

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

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



8372: LAND EAST OF ALBION ROAD & NORTH OF COPPER LANE, MARDEN

Biodiversity Net Gain Assessment

1. INTRODUCTION

Background & Proposals

- 1.1. Ecology Solutions was commissioned by Rydon Homes Ltd in July 2023 to undertake a Biodiversity Net Gain Assessment of Land East of Albion Road & North of Copper Lane, Marden which will hereafter be referred to as 'the site'.
- 1.2. The purpose of this assessment work is to ascertain the baseline habitat value of the site, to determine the likely 'biodiversity impact' of the proposals, and to assess the opportunities to generate biodiversity enhancements within the site.
- 1.3. The biodiversity impact in this instance has been quantified through the use of the DEFRA Biodiversity Metric v4.0, a widely used calculator tool as advocated by Natural England. Habitat conditions were assessed in line with the Biodiversity Metric 4.0 guidance using the Biodiversity Metric 4.0 Habitat Condition Assessment Sheets.
- 1.4. The assessment work has been undertaken using the habitat baseline as collated by Ecology Solutions during specific Phase 1 Habitat survey work between May 2019 and July 2023.
- 1.5. The development proposals described within this report have been based on the Coloured Site Layout (Drawing No: 22037 / SK25G).

Site Characteristics

- 1.6. The site is located to the southeast of Marden and is bordered to the north by a new development site (for 124 dwellings planning ref MA/17/504754/FUL) with further existing residential development beyond Stanley Road. To the east are a small number of existing properties and associated gardens with open countryside beyond. Albion Road lies to the west with existing residential development beyond (including recent

developments at Stanley Farms MA/13/1585 and The Parsonage MA/13/0693). The site is bordered to the south by Copper Lane with open countryside beyond

- 1.7. The site itself comprises an operational plum and apple orchard, bounded by hedgerows and trees with a large area of scrub within the northwest of the site and a series of ponds fringed by grassland in the south.

2. BIODIVERSITY NET GAIN ASSESSMENT METHODOLOGY

- 2.1. A Biodiversity Net Gain Assessment (BNG) is a methodology used to assess whether any plan or project is capable of delivering measurable contributions to local biodiversity as a result of the proposals.
- 2.2. This is achieved by undertaking a review of the measured biodiversity value of the site prior to construction works (i.e. the baseline), and comparing it to what can be delivered, post-development. The intention being to secure a measurable net gain to biodiversity when compared to the baseline situation.
- 2.3. This net gain can either be achieved directly through site-based means (i.e. included within the planning boundary), or delivered as an off-site measure through bespoke off-site habitat creation or in certain cases, the purchasing of biodiversity credits through a credit broker.

Methodology

- 2.4. In order to undertake a BNG assessment, the Defra Biodiversity Metric V4.0 (hereafter, referred to as the 'Metric') has been applied to the site.
- 2.5. The methodology for undertaking the BNG is based on the guidance provided within the Technical Supplement and User Guide published by Defra, in addition to the application of professional judgement.
- 2.6. The Metric works by assigning credits to the habitats located within the Development Site (both baseline and post-development). These credits are then used as a proxy to determine the ecological value of the site.
- 2.7. The respective credit score of each habitat is gauged by calculating key parameters that influence that habitats' reported value. These are as follows:
 - Habitat type / distinctiveness;
 - Habitat area;
 - Habitat condition; and,
 - Strategic significance.
- 2.8. For either created or enhanced habitats, the additional main parameters are applied;
 - Habitat target type / distinctiveness;
 - Habitat target condition;
 - Time till target condition; and,
 - Difficulty of creation / enhancement.

- 2.9. The value for hedgerow / treeline habitats and ditch / watercourse habitats are calculated separately, however follow a similar working methodology as those described for area based habitats above.
- 2.10. The recorded baseline and development proposals for the site have been assessed against the above identified parameters and Condition Assessment Criteria (CAC) provided by Defra. The relevant baseline is outlined within Section 2 above, and the post-development proposals for the site are summarised below as well as being highlighted on the attached plans.

