in_P	W_in_P	Low	1	W_in_P
Ditches: Dry ditch	J26	Low	2	Low	1	W_in_P	W_in_P	Low	1	W_in_P
Boundaries: Fence	J24	None	0	Low	1	W_in_P	W_in_P	Low	1	W_in_P
Boundaries: Wall	J25	Low	2	Low	1	W_in_P	W_in_P	Low	1	W_in_P
Boundaries: Dry stone wall	J25	Medium	4	Low	1	W_in_P	W_in_P	Low	1	W_in_P
Other: Inland cliff	I1	Medium	4	Low	1	W_in_P	W_in_P	Low	1	W_in_P
Other: Earth bank	J28	Low	2	Low	1	W_in_P	W_in_P	Low	1	W_in_P
Other: Living wall	n/a	Low	2	Low	1	W_in_P	W_in_P	Low	1	W_in_P

Habitats for creation	Habitats for restoration
Phase 1 Habitat Descriptions	Phase 1 Habitat Descriptions
Built Environment: Buildings/hardstanding	Woodland: Broad-leaved semi-natural woodland
Built Environment: Gardens (lawn and planting)	Woodland: Broad-leaved plantation
Woodland: Broad-leaved plantation	Woodland: Coniferous semi-natural woodland
Woodland: Coniferous plantation	Woodland: Coniferous plantation
Woodland: Mixed plantation	Woodland: Mixed semi-natural woodland
Woodland: Wet woodland	Woodland: Mixed plantation
Woodland: Dense continuous scrub	Woodland: Wet woodland
Woodland: Scattered scrub	Woodland: Dense continuous scrub
Woodland: Scattered trees	Woodland: Scattered scrub
Woodland: Coniferous parkland	Woodland: Scattered trees
Woodland: Orchard	Woodland: Broad-leaved parkland
Grassland: Semi-improved acidic grassland	Woodland: Coniferous parkland
Grassland: Semi-improved neutral grassland	Woodland: Orchard
Grassland: Semi-improved calcareous grassland	Grassland: Unimproved acidic grassland
Grassland: Marsh / Marshy grassland	Grassland: Semi-improved acidic grassland
Grassland: Dry heath / Acidic grassland mosaic	Grassland: Unimproved neutral grassland
Grassland: Set-aside / Arable field margins	Grassland: Semi-improved neutral grassland
Grassland: Amenity grassland	Grassland: Unimproved calcareous grassland
Wetland: Standing water	Grassland: Semi-improved calcareous grassland
Wetland: Running water	Grassland: Marsh / Marshy grassland
Wetland: Reedbed	Grassland: Dry heath / Acidic grassland mosaic
Wetland: Sphagnum Bog	Grassland: Set-aside / Arable field margins
Wetland: Acid/neutral flush	Wetland: Standing water
Wetland: Basin Mire	Wetland: Running water

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

Condition	
Good	3
Moderate	2
Poor	1

Time	
3 years	1.1
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

Wetland: Swamp	Wetland: Reedbed
Wetland: Inundation vegetation	Wetland: Sphagnum Bog
Other: Continuous bracken	Wetland: Acid/neutral flush
Other: Tall ruderal	Wetland: Basin Mire
Other: Non-ruderal	Wetland: Swamp
Other: Ephemeral/short perennial	Wetland: Inundation vegetation
Other: Allotments	Other: Continuous bracken
Other: Quarry	Other: Tall ruderal
Other: Spoil	Other: Non-ruderal
Other: Refuse tip	Other: Ephemeral/short perennial
Other: Introduced shrub	Other: Allotments
Other: Bare ground	Other: Bare ground
Other: Living Wall	Other: Living roof - Extensive
Other: Living roof - Extensive	Other: Living roof - Semi-intensive
Other: Living roof - Semi-intensive	Other: Living roof - Intensive
Other: Living roof - Intensive	Other: Living roof - Brown
Other: Living roof - Brown	Other: Living roof Mosaic
Other: Living roof Mosaic	Other: Living Wall

Medium	1.5
Low	1
n/a	0

Linear	Linear
Hedges: Intact hedge	Hedges: Intact hedge
Hedges: Native species rich intact hedge	Hedges: Native species rich intact hedge
Hedges: Hedge with trees	Hedges: Hedge with trees
Hedges: Native species rich hedge with trees	Hedges: Native species rich hedge with trees
Hedges: Linear scrub	Hedges: Linear scrub
Hedges: Linear trees	Hedges: Linear trees
Hedges: Introduced shrub	Ditches: Standing water
Ditches: Standing water	Ditches: Running water
Ditches: Running water	Ditches: Dry ditch
Ditches: Dry ditch	Boundaries: Dry stone wall
Boundaries: Fence	Other: Inland cliff
Boundaries: Wall	Other: Earth bank
Boundaries: Dry stone wall	Other: Living wall
Other: Inland cliff	
Other: Earth bank	
Other: Green wall	

Preset Time to Target Condition (Good)	UK Priority Habitat /Habitat of Principal Importance	LBAP Priority Habitat	NVC	Habitat Definition	Notes
n/a	Not a priority habitat	Not a priority habitat			
n/a	Not a priority habitat	Not a priority habitat			
W_in_P	Lowland mixed deciduous woodland	Woodland	W8,W10, W16	Include all stands which do not obviously originate from planting. Both ancient and more recent stands are included. Woodland where more than 30% is planted should be classified as plantation. However, mature plantations (more than about 120 years old) of locally native species where there are semi-natural woodland ground flora and shrub communities should be classified as semi-natural (NCC, 1990). See Phase 1 Survey Handbook for definition of woodland types included in semi-natural category.	
W_in_P	Not a priority habitat	Not a priority habitat	Some forms of W8, W10, W16 or non NVC	Obviously planted woodland with no more than 10% of the canopy made up of conifer trees (NCC, 1990). See Phase 1 Survey Handbook for exceptions. The category includes recent stands (i.e less than about 120 years) planted with locally native trees. The phase 1 handbook does not define a minimum size but the National Inventory of Woodland and Trees defines woodland as having a minimum area of 0.5ha and a minimum width of 20m.	
n/a	Native pine woodlands (Scotland only). Yew stands are included in the lowland beech and yew woodland plan and upland mixed ashwood plan.	n/a	W13, W18		This woodland type s not found in Warwickshire
n/a	Not a priority habitat	Not a priority habitat	Some forms of W10, W16 or non NVC	Obviously planted woodland with no more than 10% of the canopy made up of broadleaved trees (NCC, 1990). See Phase 1 Survey Handbook for exceptions. Typical trees species include larch (<i>Larix</i> spp), pine (<i>Pinus</i> spp) and spruce (<i>Picea</i> spp).	
W_in_P	Lowland mixed deciduous woodland	Woodland		Woods that do not obviously originate from planting (see Phase 1 Survey Handbook for exceptions) with a canopy made up of between ten and ninety percent of either broadleaved and coniferous trees (NCC, 1990).	
W_in_P	Not a priority habitat	Not a priority habitat		Obviously planted with 10-90% of either broadleaved or conifer trees in the canopy (NCC, 1990). See Phase 1 Survey Handbook for exceptions.	
W_in_P	Wet woodland	Woodland	W1 - W7	Wet woodlands are found on poorly drained or seasonally wet soils. They are commonly found on floodplains, alongside rivers and stream, on fens and in damper areas of other woodland types. Alder, birch and willows are usually the dominant tree species.	Wet woodland is scarce in the County.

