PLANNING DESIGN ENVIRONMENT

Sherington
Milton Keynes
Ecological Assessment

TEP Report Ref: 4828.002
Version 2.0
November 2014

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for

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Central Milton Keynes
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Written:	Checked:	Approved:
CMH	SMC	ACP

CONTENTS **PAGE**

APPENDICES

DRAWINGS

1.0 SUMMARY

1.1 TEP was commissioned by David Lock Associates to undertake an ecological assessment of land off High Street, Sherington in Milton Keynes.

1.2 A desktop study and extended phase 1 habitat survey of the site was undertaken to help inform proposals for site allocation of a small development of 11 residential properties and a shop with associated landscaping.

1.3 There are no internationally or nationally designated wildlife sites within 1km of the development site. There are three locally designated sites within this buffer zone including the Milton Keynes road corridor, however it is considered highly unlikely that these will be affected by works due to their distance from the proposed site and lack of connecting habitat.

1.4 There are three species-poor hedgerows on site which are listed as a habitat of principle importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. Current proposals illustrate these will largely be retained and therefore there are no implications associated with the hedgerows.

1.5 The habitats on site may be suitable for protected flowering plants, such as bluebell that were not evident during the survey. A repeat survey must be undertaken during April-May to determine the presence of such plant species.

1.6 Although there are no ponds within the site, there are ponds within 500m and records of great crested newt *Triturus cristatus*. Amphibian surveys must be carried out prior to any works. Pond surveys can be undertaken between March and June (with at least two surveys between mid-March and mid-May).

1.7 There is a wet ditch with running water just outside the western boundary which is suitable as water vole habitat and therefore a water vole survey must be undertaken. The optimum survey period is between March and June.

1.8 The hedgerows and dense scrub on site represent foraging and nesting habitat for birds. Any works to hedgerows or scrub should ideally be undertaken outside of the bird nesting season of March to August inclusive. If it is not possible for works to these features to avoid the nesting bird season of March to August, a nesting bird survey by an ecologist will be required immediately prior to the works.

1.9 Opportunities to enhance biodiversity potential within the development are included in Chapter 7.0.

2.0 INTRODUCTION

2.1 TEP was commissioned by David Lock Associates to undertake an ecological assessment of the land off High Street in Sherington, Milton Keynes.

2.2 The land has been put forward for site allocation for small scale development, comprising 11 residential properties and a shop. Drawing RM0001 – 002 illustrates the proposals plan.

2.3 This report has the following objectives:

- to describe the existing vegetation and give an overview of the habitats present on the site;
- to identify whether there are any features of conservation value present, such as legally protected species or habitats of biodiversity importance; and
- to advise of further surveys or mitigation requirements that might be needed prior to development of the site.

3.0 SITE DESCRIPTION

3.1 The site is located at the junction of High Street and Church Street in the rural village of Sherington, which is situated in the Borough of Milton Keynes and ceremonial county of Buckinghamshire, England. The approximate central grid reference is SP 888 465. A map of the site location is shown in Figure 1.

Figure 1: Site location and environs

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4.0 SURVEY METHODS

Desktop survey

4.1 Biological records and information regarding local wildlife site designations were obtained/ requested from Magic map online resource, Milton Keynes Council and Buckinghamshire and Milton Keynes Environmental Record Centre for a 1km buffer around the site.

Habitat survey

4.2 A habitat survey was carried out by ecologist Candice Howe, *Grad*CIEEM (BSBI Field Identification Skill Level 3) on 28th October 2014. This was undertaken following Phase 1 Habitat survey guidelines (JNCC 2010) and gives an overview of key habitats, wildlife corridors and the likely sites for species of conservation concern including invasive species.

Assessment for species of conservation concern

4.3 During habitat survey, the habitats present were assessed for their potential to support species of conservation concern, particularly statutorily protected species or species of principal importance as identified on Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006.

Limitations

4.4 The survey was undertaken outside the optimum survey season; therefore some species of flowering plant may not have been evident or identifiable at the time of survey.

5.0 SURVEY RESULTS

Desktop survey results

Protected Sites

5.1 There are no internationally or nationally protected sites (e.g. SSSI, SPA, Ramsar, SAC) on the site or within 1km of the site.

5.2 Desktop record searches revealed the following locally designated sites:

- A509 Verge of East of Sherington Local Wildlife Site (LWS) is 700m east of the site and consists of two sections of road verge either side of the A509 supporting species-rich grassland habitat;
- Milton Keynes Road Corridor – the A509 is designated as a Wildlife Corridor as part of the Milton Keynes Wildlife Corridor Project in 1996 and has a status equivalent to LWS;
- Hazelmead Farm, Sherington (LWS) is located 800m north west of the site and is designated for its species-rich grassland.

5.3 There are records of the following protected species within 1km of site:

- Great crested newt (280m south of site);
- Unconfirmed species of *Myotis* bat (800m north west of site – associated with the Ouse Valley);
- Common pipistrelle *Pipistrellus pipistrellus* (800m north west of site associated with Ouse Valley);

- Brown long-eared bat *Plecotus auritus (*920m east of the site – associated with the A509).

5.4 Further results of the desktop search are provided in Appendix 1, please note that confidential records are not included.

Habitat Survey Results

5.5 The Habitat survey map is shown in Drawing G4828.002 and Target Notes detailed in Appendix 2. The site area is approximately 1.1ha and comprises grassland with boundary hedges. The habitat types present are as follows:

- Semi-improved grassland
- Species poor hedge
- Dense scrub
- Wet ditch/running water
- Amenity grassland

Semi-improved grassland

5.6 The majority of the site comprises semi-improved grassland, which has been improved to some degree historically and modified most likely through grazing but more recently has been left unmanaged. The resulting sward is dominated by *Lolium perenne* with a range of other common grass species and a low diversity of forb species (Figure 2). Target Note 3 provides a species list of the grassland.

Figure 2: Semi-improved grassland

Species-poor hedge

5.7 There are three species poor intact hedges along the west, north and east boundaries of the field. All the hedgerows are dominated by hawthorn *Crataegus monogyna* and are mature but unmanaged. The hedgerow along the western boundary runs alongside a wet ditch and is described in Target Note 1 (Figure 3).

Figure 3: The hedgerow along the western boundary

5.8 The hedgerow along the northern boundary (see Target Note 4) contains a dry ditch and has a dense scrub understorey in most areas which is shaded. The mid-section is dominated by blackthorn *Prunus spinosa*, which has regenerated and is encroaching south to a width of approximately 10m (Figure 4).

Figure 4: The hedgerow along the northern boundary includes blackthorn

5.9 The hedgerow along the eastern boundary is described in Target Note 5 and is similar to that along the western boundary. There is a dry ditch within the hedgerow and the understorey is dominated by dense scrub and is heavily shaded (Figure 5).

Figure 5: The hedgerow along the eastern boundary

5.10 Along the southern boundary, there is a defunct hedgerow that is interspersed with dense scrub (Figure 6). There is also a dry ditch which extends partway along the southern boundary. All the hedges provide value for wildlife, such as foraging, shelter or nesting habitat for birds and commuting and foraging habitat for bats.

Figure 6: Defunct hedgerow along the southern boundary

Dense scrub

5.11 There is a large area of dense scrub to the south east of the site which is described in Target Note 2. The scrub habitat has started to encroach into the grassland. All the hedgerows have a dense scrub understorey and any gaps in the hedges (e.g. at the

corners of the fields) have been filled by areas of dense scrub. This type of habitat can provide value to birds for shelter, foraging and potentially nesting. During the survey robins *Erithacus rubecula* and pied wagtails *Motacilla alba* were observed within this habitat. A dilapidated shed is present in the south east of the corner which is covered in dense scrub. The remaining structure does not provide any roosting potential for bats (Figure 7).

Figure 7: Dilapidated wooden shed

Wet ditch/running water

5.12 There is a wet ditch just outside the western boundary, which is culverted in several places. The ditch has sandy, vegetated bank and although only quite short in length (approximately 80m) provides suitable habitat for water voles (Figure 8).

Figure 8: Wet ditch alongside the western boundary

Amenity Grassland

5.13 There is a very small area of amenity grassland in the southwest corner of the site, which is presumably managed by the adjacent resident (Figure 9). The dry ditch which extends along the southern boundary is clearly visible in this area.

Figure 9: Small area of amenity grassland

Protected plant species

5.14 No protected or invasive plant species were found within the site.

Connectivity with the wider landscape

5.15 The site is well connected to the wider landscape immediately to the north and east of the site, particular by the hedgerows. The connectivity is more restricted to the south and west due to the presence of residential properties and roads. Although well connected to the countryside in close proximity to the site, there are barriers to the locally designated Wildlife Sites in the form of the High Street main road to the west and Gun Lane to the east. Due to this lack of habitat linkage and the distance between the sites, it is considered highly unlikely that the proposals will affect any of the LWS.

Assessment for species of conservation concern

Amphibians and Reptiles

5.16 There is no amphibian breeding habitat within the site, however aerial mapping shows there are three ponds within 500m of the site; located approximately 150m, 250m and 500m north and north east of the site, which may provide suitable breeding habitat. The hedgerows provide some potential foraging, refuge or commuting habitat for amphibians and or reptiles.

Water vole and Otter

5.17 The wet ditch alongside the western boundary provides suitable habitat for water vole.

Badger

5.18 There is some limited foraging habitat for badger on site; however, no setts or other signs of badger were identified during the survey.

Nesting Birds

5.19 The hedgerows and dense scrub provide foraging habitat for a range of bird species and also provide suitable nesting habitat.

Bats

5.20 There is no suitable roosting habitat on site for bats, however the hedgerows do provide suitable foraging and commuting habitat. Current proposals will retain the majority of the hedgerows and therefore there will be no significant loss of foraging or commuting habitat for the local bat populations.

6.0 CONCLUSIONS

6.1 The habitats on site could support protected plant species which are not currently in flower/evident. Therefore further surveys are required.

6.2 Although there is no breeding habitat on site, there are three ponds located within 500m of the site which is linked to the proposed site by hedgerows. There are also records of great crested newt within 500m south of the site. The hedgerows provide suitable terrestrial habitat for amphibians and reptiles. Further surveys are required to determine the presence or likely absence of amphibians.

6.3 The wet ditch within 30m of the western boundary of the site has the potential to support water voles and therefore further surveys are required.

6.4 The site has limited foraging potential for badger. Although, it is considered unlikely that the proposals would have any implications on badgers, precautionary best practice measures are required during any works.

6.5 The hedges and scrub on site provide potential nesting bird habitat and removal of these features may affect nesting birds. Virtually all UK wild birds are protected at the nest under the *Wildlife and Countryside Act 1981 as amended*.

7.0 RECOMMENDATIONS

Habitats

7.1 A repeat habitat survey must be undertaken during April-May to determine presence of protected plant species.

Amphibians and Reptiles

7.2 Amphibian surveys must be carried out prior to any works. Pond surveys can be undertaken between March and June (with at least two surveys between mid-March and mid-May).

