COTEFIELD FARM, BODICOTE

Code for Sustainable Homes Report Eco 1-4

Prepared by ACD Ecology

For

ACD

Ecology
Arboriculture
Landscape Architecture



Written By:	AD
Checked By:	DM
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CODE FOR SUSTAINABLE HOMES REPORT SUMMARY TABLE

Issue ID	Description	Eco Credits currently available	Comments
Eco 1	Ecological value of site	0	Land has some ecological features, including mature trees and hedgerows
Eco 2	Ecological enhancement	1	1 credit is achievable with adoption of all key recommendations and 30% of additional recommendations.
Eco3	Protection of ecological features	1	According to the landscape plans the majority of the trees and hedgerows are being retained
Eco4	Change in ecological value of site	2	A neutral change in the ecological value of the site will occur.

Total Eco credits currently available: 4

A1: CONTACT DETAILS

Ecologist's Details

Company name: ACD Ecology

Company address: The Old Dairy, Rodbourne Rail Business Centre, Grange Lane,

Malmesbury, Wiltshire, SN16 0ES

Contact name: Amy Denness

Telephone number: 01666 825 646

Report Reference: BAN18397CfSH

Developer / Client Details

Company name: Banner Homes

Company address: Brooklands, 5 Brooklands, Moons Moat Drive, Redditch,

Worcestershire, B98 9DW

Contact name: Richard Cowie

Telephone number: 01628 539312

Section A2: Development Details

BRE Reference Number: TBC

Client Reference Number: TBC

Development Name: Cotefield Farm, Bodicote

Development Address: Cotefield Farm, Bodictote, Oxfordshire, OX15 4AQ

B1: SUITABLY QUALIFIED ECOLOGIST'S QUALIFICATIONS

Do you hold a degree (or equivalent qualification, e.g. N/SVQ level 5) in ecology or related subject?
Yes ⊠ No □
If Yes, please provide details:
BSc (Hons) Conservation and Wildlife Management, University of Portsmouth
MSc Plant Diversity, University of Reading
Are you a practising ecologist with a minimum of 3 years relevant experience within the last 5 years?
Relevant experience must clearly demonstrate a practical understanding of factors affecting ecology in relation to construction and the built environment and will include acting in an advisory capacity to provide recommendations for ecological protection, enhancement and mitigation measures, e.g. ecological impact assessments.
Yes ☐ No ⊠
If Yes, please provide details:
Are you bound by a professional code of conduct and subject to peer review*?
A full member of one of the following organisations will be deemed suitable: Chartered Institution of Water and Environmental Management (CIWEM); Institute of Ecology and Environmental Management (IEEM); Institute of Environmental Management and Assessment (IEMA); Landscape Institute (LI).
Yes ⊠ No □
If Yes, please provide details:
I am a graduate member of the Chartered Institute of Ecology and Environmental Management (CIEEM). This report has also been reviewed by the Ecology Director who is a full member of CIEEM (MCIEEM) and the Institute of Environmental Management and Assessment (MIEMA).

*Peer review is defined as the process employed by a professional body to demonstrate that potential or current full members maintain a standard of knowledge and experience required to ensure compliance with a code of conduct and professional ethics.

Note: If the answer to any question in Section B1 is 'No' then the ecologist writing the report does not meet the requirements of a Suitably Qualified Ecologist under the Code. The ecology report

therefore cannot be used in the Code assessment unless it is verified by a 'Suitably Qualified Ecologist'. If this is the case, proceed to Section B2.

If the ecologist does meet the requirements of a Suitably Qualified Ecologist, proceed to Section C.

B2: REPORT VERIFICATION

If the appointed ecologist does not meet the requirements of a Suitably Qualified Ecologist, the report must be verified by an individual who does meet these requirements. Otherwise the ecology report cannot be used in the Code assessment.