W_in_P	Not a priority habitat	Not a priority habitat	W21-24	A block of scrub is dominated by the shrub species less than five metres tall. It may have a few scattered trees but there will be no recognisable canopy. To be dense or continuous, the scrub cover must be thirty percent or more. This includes stands of bramble, dog Rose and gorse (<i>Ulex europaeus</i>) and also stands of mature hawthorn (<i>Crataegus monogyna</i>), blackthorn (<i>Prunus spinosa</i>) or grey willow (<i>Salix cinerea</i>) even if they are greater than 5m tall. (NCC, 1990).	Scrub is often part of mosaic with other habitats. Its conservation value can be variable, and is often seen as of low value due to low botanical species diversity. However, it can be of high value in its own right as well as providing suitable habitat for some of the county's important species of invertebrates, mammals and birds.
W_in_P	Not a priority habitat	Not a priority habitat	W21-24	As above but scrub cover is less than thirty percent.	Scattered scrub occurs in association with other semi-natural habitats, frequently occurring as a mosaic with grassland or early successional communities, and often having occasional scattered trees. The presence of scattered scrub can add to a site's ecological interest. Where scrub is part of a habitat mosaic, for example with grassland, the habitat with the higher distinctiveness score should automatically be entered in the BIA.
W_in_P	Not a priority habitat	Not a priority habitat		Habitat that is neither woodland or scrub, but have trees present. Tree cover must be less than thirty percent. However, most examples of planted trees over amenity grassland should be included in this category even where tree cover exceeds 30%	The area calculation should be the whole land parcel on which the scrub/trees are planted and not just the cover the individual trees/shrubs. Where a parcel of land has more than one habitat e.g. scattered trees on grassland, the habitat with the higher distinctiveness score should be entered.
W_in_P	Wood-pasture and parkland	Old parkland & veteran trees	Range of NVC types	This category is for Wood Pasture and Parkland Priority Habitat/Habitat of Principle Importance only. Wood-pasture and parkland is not defined by any particular type(s) of vegetation, NVC types, or Phase 1 habitat types. Instead they are mosaic habitats valued for their trees, especially veteran and ancient trees, and the plants and animals that they support (LBAP).	This habitat is typical of large estates with a history of traditional management e.g. grazing by cattle or deer, but can also be found in cemeteries and churchyards. Such sites can often be important due to the presence of large numbers of mature trees and can also have historic, cultural and landscape importance.
W_in_P	Not a priority habitat	n/a		Parklands with introduced exotic trees such as cedar (<i>Cedrus</i> spp).	
n/a	Not a priority habitat	Not a priority habitat		Only include areas where future land use is uncertain, e.g., if it is not clear whether they are to be replanted.	
W_in_P	Traditional orchard	Orchards	Range of NVC types	This category is for Traditional Orchards Priority Habitat/Habitats of Principal Importance only. Intensively managed orchards are not included. Traditional orchards are defined as groups of fruit and nut trees planted on vigorous rootstocks at low densities in permanent grassland and managed in a low intensity way. The minimum size of a traditional orchard is defined as at least five trees with crown edges less than 20m apart. Orchards are a mosaic habitat containing fruit trees, deadwood, pasture or meadow, scrub, hedgerows, ponds etc. Prime examples support a diversity of vascular plants, bryophytes, lichens, fungi, vertebrates and invertebrates including BAP species, nationally rare and scarce species.	

W_in_P	Lowland dry acid grassland	Acid grassland	U1-U4	Lowland acid grassland typically occurs on nutrient poor, free-draining soils of low pH (<5.5). Acid grasslands are characteristically species poor with typical species that include fine-leaved grasses such as common bent, sheep's fescue, mat-grass and wavy hair-grass and forbs such as heath bedstraw, tormentil and sheep's sorrel. Although species-poor compared to other semi-natural grasslands, it contains important communities with species that are rare in the region.	Lowland acid grasslands are very rare in Warwickshire sub region. The HBA (2012) recorded a total resource of 72.7ha (2.4ha unimproved and 70.3ha semi-improved). It is mainly associated with heathland, woodland or post-industrial sites. They are largely confined to the acid glacial soils in the north of the County on the Midlands Plateau Natural Area where they persist as fragments.
W_in_P	Lowland dry acid grassland	Acid Grassland	U1-U4	Improvement reduces the acid character of the grassland and semi-improved acid grasslands will contain a mesotrophic species element (such as white clover, yarrow, common mouse-ear, perennial rye-grass, Yorkshire fog) but in practice, it can be difficult to separate unimproved and semi-improved grasslands.	See above
W_in_P	Lowland meadow	Neutral grassland	MG4, MG5, MG8	Unimproved neutral grasslands are found on neutral clays and alluvial soils which have not been subject to alteration through the use of fertilizers, slurry and herbicides. They are the product of a long history of traditional management such as hay making (meadows) or low intensity grazing (pastures) over many decades. Species diversity is often high (but where neglected can be rank) and can include rare or scarce plants such as green-winged orchid, dyer's greenweed, pepper saxifrage and adder's tongue fern. They also support a diverse fauna, especially invertebrate species.	True unimproved grassland is now very rare in the sub region. The HBA recorded 174ha in 2017. SSSIs account for 73ha (40%) of this total. Outside of SSSIs remnant unimproved grasslands are generally small and highly fragmented, found on nature reserves, small 'hobby' farms, churchyards, traditional orchards, woodland rides, churchyards, as fragments of remnant old grassland that have escaped intensification e.g. within or on the edge of urban areas. Many of these are designated as Local Wildlife Sites.
W_in_P	Lowland meadow	Neutral grassland	MG1, MG6, MG4, MG5	Semi-improved neutral grasslands have been subject to some form of agricultural improvement such as fertilizer application, use of herbicide, intensive grazing or drainage but are typically not subject to regular reseeded (improved grasslands). Semi-improved grasslands cover a very broad range of grassland quality from almost unimproved (species-rich) to species-poor semi-improved grassland that is just slightly more species-rich than agriculturally improved grassland.	Species-rich semi-improved grassland is more widespread in the sub region than unimproved grassland but still scarce. Species diversity will be lower than unimproved grasslands but still of high botanical diversity supporting grassland communities that resemble MG5 or MG4 grassland with species such as common knapweed, lady's bedstraw, yellow rattle, common bird's-foot-trefoil, meadow vetchling, oxeye daisy and great burnet but often at lower frequencies than seen in unimproved meadows. Rarer species associated with true unimproved grasslands will also tend to be absent.

