Ecology Solutions Limited
Farncombe House
Farncombe Estate
Broadway
Worcestershire
WR12 7LJ

+44(0)1451 870767
info@ecologysolutions.co.uk
www.ecologysolutions.co.uk

10993: LAND OFF FREESTONE GROVE, WESTBURY

BRIEFING NOTE: BIODIVERSITY NET GAIN ASSESSMENT

INTRODUCTION

1. Ecology Solutions was commissioned by Robert Hitchins Ltd in October 2022 to undertake a Biodiversity Net Gain Assessment of the proposed development at Land off Freestone Grove, Westbury hereafter referred to as 'the site'.

2. The proposals are for the construction of a residential development (up to 40 dwellings) with associated works including infrastructure, open space, landscaping and the construction of new vehicular and pedestrian access off Freestone Grove and Cheviot Road.

3. This document details the Biodiversity Net Gain Assessment undertaken for the above site, using the DEFRA Biodiversity Metric 4.0.

BIODIVERSITY NET GAIN ASSESSMENT

4. This Biodiversity Net Gain Assessment has been based upon the illustrative landscape masterplan for the above site, which is included at Appendix 1.

5. The landscape proposals include the loss of modified grassland, ruderal vegetation, and bramble scrub. Plan BNG1 shows the existing habitats within the site.

6. Proposed habitats include a built area of developed land and vegetated gardens, other neutral grassland, amenity grassland, native scrub, urban drainage features and tree planting. Plan BNG2 shows the proposed habitats within the site. For the purposes of this calculation a 60:40 split of developed land:vegetated garden has been assumed for the built area of the site.

7. Following calculations based upon the illustrative proposals undertaken using DEFRA Biodiversity Metric 4.0 Calculation Tool, it can be seen that a net gain in biodiversity can be delivered as a result of the proposed development. Specifically, an increase in habitat units from 3.45 units to 4.52 units (which equates to a **30.85% increase**) and an increase in hedgerow units from 4.78 units to 6.07 units (which equates to a **27.05% increase**). The DEFRA Biodiversity Metric 4.0 Calculation is shown at Appendix 2.

8. The condition assessments for the baseline and proposed habitats are detailed in tables 1-4 below.

Table 1. Summary of baseline habitats (excluding woodland) assessed against the DEFRA Biodiversity Metric 4.0 Calculation Tool condition sheets.

Baseline Habitat	Condition Sheet	Condition Assessment		Condition
		Criteria Ref	Criteria Achieved (Y/N)	
Modified Grassland	Grassland Habitat Type (Low Distinctiveness)	A	N	Poor (4 / 7 passed) Failed Criterion A which is essential for Moderate condition
		B	N	
		C	Y	
		D	Y	
		E	N	
		F	Y	
		G	Y	
Ruderal / Ephemeral	Urban	A	Y	Moderate (2 / 3 passed)
		B	N	
		C	Y	
Bramble Scrub	Condition Assessment NA			

Table 2. Summary of proposed habitats assessed against the DEFRA Biodiversity Metric 4.0 Calculation Tool condition sheets.

Proposed Habitat	Condition Sheet	Condition Assessment		Condition
		Criteria Number	Criteria Achieved (Y/N)	
Other Neutral Grassland	Grassland Habitat Type (Medium Distinctiveness)	A	Y	Good (6 / 6 passed) Assigned 'Moderate' as a conservative estimate
		B	Y	
		C	Y	
		D	Y	
		E	Y	
		F	Y	
Modified Grassland	Grassland Habitat Type (Low Distinctiveness)	A	N	Poor (5 / 7 passed) Failed Criterion A which is essential for Moderate condition
		B	N	
		C	Y	
		D	Y	
		E	N	
		F	Y	
		G	Y	
Urban Tree	Individual Trees	A	Y	Moderate (4 / 6 passed)
		B	Y	
		C	N	
		D	Y	
		E	N	
		F	Y	
SuDS	Urban	A	Y	Good (5 / 5 passed)
		B	Y	
		C	Y	
		E1	Y	
		E2	Y	

Table 3. Summary of existing hedgerows assessed against the DEFRA Biodiversity Metric 4.0 Calculation Tool condition sheets.