Badgers

7.3 Best practice measures should be implemented during works to ensure the risk to badgers is minimised, such as the covering of any trenches or excavation areas overnight.

Nesting Birds

7.4 All vegetation clearance should be undertaken outside the bird nesting season (March to August inclusive), if this is not possible, a nesting bird check must be undertaken by a suitably qualified ecologist a maximum of 24 hours in advance of any clearance works. If a nest is found, a stand-off zone will need to be applied within which no works are undertaken until the ecologist has confirmed that any young have fledged and the nest is no longer in use

<u>Biodiversity Enhancement Opportunities</u>

7.5 Under the National Planning Policy Framework (NPPF), there is a requirement to minimise impacts on biodiversity, and seek to provide net gains in biodiversity where possible. The following features can be incorporated into future designs to enhance biodiversity:

- Bird boxes
- Integrated bat boxes
- Green roofs
- Planting schemes
- Insect or habitat walls
- Planters and baskets
- Hedgehog passages
- Rain gardens

7.6 Opportunities for bats and birds should be provided through the use of boxes on buildings.

7.7 Bat bricks or tubes can be integrated into new buildings and are more successful than bat boxes in urban areas, as they are permanent features and are likely to be subjected to fewer disturbances.

7.8 Examples of bat and bird box designs are presented at Appendix 3, ecological advice will be required to inform the position, orientation and height of these features.

7.9 Green roofs can enhance biodiversity in urban areas and can provide 'stepping-stone' habitats, increasing ecological connectivity.

7.10 Planting schemes can be modified to include a mix of wildlife friendly species, for example a mixture of flowering plants, vegetables, native trees and shrubs to encourage insect diversity including nocturnal flying insects. Such measures will in turn increase foraging opportunities for bats and birds.

7.11 Habitat walls can be partially or totally covered by vegetation and will provide a wildlife habitat in a limited space. The simplest and most cost-effective form is green trellising using ivy, honeysuckle *Lonicera periclymenum* or other scented and berry producing climbers which once mature will provide nesting habitat for birds and attract insects. Baskets and planters can be used to increase plant coverage across a site.

7.12 Gaps of over 15cm at the base of boundary fencing can provide passages for hedgehogs to improve connectivity and increase foraging range for this declining species.

7.13 Rain gardens comprise depressions in hardstanding, which are filled with a free-draining material and planted in strategic places in order to slow surface water run-off and improve surface drainage in urban areas. These features will also attract insects and improve foraging opportunities.

8.0 REFERENCES

GUNNELL K et al (2012) Landscape and urban design for bats and biodiversity, Bat Conservation Trust

HUNT L (2012) Bat surveys: Good Practice Guidelines, 2nd Edition, Bat Conservation Trust.

JOINT NATURE CONSERVATION COMMITTEE (2010) Phase 1 Habitat Survey. JNCC. Peterborough

JOINT NATURE CONSERVATION COMMITTEE (2004) Bat Worker's Manual. 3rd Edition. JNCC

APPENDIX ONE
Desktop Study
Ref: 4828.003

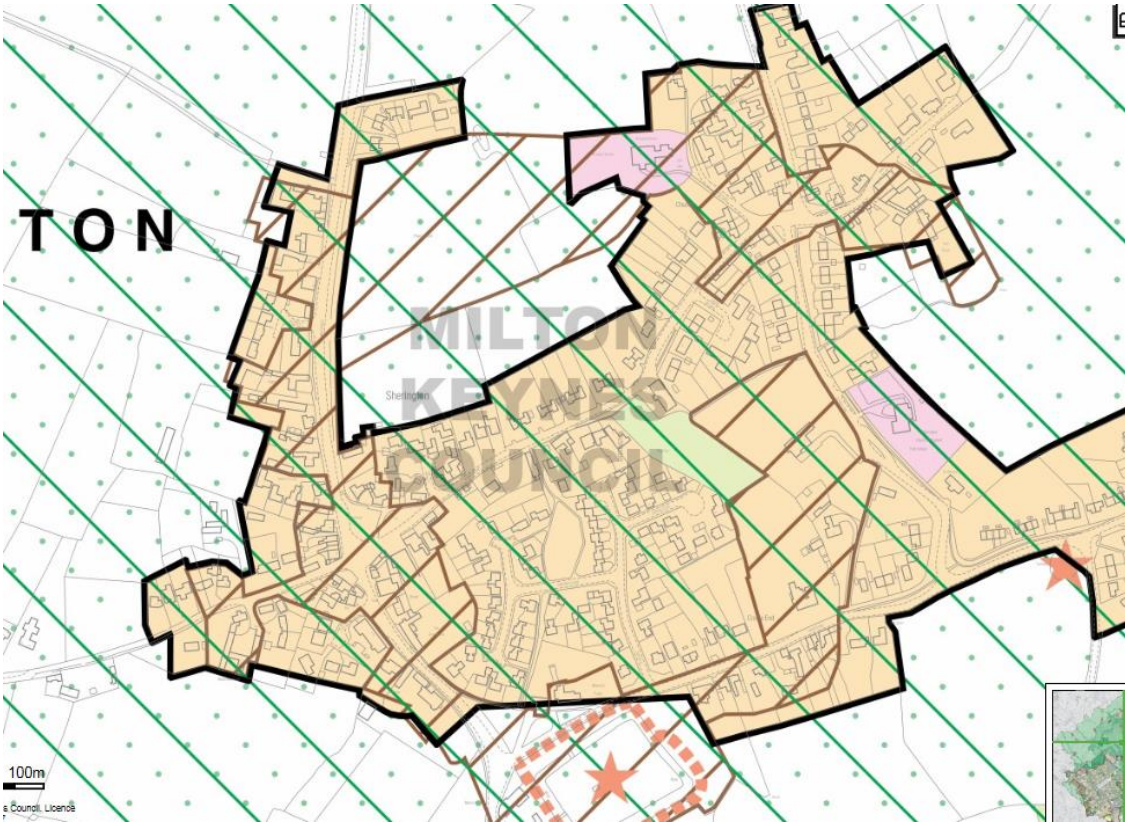
Desk Based Ecology Assessment

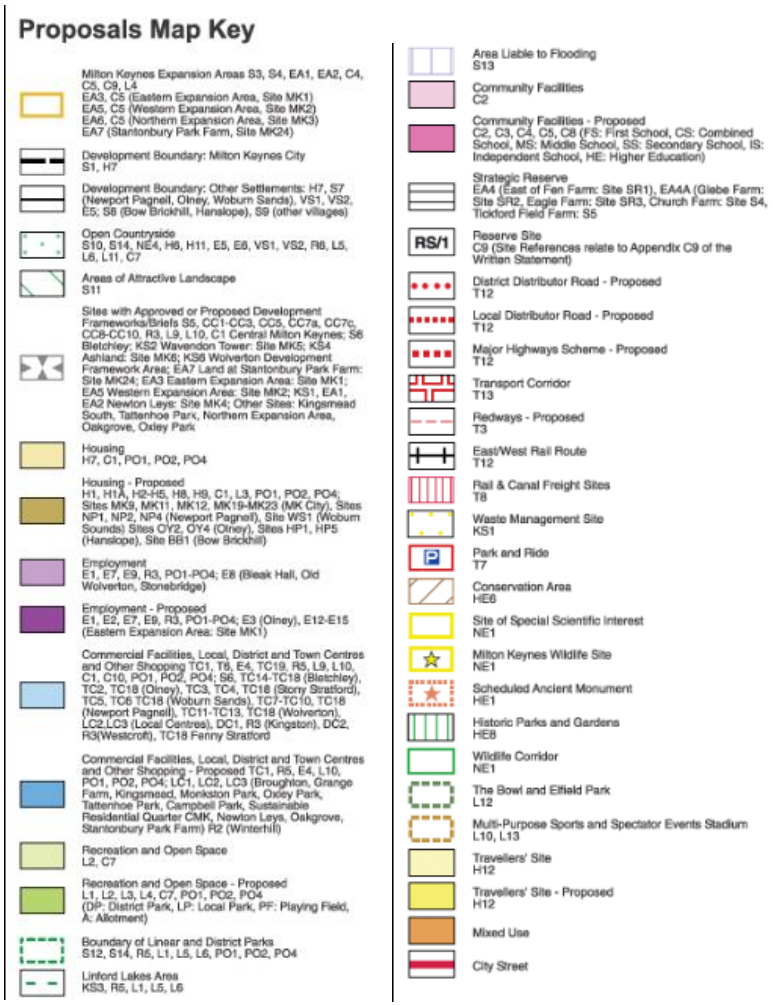
Sherrington
Milton Keynes
Approximate Central Grid Reference: SP 888 467