W_in_P	Lowland calcareous grassland	Calcareous grassland	CG2, CG5	Calcareous grassland supports a range of plant communities in which lime-tolerant (calcicolous) plants are characteristic. Typical forb species include common centuary, yellow-wort, kidney vetch and dwarf thistle and grasses such as sheep's fescue, tor-Grass, upright brome, crested hair-grass and meadow oat-grass.	Calcareous grassland is very rare in the sub-region, largely confined to the south and east of Warwickshire within the Cotswolds and Feldon areas (and with limited areas in the south of the Arden). The majority has a relatively recent origin, falling within old or partially worked quarries, where disturbance has ceased some time ago. Further more important examples occur in cuttings. A little exists within agricultural settings (often on steeper ground that has been left out of improvement schemes) and along some road verges and railway or canal cuttings (Warwickshire LBAP). The latest figures from Habitat Biodiversity Audit (HBA, 2012) give the total area of calcareous grassland in Warwickshire, Coventry and Solihull to be 118 ha (35ha unimproved and 83ha semi-improved). A large part of this resource is included within designated sites (SSSIs and LWSs)
W_in_P	Lowland calcareous grassland	Calcareous grassland	CG2, CG5	Semi-improved calcareous grasslands that have been improved by the addition of some fertiliser will contain some mesotrophic species such as white clover, yarrow, Yorkshire fog, cock's-foot and crested dog's-tail.	
n/a	Not a priority habitat	Not a priority habitat	Some examples of MG6	This consists of semi-improved grassland which is more improved, poorer in species diversity, and more resembles species-poor neutral grassland irrespective of the underlying soil type. However, it is noticeably less improved and more species rich than improved grassland (NCC, 1990). Typical species including Yorkshire fog, meadow foxtail, cock's-foot, red fescue, ribwort plantain and meadow buttercup.	
n/a	Not a priority habitat	Not a priority habitat	MG6a, MG7	Improved grasslands are dominated by a limited range of grasses, particularly perennial rye-grass and have a very low forb diversity characteristically dominated by white clover.	It is the commonest grassland type in the County.
W_in_P	Coastal and floodplain grazing marsh Purple moor-grass and rush pasture Lowland meadow		MG8-10, MG12, M22-28	This is a diffuse category covering certain Molinia grasslands, grasslands with a high proportion of Juncus species, Carex species or Filipendula ulmaria, and wet meadows and pastures supporting communities of species such as Caltha palustris or Valeriana species, where broadleaved herbs predominate over grasses.	
W_in_P	Lowland heathland Lowland dry acid grassland	Lowland heathland		This represents a common mixture of dry heath and acid grassland. Lowland heathland is typified by the presence of low growing shrubs such as heather (<i>Calluna vulgaris</i>), dwarf gorse (<i>Ulex minor</i>) and cross-leaved heath (<i>Erica tetralix</i>).	Heathland is very rare in the County. The HBA (2012) has recorded 7.76ha of dry heath/acid grassland mosaic. They are mainly associated with common land and woodland on the acid glacial soils in the north of the county.
W_in_P	Arable field margins	Arable field margins		Arable field margins are herbaceous strips or blocks around arable fields that are managed specifically to provide benefits for wildlife (see UK BAP, 2008 for definition of margin types that are included and those that are excluded). They are valued for supporting scarce/rare arable plants as well as invertebrates and nesting and feeding birds.	

n/a	Not a priority habitat	Not a priority habitat	Various grassland forms but mostly MG6, MG7	This comprises intensively managed and regularly mown grasslands, typical of lawns, playing fields, golf course fairways and many urban 'savannah' parks, in which perennial rye grass, with or without white clover, often predominates. The sward composition will depend on the original seed mixture used and on the age of the community. Herbs such as daisy, greater plantain and dandelion may be present. If the amenity grassland has a sward rich in herbs, it may be possible to classify it as semi-improved acidic, neutral or calcareous grassland, as appropriate. In such cases, the area concerned should be mapped as the specific grassland type and its amenity use target noted (NCC, 1990).	
W_in_P	Ponds	Ponds		Standing water includes lakes, reservoirs, pools, flooded gravel pits, ponds, water-filled ditches and canals.	Typical floating and submerged plant species include Duckweed (<i>Lemna</i> spp.), Canadian pondweed (<i>Elodea canadensis</i>), Hornwort (<i>Ceratophyllum</i> spp.), amphibious bistort (<i>Persicaria amphibia</i>) and yellow water-lily (<i>Nuphar lutea</i>). Standing water bodies are important for a vast range of plants and animals, including several protected species such as great crested newt.
W_in_P	Rivers & streams	Rivers & streams		Running water comprises rivers and streams (but not canals, which are classed as Standing Water).	The habitat quality of watercourses can vary widely, with many adversely affected by human activities, such as channel straightening and pollution. However there are also many that have significant wildlife value, providing habitat for a range of plants and animals including protected species such water vole and otter.
W_in_P	Reedbeds	Reedbeds		Reed beds are wetlands dominated by, but not necessarily composed purely of, stands of the common reed (<i>Phragmites australis</i>). They can include areas of reed which are both wet and dry at their base but usually the water table is at or above ground level for much of the year (LBAP). Usually part of a mosaic with open water and ditches, wet grassland, wet woodland etc. They usually require management e.g. grazing, cutting, scrub control to maintain a mosaic of vegetation at different stages of growth.	Reed beds are not common or extensive in the sub-region, being mainly associated with sand and gravel extraction within certain river valleys (e.g. the Tame and Avon), some water-filled limestone quarries, a few mining subsidence pools and formal lakes in country house estates, and occasionally as narrow fringes of reed along rivers, canals and ditches. There are dozens of small reed beds, though large ones are few in number and probably only account for 25-30ha.
n/a	Blanket bog Lowland raised bog	n/a	M1-3, M17-20		Habitat not found in Warwickshire
W_in_P	Lowland fens	Fen & swamp		These typically support species-poor vegetation consisting of a Sphagnum carpet overlain by <i>Carex</i> or <i>Juncus</i> species. Characteristic moss species include <i>Sphagnum recurvum</i> , <i>S. palustre</i> and <i>S. auriculatum</i> . Overlying vegetation may consist of small <i>Carex</i> species (<i>Carex echinata</i> , <i>C. nigra</i> or <i>C. cura</i>), <i>Carex rostrata</i> , <i>Juncus acutifloris</i> , <i>J. effusus</i> , <i>J. squarrosus</i> , or <i>Eriophorum angustifolium</i> .	Extremely rare in the County e.g. Coleshill and Bannerly Pools SSSI
n/a	Lowland fens	n/a	Various mire communities	Basin mire is a topogenous fen, fed by ground water or streams. It develops in a waterlogged basin and does not contain much open water. The vegetation may be dominated by <i>Sphagnum</i> species, together with <i>Carex rostrata</i> and ericoids, or by tall swamp plants such as <i>Phragmites australis</i> , <i>Schoenoplectus</i> (<i>Scirpus</i>) <i>lacustris</i> and <i>Typha</i> species	Habitat not found in Warwickshire

W_in_P	Lowland fens	Fen & swamp		Swamp contains tall emergent vegetation typical of the transition between open water and exposed land. Swamps are generally in standing water for a large part of the year. Swamp vegetation includes both mixed and single-species stands include reedmace (<i>Typha</i> spp.), common reed (<i>Phragmites australis</i>), reed canary-grass (<i>Phalaris arundinacea</i>), reed sweet-grass (<i>Glyceria maxima</i>) and tall sedge species (<i>Carex</i> spp.).	The Phase 1 category includes reedbed (see above) as well as fen and swamp.
W_in_P	Not a priority habitat	Fen & swamp	MG11, MG13, OV28-36	Inundation vegetation covers areas that are periodically inundated. The species community is generally open and inherently unstable. Typical species present may include the following: knot grass (<i>Polygonum</i>) species, bulbous rush (<i>Juncus bulbosus</i>), beggartick and bur-marigold (<i>Bidens</i>) species, creeping bent grass (<i>Agrostis stolonifera</i>), marsh foxtail (<i>Alopecurus geniculatus</i>), as well as many ruderal species (NCC, 1990).	
n/a	Not a priority habitat	Not a priority habitat		This includes arable cropland, horticultural land (for example nurseries, vegetable plots, flower beds), freshly-ploughed land and recently reseeded grassland, such as rye grass and ryeclover leys, often managed for silage (NCC, 1990).	
W_in_P	Not a priority habitat	Not a priority habitat	W25	Areas dominated by <i>Pteridium aquilinum</i> (NCC, 1990).	
W_in_P	Not a priority habitat	Not a priority habitat	OV24-27	This category comprises stands of tall perennial or biennial dicotyledons, usually more than 25cm high, of species such as rosebay willowherb and common nettle (NCC, 1990). It is often found as a habitat-edge community and in urban areas is frequently found on post industrial sites/waste ground.	
W_in_P	Not a priority habitat	Not a priority habitat		Non-wooded stands of species such as <i>Oreopteris limbosperma</i> , <i>Athyrium filix-femina</i> , <i>Dryopteris</i> species or <i>Luzula sylvatica</i> should be included in this category (NCC, 1990).	
W_in_P	Not a priority habitat	Not a priority habitat		Short, patchy plant associations typical of derelict urban sites, quarries and railway ballast. The vegetation typically lacks a clear dominant species, but consists of a mixture of low-growing plants, often less than 25 cm high, such as greater plantain, creeping buttercup, white clover, black medick, coltsfoot, oxeye daisy and ragwort species, or of taller species such as <i>Sisymbrium</i> or <i>Melilot</i> species (NCC, 1990).	
n/a	Not a priority habitat	Allotments		All allotments included	
n/a	Not a priority habitat	Quarries & gravel pits		Excavations such as gravel, sand or chalk pits and stone quarries should be included in this category.	
n/a	Not a priority habitat	Not a priority habitat		Includes abandoned industrial areas and tips of waste material such as coal mine spoil and slag.	
n/a	Not a priority habitat	Not a priority habitat		Rubbish tips, worked landfill sites	
n/a	Not a priority habitat	Not a priority habitat		This is vegetation dominated by shrub species that are not locally native, whether planted or self-sown. Common introduced shrubs include species of box, dog wood, laurel, privet, <i>Rhododendron</i> and snowberry. Formal beds of shrubs such as of <i>Hypericum calycinum</i> , <i>Cotoneaster</i> , heaths and dwarf conifers should be included here.	
n/a	Not a priority habitat	Not a priority habitat			
W_in_P					
W_in_P					
W_in_P					
W_in_P					