Hedgerow No.	Habitat	A1	A2	B1	B2	C1	C2	D1	D2	E1	E2	Condition
H1	Native Hedgerow	Y	Y	Y	N	Y	Y	Y	Y	N/A	N/A	**Good**
H3	Species-rich Native Hedgerow – Ditch	Y	Y	Y	Y	Y	Y	Y	Y	N/A	N/A	**Good**
H4	Native Hedgerow with Trees	Y	Y	Y	N	Y	Y	Y	Y	N	Y	**Good**

Table 4. Summary of enhanced hedgerows assessed against the DEFRA Biodiversity Metric 4.0 Calculation Tool condition sheets.

Hedgerow No.	Habitat	A1	A2	B1	B2	C1	C2	D1	D2	E1	E2	Condition
H1	Species-rich Native Hedgerow	Y	Y	Y	Y	Y	Y	Y	Y	N/A	N/A	**Good**
H4	Species-rich Native Hedgerow with Trees	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	**Good**

9. It should be noted that the DEFRA Biodiversity Metric calculation does not take into consideration measures relating to protected or notable species. The provision of new species-rich grassland will provide enhanced foraging opportunities for Badgers, bats, and birds, as well as potential terrestrial habitat for invertebrates and reptiles.

10. A number of additional enhancements will also be provided as part of the proposed development, that are not accounted for within the net gain calculation. This includes the provision of bat boxes providing enhanced roosting opportunities for bats and bird boxes providing enhanced nesting opportunities for birds.

CONCLUSION

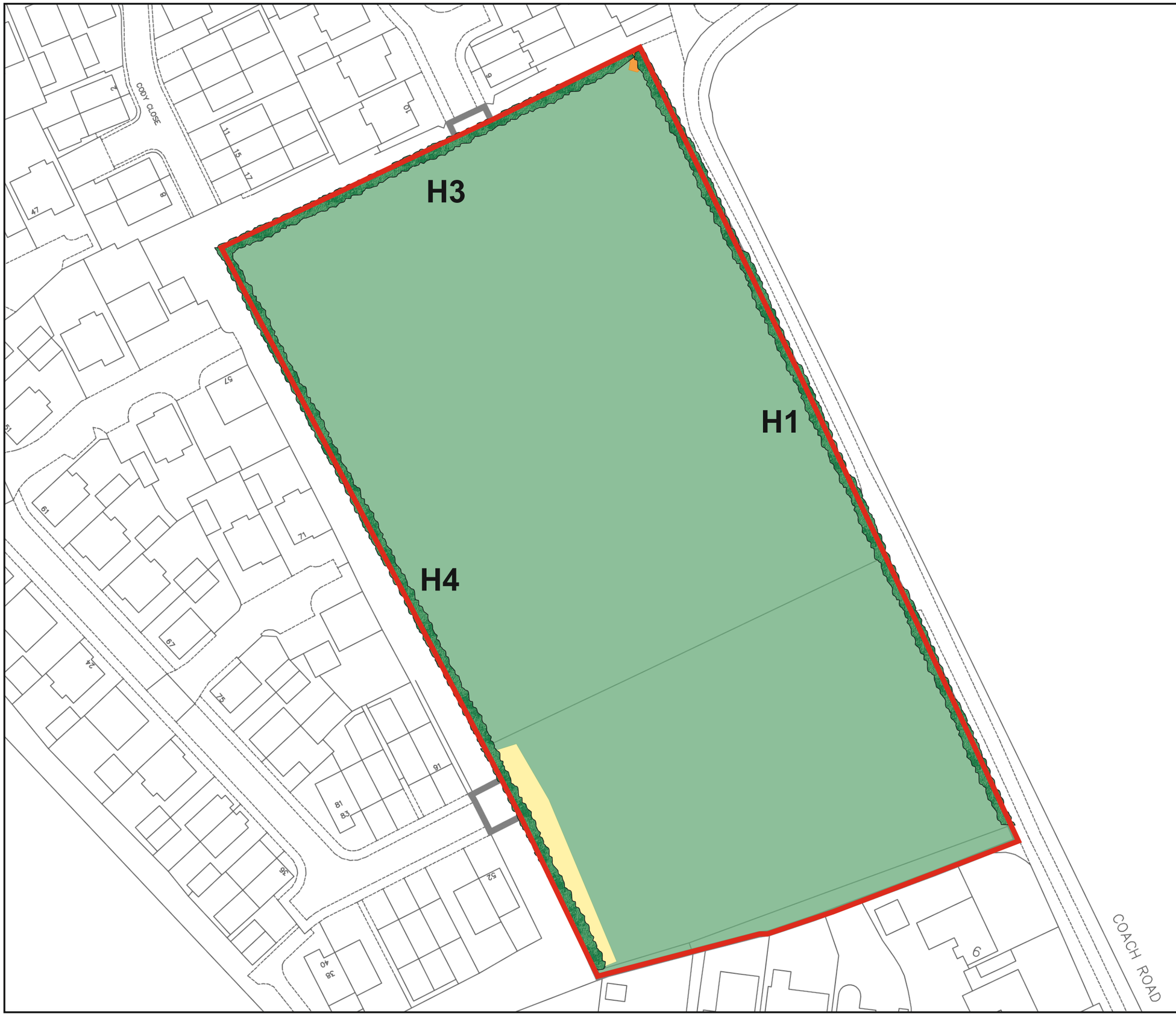
11. The calculation indicates that a significant net gain in biodiversity can be achieved under the current development proposals. It has also been demonstrated that the proposals would achieve a net gain well in excess of 10% which is required within the emerging Westbury Neighbourhood Plan (2022-2026) and is also expected to become the minimum net gain requirement following the adoption of a regulation within the Environment Act. Specifically, a **30.85% increase in habitat units and a 27.05% increase in hedgerow units** is achieved under the current proposals.