Contents

Site location plan

Extract of Milton Keynes *Local Plan* (adopted Dec 2005) and supporting key




Proposals Map Key
Milton Keynes Expansion Areas S3, S4, EA1, EA2, C4, C5, C9, L4
EA3, C5 (Eastern Expansion Area, Site MK1)
EA5, C5 (Western Expansion Area, Site MK2)
EA6, C5 (Northern Expansion Area, Site MK3)
EA7 (Stantonbury Park Farm, Site MK24)
Development Boundary: Milton Keynes City
S1, H7
Development Boundary: Other Settlements: H7, S7 (Newport Pagnell, Olney, Woburn Sands), VS1, VS2, E5; S8 (Bow Brickhill, Hanslope), S9 (other villages)
Open Countryside
S10, S14, NE4, H6, H11, E5, E8, VS1, VS2, R6, L5, L6, L11, C7
Areas of Attractive Landscape
S11
Sites with Approved or Proposed Development Frameworks/Briefs S5, CC1-CC3, CC5, CC7a, CC7c, CC8-CC10, R3, L9, L10, C1 Central Milton Keynes; S6 Bletchley; KS2 Wavendon Tower; Site MK5; KS4 Ashland; Site MK6; KS6 Wolverton Development Framework Area; EA7 Land at Stantonbury Park Farm: Site MK24; EA3 Eastern Expansion Area: Site MK1; EA5 Western Expansion Area: Site MK2; KS1, EA1, EA2 Newton Leys: Site MK4; Other Sites: Kingsmead South, Tattenhoe Park, Northern Expansion Area, Oakgrove, Oxley Park
Housing
H7, C1, PO1, PO2, PO4
Housing - Proposed
H1, H1A, H2-H5, H8, H9, C1, L3, PO1, PO2, PO4; Sites MK9, MK11, MK12, MK19-MK23 (MK City), Sites NP1, NP2, NP4 (Newport Pagnell), Site WS1 (Woburn Sounds) Sites OY2, OY4 (Olney), Sites HP1, HP5 (Hanslope), Site BB1 (Bow Brickhill)
Employment
E1, E7, E9, R3, PO1-PO4; E8 (Bleak Hall, Old Wolverton, Stonebridge)
Employment - Proposed
E1, E2, E7, E9, R3, PO1-PO4; E3 (Olney), E12-E15 (Eastern Expansion Area: Site MK1)
Commercial Facilities, Local, District and Town Centres and Other Shopping TC1, T6, E4, TC19, R5, L9, L10, C1, C10, PO1, PO2, PO4; S6, TC14-TC18 (Bletchley), TC2, TC18 (Olney), TC3, TC4, TC18 (Stony Stratford), TC5, TC6 TC18 (Woburn Sands), TC7-TC10, TC18 (Newport Pagnell), TC11-TC13, TC18 (Wolverton), LC2,LC3 (Local Centres), DC1, R3 (Kingston), DC2, R3(Westcroft), TC18 Fenny Stratford
Commercial Facilities, Local, District and Town Centres and Other Shopping - Proposed TC1, R5, E4, L10, PO1, PO2, PO4; LC1, LC2, LC3 (Broughton, Grange Farm, Kingsmead, Monkston Park, Oxley Park, Tattenhoe Park, Campbell Park, Sustainable Residential Quarter CMK, Newton Leys, Oakgrove, Stantonbury Park Farm) R2 (Winterhill)
Recreation and Open Space
L2, C7
Recreation and Open Space - Proposed
L1, L2, L3, L4, C7, PO1, PO2, PO4
(DP: District Park, LP: Local Park, PF: Playing Field, A: Allotment)
Boundary of Linear and District Parks
S12, S14, R5, L1, L5, L6, PO1, PO2, PO4
Linford Lakes Area
KS3, R5, L1, L5, L6
Area Liable to Flooding
S13
Community Facilities
C2
Community Facilities - Proposed
C2, C3, C4, C5, C8 (FS: First School, CS: Combined School, MS: Middle School, SS: Secondary School, IS: Independent School, HE: Higher Education)
Strategic Reserve
EA4 (East of Fen Farm: Site SR1), EA4A (Glebe Farm: Site SR2, Eagle Farm: Site SR3, Church Farm: Site S4, Tickford Field Farm: S5
RS/1
Reserve Site
C9 (Site References relate to Appendix C9 of the Written Statement)
District Distributor Road - Proposed
T12
Local Distributor Road - Proposed
T12
Major Highways Scheme - Proposed
T12
Transport Corridor
T13
Redways - Proposed
T3
East/West Rail Route
T12
Rail & Canal Freight Sites
T8
Waste Management Site
KS1
Park and Ride
T7
Conservation Area
HE6
Site of Special Scientific Interest
NE1
Milton Keynes Wildlife Site
NE1
Scheduled Ancient Monument
HE1
Historic Parks and Gardens
HE8
Wildlife Corridor
NE1
The Bowl and Elfield Park
L12
Multi-Purpose Sports and Spectator Events Stadium
L10, L13
Travellers' Site
H12
Travellers' Site - Proposed
H12
Mixed Use
City Street

Extracts of relevant planning policies and supplementary planning guidance

OPEN COUNTRYSIDE
POLICY S10

The open countryside is defined as all land outside the development boundaries defined on the Proposals Map. In the open countryside, planning permission will only be given for development that is essential for agriculture, forestry, countryside recreation or other development which is wholly appropriate to a rural area and cannot be located within a settlement.

AREAS OF ATTRACTIVE LANDSCAPE
POLICY S11

The following areas are defined on the Proposals Map as Areas of Attractive Landscape:
1 The Brickhills
2 The Ouse Valley, north and west of Newport Pagnell
Within these areas, development should:
(i) Not damage the special character of the area
(ii) Enhance important landscape features where possible
(iii) Protect and enhance features of nature conservation value
(iv) Retain and improve public access and opportunities for countryside recreation.

NATURE CONSERVATION SITES
POLICY NE1

(i) Development will not be permitted if it is likely to harm the nature conservation value of an international site (RAMSAR sites, SACs and SPAs)
(ii) Proposals for development likely to affect a National Nature Reserve or Site of Special Scientific Interest will be only be permitted if they can be subject to conditions that will prevent damaging impacts on biodiversity interests, or if other material considerations are sufficient to override nature conservation interests.
(iii) Development which would be likely to harm the biodiversity or geological conservation value of a site of county-wide (RIGS, MK Wildlife sites) or local importance (Local Nature Reserves, Wildlife Corridors, local wildlife sites) will only be permitted if the importance of the development outweighs the local value of the site.

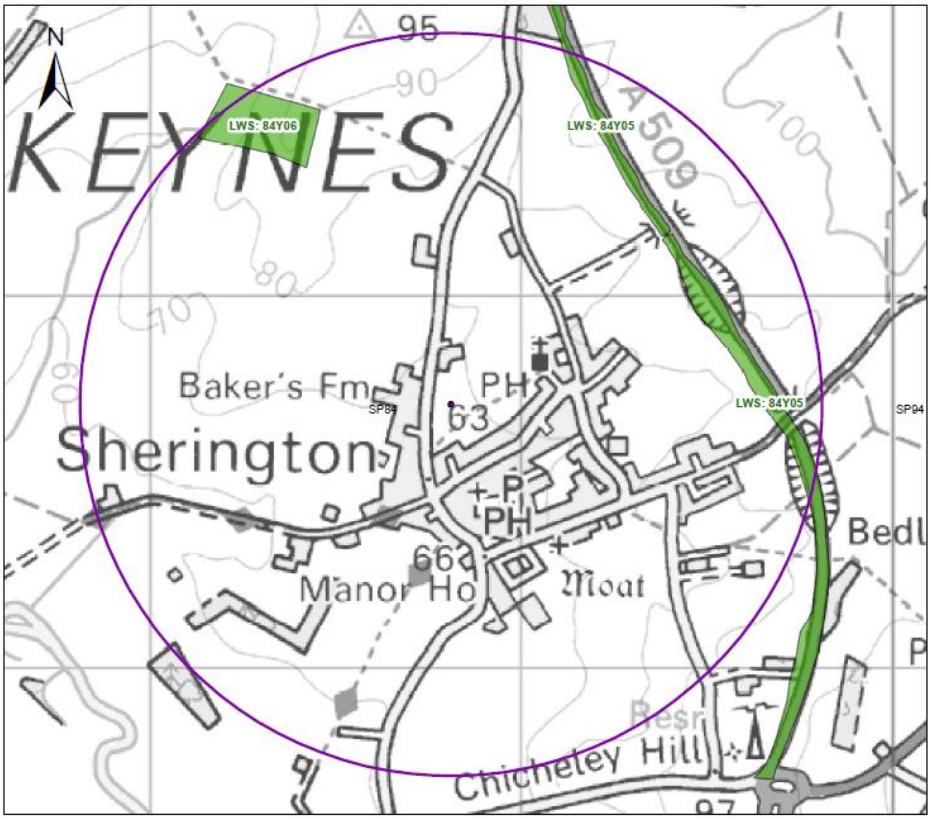
PROTECTED SPECIES
POLICY NE2

Planning permission will be refused for development if it would be likely to adversely affect animal or plant species, or their habitat, specifically protected by law.
Where necessary, planning conditions will be attached to permissions to require the developer to take steps to secure the protection of the species or habitat affected by development.

BIODIVERSITY AND GEOLOGICAL ENHANCEMENT
POLICY NE3

All new development exceeding 5 dwellings (in the case of residential development) or incorporating gross floorspace in excess of 1000 sq m (in the case of other development) will be required to incorporate proposals to enhance biodiversity and geological features which are appropriate to, and where possible compensate for, impacts on the immediate area and the site characteristics.
Measures may include use of native species in landscaping schemes, or the improvement or creation of wildlife habitats or features of geological interest.
Priority will be given to woodland planting and other habitats and species identified by local Biodiversity Action Plan.
Where enhancement is not possible on the site, appropriate enhancements will be sought on other land.

Map provided by Buckinghamshire & Milton Keynes Environmental Record Centre of site designations within 1km



Please note that the layers held by the Environmental Records Centre are compiled from data that has been received from a variety of sources, including volunteers and professionals.

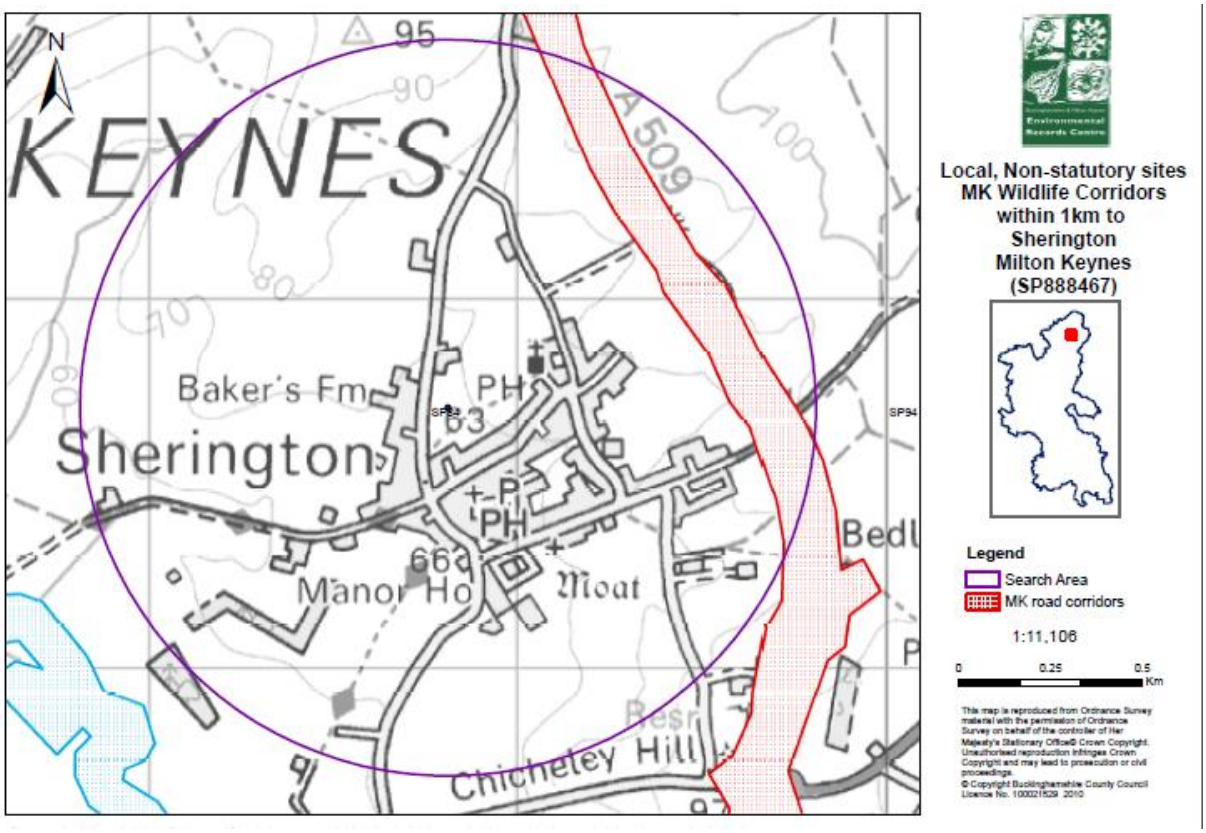
Local, Non-statutory sites within 1km to Sherington Milton Keynes (SP888467)