Project proposals summary

- 2.11. Mechanisms of delivering ecological gains within the application site have and will continue to be considered at all stages of design in order to realise the overall ecological potential of the site and habitats both created and enhanced. Notwithstanding this, in order to facilitate development as well as habitat creation, the proposals will result in the loss of areas of grassland habitat and mixed scrub.
- 2.12. The development proposals incorporate areas of enhancement which provide significant net gains to biodiversity. However, habitat is being lost and as such, the measures that will be put in place will ensure that any losses are entirely mitigated.
- 2.13. Enhancing orchard, grassland and mixed scrub habitats is a key focus of the mitigation strategy for this site. The orchard, grassland and mixed scrub habitats which are currently present within the site are of poor quality and lacking in diversity. Through additional management, it will be possible to create habitats which have a greater diversity, and as a consequence support a more diverse range of fauna. Appropriate management of good quality grassland and scrub throughout the site will further provide net gains.
- 2.14. In summary, it is considered that the losses of ecological assets on site will be compensated for in full with the additional mitigation providing increased levels of biodiversity and species richness when compared to the present baseline.

Limitations

- 2.15. Biodiversity Metrics provide a way of measuring the biodiversity value of a site pre-development, and comparing it to what it will be, post-development. This is based on several parameters and the application guidance set out within the Defra v4.0 supplements. Metric analysis itself does run the risk of becoming limited by the quantifiable workings involved, and the quality of the professional judgement given.
- 2.16. This is most obviously highlighted by the fact that Metrics do not currently take into consideration measures directly relating to protected or notable species. It is only interested in the proposals from a purely mathematical perspective which is limited solely to habitats. For instance, the provision of a bespoke mitigation strategy that would, for example, see the inclusion

of a variety of amphibian habitats to aid population success, will not necessarily score commensurate with the real value as it will simply assess the habitats in isolation and not that of the bigger picture.

- 2.17. A further example of this would be that there is no mechanism currently in place that would reward schemes for installing several faunal specific features, such as bat and bird boxes or hibernacula.
- 2.18. Additionally, Biodiversity Metrics often favour certain habitat types such as those that are typically 'easier' to create and in shorter time frames. This can often lead to a situation where project design is stunted due to the fact ambitious projects often run the risk of being penalised due to the perceived difficulty of the habitats being proposed.
- 2.19. Whilst Biodiversity Metrics can be considered a helpful and guiding tool when assessing the BNG of a site, for a number of reasons including those outlined above, they shouldn't be the sole approach adopted when considering the validity of the site proposals in the context of local and national biodiversity planning policy.

3. RECORDED HABITAT BASELINE

Habitat Baseline

- 3.1. The habitats present at the application site were recorded and assessed during surveys undertaken between May 2019 and July 2023. The results are presented below:

Habitat Type	Area (ha)	Distinctiveness	Condition	Habitat Units
<i>Intensive Orchards</i>	4.303	Low	N/A	8.61
<i>Modified Grassland</i>	0.436	Low	Poor	0.87
<i>Mixed Scrub</i>	0.482	Medium	Poor	1.93
<i>Ponds (non-priority)</i>	0.217	Medium	Poor	0.87
<i>Developed Land; Sealed Surface</i>	0.006	V Low	N/A	0.00
<i>Bare Ground</i>	0.006	Low	Poor	0.01
<i>Ruderal</i>	0.031	Low	Poor	0.06
<i>Hedgerows and Tree Lines (Ruderal)</i>	0.121	Low	Poor	0.76
			Total:	13.11

Table 1: Baseline Habitat Units

Intensive Orchards

- 3.2. The large majority of the site comprises intensive orchards. This habitat is automatically given condition assessment N/A within the DEFRA metric.

Modified Grassland

- 3.3. The modified grassland within the site was assessed to be in poor condition as the grassland is not noted to generally possess 6-8 species per m², essential for achieving moderate condition.

Mixed Scrub

- 3.4. The mixed scrub within the site was assessed to be in poor condition. The scrub is noted to possess at least three woody species but fails all other criteria.

Ponds (non-priority)

- 3.5. The ponds within the site were assessed to be in poor condition. The ponds have less than 10% covered in duckweed or filamentous algae, of good water quality and are not artificially connected to other waterbodies but fails all other criteria.

Developed Land; Sealed Surface

- 3.6. Areas of developed land are present in form of buildings within the west of the site. The developed land is given N/A condition within the DEFRA metric.

Bare Ground

- 3.7. A small area of bare ground is present in the west of the site and was assessed to be in poor condition as no vegetation is present.