- 1. The person who verifies the report must provide written confirmation that they meet the requirements of a Suitably Qualified Ecologist in accordance with Section B1 above.
- 2. Details on verifying an ecology report for a Code assessment:
 - The individual verifying the report must provide written confirmation that they comply with the definition of a Suitably Qualified Ecologist (as detailed above in Section B1).
 - The individual verifying the report must confirm in writing they have read and reviewed the report and found it to:
 - represent sound industry practice
 - report and recommend correctly, truthfully, and objectively
 - be appropriate given the local site conditions and scope of works proposed
 - avoid invalid, biased, and exaggerated statements.

Written confirmation from the third party verifier on all the points detailed under 1 and 2 above (for Section B2) must be included in the Appendix to this report (see Section E).

SECTION C: SITE SURVEY

Have the findings of the ecology report been based on data collected from a site survey(s)?				
Yes 🖂	No 🗌			
If yes, please provide details to confirm this (e.g. date(s) and scope of site survey(s))				
A basic Habitat Survey was carried out by RPS in February 2010				
(RPSPhase1HabitatSurve	у).			

Note: If 'No' has been answered to Question 1 of Section C the ecology report cannot be used to determine compliance with the requirements of the relevant Code credits.

On what date did/ will initial site preparation works commence?

unknown

Note: If the site survey was carried out after initial site preparation works commenced, the ecology report cannot be used to determine compliance with the requirements of the relevant Code credits.

Note to Suitably Qualified Ecologist and the Code assessor: The contents of the ecology report must be representative of the site's existing ecology immediately prior to the commencement of initial site preparation works.

SECTION D: DETAILS FROM THE SITE SURVEY

Eco 1 Ecological Value of Site

Is the construction zone of low or insignificant ecological value?

The construction zone includes any land used for buildings, hard standing, landscaping, site access and any other land where construction work is carried out (or land being disturbed in any way), plus a 3 metre boundary in either direction around these areas. It also includes any areas used for temporary site storage and buildings.

Yes ☐ No ⊠

If yes, is there any land outside the construction zone but inside the development site of ecological value?

N/A

Please give details:

N/A

If yes, is it possible for all areas / features of ecological value to remain undisturbed by the construction works?

N/A

Eco 2 Ecological Enhancement

Has t	he developer / client re	quired you to provide advice and recommendations for enhancing
site e	cology?	
	Yes 🖂	No 🗆

If yes, please provide a brief statement outlining all of your KEY recommendations*:

- 1. Any vegetation clearance should be undertaken between October and February, inclusive (i.e. outside of the bird nesting season). Should it prove necessary to remove vegetation during the bird nesting season, an ecologist must check the area for the presence of bird nests in advance of the clearance. If no evidence of breeding birds is found, clearance work must be completed within 48 hours of inspection. If any active nests are found, vegetation clearance must cease immediately and an appropriate buffer zone established around the nest. The buffer zone must remain intact until it has been confirmed that the young have fledged and the nest is no longer in use.
- Install four 1SP Schwegler Sparrow Terrace nest boxes onto buildings
 within the development. These boxes should be positioned at least 2 metres
 above the ground on east or north-east facing walls. Available from:
 http://www.nhbs.com/1sp schwegler_sparrow-terrace_tefno_174850.html
- 3. Install three 1WQ Schwegler bat boxes onto buildings within the development. These boxes should be positioned between 3-5metres above the ground on south, south-east or south-west facing walls. Available from: http://www.nhbs.com/1wq_schwegler_summer_and_winter_bat_roost_tefno-161275.html
- 4. Install one No.5 Schwegler Owl Box onto a mature tree within the development or onto a mature tree within the strip of trees along the southwestern boundary of the site. If a suitable tree is not available, the box can be installed on a metal pole which should be inserted into the ground. The box should be installed at least 3 metres above the ground and is best positioned as shown in Appendix 1. Available from: http://www.nhbs.com/no-5-schwegler_owl_box_tefno_162009.html
- 5. Source a collection of logs of varied lengths and diameters, and create two invertebrate loggeries. To create the loggeries place the logs 'end up' into a pre-dug hole (depth 60cm) then fill the dug soil back around the log pile to

make it secure. Leave the loggery in place to allow invertebrates to colonise. For best results use a hardwood (i.e. beech, oak, sycamore) with the bark still attached. Position the loggeries as shown in Appendix 1.