[illegible]

Condition Assessment	Habitat creation/restoration timescales
Classify as poor condition	
Classify as poor condition	0-5 years
Use FEP T08 condition assessment	Planted native woodlands will be about 120 years old before they can be considered semi-natural and should be composed of locally native species and have semi-natural woodland ground flora and shrub communities (Phase 1 Survey Handbook, NCC 1990) therefore cannot be created on timescales used in BIA. Timescales for the restoration of existing semi-natural woodland will depend on reasons for unfavourable condition. Timescales for restoration will depend on reasons for unfavourable condition (see condition assessment) and management required to improve condition.
Use T08 even though this habitat does not meet strict FEP definition for use with T08.	It is likely to take more than 100 years before the planted woodlands approach good condition e.g. with an age and structural diversity including canopy, understory and field layer that supports plants, insect, mammal and bird species typical of native woodlands. For these reasons, aim for moderate condition in 32+ years. The minimum woodland size for Countryside Stewardship woodland creation grants is 0.5 hectares and must have a minimum width of 20 metres.
Use T08 even though this habitat does not meet strict FEP definition for use with T08.	n/a
Classify as poor condition	n/a
Use FEP T08 condition assessment	
Use T08 even though this habitat does not meet strict FEP definition for use with T08.	It is likely to take more than 100 years before the planted woodlands approach good condition e.g. with an age and structural diversity including canopy, understory and field layer that supports plants, insect, mammal and bird species typical of native woodlands. Target condition should be moderate in 32+ years.
Use FEP T08 condition assessment	

Use condition assessment V05 for scrub, even if the scrub does not meet the FEP definition of high environmental value scrub.	Scrub of high conservation value contains a range of shrub species (at least 3) with mixed age structure, has a complex vertical and horizontal structure i.e. variation in physical structure, age range and spacing, has many clearings and glades giving a high boundary/area ratio, a well developed edge with ungrazed tall herbs, and supports a range of rare/local invertebrates. Scrub typically matures in 15 years (RSPB), so it should be possible to create good quality scrub in 15 years with suitable management e.g. rotational cutting that achieves the above conditions.
Use condition assessment V05 for scrub, even if the scrub does not meet the FEP definition of high environmental value scrub.	Scrub of high conservation value contains a range of shrub species (at least 3) with mixed age structure, has a complex vertical and horizontal structure i.e. variation in physical structure, age range and spacing, has many clearings and glades giving a high boundary/area ratio, a well developed edge with ungrazed tall herbs, and supports a range of rare/local invertebrates. Scrub typically matures in 15 years (RSPB), so it should be possible to create good quality scrub in 15 years with suitable management e.g. rotational cutting that achieves the above conditions.
No FEP condition assessment. See next column for important attributes.	The ecological value of scattered trees will depend on the tree species (species such as oak, birch, hawthorn and willows are most valuable), age (large, mature trees have higher value), location (the proximity of other habitats that add habitat, species and structural diversity), the presence of features such as decay, loose bark, dense ivy cover etc. It takes decades for these features to develop.
Use FEP T03 condition assessment	Timescales for restoration will depend on reasons for current condition and management required to improve condition. Reasons for unfavourable condition may include e.g. loss of old trees (disease, root damage, soil compaction, felling) lack of replacement trees, lack of standing and fallen deadwood (removed for safety reasons, over-tidying), inappropriate management e.g. intensive grazing levels.
Classify as poor condition	n/a
Use FEP T15 or PTES (Peoples Trust for Endangered Species) condition assessment (see PTES/NE Project Report NECR077)	The PTES condition assessment has 3 condition categories: excellent (established, mixed ages of tree, grazed, standing and fallen deadwood), good/fair (includes newly planted or young orchards that are mown, they lack good deadwood habitat and the mature trees that can provide it naturally), poor (gappy, no new trees, scrubbed over, trees damaged). Newly planted orchards can therefore be in moderate (i.e PTES good/fair) condition in 5-10 years provided associated habitats e.g. wildflower grassland, hedges, scrub, deadwood logpiles etc are incorporated. It will take a lot longer to achieve good condition i.e. trees of varying age, standing and fallen deadwood etc. See PTES website and Natural Englands Technical information notes (TIN12 to 21) for advice on planting, species and varieties, wildlife, location, rootstocks etc), also Countryside Stewardship, Creation of traditional orchards option BE5.

Use FEP G05 condition assessment	Unimproved grasslands cannot be recreated, at least not on timescales used in the BIA metric. It is possible to create BAP quality grasslands that resemble old unimproved grasslands but these classified as semi-improved - see below.
Use FEP G05 condition assessment	A review of agri-environment schemes (5 sites) found it is possible to create/restore lowland dry acid grassland PH within 10-20 years. One site created (20 years ago) on a field of free draining sand has a well established U1c grassland in good condition. The 4 restored sites were in moderate (3 sites) or good (1 site) condition over timescales of 10-20 years by reinstatement of management e.g. grazing, tree/shrub clearance. See attached guidance for details.
Use FEP G06 condition assessment	Studies (see attached guidance) give timescale trajectories of many decades for the recreation of unimproved neutral grassland. It is possible to create grasslands that superficially resemble species-rich grasslands (see below) but these will not have the natural vegetation patterns, full range of plant species and undisturbed soil fauna and flora of unimproved grasslands.
Use FEP G06 condition assessment	Evidence from agri-environment schemes (Wilson et al - see attached guidance) show that it is possible to create/restore lowland meadow PH of moderate to good quality typically in 8-15 years. Careful site selection (e.g. low soil nutrient levels) and suitable management (e.g. cutting and grazing) are important. Low frequency of positive indicator species was the primary reason for grasslands failing to achieve good status. It is possible therefore to create/restore lowland meadow PH to good condition in 10 years on high potential sites (see FEP manual Keys 1 and 2c). On low potential sites, moderate condition in 15 years is a more realistic target.

Use FEP G04 condition assessment	Studies suggest timescale trajectories of 60-100 years for the restoration of ancient calcareous grasslands (see attached guidance).
Use FEP G04 condition assessment	A review of agri-environment schemes (Wilson et al) found it is possible to create/restore lowland calcareous grassland PH in 8-15 years. However, low soil nutrient levels and suitable grazing management are important. Of 15 sites studied, 10 were in good condition and 5 were in moderate condition.
Classify as poor condition	n/a
Classify as poor condition	n/a
Use FEP G07 condition assessment	A review of agri-environment schemes (by Wilson et al - see attached guidance) looked at three wet grassland schemes - one creation, two restoration. One site created on arable land (previously a fen) by raising water levels and natural regeneration from seedbank, was purple moor grass & rush pasture PH in moderate condition after 12 years. The restored sites (scrub clearance and/or grazing) had achieved good condition after 2 & 11 years.
Use FEP M03 & G05	
Use FEP species features, including SP02 uncommon vascular plants.	