Native Hedgerows, Native Hedgerows with Trees and Lines of Trees

- 3.8. In addition to the habitats outlined above, there are also nine hedgerows measuring a total of 849m. The first of these hedgerows is a Field Maple dominated hedge in the northwest of the site, the second is a Field Maple dominated hedge along the northern boundary. The third is a Hawthorn dominated hedge along the northeast boundary. The fourth is a Hawthorn dominated hedge in the south of the site. The fifth is a Hawthorn and Blackthorn dominated hedge along the southern boundary. The sixth is a Hawthorn and Blackthorn dominated hedge along the northwest of the site while the seventh is a Field Maple dominated hedge along the western boundary. The eighth is a Hawthorn and Hazel dominated hedge in the northeast of the site, while the ninth is a Hawthorn dominated hedge in the west of the site.
- 3.9. There are three lines of trees, measuring a total of 441m. The first of these is a line of semi-mature Silver Birch trees planted as a wind break within the north of the site. The second runs along the eastern boundary with species such as Cherry, Willow, Oak and Hazel. The third runs along the southern boundary and is dominated by Oak.

4. BIODIVERSITY NET GAIN ASSESSMENT RESULTS

- 4.1. In line with the above methodology, a BNG assessment using DEFRA Metric (v4.0) has been undertaken. This is in accordance with the guidance outlined by Natural England. The board habitat types to be either created or enhanced, are included within the tables below and shown graphically on Plan BNG1 and BNG2.
- 4.2. Each table is split into both pre-development (baseline) and post-development (created and enhanced) descriptions relevant to each main measured habitat type; area-based habitats and linear based.

Area Based Habitats

Baseline Habitat	Baseline Habitat Condition	Post-development impacts (Ha)			Summary Baseline Condition Notes
		Total Area	Enhanced	Lost	
Invasive Orchards	<i>N/A</i>	4.303	0.192	4.11	The Intensive Orchard is automatically given a N/A condition assessment within the v4.0 DEFRA metric.
Modified Grassland	<i>Poor</i>	0.436	0.00	0.436	The Modified Grassland habitats within the site have been assessed to be of poor quality according to the Condition Assessment published alongside the v4.0 DEFRA metric as is not noted to generally possess 6-8 species per m2, essential for achieving moderate condition
Mixed Scrub	<i>Poor</i>	0.482	0.00	0.482	The Mixed Scrub has been assessed to be of poor quality according to the Condition Assessment published alongside the v4.0 DEFRA metric as is noted to possess at least three woody species but fails all other criteria.
Pond (Non-Priority)	<i>Poor</i>	0.217	0.217	0.00	The Pond (Non-Priority) habitats within the site have been assessed to be poor quality according to the Condition Assessment published alongside the v4.0 DEFRA metric as they are noted to have less than 10% covered in duckweed or filamentous algae, of good water quality and are not artificially connected to other waterbodies but fails all other criteria

Baseline Habitat	Baseline Habitat Condition	Post-development impacts (Ha)			Summary Baseline Condition Notes
		Total Area	Enhanced	Lost	
Developed Land	<i>N/A</i>	0.006	0.00	0.006	The Developed Land is automatically given a N/A condition assessment within the v4.0 DEFRA metric.
Bareground	<i>Poor</i>	0.006	0.00	0.006	The area of bareground within the site has been assessed to be poor quality according to the Condition Assessment published alongside the v4.0 DEFRA metric as no vegetation is present.
Ruderal	<i>Poor</i>	0.031	0.00	0.031	The area of ruderal within the site has been assessed to be poor quality according to the Condition Assessment published alongside the v4.0 DEFRA metric.

Table 2. Baseline area habitat descriptions.