If yes, please provide a brief statement outlining all of your ADDITIONAL recommendations*.

- Install two 2F Schwegler Bat roost boxes onto retained mature trees within the development. These boxes should be positioned so that they face in a south, south-easterly or south-westerly direction. Available from: http://www.nhbs.com/2f schwegler bat box general purpose tefno 15862 9.html
- Install three 1MR Schwegler Avianex nest boxes onto buildings within the
 development. These boxes should be positioned at least two metres above
 the ground on north-east facing walls. Available from:
 http://www.nhbs.com/1mr_schwegler_avianex_tefno_158599.html
- 3. Install four 17B Schwegler Swift nest boxes onto buildings within the development. These boxes should be positioned under the eaves on north-east facing walls. Available from:
 http://www.nhbs.com/no 17b schwegler swift nest box single cavity tefn o 177982.html
- 4. Install two Schwegler Underground Bumble Bee boxes into warm, sheltered areas of shrub planting. Available from:

 http://www.nhbs.com/schwegler_underground_bumble_bee_box_tefno_181

 089.html
- Install two Schwegler Hedgehog Domes under the existing boundary hedgerows. Available from: http://www.nhbs.com/hedgehog_dome_tefno_161285.html
- 6. Install three ladybird houses into warm, sheltered areas of dense shrub planting within the development. Available from:

 http://www.greengardener.co.uk/product.asp?id_pc=24&cat=32&id_product=235

Guidance on artificial habitat is provided at the end of the report.

^{*} The client / developer will be required to adopt / implement all KEY recommendations and 30% of ADDITIONAL recommendations.

Eco 3 Protection of Ecological Features

Note: Eco 3 looks at protecting all existing features / areas of ecological value on the site and boundary area. If a feature of ecological value is to be removed as part of the development works, e.g. site clearance, then this credit cannot be achieved. If you have deemed the whole development site to be of poor ecological value then there will be no features of ecological value to protect. If the construction zone is of low ecological value but the wider site is not, give protection measures here. If there is an area(s) or feature(s) of low or insignificant ecological value you wish to advise be retained and enhanced / improved, e.g. a species-poor hedgerow to a species-rich hedgerow, then full details of this advice should be entered as a recommendation under Eco 2 Ecological Enhancement.

under Eco 2 Ecological Enha	ncement.
Are there any existing feature site?	es/ areas of ecological value on the site or at the boundary of the
Yes 🖂	No 🗌
	statement outlining the advice/ recommendations given for s and areas of ecological value:
	ees and hedgerows on site. According to the landscape plans e features are being retained.
Are any ecological features to	be relocated on the site?
Yes	No 🖂

If yes, please provide a brief statement outlining the reasons for relocation and recommendations for protecting the ecological features:

N/A

Eco 4 Change of Ecological Value of Site

Are you able to provide the following information for before and after construction: habitat types and an estimate of the number of floral species present per habitat type (based on appropriate censusing techniques and confirmed planting regimes)?

Yes ⊠ No □

If yes, please provide the following information:

Landscape plan: BAN18397_11D

a. A brief description of the landscape and habitats surrounding the development site:

The proposed development site is bordered by residential housing to the north and arable fields to the east, south and west.

- b. The total site area (this will be the same both before and after development): 44480m²
- c. Provide details of the site before development in the table below:

The habitat map was used to establish the areas of plot types before development:

Habitat Type*	Area of habitat type (m²)	Number of species per habitat type from survey
Arable	36677	0
Amenity grass	5760	4
Broad leaved trees	35	5
Coniferous trees	2	1
Hard standing	1568	0
Hedgerows	288	10
Scrub	150	6
Total area	44480	

d. Provide details of the site after development in the table below:

The Landscape proposal plan was used to establish the areas of plot types after development:

Habitat Type*	Area of habitat type (m²)	Number of species per habitat type
Amenity grassland - gardens	11978	4
Amenity grassland - other	5796	4
Hard landscape	24314	0
Hedgerows – retained and planted	888	15
Retained trees	35	5
Planted trees	153	13
Planting: wildlife-friendly	938	34
Planting: non wildlife-friendly	378	0
Total area	44480	

^{*} Habitat types will include natural areas, e.g. various grasslands and woodlands; as well as areas of the built environment, e.g. buildings, hard landscaping. The area of each habitat type when added together must always equal the total area of the development site.