Classify as poor condition	n/a
Use FEP W07 condition assessment	Ponds colonise rapidly with plants, invertebrates and ampibians and can take just a few years to be of high wildlife value. However, the value of ponds is affected by the water quality (e.g. elevated nutrient levels), pollution risk e.g. road-runoff, presence of stream inflows, location (ponds in urban and arable areas tend to be of poorer quality). Good quality ponds tend to occur in close proximity to other ponds or wetland habitats and where they are buffered by semi-natural habitat. These factors should be taken into account when deciding on target condition.
No FEP condition assessment. See next column	Good quality watercourses will have a divesity of natural channel features typical of lowland watercourses. These include a variety of flow patterns (riffles, runs, glides, pools and marginal dead water), a variety of channel features (side bars, point bars, silt deposits and islands), meanders and associated erosion/deposition features and natural variation of bankside habitats.
Use FEP W08 condition assessment	Newly created reed bed can establish very rapidly ie within a few growing seasons (RSPB). However, reedbed habitat quality can vary greatly depending on size, degree of wetness and dryness, scrub cover, soil type, water quality and management. These factors should be taken into account when making decisions about target condition.
n/a	n/a
Use FEP W04 condition assessment	n/a
n/a	n/a

Use FEP W04 condition assessment

Classify as poor condition	0-5 years
Bracken should be classed as poor condition unless it meets the FEP definition of high environmental value bracken in which case its condition should be assessed against V05*.	
Classify as poor condition, unless it meets the criteria LWS selection.	
Classify as poor condition	
Classify as poor condition	
Classify as poor condition	
Classify as poor condition	n/a
Classify as poor condition	n/a
Classify as poor condition	n/a
Classify as poor condition	0-5 years
	n/a

[illegible]

[illegible][illegible]

0		0.00	
0		0.00	
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Enhancement	Distinctiveness	Area	Value
0		0.00	
0		0.00	
0		0.00	
0		0.00	
0		0.00	
0		0.00	
0		0.00	
0		0.00	
0		0.00	
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0		0.00	
0		0.00	
0		0.00	
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0		0.00	
0		0.00	

	Loss	Gain	
Offset Requirements	0.00	0.00	0.00
Woodland	0.00	0.00	0.00
Grassland	0.00	0.00	0.00
Wetland	0.00	0.00	0.00
Other	0.00	0.00	0.00
Built Environment	0.00	0.00	0.00

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Woodland					Grassland			
High	Medium-High	Medium	Medium-Low	Low	High	Medium-High	Medium	Medium-Low
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

%

0.00

#DIV/0!#DIV/0!

#DIV/0!#DIV/0!

#DIV/0!#DIV/0!

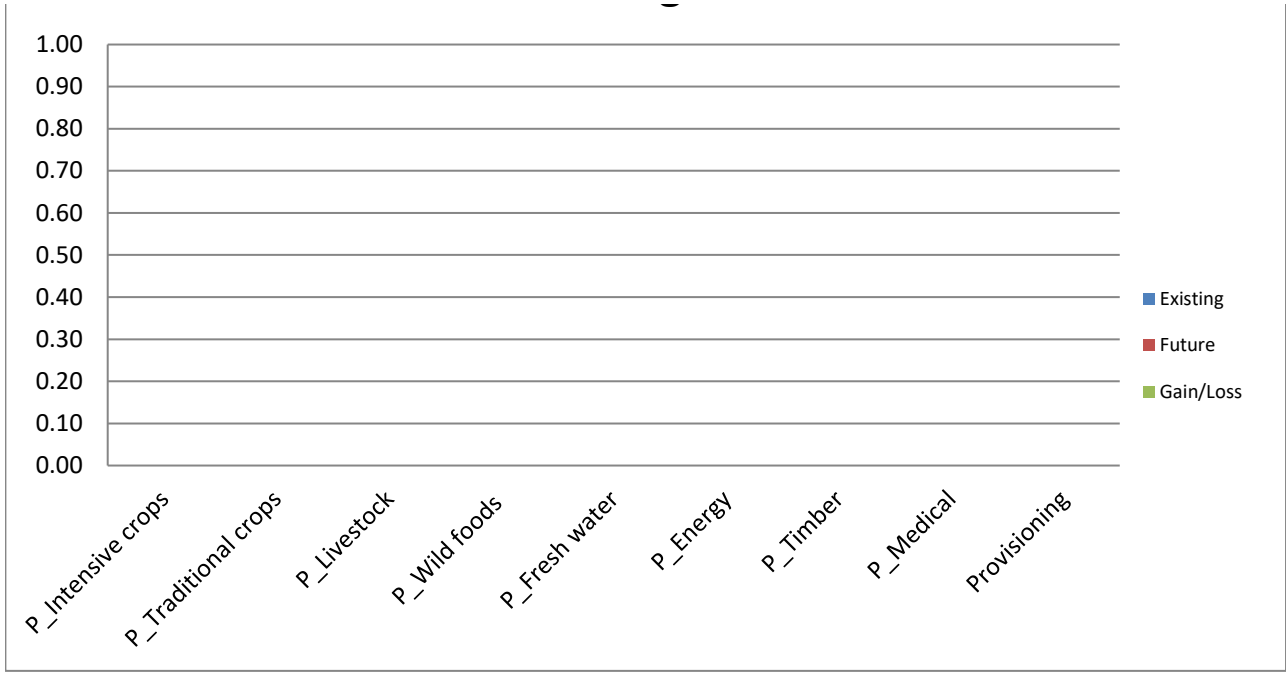
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0.00	0.00

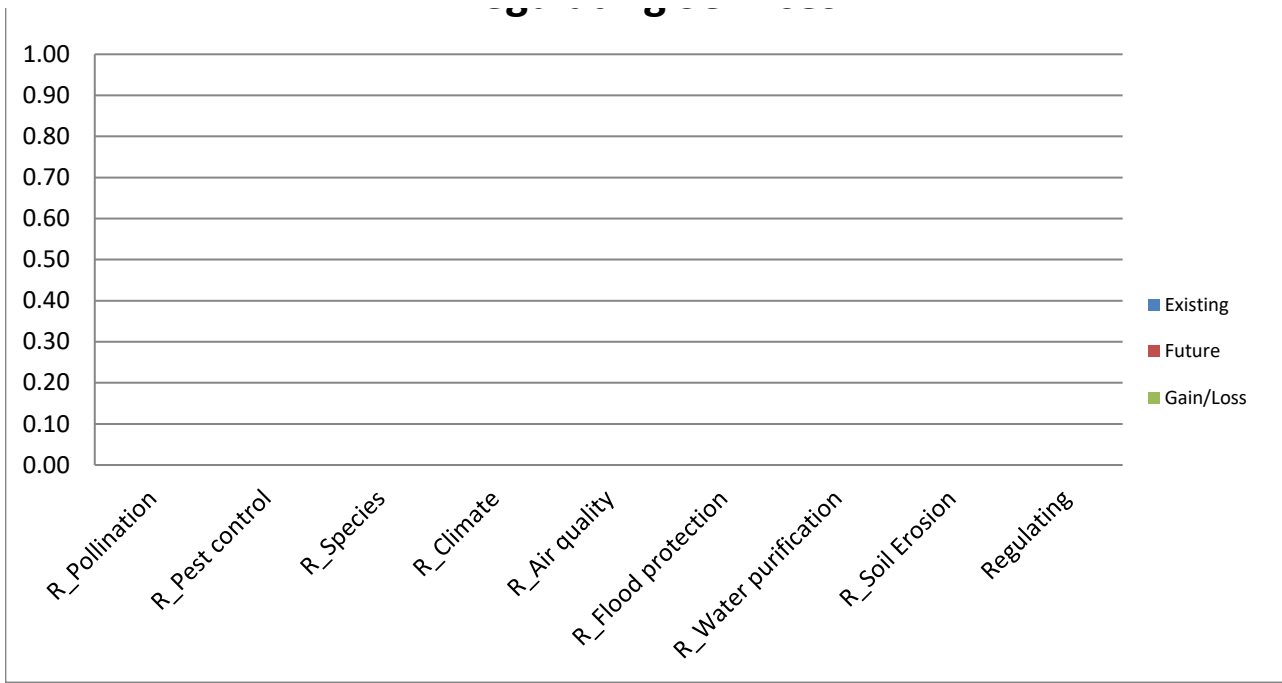
0.00	0.00	0.00	0.00	0.00

Medium-Low	Low
0.00	0.00

Built Environmment				
High	Medium-High	Medium	Medium-Low	Low
0.00	0.00	0.00	0.00	0.00