Habitat Type	Area (Ha)	Target Condition	Target Condition Notes
Developed land; sealed surface	2.397	<i>N/A - Other</i>	Areas of built-form, including hardstanding and roads. No condition applicable
Vegetated Garden	0.567	<i>N/A</i>	A 60/40 split of built-form and vegetated garden has been assumed. No condition applicable.
Mixed Scrub	0.429	<i>Good</i>	New areas of mixed scrub will be created by the planting of native shrub species and appropriate management. The majority of the longer-term management will consist of coppicing/pollarding individual specimens at different points to create variety and provide regenerative growth. With time natural sapling generation and edge management will become more prevalent and control of growth will become smaller scale. Thinning will be necessary to ensure good scrub structure and to control any overly dominant or non-native species. Management will ensure a diverse range of native woody species, and remove unwanted invasive species.
Other Neutral Grassland	1.176	<i>Moderate</i>	Several areas of wildflower meadows have been incorporated within the site and will be seeded with a seed mix such as Emorsgate EM2 (or similar) will be used within the grassland. This incorporates a mixture of grasses (85%), and wildflower (15%) which will benefit a wide range of species. Appropriate ground preparation is essential in order to minimise the presence of unwanted weeds. After the first year of growth, these areas should be managed in late summer to a length of approximately 50mm, and the cuttings should be left in-situ for a period of 1-7 days to dry and shed seeds. Cuttings should then be removed from site. Management can be undertaken through to late autumn / winter to around 50mm, and again in spring if needed. Though good condition may be feasible, moderate condition has been assigned as a precaution.
Modified Grassland	0.436	<i>Poor</i>	Grassland will be created throughout the application site in the form of open green spaces, road verges and natural green walkways. A dry seed mix should be used. It is assumed that management will consist of regular mowing / cutting at appropriate times of year, regular weeding and any required reseeded. Fairly poor condition assigned to areas of modified grassland on a precautionary basis due to likely regular management
Sustainable Urban Drainage Feature	0.052	<i>Good</i>	This area encompasses the water features not directly connected to the existing ponds. These features are situated in the north and south of the site. It is considered that 'Sustainable Urban Drainage Feature' rather than 'Ponds (Non-Priority Habitat)' is more appropriate for these areas as they are unlikely to be heavily planted with aquatic species. These areas will provide suitable drainage for the site.

Table 3. Post-development (created) area habitat descriptions

Baseline Habitat Type	Enhanced to	Area (Ha)	Condition change	Target Condition Notes
Intensive Orchard	Traditional Orchard	0.192	<i>Poor - Moderate</i>	Areas of intensive orchard are to be enhanced to traditional orchard through the planting of species rich grassland using a seed mix such as Emorsgate EM2 (or similar) and the improved management of existing trees through pruning.
Pond (non-priority)	Pond (non-priority)	0.217	<i>Poor - Moderate</i>	Existing ponds within the site will be enhanced by the planting of Emorsgate Seeds EP1 Pond Edge Mixture or similar and the removal of scrub to reduce shading.

Table 4. Post-development (enhanced) area habitat descriptions

Linear Based Habitats : Hedgerows

Baseline Habitat	Baseline Habitat Condition	Post-development impacts (Km)		Lost	Summary Baseline Condition Notes
		Total Area	Enhanced		
Line of Trees	<i>Poor</i>	0.21	0.00	0.12	The lines of trees TL2 and TL3 have been assessed to be of moderate quality and TL1 has been assessed to be of poor quality according to the Condition Assessment published alongside the v4.0 DEFRA metric.
	<i>Moderate</i>	0.132	0.00	0.00	
	<i>Moderate</i>	0.099	0.00	0.04	
Native Hedgerow	<i>Moderate</i>	0.058	0.00	0.01	Hedgerows H4 and H5 have been assessed to be of moderate quality and hedgerows H6 and H9 have been assessed to be in poor condition according to the Condition Assessment published alongside the v2.0 DEFRA metric.
	<i>Moderate</i>	0.065	0.00	0.00	
	<i>Poor</i>	0.136	0.00	0.00	
	<i>Poor</i>	0.015	0.00	0.00	
Native Hedgerow with Trees	<i>Moderate</i>	0.069	0.00	0.03	The hedgerows with trees H1, H2, H3, and H7 have been assessed to be of moderate and quality and H8 has been assessed to be of poor quality according to the Condition Assessment published alongside the v4.0 DEFRA metric.
	<i>Moderate</i>	0.212		0.00	
	<i>Moderate</i>	0.057		0.00	

Baseline Habitat	Baseline Habitat Condition	Post-development impacts (Km)			Summary Baseline Condition Notes
		Total Area	Enhanced	Lost	
	<i>Moderate</i>	0.16	0.00	0.00	
	<i>Poor</i>	0.073	0.00	0.00	

Table 5. Baseline linear habitat descriptions

Habitat Type	Length (km)	Target Condition	Target Condition Notes
Native Hedgerow	1.33	<i>Moderate</i>	New native hedgerow planting will be planted throughout the site. Species to be included are TBC . The new hedgerow will meet the majority of the CAC and therefore good condition could be achieved, however a target of moderate has been given as a precaution.