Legend
Search Area
Local Wildlife Sites

1:11,106

0 0.25 0.5 Km

Date created 05/11/2014


N
KEYNES
95
90
A509
80
70
Baker's Fm
PH
Sherington
63
SP94
PH
Bedl
Manor Ho
Moat
Chicheley Hill
Local, Non-statutory sites
MK Wildlife Corridors
within 1km to
Sherington
Milton Keynes
(SP888467)
Legend
Search Area
MK road corridors
1:11,106
0
0.25
0.5
Km
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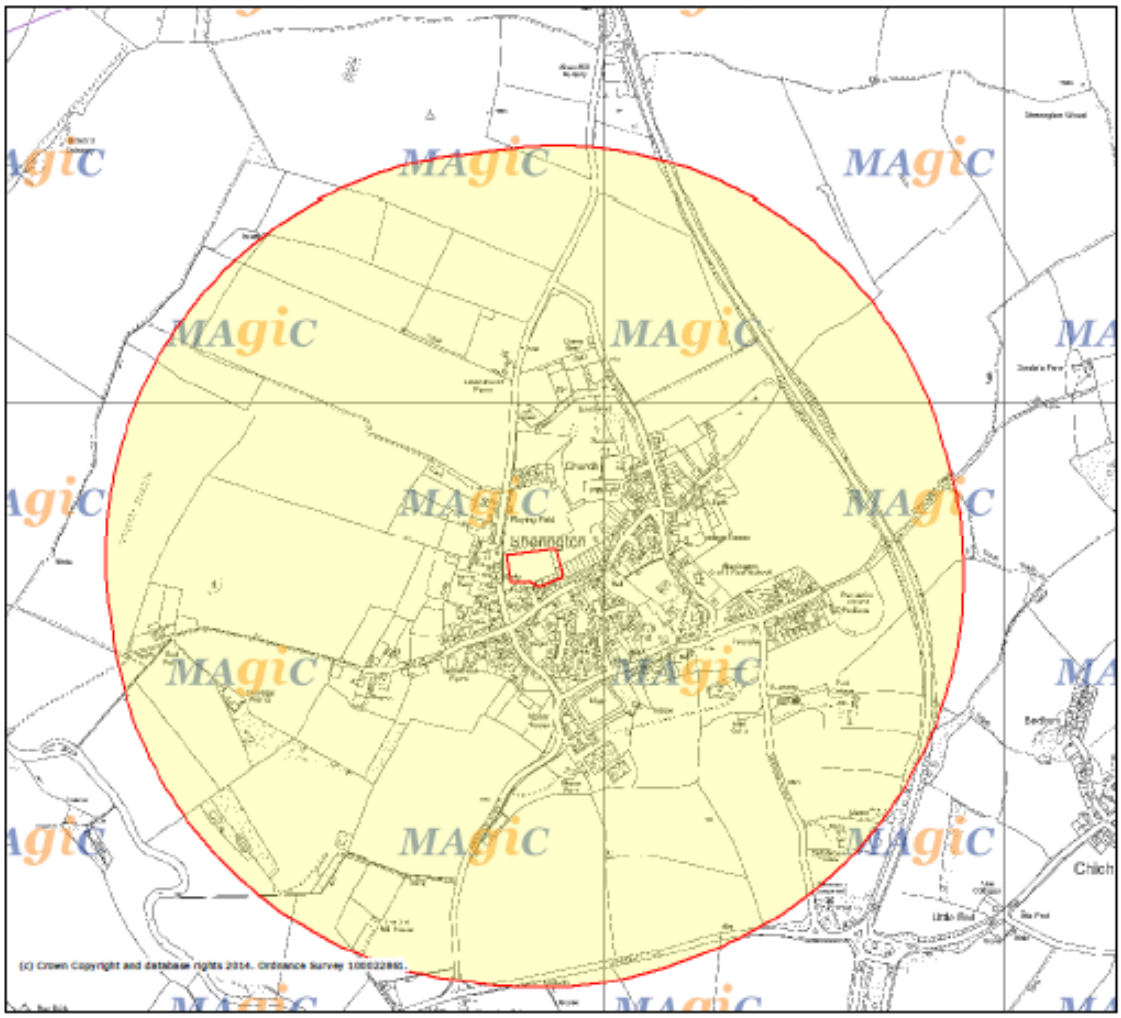
Magic Map 1km search zone for designated wildlife sites - Map



Legend

- Environmentally Sensitive Areas (England)
- Local Nature Reserves (England)
- National Nature Reserves (England)
- National Parks (England)
- Ramsar Sites (England)
- Sites of Special Scientific Interest (England)
- SSSI Impact Risk Zones (England) - For use by Local Planning Authorities to assess planning applications for likely impacts on SSSIs
- Special Areas of Conservation (England)
- Special Protection Areas (England)
- Biosphere Reserves (England)

Projection = OSGB36
xmin = 486700
ymin = 245500
xmax = 491100
ymax = 247900

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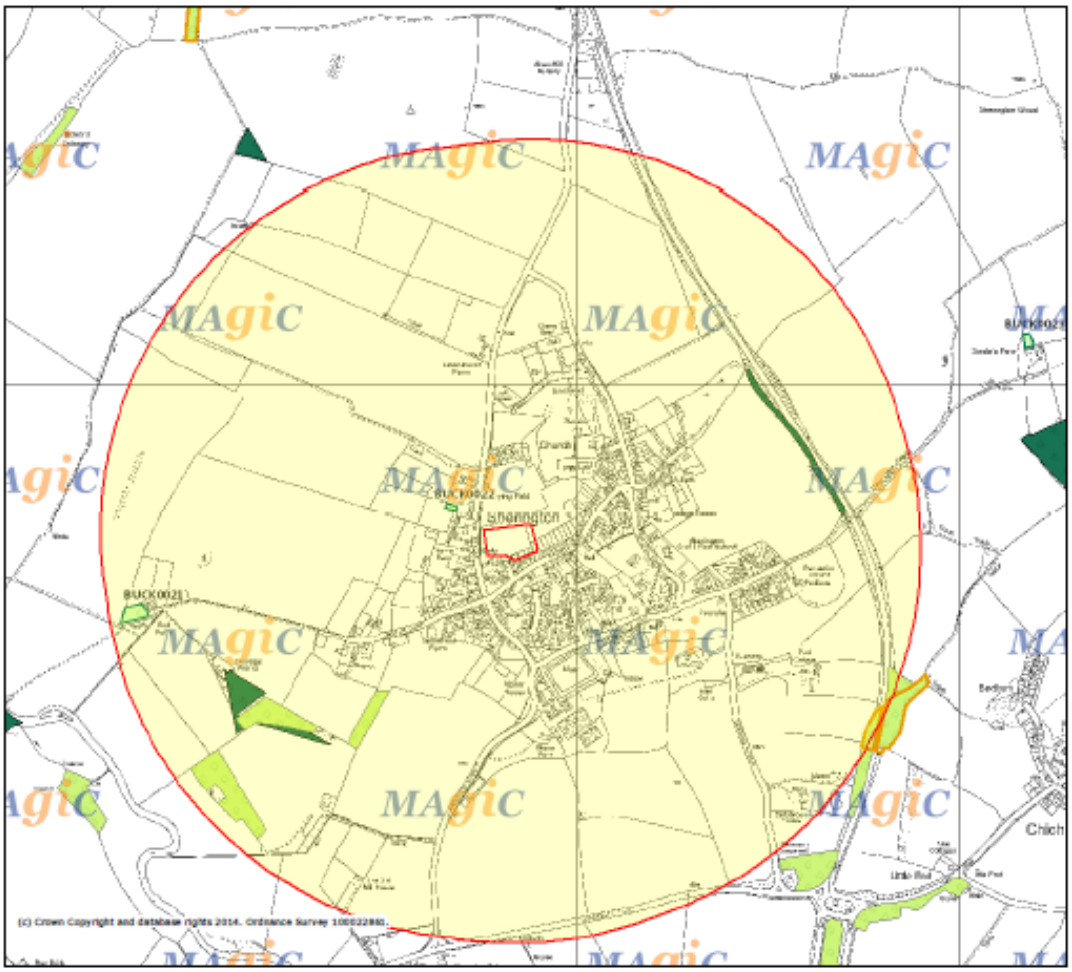
Magic Map 1km search zone for designated wildlife sites - Report

SSSI Impact Risk Zones (England) - For use by Local Planning Authorities to assess planning applications for likely impacts on SSSIs
1. DOES PLANNING PROPOSAL FALL INTO ONE OR MORE OF THE CATEGORIES BELOW?
2. IF YES, CHECK THE CORRESPONDING DESCRIPTION(S) BELOW. LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:
All Planning Applications
Airport
Airports, helipads and other aviation proposals, including new roads etc.
Infrastructure
Wind & Solar Energy
Quarry
Non Residential
Residential
Rural Residential
Air Pollution
Combustion
Waste
Composting
Discharges
Any discharge of water or liquid waste that is more than 20m³/day. The water needs to either be discharged to ground (ie to seep away) or to surface water, such as a beck or stream. Discharges to mains sewer are excluded.
Guidance
/Metadata_for_magic/SSSI IRZ User Guidance v1.8 MAGIC 04August2014.pdf

Magic Map 1km search zone for habitat inventory data



Legend

- Ancient and Semi-Natural Woodland
- Ancient Replanted Woodland
- Traditional Orchard BAP Priority Habitat (England)
- Forestry Commission Legal Boundary (England)
- Deciduous Woodland BAP Priority Habitat (England)
- National Inventory of Woodland and Trees (England)
- Woodpasture and Parkland BAP Priority Habitat (England)

Projection = OSGB36
xmin = 486700
ymin = 265500
xmax = 491100
ymax = 267900

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Wildlife Site Citations

Site Name	File Code	Date surveyed
A509 East of Sherington	84Y05	18/06/03
Parish	**District**	**Area (ha)**
Sherington	Milton Keynes	Approx.0.3
Grid Ref. SP897465	**Recorder(s)** Mr C Coppock & Mr M Olozulu	

Location, Topography, Boundaries and Surrounding Land Use
These roadside verges are approximately 1.5 km long and are about 0.6 km east of Sherington. The verges referred to are on both sides of the A509. The geology is Clay underlying typical calcareous pelosols. The terrain of both verges is steep, rising at an incline away from the road. Fences border the entire verge on either side of the road. Semi-improved grasslands are present to the west of the verge and to the east are arable fields. A remnant of woodland is present in the middle of the verge on the western side of the road.