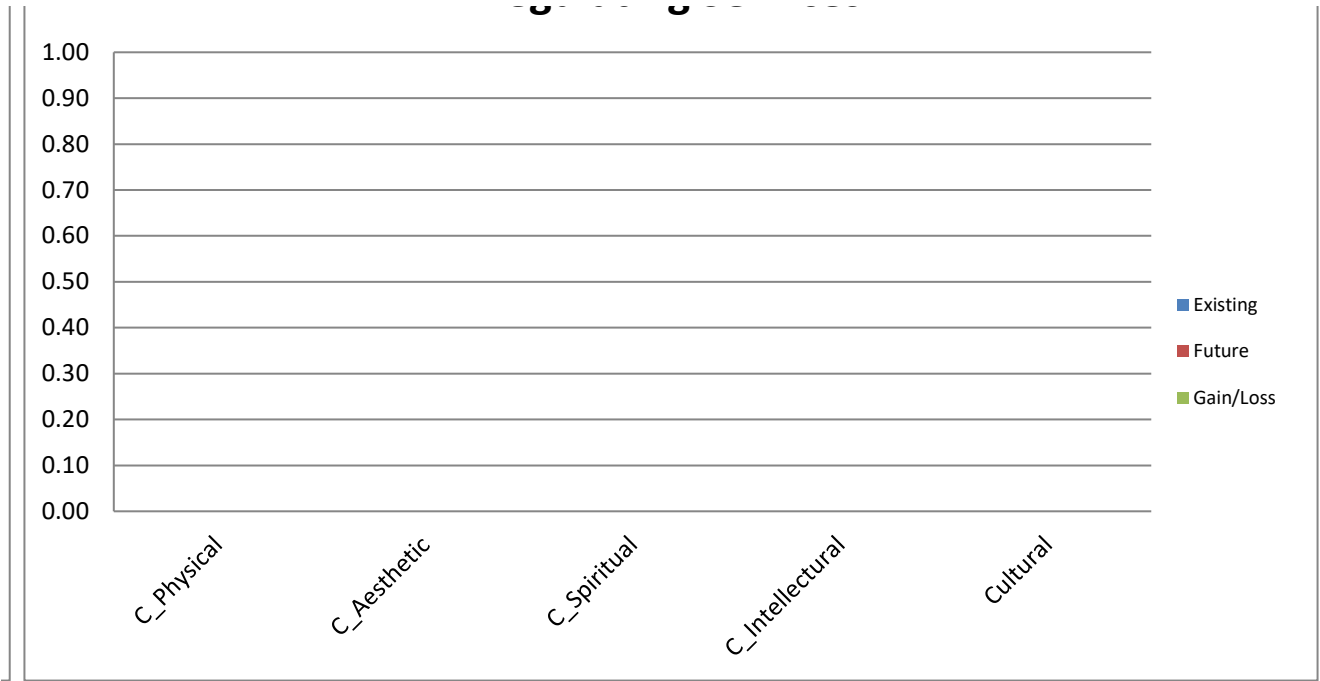


[illegible][illegible][illegible]



[illegible][illegible]R_Pest contr R_Species R_Climate R_Air quality R_Flood prote R_Water purifi R_Soil Erosio **Regulating**

[illegible][illegible][illegible]



HABCODE

C_Physical	C_Aesthetic	C_Spiritual	C_Intellectual	Cultural	
0.00	0.00	0.00	0.00	0.00	A111
0.00	0.00	0.00	0.00	0.00	A112
0.00	0.00	0.00	0.00	0.00	A121
0.00	0.00	0.00	0.00	0.00	A122
0.00	0.00	0.00	0.00	0.00	A131
0.00	0.00	0.00	0.00	0.00	A132
0.00	0.00	0.00	0.00	0.00	A21
0.00	0.00	0.00	0.00	0.00	A22
0.00	0.00	0.00	0.00	0.00	A31
0.00	0.00	0.00	0.00	0.00	A3
0.00	0.00	0.00	0.00	0.00	A32
0.00	0.00	0.00	0.00	0.00	A4
0.00	0.00	0.00	0.00	0.00	A5
0.00	0.00	0.00	0.00	0.00	A6
0.00	0.00	0.00	0.00	0.00	B11
0.00	0.00	0.00	0.00	0.00	B12
0.00	0.00	0.00	0.00	0.00	B21
0.00	0.00	0.00	0.00	0.00	B22
0.00	0.00	0.00	0.00	0.00	B31
0.00	0.00	0.00	0.00	0.00	B32
0.00	0.00	0.00	0.00	0.00	B4
0.00	0.00	0.00	0.00	0.00	B5
0.00	0.00	0.00	0.00	0.00	B6
0.00	0.00	0.00	0.00	0.00	C11
0.00	0.00	0.00	0.00	0.00	C31
0.00	0.00	0.00	0.00	0.00	C32
0.00	0.00	0.00	0.00	0.00	D5
0.00	0.00	0.00	0.00	0.00	E11
0.00	0.00	0.00	0.00	0.00	E21
0.00	0.00	0.00	0.00	0.00	E32
0.00	0.00	0.00	0.00	0.00	F1
0.00	0.00	0.00	0.00	0.00	F22
0.00	0.00	0.00	0.00	0.00	G1
0.00	0.00	0.00	0.00	0.00	G2
0.00	0.00	0.00	0.00	0.00	I21
0.00	0.00	0.00	0.00	0.00	I22
0.00	0.00	0.00	0.00	0.00	I24
0.00	0.00	0.00	0.00	0.00	J11
0.00	0.00	0.00	0.00	0.00	J112
0.00	0.00	0.00	0.00	0.00	J113
0.00	0.00	0.00	0.00	0.00	J12
0.00	0.00	0.00	0.00	0.00	J13
0.00	0.00	0.00	0.00	0.00	J14

[illegible][illegible]

C_Physical	C_Aesthetic	C_Spiritual	C_Intellectual	Cultural
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00