12. It is also considered that the development proposals will deliver a further net gain in biodiversity through the additional enhancement measures detailed above that are not accounted for within the calculation. As such, it is considered that it has been demonstrated that the proposed development will achieve an overall net gain in biodiversity over the existing situation.

Ecology Solutions
June 2023

PLAN BNG1

Existing Habitats



KEY:

- SITE BOUNDARY
  1.696ha
- MODIFIED GRASSLAND
  Poor Condition
  1.533
- RUDERAL
  Moderate Condition
  0.029ha
- BRAMBLE SCRUB
  N/A Condition
  0.001ha
- HEDGEROW
  Good Condition
  0.133ha and 0.438km

N

ECOLOGYSOLUTIONS
Part of the ES Group

Farncombe House
Farncombe Estate | Broadway
Worcestershire | WR12 7LJ

+44(0)1451 870767
info@ecologysolutions.co.uk
ecologysolutions.co.uk

10993: LAND OFF FREESTONE GROVE, WESTBURY

PLAN BNG1:
EXISTING HABITATS

Rev: A

Jun 2023

Based upon the Ordnance Survey map with permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. Ecology Solutions Ltd. Farncombe House, Farncombe Estate, Broadway, Worcestershire, WR12 7LJ. CEM20130000228

PLAN BNG2

Proposed Habitats

Based upon the Ordnance Survey map with permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. Ecology Solutions Ltd. Farncombe House, Farncombe Estate, Broadway, Worcestershire, WR12 7LJ. CEM20130000228



KEY:

SITE BOUNDARY
1.696ha

RETAINED

HEDGEROW
Good Condition
0.0118ha and 0.084km

CREATED

BUILT AREA (60:40)
DEVELOPED SEALED SURFACE:
VEGETATED GARDEN
N/A Condition
0.329ha:0.219ha

DEVELOPED SEALED SURFACE
N/A Condition
0.472ha

MODIFIED GRASSLAND
Poor Condition
0.231ha

OTHER NEUTRAL GRASSLAND
Moderate Condition
0.352

SuDS
Good Condition
0.018ha

URBAN TREE
Moderate Condition
0.358ha

ENHANCED

HEDGEROW
Good Condition
0.0562ha and 0.33km

N

ECOLOGYSOLUTIONS
Part of the ES Group

Farncombe House
Farncombe Estate | Broadway
Worcestershire | WR12 7LJ

+44(0)1451 870767
info@ecologysolutions.co.uk
ecologysolutions.co.uk

10993: LAND OFF FREESTONE GROVE, WESTBURY

PLAN BNG2:
PROPOSED HABITATS

Rev: A

Jun 2023

APPENDIX 1

Illustrative Landscape Masterplan



Site Name: Land off Freestone Grove,Westbury	Drawing Number: 361.P.3.1			Revision: G
Drawing Title: Illustrative Masterplan	Drawn By: POK	Checked By: GRJ	Date: 15.08.2022	Scale: 1:1000@A3