Has your client / developer requested you to carry out the calculation for Eco 4 Change in Ecological Value of Site? The calculation must be carried out in line with the methodology provided in the most current version of the Code Guidance.

No 🗆

If yes, please complete the tables below:

Calculation of the Ecological Value of the Site Before Development:

Plot Type	Area of Plot Type [m²]		Species [No.] (from Table 2 or a SQE*)		Species x Area of Plot Type
Arable	35765	Х	0	Ш	0
Amenity grass	5760	Х	4		23040
Broad leaved trees	35	Х	5	=	175
Coniferous trees	2	Х	1	=	2
Hard standing	1568	Х	0	=	0
Hedgerows	1200	Х	10	Ш	2800
Scrub	150	Χ	6	II	900
(1) Total site area =	44480			(2) Total =	26997
Species before development = Total species x area of plot type / Total site area = (2)/(1) =					0.60

^{*} SQE = Suitably Qualified Ecologist

Calculation of the Ecological Value of the Site After Development:

Plot Type	Area of Plot Type [m²]		Species [No.] (from Table 2 or a SQE*)		Species x Area of Plot Type
Amenity grassland - gardens	11522	Х	4	=	47912
Amenity grassland - other	5796	Χ	4	=	23184
Hard landscape	23858	Χ	0	=	0
Hedgerows – retained and planted	1800	X	15	=	13320
Retained trees	35	Χ	5	=	175
Planted trees	153	Х	13	=	1989
Planting: wildlife-friendly	938	Х	34	=	31892
Planting: non wildlife-friendly	378	Х	0	=	0
(1) Total site area =	44480			(2) Total =	118472
Species after development =					2.66
Total species x area of plot type / Total site area = (2)/(1) =					

^{*} SQE = Suitably Qualified Ecologist

Total change in species:

Total no. Species after development - Total no. Species before development

$$= 2.66 - 0.60$$

= 2.05 (neutral ecological change)

Credits are awarded where the resulting change in ecological value is as follows:

Criteria	Credits
The ecological value before and after development is measured,	
and overall change in species per hectare is:	
Minor: negative Change between -9 and less than or equal to -3.	1
Neutral: greater than -3 and less than or equal to +3	2
Minor enhancement: greater than 3 and less than or equal to 9	3
Major enhancement: greater than +9	4

SECTION E: APPENDIX

The required documentation to be included within the appendix of this guidance document will include: the ecology report; written confirmation from the verifier of the ecology report (where necessary); and any supplementary documentation, e.g. ecologist's curriculum vitae; maps, plans, drawings, letters / emails of correspondence, etc. Please include these details along with the appropriate reference to each document in the table below:

Document	Reference
Signature of Validation	Duncan Murray (Ecology Director)
Habitat Survey	RPSPhase1HabitatSurvey
Landscape Plan	BAN18397-11D

SIGNATURE OF VALIDATION

I confirm that the information provided in this document is truthful and accurate at the time of completion.