DESCRIPTION

Woodland: Broad-leaved semi-natural woodland
Woodland: Broad-leaved plantation
Woodland: Coniferous semi-natural woodland
Woodland: Coniferous plantation
Woodland: Mixed semi-natural woodland
Woodland: Mixed plantation
Woodland: Dense continuous scrub
Woodland: Scattered scrub
Woodland: Broad-leaved parkland
Woodland: Scattered trees
Woodland: Coniferous parkland
Woodland: Recently felled woodland
Woodland: Orchard
Woodland: Wet woodland
Grassland: Unimproved acidic grassland
Grassland: Semi-improved acidic grassland
Grassland: Unimproved neutral grassland
Grassland: Semi-improved neutral grassland
Grassland: Unimproved calcareous grassland
Grassland: Semi-improved calcareous grassland
Grassland: Improved grassland
Grassland: Marsh / Marshy grassland
Grassland: Poor semi-improved grassland
Other: Continuous bracken
Other: Tall ruderal
Other: Non-ruderal
Grassland: Dry heath / Acidic grassland mosaic
Wetland: Sphagnum Bog
Wetland: Acid/neutral flush
Wetland: Basin Mire
Wetland: Swamp
Wetland: Inundation vegetation
Wetland: Standing water
Wetland: Running water
Other: Quarry
Other: Spoil
Other: Refuse tip
Other: Arable
Other: Allotments
Grassland: Set-aside / Arable field margins
Grassland: Amenity grassland
Other: Ephemeral/short perennial
Other: Introduced shrub

Other: Bare ground
Built Environment: Buildings/hardstanding
Wetland: Reedbed
Built Environment: Gardens (lawn and planting)
Other: Vertical face (correction factor)
Other: Living Wall
Other: Living roof - Extensive
Other: Living roof - Semi-intensive
Other: Living roof - Intensive
Other: Living roof - Brown
Other: Living roof - Mosaic

INFERENCE

Median Stakeholder value

Median Stakeholder value

Set to mean of Semi-natural BL (A111) & coniferous plantation (A122)

Median Stakeholder value

Set to average (A111 + A121)

Set to average (A112 + A122)

Median Stakeholder value

Set to A22

Set to J12 for cultural; average (J12 + A112) for others (J12 = amenity; A112 = broadleaf plantation)

same as A31

Set to J12 for cultural; average (J12 + A122) for others (J12 = amenity; A122 = Conifer plantation)

Set to J4 (bare ground) with reduced habitat (3-->1) and soil-related variables set to those of A132 (mixed plantation)

Set to A112 with modified food provision (A112 = BL plantation)

CT Added

Median Stakeholder value

Set to B11

Median Stakeholder value

Set to B21

Median Stakeholder value

Set to B31

Median Stakeholder value

Median Stakeholder value

Set to mean of B4 and B22 (IG and Neutral grassland)

Set to C31

Median Stakeholder value

Set to C31

Median Stakeholder value

Set to B5 with some expert modification (Pam) to reflect differences

Set to B5 with some expert modification (Pam) to reflect differences

Set to B5 with some expert modification (Pam) to reflect differences

Set to B5 with some expert modification (Pam) to reflect differences

Set to B5 with some expert modification (Pam) to reflect differences

Median Stakeholder value

Set to G1 (standing water)

Set to J4 (bare ground)

Set to J4 (bare ground)

Set to J4 (bare ground)

Median Stakeholder value

Set to J12 (amenity) with increased food provision, reduced arable and more intellectual /spiritual interactions

CT Added

Median Stakeholder value

set to C31 (tall ruderal)

set to C31 (tall ruderal)

Median Stakeholder value

Median Stakeholder value

Set to B5 - WCC set

- WCC set

- WCC set

same as garden - WCC set

same as garden - WCC set

same as garden - WCC set

same as garden - WCC set

same as garden WCC set

same as garden - WCC set

C_Physical	C_Aesthetic	C_Spiritual	C_Intellectual	R_Pollination	R_Pest control	R_Species	R_Climate	R_Air quality	R_Flood protection
5	5	5	4.5	5	4	5	5	5	4.5
4.5	4	3	3	3.5	3	3.5	4	4	4
3	2.5	1.5	3	2	2	2	2.5	3	3
2	2	2	3	4.5	3.5	4	4	3	3
4.5	4.4	4.1	4.1	4.3	3.5	4.3	4.4	4.5	4.1
3.8	3.3	2.3	3	2.8	2.5	2.8	3.3	3.5	3.5
2	2	2	3	4.5	3.5	4	4	3	3
2	2	2	3	4.5	3.5	4	4	3	3
3.8	3	3	2.5	1	2	2.3	2.5	2.5	3
3.8	3	3	2.5	1	2	2.3	2.5	2.5	3
2.8	1.8	1.3	1.8	1	1.5	1.5	1.8	2	2.5
1	1	0	0.5	1	1	1	0	0	1
4.5	4	3	3	3.5	3	3.5	4	4	4
5	4	2	2	2.5	2.5	5	5	4	5
3.5	4.5	3	4	5	4	5	3	3	3
3.5	4.5	3	4	5	4	5	3	3	3
4	4	3	4	5	4	5	3	3	3
4	4	3	4	5	4	5	3	3	3
3.5	4.5	3	4	5	4	5	3	3	3
3.5	4.5	3	4	5	4	5	3	3	3
1	1	1	1	1	1	1	1	1	2
3	4	3	4	5	3.5	5	3	3	4
2.5	2.5	2	2.5	3	2.5	3	2	2	2.5
1.5	2	1.5	2.5	5	4	4	3	2.5	2
1.5	2	1.5	2.5	5	4	4	3	2.5	2
1.5	2	1.5	2.5	5	4	4	3	2.5	2
3	4.5	4	4	5	3.5	5	3.5	3	3
2	4	3	4	4	3.5	5	3.5	3	4
2	4	3	4	4	3.5	5	3.5	3	4
2	4	3	4	4	3.5	5	3.5	3	4
2	4	3	4	4	3.5	5	3.5	3	4
2	4	3	4	4	3.5	5	3.5	3	4
4	5	5	4	2.5	2	5	2.5	2	2.5
4	5	5	4	2.5	2	5	2.5	2	2.5
1	1	0	0.5	1	1	3	0	0	1
1	1	0	0.5	1	1	3	0	0	1
1	1	0	0.5	1	1	3	0	0	1
1	1	0.5	1	1	1	0.5	1.5	1	1
2	1	2	2	1	1	1	1	1	2
1	1	1	1	5	5	4	4	2.5	3
2.5	1	1	0.5	1	1	1	1	1	2
1.5	2	1.5	2.5	5	4	4	3	2.5	2
1.5	2	1.5	2.5	5	4	4	3	2.5	2

[illegible]

ction

R_Water purification

R_Soil Erosion

P_Intensive crops

P_Traditional crops

P_Livestock

P_Wild foods

P_Fresh water

P_Energy

P_Timber

4	5	0	0	0.5	0	1	0	4
4	4	0	1	0	0.5	1	0	4.5
2.5	3.5	0	0	0.5	0.5	0.5	4	5
3	3	0	0	2.5	0	0	3	2
3.6	4.6	0	0	0.5	0.1	0.9	1	4.3
3.3	3.8	0	0.5	0.3	0.5	0.8	2	4.8
3	3	0	0	2.5	0	0	3	2
3	3	0	0	2.5	0	0	3	2
3	3.3	0	0.5	0.5	0.3	0.5	0	2.3
3	3.3	0	0.5	0.5	0.3	0.5	0	2.3
2.3	3	0	0	0.8	0.3	0.3	2	2.5
3.3	0	0	0	0	0	0.8	0	0
4	4	0	3	0	0.5	1	0	4.5
5	5	0	2	1	1	2	3	2
3	4	0	0	3	0.5	0	0	0
3	4	0	0	3	0.5	0	0	0
3	4	0	0	3	0.5	0	0	0
3	4	0	0	3	0.5	0	0	0
2.5	4	0	0	3	0.5	0	0	0
2.5	4	0	0	3	0.5	0	0	0
1.5	2.5	1.5	0	5	0	0	0	0
4	4	0	0	3.5	0.5	1	0	0
2.3	3.3	0.8	0	4	0.3	0	0	0
2.5	3	0	0	1.5	0.5	0.5	0	0
2.5	3	0	0	1.5	0.5	0.5	0	0
2.5	3	0	0	1.5	0.5	0.5	0	0
3	3.5	0	0	2.5	0.5	0	0	0
4	4	0	0	1.5	0.5	1.5	0	0
4	4	0	0	1.5	0.5	1	0	0
4	4	0	0	1.5	0.5	1.5	0	0
4	4	0	0	1.5	0.5	1.5	0	0
4	4	0	0	1.5	0.5	1	0	0
3.5	0.5	0	0	1	1.5	5	0	0
3.5	0.5	0	0	1	1.5	5	0	0
1	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0
1	1	5	4	1	0	0	0	0
2	2.5	0	4	0	0	0	0	0
4	4	0	1	1	1	0	1	0
2	2.5	0	0	1	0	0	0	0
2.5	3	0	0	1.5	0.5	0.5	0	0
2.5	3	0	0	1.5	0.5	0.5	0	0