Robert Hitchins
The Complete Development Solution
The Manor, Boddington, Cheltenham, Gloucestershire, GL51 0TJ
Tel: 01242 680694
www.robert-hitchins.co.uk

APPENDIX 2

DEFRA Biodiversity Metric v4.0

Project Name:	Map Reference:
A-1 On-Site Habitat Baseline	

Condense / Show Columns | Condense / Show Rows

Main Menu | Instructions

Area habitat summary	
Total Net Unit Change	1.06
Total Net % Change	30.85%
Trading Rules Satisfied	No - check trading summaries ▲

	Existing area habitats			Distinctiveness	Condition	Strategic significance	Required Action to Meet Trading Rules	Ecological baseline	Retention category biodiversity value						Bespoke compensation agreed for unacceptable losses	Comments		
Ref	Broad Habitat	Habitat Type	Area (hectares)	Distinctiveness	Condition	Strategic significance		Total habitat units	Area retained	Area enhanced	Baseline units retained	Baseline units enhanced	Area habitat lost	Units lost		User comments	Consenting body comments	GIS reference number
1	Grassland	Modified grassland	1.533	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	3.07			0.00	0.00	1.53	3.07				
2	Sparsely vegetated land	Ruderal/Ephemeral	0.029	Low	Moderate	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	0.12			0.00	0.00	0.03	0.12				
3	Heathland and shrub	Bramble scrub	0.001	Medium	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	0.00			0.00	0.00	0.00	0.00				
4	Sparsely vegetated land	Ruderal/Ephemeral	0.133	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	0.27	0.068		0.14	0.00	0.07	0.13				
5																		
6																		
7																		
8																		
9																		
		Total habitat area	1.70					3.45	0.07	0.00	0.14	0.00	1.63	3.32				
		Site Area (Excluding area of individual trees and Green walls)	1.70															

Total area lost (excluding area of individual trees and Green walls)	1.63

Project Name:	Map Reference:
A-2 On-Site Habitat Creation	

Condense / Show Columns | Condense / Show Rows

Main Menu | Instructions

Area habitat summary	
Total Net Unit Change	1.06
Total Net % Change	30.85%
Trading Rules Satisfied	No - check trading summaries ▲
Area Check (excluding individual trees and green walls)	Area Acceptable ✓

Post development/ post intervention habitats												
			Distinctiveness	Condition	Strategic significance	Temporal multiplier		Difficulty		Comments		
Broad Habitat	Proposed habitat	Area (hectares)	Distinctiveness	Condition	Strategic significance	Standard or adjusted time to target condition	Final time to target condition (years)	Final difficulty of creation	Habitat units delivered	User comments	Consenting body comments	GIS reference number
Urban	Developed land; sealed surface	0.472	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	0	Medium	0.00			
Urban	Developed land; sealed surface	0.329	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	0	Medium	0.00			
Urban	Vegetated garden	0.219	Low	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.42			
Grassland	Modified grassland	0.231	Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.45			
Grassland	Other neutral grassland	0.352	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	5	Low	2.36			
Urban	Sustainable drainage system	0.018	Low	Good	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	5	Medium	0.06			
Urban	Developed land; sealed surface	0.01	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	0	Medium	0.00			
Individual trees	Urban tree	0.358292359	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	27	Low	1.10			
	Total habitat area	1.99							4.38			

Site Area (Excluding area of Individual trees and Green walls)	1.63

M² to hectares conversion tool:	Select a unit	Hectares	M²

Project Name:	Map Reference:
B-1 On-Site Hedge Baseline	

Condense / Show Columns | Condense / Show Rows

Main Menu | Instructions

Hedgerow summary	
Total Net Unit Change	1.29
Total Net % Change	27.05%
Trading Rules Satisfied	No - check trading summary ▲