Detailed Description
Both sides of the roadside verge are rough neutral grassland with scattered scrub. There is a higher diversity of species on the verge to the east of the road, and there are also pockets of species rich areas occurring sporadically along the western verge. The northern section of both verges is more species rich.

Creeping Cinquefoil (*Potentilla reptans*) is abundant. Bird's-foot-trefoil (*Lotus corniculatus*), Black Knapweed (*Centaurea nigra*), False Oat-grass (*Arrhenatherum elatius*), Creeping Bent (*Agrostis stolonifera*) and Wild Carrot (*Daucus carota*) occur frequently on both sides of the road verge.

Common Spotted Orchid (*Dactylorhiza fuchsii*), Cowslip (*Primula veris*), Glaucous Sedge (*Carex flacca*), Greater Burnet Saxifrage (*Pimpinella major*), Lesser Trefoil (*Trifolium dubium*), Hairy Tare (*Vicia hirsuta*), Red Bartsia (*Odontites vernus*), Yellow Oat-grass (*Trisetum flavescens*), Barren Brome (*Anisantha sterilis*), and Wild Basil (*Clinopodium vulgare*) were recorded as occasional.

There are a few damper areas on the eastern section, characteristic species occurring here include Hard Rush (*Juncus inflexus*), False Fox-sedge (*Carex otrubae*) and Selfheal (*Prunella vulgaris*).

Bee Orchid (*Ophrys apifera*)[1], Common Centaury (*Centaurium erythraea*), Meadow Vetchling (*Lathyrus pratensis*), Wild Marjoram (*Origanum vulgare*) and Wild Liquorice (*Astragalus glycyphyllos*)[1] are all locally abundant, and occur mainly to the north of the verge suggesting this section is more calcareous than the rest of the site.

This community most closely resembles National Vegetation Classification (NVC) MG1e *Arrhenatherum elatius* grassland *Centaurea nigra* sub-community.

The wooded section consists mostly of Ash (*Fraxinus excelsior*) and Pedunculate Oak (*Quercus robur*) with Blackthorn (*Prunus spinosa*), Dog Rose (*Rosa canina*), Field Rose (*Rosa arvensis*), Wayfaring Tree (*Viburnum lantana*) and Oregon Grape (*Mahonia aquifolium*) amongst the scrub species. There is scattered scrub along the entire length of the verge, which consists mostly of Blackthorn.

On this visit, 92 plant species were recorded.

[1] Uncommon in Bucks

Last updated: 13/02/2007

Due to the mosaic and structure of the habitat, some invertebrate fauna will be supported. Ringlet (*Aphantopus hyperantus*), Meadow Brown (*Maniola jurtina*), Marbled White (*Melanargia galathea*), Meadow Grasshopper (*Chorthippus parallelus*), Five-spot Burnet (*Zygaena trifolii*) and Common Blue Damselfly (*Enallagma cyathigerum*) were recorded on this visit. Anthills are distributed along the verge and are occupied by Black Ants.

Other species recorded on this visit are Green Woodpecker (*Picus viridis*) and Rabbit (*Oryctolagus cuniculus*).

Priority/local UK BAP species recorded
Cowslip
Green Woodpecker

Red Data Book (RDB) species recorded
None recorded

Nationally Scarce species recorded
None recorded

Current/Past Management Regime
The Highways Department of Milton Keynes Council manages the verge by mowing. Due to the abundance of False Oat-grass it can be deduced that the mowing regime is not conclusive to maintaining a species-rich sward.

Ideal Management Regime

- The mowing regime should be implemented in August onwards, this allows for the wildflowers to seed.
- Try to avoid low cutting heights, as bare patches will provide favourable areas for the invasion of species such as Creeping Thistle. This should be done sensitively to ensure that the anthills are not damaged.
- Discourage machinery access to grassland when conditions are damp.

Other Issues
None

Useful Information

Wildlife Trust	Tel: 01865 775476
English Nature	Tel: 01635 268881

Last updated: 13/02/2007

Buckinghamshire & Milton Keynes Wildlife Sites Project	LOCAL WILDLIFE SITE A509 Verge East of Sherington	Buckinghamshire & Milton Keynes Biodiversity Partnership

Site Name A509 Verge East of Sherington	File Code 84Y05	Grid Ref. SP897466–SP893471	Date Surveyed 23/07/2010	Area (ha) c.1.1
District Milton Keynes	Parish Sherington		Recorder(s) Philip Irving	
Soils 411d Hanslope	Superficial Deposits Chalky till		Bedrock Permian, Jurassic and Eocene Limestone	
			JCA (Joint Character Area) Bedfordshire and Cambridgeshire Claylands 88	

1. Location, Topography, Boundaries and Surrounding Land Use

1.1 The site consists of two sections of road verge north of Perry Lane either side of the A509 to the east of Sherington. It is between 80m and 90m in altitude. The species-rich grassland is mostly present on two sections of open, steep cutting on either side of the carriageway. Much of the rest of the site consists of dense and scattered scrub with areas of coarse grassland and ruderal vegetation in places, and tree and shrub planting on the outer section of the western verge. The site is bordered either side by intensive arable farmland with areas of improved grassland to the south.

1.2 The verges are located within two cuttings through chalky till that is possibly influenced by the underlying Oolitic limestone.

1.3 The verges on both sides of the carriageway south of Perry Lane have already been identified as an LWS and support a similar mix of habitats.

2. Detailed Description
Flora

2.1 The species-rich grassland at the site has affinities to both Lowland Calcareous Grassland and Lowland Meadow communities, ranging between an NVC MG1d/e Arrhenatherum community (Pastinaca/Centaurea sub-communities) and a CG7 Festuca-Hieracium-Thymus community on the steepest areas.

2.2 Grasses in the sward include false oat-grass *(Arrhenatherum elatius)*, red fescue (*Festuca rubra*), cock's foot (*Dactylis glomerata*), yellow oat-grass *(Trisetum flavescens)* and Yorkshire fog (*Holcus lanatus*), with a very sparse sward on the steepest areas of the west-facing slope of the cutting. Black ant hills are occasional in places.

2.3 The more neutral MG1e grassland along the base of the verge contains frequent creeping cinquefoil *(Potentilla reptans)*, black knapweed *(Centaurea nigra)*, ribwort plantain *(Plantago lanceolata)*, black medick *(Medicago lupulina)*, yarrow *(Achillea millefolium)*, red clover *(Trifolium pratense)* and autumn hawkbit *(Leontodon autumnalis)* with occasional wild basil *(Clinopodium vulgare)*, agrimony *(Agrimonia*

eupatoria), hedge bedstraw *(Galium mollugo)*, hairy St. Johns wort *(Hypericum hirsutum)*, hoary ragwort *(Senecio erucifolius)*, selfheal *(Prunella vulgaris)*, smooth hawksbeard *(Crepis capillaries)*, field bindweed *(Convolvulus arvensis)*, dandelion *(Taraxacum officinalis)*, bristly ox-tongue *(Picris echioides)*, wild carrot *(Daucus carota)*, tufted vetch *(Vicia cracca)*, smooth tare *(Vicia tetrasperma)*, red bartsia *(Odontites verna)*, stone parsley *(Sison amomum)* and common fleabane *(Pulicaria dysenterica)* The very coarsest areas containing frequent creeping buttercup *(Ranunculus repens)*, creeping thistle *(Cirsium arvense)*, field horsetail *(Equisetum arvense)*, perennial sow-thistle *(Sonchus arvensis)*, ground ivy *(Glechoma hederacea)*, nettle *(Urtica dioica)*, broad-leaved dock *(Rumex obtusifolius)*, cow parsley *(Anthriscus sylvestris)*, upright hedge parsley *(Torilis japonica)* and hogweed *(Heracleum sphondylium)*. Ruderal vegetation dominated by coarse herbs such as creeping thistle and broad-leaved dock, is present in places, such as on part of the west-facing slope of the cutting.

2.4 Finer MG1d grassland with occasional anthills is present on the east-facing western slope of the cutting and contains frequent wild carrot, wild basil, agrimony and selfheal with a range of calcareous grassland and lowland meadow indicators including frequent black knapweed and hairy violet *(Viola hirta)*, and occasional meadow vetchling *(Lathyrus pratensis)*, cowslip *(Primula veris)*, glaucous sedge *(Carex flacca)* and ox-eye daisy *(Leucanthemum vulgare)*.

2.5 The west facing eastern slope of the cutting supports a much sparser CG7-type grassland that contains frequent common centaury *(Centaurium erythraea)*, yellow-wort *(Blackstonia perfoliata)*, wild carrot and blue fleabane *(Erigeron acer)* as well as many of the above species such as black knapweed and agrimony. A single orchid seed head was found but due to the lateness of the survey it was not possible to confirm identification.

2.6 Much of the site is dominated by scattered or dense hawthorn scrub *(Crataegus monogyna)* (W21-Crataegus-Hedera community) with patches of bramble *(Rubus fruticosus)* (W24-Rubus-Holcus underscrub) in more open areas.

Much of the mature scrub is in turn developing into secondary W8-Fraxinus-Acer-Mercurialis woodland dominated by regenerating ash *(Fraxinus excelsior)*. Other woody species within the scrub include frequent field maple *(Acer campestre)* and blackthorn *(Prunus spinosa)*, and occasional dog rose *(Rosa canina)*, wild plum *(Prunus domestica)*, dogwood *(Cornus sanguinea)*, elder *(Sambucus nigra)* and apple *(Malus domestica)*. Ivy *(Hedera helix)* is abundant within the scrub.

2.7 The roadside ditch on the west side of the road contains frequent grey willow *(Salix cinerea)* with open sections overgrown with great willowherb *(Epilobium hirsutum)* and hard rush *(Juncus inflexus)*, and occasional bittersweet *(Solanum dulcamara)*.

2.8 The strip of land to the west of the western verge has been planted up with a range of tree and shrub species including pedunculate oak *(Quercus robur)*, ash, field maple, pine sp., cherry *(Prunus avium)*, aspen *(Populus tremula)*, white poplar *(Populus alba)*, hazel *(Corylus avellana)*, guelder rose *(Viburnum opulus)* and rowan *(Sorbus aucuparia)*.

3. Fauna

No notable fauna was recorded during the survey.

4. Past / current management regime

4.1 Apart from regular mowing along the base of the verges, the site appears generally unmanaged, with much of the small remaining areas of grassland on the cutting becoming invaded by bramble and other scrub and trees.

5. Ideal management regime

This is intended to represent an ideal management regime to maximise the wildlife value of the site. It is recognised that this management may not be achievable or desirable for the landowner but it is hoped that he/she will consider moving towards this prescription. The management options detailed below in no way infer any criticism of the current management of the site and it is acknowledged that the botanical diversity of the site is due to the sensitivity of the previous actions of the landowner/manager.