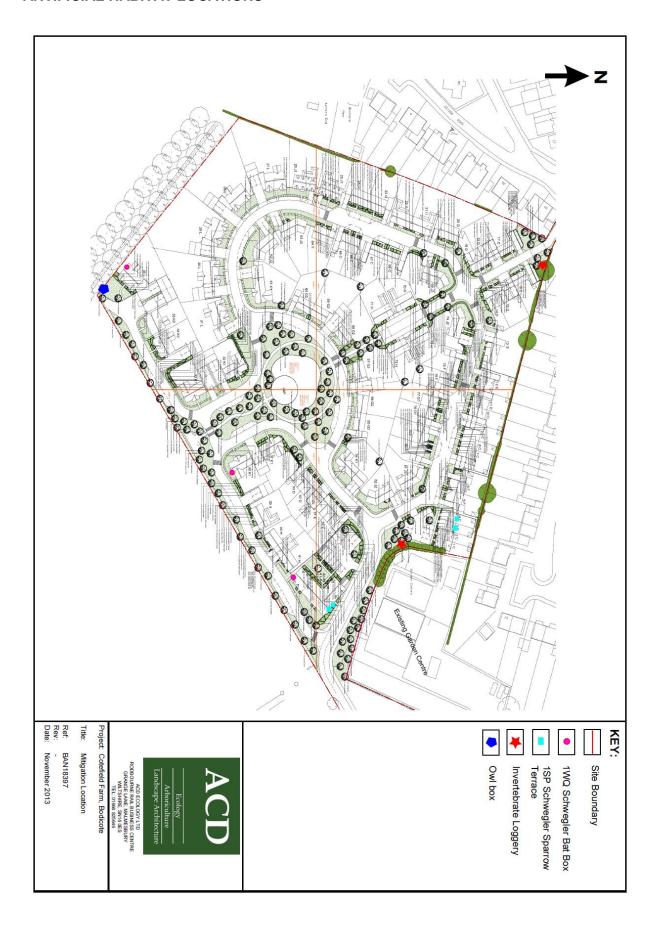
I hold a degree in ecology or related subject, having a Bachelor's degree in Physical Geography and a Master's degree in Conservation; I am a practising ecologist with 14 years' relevant experience; and I am bound by a professional code of conduct and subject to peer review, being a member of the Chartered Institute of Ecology and Environmental Management, a member of the Institute of Environmental Management and Assessment, and a Chartered Environmentalist.

Name of ecologist: Duncan Murray BSc MSc CEnv MCIEEM, MIEMA

Signature of ecologist:

Date November 2013

ARTIFICIAL HABITAT LOCATIONS



ARTIFICIAL HABITATS

BAT BOX DESIGNS

Schwegler 1WQ - Summer and Winter Roost



A sophisticated bat box designed for the safe hibernation of bats in winter as well as for roosting, forming colonies and raising their young during summer. It has an attractive design and is easy and convenient to install on the wall of a building.

This new box uses the same patented Schwegler "double wall system" as the 1FW Hibernation Box, which has been tested and proven for decades and used in many professional and scientific projects in forests all over Europe.

Schwegler 2F - General Purpose



The 2F is manufactured from long-lasting Woodcrete, which is a blend of wood, concrete and clay which will not rot, leak, crack or warp, and will last for at least 20 - 25 years, making it suitable for long-term mitigation projects. Woodcrete is breathable and maintains a stable temperature inside the box and the 2F is painted black to absorb warmth. It also provides a good rough surface for bats to cling on to and climb. The 2F bat box can be sited in trees or on buildings and is best positioned at a height of between 3 to 6 metres. Please note that once bats have inhabited a roost site they may only be disturbed by licensed bat workers.

BIRD BOX DESIGNS
Schwegler 1MR Avianex Nest Box



This bird box can be placed on the wall of a building or in the garden to be aesthetically pleasing. There is a choice of three colours to fit in with the architectural design. This box provides a roosting site for a variety of garden birds all year round. The 1MR is constructed from ultra-tough WoodcretePLUS, a uniquely long-lasting blend of wood, concrete and clay that won't ever leak, warp or rot.

Schwegler 1P Sparrow Terrace Box



For House and Tree Sparrows, and in some instances other birds which use nest boxes such as Tits, Redstarts and Spotted Flycatchers. On all types of houses in built-up areas, and on industrial and agricultural buildings such as barns, sheds and factories. Installation height: 2m or more above ground level

No.5 Schwegler Owl box



Owl boxes are often installed in parks and forests, not only to promote the diversity of species, but also as a means of controlling mouse populations. This box should be installed 4-6 metres above the ground. It is made from wood-concrete and designed to last for 20-25 years.