Table 6. Post-development (created) linear habitat description

Results Summary

4.3. The Biodiversity Metric returns the following headlines results for the site:

		Defra BNG Metric Categories	
		Area	Linear Hedge
Baseline results (onsite)	Units	13.11	6.41
Post-development results (onsite)	Units	16.75	10.22
	Unit Change	+3.64	+3.81
	% Change	+27.77%	+59.36%

Table 7. BNG Results

4.4. The detailed results of the Biodiversity Metric assessments are included at Appendix 2 of this document and shown graphically on Plans BNG1 & 2.

5. SUMMARY AND CONCLUSIONS

- 5.1. Ecology Solutions was commissioned by Rydon in July 2023 to undertake a Biodiversity Net Gain Assessment of Land East of Albion Road & North of Copper Lane, Marden
- 5.2. This assessment has been informed by detailed information obtained through surveys conducted between May 2019 and June 2023.
- 5.3. A BNG assessment has been undertaken using the Defra Metric v4.0.

Conclusions

- 5.4. The results of the BNG analysis work have confirmed that the site can deliver significant net-gains to biodiversity of 27.77%. This is in excess of what would be required when the requirement of the Environment Act come into force (i.e. +10% BNG). As such, the proposals are therefore in-alignment with the relevant development plan.

Ecology Solutions
August 2023

PLAN BNG1

Existing 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, Broadway, Worcestershire, WR12 7LJ. CEM20130000228



KEY:

	SITE BOUNDARY 5.862ha
	INTENSIVE ORCHARD 4.303ha
	MIXED SCRUB 0.482ha
	MODIFIED GRASSLAND 0.436
	SPOIL MOUND 0.031ha
	DEVELOPED SEALED SURFACE 0.006ha
	BAREGROUND 0.006ha
	POND 0.217ha
	HEDGEROW 0.127ha and 0.783km
	TREE LINE 0.254ha and 0.441km



 ECOLOGYSOLUTIONS <small>Part of the ES Group</small>	Farncombe House Farncombe Estate Broadway Worcestershire WR12 7LJ +44(0)1451 870767 info@ecologysolutions.co.uk ecologysolutions.co.uk
---	---

8372: LAND EAST OF ALBION ROAD & LAND NORTH OF COPPER LANE, MARDEN

PLAN BNG1: EXISTING HABITATS	Rev: A May 2022
---	--------------------

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, Broadway, Worcestershire, WR12 7LJ. CEM20130000228



KEY:

	SITE BOUNDARY 5.862ha
RETAINED	
	NATIVE HEDGEROW 0.127ha and 0.812km
	RETAINED TREE LINE 0.077ha and 0.275km
ENHANCED	
	TRADITIONAL ORCHARD 0.192ha
	POND 0.217ha
CREATED	
	BUILT AREA (70:30) DEVELOPED SEALED SURFACE 1.32ha VEGETATED GARDEN 0.567ha
	DEVELOPED SEALED SURFACE 1.077ha
	OTHER NEUTRAL GRASSLAND 1.176ha
	MODIFIED GRASSLAND 0.436
	MIXED SCRUB 0.429ha
	URBAN DRAINAGE FEATURE 0.052ha
	NATIVE HEDGEROW 0.196ha and 1.33km



Farncombe House
Farncombe Estate | Broadway
Worcestershire | WR12 7LJ

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

8372: LAND EAST OF ALBION ROAD & LAND NORTH OF COPPER LANE, MARDEN

Colour
Land Ea
& North of Copp
2203
Scale 1

**PLAN BNG2:
PROPOSED HABITATS**

Rev: A
Aug 2023

ING No 1035-L-05 ISSUED BY CLIENT 05/10/2022 AND BASED ON TOPOGRAPHICAL SURVEY

© Ecology Solutions Ltd. All rights reserved. This document is the property of Ecology Solutions Ltd. It is not to be used for any other purpose without the written consent of Ecology Solutions Ltd. The information contained herein is for the use of the client only and is not to be used for any other purpose. Ecology Solutions Ltd. is not responsible for any errors or omissions in this document. Ecology Solutions Ltd. is not responsible for any damage or loss of any kind arising from the use of this document. Ecology Solutions Ltd. is not responsible for any damage or loss of any kind arising from the use of this document. Ecology Solutions Ltd. is not responsible for any damage or loss of any kind arising from the use of this document.