5.1 The remaining areas of species-rich grassland at the site will be lost to scrub growth within a relatively short time unless positive management is carried out. All scrub should be removed from the two main areas on the east and west facing slopes (see plan), with cut stumps treated with herbicide to prevent regrowth. These areas should then be managed by an annual hay cut in late summer to prevent further scrub invasion and the spread of coarse plants. Clearance of dense bramble and other scrub around the edges of these areas should also be carried out to expand the areas of grassland. Other areas of less diverse grassland should be managed by a rotational scrub cutting regime to maintain a scrub/grassland mosaic.

5.2 The areas of dense scrub/developing woodland would be enhanced by a regime of rotational cutting to create a more diverse age structure of more value for invertebrate and bird species. Some of the developing woodland should be allowed to develop by a policy of minimum intervention.

5.3 It is recommended that the site is added to the existing LWS as it supports a similar mix of grassland and scrub habitats, including small areas of reasonably diverse calcareous grassland.

Help and advice

Help is available from a number of sources to implement these recommendations:

Bucks & MK Environmental Records Centre (Wildlife records)	01296 696012
Bucks Invertebrate Group (Insect surveys)	c/o 01296 696012
RSPB (Farmland bird advice)	01295 253330
Farming & Wildlife Advisory Group (FWAG – advice on farmland wildlife management and Environmental Stewardship)	01993 886565

Number of Vascular Plant Species Recorded

23/07/2010 69 species Philip Irving

Including 3 Calcareous Grassland indicators and 6 Lowland Meadow indicators

Ancient Woodland Indicator Species

N/A

County Scarce Plants (BSBI Rare Plants List)
0

County Rare Plants (BSBI Rare Plants List)
0

Nationally Scarce Species
0

Red Data Book Species
0

UK Biodiversity Action Plan (BAP) Species
0

Birds of Conservation Concern (RSPB)
0

Habitats & Species of Principal Importance – Section 41 List from NERC Act (2006)
Lowland Calcareous Grassland/Lowland Meadow

LOCAL WILDLIFE SITE REPORT PRODUCED BY:
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On behalf of Buckinghamshire & Milton Keynes Wildlife Sites Project
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Tel. 01525 237760
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Buckinghamshire & Milton Keynes Wildlife Sites Project

LOCAL WILDLIFE SITE

Hazelmead Farm, Sherington

Buckinghamshire & Milton Keynes Biodiversity Partnership

Site Name Hazelmead Farm, Sherington	**File Code** 84Y06	**Grid Ref.** SP 884474	**Date Surveyed** 21/09/06	**Area (ha)** 4.35
District Milton Keynes	**Parish** Sherington	**Geology** Chalky Till	**Recorder(s)** M.Margot, R.Maycock, C. Coppock	
			JCA (Joint Character Area) 88 Bedfordshire & Cambridgeshire Claylands	

1. Location, Topography, Boundaries and Surrounding Land Use

1.1 These fields lie to the NW of Sherington and 3.25 km north of Newport Pagnell. The site rises gently from 75m in the east to a height of 90m in the centre, then drops steeply back down to 75m to the west. The geology is Chalky Till and the soils are slowly permeable calcareous clayey soils (Soil Asscociation 411d – HANSLOPE).

1.2 This grassland site is enclosed by hedgerows and located within an arable dominated landscape. To the east there is a road and opposite this there is a grazed field. To the north, south and west there are large arable fields. Adjoining Field E/D there is an improved grass field, possibly re-seeded with Perennial Rye-grass (*Lolium perenne*). To the west lies Hill Plantation BNS and to the east A509 verge east of Sherington LWS. To the NE is Hollington Wood, an ancient wood.

1.3 The two smaller square fields, near to Hazelmead Farm buildings were not included in the survey. They are improved grassland.

1.4 **NB: Only Field C passed as a Local Wildlife Site at the Wildlife Sites Selection Panel.**

2. Detailed Description

Flora

2.1 Six fields were surveyed at Hazelmead Farm and they varied significantly in character and quality. The majority of the fields were relatively species poor being improved or semi-improved grassland. The ridge and furrow field (Field C) was of the most interest with a good number of herb species present. At the western end of the site there was a wet ditch/stream with a number of aquatic species.

2.2 Field A was ploughed up 6 years ago (circa 2000) and sown with a grass mix. It is improved and no forbs of interest were present. It was dominated by Perrenial Rye-grass and Red Clover (*Trifolium pratense*). The western half of the field had a greater diversity of grasses with Crested Dog's Tail (*Cynosurus cristatus*) and Meadow Barley (*Hordeum secalinum*) occurring occasionally. Field B was similar to A with the sward being rank and tussocky.

2.3 Field C can be split into 4 distinct areas: the eastern end, the steep ridge and furrow slope, the old railway mound, and the western end. The eastern end was similar in character to field A and B, with little botanical interest.

2.4 From the highest point of the field C, there was a relatively steep slope towards the west with remnant ridge and furrow, an uncommon feature in this area. This part of Field C is mesotrophic grassland with affinities to National Vegetation Classification (NVC) MG5 *Cynosurus cristatus – Centaurea nigra* grassland with species associated with the *Lathyrus pratensis* sub-community (a) and *Galium verum* sub-community (b). The species composition also indicates a calcareous influence associated with the ridges and the aborted railway line.

2.5 The sward was generally dense and tussocky but a wide variety of chalk species persisted. In amongst the long grass there were a number of yellow meadow anthills. Grasses included False Oat-grass (*Arrhenatherum elatius*), Rough Meadow-grass (*Poa trivalis*), and Quaking Grass (*Briza media*).

2.6 The most frequent herb species here were Yarrow (*Achillea millefolium*), Common Bird's Foot Trefoil (*Lotus corniculatus*), Red Clover, Smooth Hawk's-beard (*Crepis capillaris*) and Lady's Bedstraw (*Galium verum*). Species occurring more occasionally included Dwarf Thistle (*Cirsium acaule*), Lesser Hawkbit (*Leontodon saxatilis*), Goat's Beard (*Tragopogon pratensis*), Selfheal (*Prunella vulgaris*), Black Knapweed (*Centaurea nigra*), Autumnal Hawkbit (*Leontodon autumnalis*), Creeping Cinquefoil (*Potentilla reptans*) and Glaucous sedge (*Carex flacca*).

2.7 The following species of greater interest were found rarely across the ridge and furrow slope: Agrimony (*Agrimonia eupatoria*), Wild Carrot (*Daucus carota*), Meadow Vetchling (*Lathyrus pratensis*), Rough Hawkbit (*Leontodon hispidus*), Fairy Flax (*Linum catharticum*) and Black Medick (*Medicago lupulina*). Hoary Ragwort (*Senecio erucifolius*), associated with clay or chalk soils, was found in one location near the base of the slope. Here the sward was slightly shorter and there were scattered clumps of scrub, mainly Hawthorn (*Crataegus monogyna*). Hard Rush (*Juncus inflexus*) was found in a damp area situated towards the top of the slope.

2.8 Running along the length of the base of the slope there was a raised mound from a proposed railway line that was never completed. Here the sward was very short, possibly due to rabbit grazing. A species of note found here was Hoary Plantain (*Plantago media*), also associated with calcareous soils. The fourth area of Field C, the western end, was grass dominated with little herb interest.

2.9 Field D, at the western end of the site, was grass dominated with False Oat-grass, Red Fescue (*Festuca rubra*), Creeping Bent (*Agrostis stolonifera*) and some Crested Dog's Tail. Autumnal Hawkbit, Goat's Beard and Meadow Buttercup (*Ranunculus acris*) occurred rarely.

2.10 Along the edge of Field D there was a wet ditch/small stream which created a boundary with Field E. Two old White Willow (*Salix alba*) pollards were growing on the banks. Species found frequently included Fool's Water-cress (*Apium nodiflorum*), Plicate Flotegrass (*Glyceria notata*), Jointed Rush (*Juncus articulatus*), Common Fleabane (*Pulicaria dysenterica*), Water Figwort (*Scrophularia auriculata*), Hairy Sedge (*Carex hirta*), Brooklime (*Veronica beccabunga*), Square-stalked St. John's wort (*Hypericum tetrapterum*), Woody Nightshade (*Solanum dulcamara*) and Great Willowherb (*Epilobium hirsutum*).

2.11 Field E was locally species rich, but significantly less than C, with some anthills present. It was under grazed and very tussocky with Cock's Foot (*Dactylis glomerata*) and Creeping and Spear Thistle (*Cirsium arvense and vulgare*) being

abundant. Herb species included Lady's Bedstraw, Black Knapweed, Yarrow, Autumnal Hawkbit, Common Sorrel (*Rumex acetosa*), Red Clover and a small patch of Lesser Stitchwort (*Stellaria graminea*) by the hedge.

2.12 Field F was of very little botanical interest as it was improved and under grazed. The sward varied from fine to dense but was rank with much Red Fescue, Creeping Bent, Meadow Barley and Crested Dog's Tail with White Clover (*Trifolium repens*) throughout. Lady's Bedstraw and Red Clover occurred rarely.

2.13 All the fields were surrounded by hedges which varied from being quite dense to gappy. The common species were Blackthorn (*Prunus spinosa*) and Hawthorn, with Elder (*Sambucus nigra*), Cultivated Apple (*Malus domestica*), Ash (*Fraxinus excelsior*), and Elm (*Ulmus procera)* occasional. Midland Hawthorn (*Crataegus laevigata*) was rare in the hedgerows.

3. Fauna

This is not an exhaustive list but represents species encountered during the floral survey.
These fields provided important habitat for birds, mammals, and butterflies.

Birds
Sky Lark
Yellowhammer
Meadow pipit
Green Woodpecker
Barn Owl
Kestrel
Robin
Magpie

Mammals
Muntjac Deer
Fox
Weasel (Dead)

Invertebrates

Butterflies
Brimstone
Comma
Speckled Wood
Large White
Small Copper

Other
Common Darter
Kentish Snail (*Monacha cantiana*)

4. Current management regime

4.1 Sheep lightly graze all the fields. Some fields have been improved.

5. Ideal management regime

This is intended to represent an ideal management regime to maximise the wildlife value of the site. It is recognised that this management may not be achievable or

desirable for the landowner but it is hoped that he/she will consider moving towards this prescription. The management options detailed below in no way infer any criticism of the current management of the site and it is acknowledged that the current good botanical diversity of parts of the site is due to the sensitivity of the previous actions of the landowner/manager.

5.1 Hazelmead Farm has potential to support a more diverse range of wildflowers, hence providing important habitat for more insects and birds. The site currently supports an interesting array of calcareous species in the ridge and furrow field but these are being out competed by coarser species, especially grasses. Without management the grassland will continue to become more tussocky and the finer herb species will be lost.