[illegible]

P_Medical	Provisioning	Regulating	Cultural	P_Food
0	1.1	4.7	4.9	0.2
0	1.3	3.8	3.6	0.3
0	1.2	2.6	2.5	0.2
0.5	0.9	3.5	2.3	0.8
0	1.1	4.2	4.3	0.2
0	1.3	3.2	3.1	0.3
0.5	0.9	3.5	2.3	0.8
0.5	0.9	3.5	2.3	0.8
0	0.8	2.4	3.1	0.3
0	0.8	2.4	3.1	0.3
0	0.7	1.9	1.9	0.3
0	0.2	0.9	0.6	0
0	1.7	3.8	3.6	1
1	1.4	4.3	3.3	0
0.5	0.6	3.8	3.8	1
0.5	0.6	3.8	3.8	1
0	0.6	3.8	3.8	1
0	0.6	3.8	3.8	1
0	0.6	3.7	3.8	1
0	0.6	3.7	3.8	1
0	1.3	1.4	1	2.2
0.5	0.9	3.9	3.5	1.2
0	1	2.6	2.4	1.6
0.5	0.4	3.3	1.9	0.5
0.5	0.4	3.3	1.9	0.5
0.5	0.4	3.3	1.9	0.5
0.5	0.5	3.7	3.9	0.8
0.5	0.6	3.9	3.3	0.5
0.5	0.5	3.9	3.3	0.5
0.5	0.6	3.9	3.3	0.5
0.5	0.6	3.9	3.3	0.5
0.5	0.5	3.9	3.3	0.5
0.5	1.2	2.6	4.5	0.3
0.5	1.2	2.6	4.5	0.3
0	0	0.9	0.6	0
0	0	0.9	0.6	0
0	0	0.9	0.6	0
1	2	1	0.9	3.3
0	0.8	1.4	1.8	1.3
0	0.4	3.9	1	0
0	0.2	1.4	1.3	0.3
0.5	0.4	3.3	1.9	0.5
0.5	0.4	3.3	1.9	0.5

[illegible]

Index Link 3.61% 1.752242
Insurance Fund 10.00%
Management Cost 20.00%

Woodland

Biodiversity Impact Score	Primary habitat required in offset	Target habitat distinctiveness	
		Distinctiveness	Score
0.00	Woodland: Broad-leaved semi-natural woodland	High	6

Grassland

Biodiversity Impact Score	Primary habitat required in offset	Target habitat distinctiveness	
		Distinctiveness	Score
0.00	Grassland: Semi-improved neutral grassland	Medium	4

Wetland

Biodiversity Impact Score	Primary habitat required in offset	Target habitat distinctiveness	
		Distinctiveness	Score
0.00	Wetland: Standing Water	High	6

Hedgerow

Biodiversity Impact Score	Primary habitat required in offset	Target habitat distinctiveness	
		Distinctiveness	Score
0.00	species rich hedge with trees	Medium-high	5

Target habitat condition		Time till target condition		Difficulty of creation		Non-strategic area	Hectares of habitat required
Condition	Score	Time (years)	Score	Difficulty	Score		
Moderate	2	30	2.8	Medium	1.5	2	0.00

Target habitat condition		Time till target condition		Difficulty of creation		Non-strategic area	Hectares of habitat required
Condition	Score	Time (years)	Score	Difficulty	Score		
Good	3	25	2.4	Medium	1.5	2	0.00

Target habitat condition		Time till target condition		Difficulty of creation		Strategic area	Hectares of habitat required
Condition	Score	Time (years)	Score	Difficulty	Score		
Moderate	2	10	1.4	Medium	1.5	2	0.00

Target habitat condition		Time till target condition		Difficulty of creation		Strategic Area	Km of habitat required
Condition	Score	Time (years)	Score	Difficulty	Score		
Good	3	20	2	Low	1	1	0.00

0.00

Provider Agreement Set-up costs	Average Woodland creation cost per ha	Woodland maintenance cost per ha for 30 years	30 yrs Maintenance Cost plus inflation at
H	I	$\text{£}184 \times 30 = J$	$J \times 1.75 = K$
£7,000	£1,584	£5,520	3.61%
£0	£0.00	£0.00	£0.00

Provider Agreement Set-up costs	Average Meadow creation cost per ha	Meadow maintenance cost per ha for 30 years	30 yrs Maintenance Cost plus inflation at
H	I	$\text{£}227 \times 30 = J$	$J \times 1.75 = K$
£7,000	£1,686	£6,810	3.61%
£0	£0.00	£0.00	£0.00

Pond Cluster size	4
-------------------	---

Number of Ponds to be created	Number of Pond clusters to be created	Provider Agreement Set-up costs	Average Pond creation cost per pond
H	I	J	K
$L / 0.017\text{ha}$ (av. Pond size)		£7000 per pond cluster	£1,212
0	0.00	£0	£0.00

Provider Agreement Set-up costs	Average Hedgerow creation cost per km	Hedgerow maintenance cost per km for 30 years	30 yrs Maintenance Cost plus inflation at
H	I	$\text{£}7270 \times 30 = J$	$J \times 1.75 = K$
£7,000	£9,400	£218,100	3.61%
£0	£0.00	£0.00	£0.00

metres

£9.40 per metre

£7.27 per metre

Estimated cost of offset	Insurance Contribution (index linked)	Management Cost (index linked)	Total Cost of Offset Contribution
$H + I + K = L$	M	N	$L + M + N$
	10%	20%	
£0.00	£0.00	£0.00	£0.00
	Cost per ha of habitat created		£0.00
	Cost per unit		£0.00

Estimated cost of offset	Insurance Contribution (index linked)	Management Cost (index linked)	Total Cost of Offset Contribution
$H + I + K = L$	M	N	$L + M + N$
	10%	20%	
£0.00	£0.00	£0.00	£0.00
	Cost per ha of habitat created		£0.00
	Cost per unit		£0.00

Pond maintenance cost per pond for 30 years	30 yrs Maintenance Cost plus inflation at	Estimated cost of offset	Insurance Contribution (index linked)	Management Cost (index linked)
$£70 \times 30 = L$	$L \times 1.75 = M$	$I + J + L = N$	O	P
£2,100	3.61%		10%	20%
£0.00	£0.00	£0.00	£0.00	£0.00
			Cost per pond cluster created	
			Cost per unit	

Estimated cost of offset	Insurance Contribution (index linked)	Management Cost (index linked)	Total Cost of Offset Contribution
$H + I + K = L$	M	N	$L + M + N$
	10%	20%	
£0.00	£0.00	£0.00	£0.00
	Cost per ha of habitat created		£0.00
	Cost per unit		£0.00

Total Cost of Offset Contribution
N + O + P
£0.00
£0.00
£0.00

	m2	ha	Plus grassland (x2)
Average HS2 pond	167	0.017	0.034
Stoneleigh otter	200	0.02	
Burton Green	100	0.01	
Burton Green	100	0.01	
Finham Brook ponds	300	0.03	
Finham Brook ponds	200	0.02	
Finham Brook ponds	100	0.01	