APPENDIX 1

Site Layout



- KEY**
- Site boundary
 - ▶ Site access
 - Affordable Homes
 - ◆ Focal Building
 - ★ Gateway Building
 - LAP Local Area of Play
 - SS Sub Station
 - Car Barn
 - Brickwork Walls



HIGHWAY ACCESS AS PER ITB 15098-GA-028

ACCESS TO THE HOWLANDS RE-PROVIDED FROM THE SITE ACCESS ROAD

LINKAGE - AS EMERGENCY ACCESS SHARED WITH PEDESTRIAN / CYCLE ACCESS FROM ALBION ROAD TO COPPER LANE

LANDSCAPED ATTENUATION POND



Coloured Site Layout
 Land East of Albion Road
 & North of Copper Lane, Marden
22037 / SK25H
 Scale 1:500 @ A0 August 2023

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	3.64
Total Net % Change	27.77%
Trading Rules Satisfied	Yes ✓

Ref	Existing area habitats			Distinctiveness	Condition	Strategic significance	Required Action to Meet Trading Rules	Ecological baseline
	Broad Habitat	Habitat Type	Area (hectares)					Total habitat units
1	Cropland	Intensive orchards	4.303	Low	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	8.61
2	Grassland	Modified grassland	0.436	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	0.87
3	Heathland and shrub	Mixed scrub	0.482	Medium	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	1.93
4	Lakes	Ponds (non-priority habitat)	0.217	Medium	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	0.87
5	Urban	Developed land, sealed surface	0.006	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00
6	Urban	Bare ground	0.006	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	0.01
7	Sparsely vegetated land	Ruderal/Ephemeral	0.031	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	0.06
8	Sparsely vegetated land	Ruderal/Ephemeral	0.381	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	0.76
9								
10								
11								
12								
13								
Total habitat area			5.86					13.11
Site Area (Excluding area of Individual trees and Green walls)			5.86					

Retention category biodiversity value						Bespoke compensation agreed for unacceptable losses	Comments		
Area retained	Area enhanced	Baseline units retained	Baseline units enhanced	Area habitat lost	Units lost		User comments	Consenting body comments	GIS reference number
	0.192	0.00	0.38	4.11	8.22				
		0.00	0.00	0.44	0.87				
		0.00	0.00	0.48	1.93				
	0.217	0.00	0.87	0.00	0.00				
		0.00	0.00	0.01	0.00				
		0.00	0.00	0.01	0.01				
		0.00	0.00	0.03	0.06				
0.198		0.40	0.00	0.18	0.37				
0.20	0.41	0.40	1.25	5.28	11.46				

Total area lost (excluding area of Individual trees and Green walls) 5.28

M² to hectares conversion tool: Select a unit: Hectares M²

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	3.64
Total Net % Change	27.77%
Trading Rules Satisfied	Yes ✓
Area Check (excluding individual trees and green walls)	Area Acceptable ✓

Broad Habitat	Proposed habitat	Area (hectares)	Post development/ post intervention habitats									GIS reference number
			Distinctiveness	Condition	Strategic significance	Temporal multiplier	Difficulty	Habitat units delivered	Comments			
			Distinctiveness	Condition	Strategic significance	Standard or adjusted time to target condition	Final time to target condition (years)		Final difficulty of creation	User comments	Consenting body comments	
Urban	Developed land; sealed surface	1.32	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	0.567	Low	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	1.09			
Heathland and shrub	Mixed scrub	0.429	Medium	Good	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	10	Low	3.61			
Grassland	Other neutral grassland	1.176	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	5	Low	7.87			
Grassland	Modified grassland	0.436	Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.84			
Urban	Sustainable drainage system	0.052	Low	Good	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	5	Medium	0.17			
Sparsey vegetated land	Ruderal/Ephemeral	0.196	Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.38			
Urban	Developed land; sealed surface	1.077	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	0	Medium	0.00			
Total habitat area		5.25							13.97			

Site Area (Excluding area of Individual trees and Green walls) 5.25

M² to hectares conversion tool: Select a unit Hectares M²

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

Hedgerow summary	
Total Net Unit Change	3.81
Total Net % Change	59.36%
Trading Rules Satisfied	Yes ✓