5.2 It is recommended that stock are kept in Field C and Field E (using available sheep), without the freedom to move to other fields. Stocking levels should be increased in order to reduce the amount of grass in the sward and to break up the thatch layer, which has started to develop. Stock will need to be removed from these fields in spring and summer (e.g. to the neighbouring improved fields) in order to allow wildflowers to establish and set seed.

5.3 In the first year and every fifth year it would be advisable to summer graze at lower stocking levels to further reduce the sward height, even creating small patches of bare ground where wildflowers can re-establish.

5.4 Stock should not be supplementary fed in Field C and E as this leads to localised enrichment and encourages unfavourable, rank species. Spot spraying of rank species like Creeping Thistle, Spear thistle, Nettles, and Broadleaved Dock is recommended to prevent their spread.

5.5 The wet ditch/stream is an important feature of the site and it should be safeguarded. Do not apply fertiliser within 10m of this watercourse. In the future it would be advisable to pollard the willows to maintain their longevity.

5.6 It is recommended that hedges are cut every 2-3 years on rotation to enable berry and flower production for the benefit of invertebrates, birds and mammals. Fencing the hedgerows on both sides (where possible) will prevent livestock browsing the base of the hedge allowing a thick bottom to develop, benefiting a greater number of nesting birds. It would be advisable to fill in gaps with native saplings.

5.7 Several important farmland birds of conservation concern, such as Yellowhammer, Skylark and Barn Owl, were recorded during the survey. Every effort should be made to encourage these birds e.g. by leaving areas of longer grass in the improved fields. The RSPB volunteer farmer alliance scheme arranges bird surveys on suitable farmland in order to find out more about bird populations. They may be able to arrange a surveyor to visit this site and can be contacted on the number below.

5.8 Help is available to implement the best ecological management of these fields through the Environmental Stewardship Scheme. It is recommended that you contact FWAG, who have already assessed the suitability of this site, to discuss what Entry Level Options would be most suitable and achievable for you. Options such as permanent pasture with low inputs and hedgerow management would require limited change in the current management. Ring FWAG on 01993 886565.

For more details about the scheme see
http://www.defra.gov.uk/erdp/schemes/els/default.htm.

Help and advice
Help is available from a number of sources to implement these recommendations.

Bucks & MK Environmental Records Centre (Wildlife records)	01296 696012
Bucks Invertebrate Group (Insect surveys)	c/o 01296 696012
Environmental Stewardship (local Natural England office)	01993 886540
RSPB (Farmland bird advice)	01295 253330
Farming & Wildlife Advisory Group (FWAG – advice on farmland wildlife management and Environmental Stewardship)	01993 886565
Forestry Commission (Woodland Grants)	01296 696543
North Bucks Bat Group (Bat surveys & advice)	01296 427972

Number of Vascular Plant Species Recorded
87

County Uncommon Vascular Plants
0

County Rare Vascular Plants
0

Bucks & Milton Keynes Biodiversity Action Plan Species
Sky Lark
Yellowhammer
Meadow pipit
Green Woodpecker
Barn Owl
Kestrel
Small Copper

Ancient Woodland Indicator Species
N/A

LOCAL WILDLIFE SITE REPORT PRODUCED BY:
Michelle Dublon,
Buckinghamshire & Milton Keynes Wildlife Sites Officer
c/o Countryside Initiatives Team,
Buckinghamshire County Council,
Annexe A, County Hall,
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APPENDIX TWO
Target Notes Report
Ref: 4828.004

Target Note 1

There is a mature hedge-line along the western boundary of the site. A wet ditch runs along the west side of the hedge-line and is culverted. The hedge is mainly intact, with a gap in the middle to allow a public footpath to cross through. The hedge is approximately 5m wide and 80m in length.

Crataegus monogyna	Hawthorn	D
Hedera helix	Ivy	A
Rubus fruticosus agg.	Bramble	A
Anthriscus sylvestris	Cow Parsley	F
Calystegia sepium	Hedge bindweed	F
Epilobium hirsutum	Great Willowherb	F
Scrophularia auriculata	Water Betony	F
Urtica dioica	Nettle	F
Cornus sanguinea	Dogwood	O
Galium aparine	Cleavers	O
Glechoma hederacea	Ground-ivy	O
Ranunculus repens	Creeping Buttercup	O
Rumex obtusifolius	Broad-leaved Dock	O
Sambucus nigra	Elder	O
Lamium album	White Dead-nettle	R
Plantago media	Hoary Plantain	R
Sonchus asper	Prickly Sow-thistle	R
Taxus baccata	Yew	R

Target Note 2

There is an area of dense scrub to the south west of the site, which extends along the southern boundary.

Rubus fruticosus agg.	Bramble	D
Cirsium arvense	Creeping Thistle	A
Dactylis glomerata	Cock's-foot	F
Solanum dulcamara	Bittersweet	F
Cirsium vulgare	Spear Thistle	O
Geranium robertianum	Herb-Robert	O
Heracleum sphondylium	Hogweed	O
Rumex acetosa	Common Sorrel	O
Tussilago farfara	Colt's-foot	O
Urtica dioica	Nettle	O
Artemisia vulgaris	Mugwort	R
Symphoricarpos albus	Snowberry	R

Target Note 3

The majority of the field is semi-improved grassland that is currently not grazed and left unmanaged.

Lolium perenne	Ryegrass	D
Dactylis glomerata	Cock's-foot	A
Arrhenatherum elatius	False Oat-grass	F
Cirsium arvense	Creeping Thistle	F
Achillea millefolium	Yarrow	O
Anthriscus sylvestris	Cow Parsley	O
Centaurea nigra	Knapweed	O
Deschampsia cespitosa	Tufted Hair-grass	O
Heracleum sphondylium	Hogweed	O
Plantago lanceolata	Ribwort Plantain	O
Poa trivialis	Rough Meadow-grass	O
Ranunculus acris	Meadow Buttercup	O

KEY - D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Ranunculus repens	Creeping Buttercup	O
Rumex acetosa	Common Sorrel	O

Target Note 4

This mature hedge-line is approximately 100m in length along the northern boundary. It is mainly dominated by hawthorn with dense ivy cover. These sections are approximately 5m in width. The mid-section is dominated by blackthorn, which is not managed and has therefore started to encroach southwards to a width of 10m. The understorey consists mainly of dense bramble and there is a dry ditch within the hedge-line.

Crataegus monogyna	Hawthorn	D
Prunus spinosa	Blackthorn	A
Rubus fruticosus agg.	Bramble	A
Cirsium arvense	Creeping Thistle	F
Urtica dioica	Nettle	F
Ulmus sp.	Elm species	R

Target Note 5

A mature hawthorn dominated hedge is present along the eastern boundary. There is a dry ditch within the hedge. On the west facing side of the hedge, the understorey is dominated by dense scrub. The hedge is approximately 7m in width and 80m in length.

Crataegus monogyna	Hawthorn	D
Calystegia sepium	Hedge bindweed	A
Cirsium arvense	Creeping Thistle	A
Glechoma hederacea	Ground-ivy	A
Hedera helix	Ivy	A
Rubus fruticosus agg.	Bramble	A
Urtica dioica	Nettle	A
Galium aparine	Cleavers	F
Rubus idaeus	Raspberry	F
Lamium album	White Dead-nettle	O
Sambucus nigra	Elder	O
Stachys sylvatica	Hedge Woundwort	O
Achillea millefolium	Yarrow	R
Ranunculus repens	Creeping Buttercup	R
Ulmus sp.	Elm species	R

KEY - D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

APPENDIX THREE
Bat and Bird Box Examples

BAT BOXES TO INSTALL INTO OR ON TO BUILDINGS & BUILT STRUCTURES

These bat boxes are designed to be built into buildings, or underneath bridges, arches or tunnels, where conditions are relatively humid. There are particularly useful for incorporating into new buildings or bridges to attract bats or to provide new roost sites where existing buildings with bats are being renovated.

Schwegler N27

This box should be cemented into a wall. It contains a single internal wooden panel which simulates a crevice. The removable front panel allows for easy cleaning. *No painting is required, but if it is necessary, a natural breathable paint should be used*
Woodcrete (75% wood sawdust, concrete and clay mixture)
Width 18cm, Height 29cm, Depth 23.5cm

Schwegler 1FR Bat Tube

This long box can be installed within brick masonry, beneath plasterwork or wood panelling, or incorporated into concrete structures such as factory buildings or bridges. Inside it contains a woodcrete surface, a roughened wood board, and a metal mesh, providing a choice of roosting areas depending on the weather conditions and the bats' habits. This box is maintenance-free as the entrance slit is at the bottom, allowing for self cleaning. No painting required, but if painting is necessary a natural breathable paint should be used

Woodcrete (75% wood sawdust, concrete and clay mixture)
Width 20cm, Height 47.5cm, Depth 12.5cm
Entrance width 15cm, Entrance depth 2cm

Schwegler 2FR Bat Tube

The same design as the 1FR but with holes in the sides. This allows multiple tubes to be placed next to each other to form a much larger bat roost. These boxes are maintenance-free as the entrance slit is at the bottom. No painting required, but if painting is necessary a natural breathable paint should be used.

Woodcrete (75% wood sawdust, concrete and clay mixture)
Width: 20cm, Height: 47cm, Depth: 12.5cm, Weight: 13kg
Entrance Width: 15cm, Entrance Depth: 2cm

Ibstock - Enclosed Bat Box B

- Designed specifically for the pipistrelle bat
- Available in all brick types
- Discrete home for bats
- Various sizes
- Several roosting zones are created inside the box
- Bats are contained within the bat box itself
- Maintenance free with entrance at the base
- Ideal for new build & conservation work

215mm x 215mm or 215mm x 290mm
F2 S2 Fully frost resistant

Ibstock - Bat Box with Engraved Motif C

- Attractive motive
- Available in all brick types
- Discrete home for bats
- Various sizes
- Several roosting zones are created inside the box
- Bats are contained within the bat box itself
- Maintenance free with entrance at the base
- Ideal for new build & conservation work

215mm x 215mm or 215mm x 290mm
F2 S2 Fully frost resistant

Schwegler Bat Access Panel

This is a maintenance free access panel, designed to allow bats entry through exterior walls. The rear of the panel is left open so bats can pass through into existing bat roosts. The bat panel is particularly useful when renovation or conversion work is taking place in buildings containing bat roosts, where continued access to established bat roosts is desirable. No painting is required, but if painting is necessary a natural breathable paint should be used.

Material: Woodcrete (75% wood sawdust, concrete and clay mixture)
Width: 30cm, Height: 30cm, Depth: 8cm, Weight: 7.8kg

Back Plate for 1FE Bat Panel

If access to an existing nesting site is not required, the 1FE can be fitted with an optional Back Plate, which includes an attached wooden panel to create a cavity wall inside the box .The roughened surfaces of the Plate, and the inside of the 1FE itself, are very attractive to bats. Installation of the complete box is easy. For example, it can be screwed to a wall or fixed within insulation.