Schwegler 17B Swift Nest Box



The Swift Box No. 17B is made from a special mixture of compressed plant fibres and concrete which enables it to provide good insulation and an extremely long life. This box should be installed at least six to seven metres above the ground, ensuring that there is unobstructed access for birds entering and leaving. If possible, boxes should be sites under the shelter of eaves or overhanging roofs.

BUMBLE BEES Schwegler Bumble Bee Box



This box is placed under the soil and is left for the queen to colonise. Being underground it is relatively safe from interference or vandalism and can therefore be placed outside gardens and on public land without attracting any attention. Box is supplied complete with moisture-repellent nest wool.

INSECT HOUSE DESIGNS

Ladybird House



The ladybird house has a central chamber filled with natural material. There are many holes drilled in an upwards angle for the insects to reach the insulated and safe inner chamber. If necessary the roof panel may be removed for inspection or cleaning. Simply site in a sheltered, warm spot away from prevailing wind in flower beds, wooded glades or even in a planter.

Hand-crafted wooden construction. They should be positioned next to aphid infected plants with ladybirds introduced from May onwards. Dimensions: 30cm high x 15cm x 15cm.

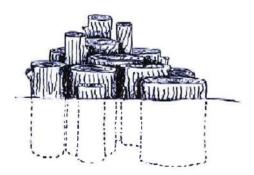
Schwegler Hedgehog Dome with Insulated Base



Choose somewhere protected from wind and rain. Try and avoid placing the Dome where the animals have to cross a lawn because these are mainly damp at night.

Nesting material: Ideally fill with hay (supplied with the Dome) but alternatively use dry leaves and straw, as well as cut up newspaper and wood shavings.

Invertebrate Loggery



Source a collection of logs of varied lengths and diameters. It is best to use a hardwood (i.e. ash, beech, oak and sycamore) with the bark still attached.

Place all logs 'end up' into a pre-dug hole (depth 60cm). Fill the dug soil back around the log pile to make it secure. Leave the loggery in place to allow invertebrates to colonise.

SUPPLIERS

BioQuip

http://www.bioquip.net/index.html

Envisage Wildcare

http://www.wildcareshop.com/Products_Results.php

Green Gardener

http://www.greengardener.co.uk/

Jacobi Jayne

http://www.livingwithbirds.com/

NHBS

http://www.nhbs.com

RSPB

http://shopping.rspb.org.uk/wildlife-garden.html

Wildlife and Countryside Services

http://www.wildlifeservices.co.uk/habitatspecies.html



ACD LANDSCAPE ARCHITECTS LTD
RODBOURNE RAIL BUSINESS CENTRE
GRANGE LANE
MALMESBURY
WILTSHIRE
SN16 0ES

TEL: (01666) 825646 FAX: (01666) 824654 email: mail@acdlandscape.co.uk CONTACT: JOHN CONSTABLE

ACD ECOLOGY LTD
RODBOURNE RAIL BUSINESS CENTRE
GRANGE LANE
MALMESBURY
WILTSHIRE
SN16 0ES

TEL: (01666) 825646 FAX: (01666) 824654 email: mail@acdecology.co.uk CONTACT: DUNCAN MURRAY

ACD ARBORICULTURE LTD
COURTYARD HOUSE
MILL LANE
GODALMING
SURREY
GU7 1EY

TEL: (01483) 425714 email: m.welby@acdarb.co.uk CONTACT: MARK WELBY

ACD (LANDSCAPE ARCHITECTS) SOUTHAMPTON LTD

12 SOUTHGATE STREET

WINCHESTER

HAMPSHIRE

SO23 9EF

TEL: (01962) 855604 email: a.wells@acdlandscape.co.uk CONTACT: ANNETTE WELLS

ECOLOGY * ARBORICULTURE * ARBORICULTURAL SITE MONITORING AND SUPERVISION LANDSCAPE & VISUAL IMPACT ASSESSMENT * LANDSCAPE DESIGN & PLANNING * LANDSCAPE MANAGEMENT * LANDSCAPE AUDIT * PROJECT MANAGEMENT * EXPERT WITNESS