	Existing hedgerow habitats			Distinctiveness	Condition	Strategic significance	Required Action to Meet Trading Rules	Ecological baseline	Retention category biodiversity value						Comments		
Baseline ref	Hedge number	Hedgerow type	Length (km)	Distinctiveness	Condition	Strategic significance		Total hedgerow units	Length retained	Length enhanced	Units retained	Units enhanced	Length lost	Units lost	User comments	Consenting body comments	GIS reference number
1	1	Native hedgerow	0.174	Low	Good	Area/compensation not in local strategy/ no local strategy	Same distinctiveness band or better	1.04		0.174	0.00	1.04	0.00	0.00			
2	3	Species-rich native hedgerow - associated with bank or ditch	0.094	High	Good	Area/compensation not in local strategy/ no local strategy	Like for like or better	1.69	0.084		1.51	0.00	0.01	0.18			
3	4	Native hedgerow with trees	0.17	Medium	Good	Area/compensation not in local strategy/ no local strategy	Same distinctiveness band or better	2.04		0.155	0.00	1.86	0.02	0.18			
4																	
5																	
6																	
7																	
8																	
			0.44					4.78	0.08	0.33	1.51	2.90	0.03	0.36			

Project Name:	Map Reference:
B-3 On-Site Hedge Enhancement	

Condense / Show Columns | Condense / Show Rows

Main Menu | Instructions

Hedgerow summary	
Total Net Unit Change	1.28
Total Net % Change	27.05%
Trading Rules Satisfied	No - check trading summary ▲

	Baseline Habitats		Post development/ post intervention habitats										Comments		
			Change in distinctiveness and condition			Distinctiveness	Condition	Strategic significance	Temporal multiplier		Difficulty risk multipliers				
Baseline ref	Baseline habitat	Proposed (Pre-populated but can be overridden)	Distinctiveness movement	Condition movement	Length (km)	Distinctiveness	Condition	Strategic significance	Standard or adjusted time to target condition	Final time to target condition (years)	Final difficulty of enhancement	Hedge units delivered	User comments	Consenting body comments	GIS reference number
1	Native hedgerow	Species-rich native hedgerow	Low - Medium	Lower Distinctiveness Habitat - Good	0.174	Medium	Good	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	5	Low	1.92			
3	Native hedgerow with trees	Species-rich native hedgerow with trees	Medium - High	Lower Distinctiveness Habitat - Good	0.155	High	Good	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	5	Low	2.64			
					0.33							4.56			

Return to results menu

Headline Results

Scroll down for final results ⚠

On-site baseline	*Habitat units*	3.45	
	Hedgerow units	4.78	
	Watercourse units	0.00	
On-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	4.52	
	Hedgerow units	6.07	
	Watercourse units	0.00	
On-site net change (units & percentage)	*Habitat units*	1.06	30.85%
	Hedgerow units	1.29	27.05%
	Watercourse units	0.00	0.00%
Off-site baseline	*Habitat units*	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site net change (units & percentage)	*Habitat units*	0.00	0.00%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	1.06	
	Hedgerow units	1.29	
	Watercourse units	0.00	
Spatial risk multiplier (SRM) deductions	*Habitat units*	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	

FINAL RESULTS

Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	1.06
	Hedgerow units	1.29
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	30.85%
	Hedgerow units	27.05%
	Watercourse units	0.00%
Trading rules satisfied?	No - Check Trading Summaries ▲	

Unit Type	Target	Baseline Units	Units Required	Unit Deficit	
Habitat units	10.00%	3.45	3.80	0.00	Unit requirement met or surpassed ✓
Hedgerow units	10.00%	4.78	5.25	0.00	Unit requirement met or surpassed ✓
Watercourse units	10.00%	0.00	0.00	0.00	Unit requirement met or surpassed ✓



ECOLOGYSOLUTIONS

Part of the ES Group

Ecology Solutions Limited | Farncombe House | Farncombe Estate | Broadway | Worcestershire | WR12 7LJ

01451 870767 | info@ecologysolutions.co.uk | www.ecologysolutions.co.uk