Material: Woodcrete (75% wood sawdust, concrete and clay mixture)
Weight: 2.2kg

Schwegler 1FQ Bat Box

An attractive box designed specifically to be fitted on the external wall of a house, barn or other building. Equally appealing to bats as a roost or a nursery, it features a special porous coating to help maintain the ideal temperature inside as well as a roughened front panel to enable the bats to land securely. Access into the box is via a step-like recess.
Inside the box, rough pieces of wood are incorporated into the back of the box which are good insulators and are used by the bats as perches. The internal layout offers three different areas with varying degrees of brightness and temperature.
This durable box is easy to attach to most walls, requires no maintenance or cleaning and will last for decades. Please note that this box is designed to be fitted to a wall. Due to the weight it is unsuitable for fences or sheds.

Woodcrete (75% wood sawdust, concrete and clay mixture)
Height 565mm; Width 350mm, Depth 85mm, Weight 13kg

BAT BOXES FOR SITING ON TREES

Schwegler 2F Bat Box

A popular general purpose box attractive to the smaller British bats. A simple design with a narrow entrance slit on the front.

Woodcrete (75% wood sawdust, concrete and clay mixture)
Diameter 16cm
Height 33cm

Schwegler 2F-DFP Bat Box

A general purpose box attractive to the smaller British bats, with a roughened wooden panel inside the box which simulates a crevice.
This box is favoured by Daubenton's bat and Nathusius' pipistrelle.

Woodcrete (75% wood sawdust, concrete and clay mixture)
Diameter 16cm
Height 33cm

Schwegler 2FN Bat Box

A larger box with both a wide access slit at the base and an access hole on the underside. Suitable for the larger British bat species. Particularly successful in attracting noctule and Bechstein's bats.

Woodcrete (75% wood sawdust, concrete and clay mixture)
Diameter 16cm
Height 36cm

Schwegler 1FD Bat Box

A large general purpose bat box, with two roughened wood panels inside the box which simulate crevices.

Woodcrete (75% wood sawdust, concrete and clay mixture)
Diameter 16cm, Height 36cm

Schwegler 1FW Hibernation Box

This large box is designed to provide a protected environment, particularly through the cold winter months when bats hibernate. It has three internal wooden panels imitating crevices. *Supplied with special fixing brackets. It is important to fit this heavy box very securely if mounting above the ground, and to site it well away from public areas.*

Woodcrete (75% wood sawdust, concrete and clay mixture)
Diameter 38cm, Height 50cm, Weight 30kg

Schwegler 1FS Bat Box

Schwegler woodcrete boxes have the highest rates of occupation of all box types. The 75% wood sawdust, concrete and clay mixture allows natural respiration, stable temperature, and durability. They are extremely long lasting and rot- and predator-proof. The 1FS is a larger capacity general purpose bat box with more insulation than most boxes for a more stable temperature in the winter.
Wooden block hanger and 'tree-friendly' aluminium nails included.
Woodcrete (75% wood sawdust, concrete and clay mixture)
Diameter: 28cm Height: 44cm Weight: 10kg

BIRD BOX SPECIFICATIONS

BOXES TO FIT ON/IN BUILDINGS

Sparrow Terrace, Stone Colour
House sparrows are gregarious and prefer to nest close to each other, so this woodcrete box provides room for three families under one roof. Made from long-lasting, breathable woodcrete. Stone colour.
No maintenance required.
Dimensions 245 x 430 x 200 mm.
Weight 13kg. Designed for fixing to walls (not suitable for fences or sheds due to the weight of the box).
A02085 Sparrow Terrace, Stone Colour (also available in brown)

Schwegler 9A House Martin Double Nest
These woodcrete nests are durable and ready for immediate use when birds return each summer. Easily fixed under the eaves on the outside walls of buildings, at least 2 metres from the ground. The backing board may be painted to match the building. Model 9A is a double unit with two nests mounted side by side on a backing board, as shown. Model 9B is similar to the 9A above but with one single nest
A02018 Schwegler 9A House Martin Double Nest
A02019 Schwegler 9B Single House Martin Nest

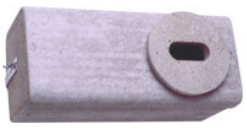
Schwegler No 10 Swallow Box
This box should be located inside buildings such as barns, stables, sheds or outhouses, ensuring there is always access for the birds through a window or opening.
A02020 Schwegler No 10 Swallow Box

Droppings Board
To avoid problems with bird droppings from house martin or swallow nests, this board can be installed where necessary, for example over a window or door.
A02021 Droppings Board

Schwegler No 16 IMF Swift Box, Double Chamber
The design of this box mimics bell tower louvres. It has two removable panels for easy inspection of the two nest chambers.
Designed for fixing on or within walls (not suitable for fences or sheds).
Dimensions 460mm h x 430mm w x 225mm d
A02088 Schwegler No 16 IMF Swift Box, Double Chamber

Schwegler No 16 Swift Box, Single Chamber
Similar to the box above but with a single chamber and single front panel.
Dimensions 240mm h x 430mm w x 225mm d.
A02087 Schwegler No 16 Swift Box, Single Chamber

Nest Mould for No 16 Swift Boxes
This nest mould fits inside the nest chamber of the No16 or No16 IMF boxes above, to encourage nesting. Research shows that the birds are more likely to nest if a nest mould is used.
A02089 Nest Mould for No 16 Swift Boxes



Schwegler No 17 Swift Box
This box is constructed from plant-fibre based material. It should be sited 6-7m above the ground, near the roof of a building or on a steep rock face.
Interior dimensions 14 x 14 cm. Outer length 34cm
A02041 Schwegler No 17 Swift Box

Schwegler No 18 Swift Box
This nest box is suitable for fixing high under the eaves or under the guttering of a building.
Woodcrete on board backing.
Interior dimensions 14 x 34 x 15 cm.
Exterior dimensions 19 x 50 x 22 cm
A02041A Schwegler No 18 Swift Box

Schwegler N24 Nest Brick
Designed for installation into the fabric of a building, this box is suitable for tits and redstart etc. Woodcrete.
Weight 7.3kg
Entrance hole 32mm Dimensions 180w x 180d x 240h mm
A02043 Schwegler N24 Nest Brick

Schweger N25 Nest Brick
Designed for installation into the fabric of a building, this box is suitable for swifts.
Woodcrete
Weight 8.8kg
Entrance hole 55x33mm. Dimensions 260w x 220d x 180h mm
A02044 Schwegler N25 Nest Brick

Schwegler N26 Nest Brick
Designed for installation into the fabric of a building, this box is suitable for pied wagtail, spotted flycatcher and black redstart etc. Woodcrete.
Weight 5.4kg
Entrance hole 110mm Dimensions 180w x 180d x 200h mm
A02045 Schwegler N26 Nest Brick

BOXES TO FIT FENCES, WALLS AND TREES

Schwegler 1B Bird Box, natural brown
The 1B appeals to a wide range of species, and is the official nest box of National Nest Box Week. The box can be nailed to the trunk of a tree, or hung from a branch. Schwegler boxes can be expected to last 25 years or more without maintenance.
Woodcrete, 23cm high x 16cm diameter.
With standard 32mm diameter entrance hole

Schwegler 2H Open Fronted Nest Box
This box is attractive to this box is attractive to robins, pied wagtails, spotted flycatcher, wrens and black redstarts. Best sited on the walls of buildings with the entrance on one side. Schwegler boxes have the highest occupation rates of all box types. They are carefully designed to mimic natural nest sites and provide a stable environment for chick rearing and winter roosting. They can be expected to last 25 years or more without maintenance.
A02015 Schwegler 2H Open Fronted Nest Box

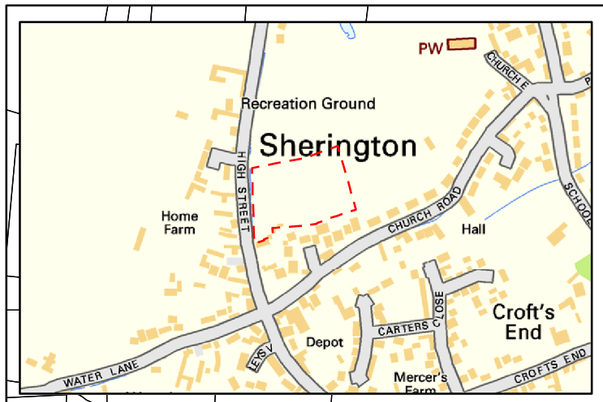
Schwegler Roundhouse Wren Box 1ZA - Autumn Red
Well insulated and mimics natural nest sites
This nest box provides the enclosed, round space preferred by wrens for nesting. They will line the nest with moss, feathers and fur. The 1ZA is made from long-lasting, breathable Schwegler Woodcrete and provides excellent protection from nest predators. It not only houses wrens when bringing up their young but also provides a sheltered place where they can roost in the winter. Strong hanging cable included to site the nest amongst shrubbery.
Code: 002096D

Gable Nest Box
A substantial wooden bird box with a gable roof and 28mm entrance hole. Made of 15mm thick softwood, external dimensions 14.5cm x 14.5cm x 26cm high (to top of gable). Suitable for the smaller garden birds.
A03008 Gable Nest Box

Wooden Bird Box
A simple wooden bird box with sloping roof, suitable for the smaller garden birds. Made from substantial 2cm thick softwood. 14cm w x 18cm d x 26cm h (backplate 33.5cm h). The standard model has a 32mm diameter entrance hole attractive to a wide range of smaller garden birds.
A03004 Wooden Bird Box

Roosting Pockets.
These attractive roosting/nest pockets can be used by wild birds in autumn, winter and spring. The birds can save energy during the colder months by roosting in a sheltered place. These pockets also provide a warm nesting place in the spring for smaller birds such as wrens. Made from natural materials. The pockets have a wire at the back to fix onto a branch, or they can be stapled or nailed to a fence or trellis with plant cover. Pack of 3 assorted roost pockets (styles may vary).
A02090 Roosting Pockets

DRAWINGS



Key

- Target notes
- Survey boundary
- Running water
- Species-poor intact hedge
- Species-poor defunct hedge
- Dry ditch
- Dense/continuous scrub
- SI — Semi-improved neutral grassland
- A — Amenity grassland

TN1 TN2 TN3 TN4 TN5

High Street

Metres
0 5 10 20 30 40 50

OS Base map supplied by client

Rev	Description	Dwn	Appvd	Date

TEP
Genesis Centre
Birchwood Science Park
Warrington WA3 7BH
Tel 01925 844004
Fax 01925 844002
email tep@tep.uk.com

Project:
Sherington, Milton Keynes

Title:
Phase 1 Habitat Survey

Map No.
G4828.002

Scale:	Date:
1:500 @ A3	03/11/2014

Drawn:	Checked:	Approved:
CM	CH	SMC