Condense / Show Columns Condense / Show Rows
 Main Menu Instructions

Baseline ref	Existing hedgerow habitats			Distinctiveness	Condition	Strategic significance	Required Action to Meet Trading Rules	Ecological baseline Total hedgerow units	Retention category biodiversity value						Comments		GIS reference number
	Hedge number	Hedgerow type	Length (km)	Distinctiveness	Condition	Strategic significance			Length retained	Length enhanced	Units retained	Units enhanced	Length lost	Units lost	User comments	Consenting body comments	
1	H1	Native Hedgerow with trees	0.069	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Same distinctiveness band or better	0.55	0.042		0.34	0.00	0.03	0.22			
2	H2	Native Hedgerow with trees	0.212	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Same distinctiveness band or better	1.70	0.212		1.70	0.00	0.00	0.00			
3	H3	Native Hedgerow with trees	0.057	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Same distinctiveness band or better	0.46	0.057		0.46	0.00	0.00	0.00			
4	H4	Native Hedgerow	0.058	Low	Moderate	Area/compensation not in local strategy/ no local strategy	Same distinctiveness band or better	0.23	0.052		0.21	0.00	0.01	0.02			
5	H5	Native Hedgerow	0.065	Low	Moderate	Area/compensation not in local strategy/ no local strategy	Same distinctiveness band or better	0.26	0.065		0.26	0.00	0.00	0.00			
6	H6	Native Hedgerow	0.136	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness band or better	0.27	0.136		0.27	0.00	0.00	0.00			
7	TL1	Line of Trees	0.21	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness band or better	0.42	0.087		0.17	0.00	0.12	0.25			
8	TL2	Line of Trees	0.132	Low	Moderate	Area/compensation not in local strategy/ no local strategy	Same distinctiveness band or better	0.53	0.132		0.53	0.00	0.00	0.00			
9	TL3	Line of Trees	0.099	Low	Moderate	Area/compensation not in local strategy/ no local strategy	Same distinctiveness band or better	0.40	0.056		0.22	0.00	0.04	0.17			
10	H7	Native Hedgerow with trees	0.16	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Same distinctiveness band or better	1.28	0.16		1.28	0.00	0.00	0.00			
11	H8	Native Hedgerow with trees	0.073	Medium	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness band or better	0.29	0.073		0.29	0.00	0.00	0.00			
12	H9	Native Hedgerow	0.015	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness band or better	0.03	0.015		0.03	0.00	0.00	0.00			
13																	
14																	
15																	
16																	
17			1.29					6.41	1.09	0.00	5.76	0.00	0.20	0.66			

Headline Results

Return to results menu

Scroll down for final results ▲

On-site baseline	Habitat units	13.11	
	Hedgerow units	6.41	
	Watercourse units	0.00	
On-site post-intervention <small>(Including habitat retention, creation & enhancement)</small>	Habitat units	16.75	
	Hedgerow units	10.22	
	Watercourse units	0.00	
On-site net change <small>(units & percentage)</small>	Habitat units	3.64	27.77%
	Hedgerow units	3.81	59.36%
	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 <small>(Including habitat retention, creation & enhancement)</small>	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site net change <small>(units & percentage)</small>	Habitat units	0.00	0.00%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%

Combined net unit change <small>(Including all on-site & off-site habitat retention, creation & enhancement)</small>	Habitat units	3.64	
	Hedgerow units	3.81	
	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 <small>(Including all on-site & off-site habitat retention, creation & enhancement)</small>	Habitat units	3.64	
	Hedgerow units	3.81	
	Watercourse units	0.00	

Total net % change <small>(Including all on-site & off-site habitat retention, creation & enhancement)</small>	Habitat units	27.77%	
	Hedgerow units	59.36%	
	Watercourse units	0.00%	

Trading rules satisfied?	Yes ✓
--------------------------	-------

Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	13.11	14.42	0.00
Hedgerow units	10.00%	6.41	7.06	0.00
Watercourse units	10.00%	0.00	0.00	0.00

Unit requirement met or surpassed ✓
 Unit requirement met or surpassed ✓
 Unit requirement met or surpassed ✓



ECOLOGYSOLUTIONS

Part of the ES Group

Ecology Solutions Limited | Cokenach Estate | Barkway | Royston | Hertfordshire | SG8 8DL

01763 848084 | east@ecologysolutions.co.uk | www.ecologysolutions.co.uk