Green Farm, Shadoxhurst, Kent

Biodiversity Scoping and Enhancement Report

Kent Wildlife Trust

Land Management Advisory Service

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Contents

1 INTRODUCTION

1.1 Background to the Report

Kent Wildlife Trust was commissioned by Mr & Mrs Richmond-Coggan, owners of Green Farm, Duck Lane, Shadoxhurst, to prepare a Biodiversity Scoping and Enhancement report for the farm.

The objectives of the report have been to identify the current features of wildlife interest present within the landholding and to provide a series of outline management recommendations aimed at maximising the wildlife and biodiversity of the holding within the relatively small scale agricultural and rural enterprise that is centred on Green Farm.

1.2 Site Location / Area

Green Farm is located just south of the centre of Shadoxhurst, a village on the Kent Weald located between the North Downs and Romney Marsh and approximately 3km southwest of Ashford.

Green Farm is bounded by Church Lane along its northeastern and eastern perimeters and by Duck Lane along its northwestern boundary. A stream marks the southern boundary of the landholding, beyond which lies an area of broadleaved woodland (Upper Toke's Wood) and a series of neutral grassland fields. A number of ponds occur within the grassland abutting the farm.[1]

The farm lies within the Low Weald National Character Area (NCA 121) which is a broad, low-lying clay vale bounded by the Wealden Greensand and surrounding the High Weald. The vale often has flat and wet soils with pockets of higher, drier land on outcrops of limestone or sandstone. The Low Weald has an abundance of ponds and small stream valleys which often support wet woodlands of alder and willow. It has a well-wooded character due to the presence of copses, shaws and remnant woodlands which are linked together by tall hedgerows with numerous trees. Hop-growing and orchards are a distinctive land use in the east of the Low Weald where there are lighter soils on higher ground but much of the agriculture is pastoral due to the heavy soils that cover most of the area. These heavy soils are predominantly covered by grassland[2].

The grid reference to the centre of Green Farm is TQ 972373. The site extends to approximately 29.4ha and its location and boundaries are shown on the maps in Figures 1-2.

[1] Information obtained from the Arch Habitat Survey available at http://www.archnature.eu/mapping-tools.html

[2] http://publications.naturalengland.org.uk/publication/12332031?category=587130

GREEN FARM, SHADOXHURST

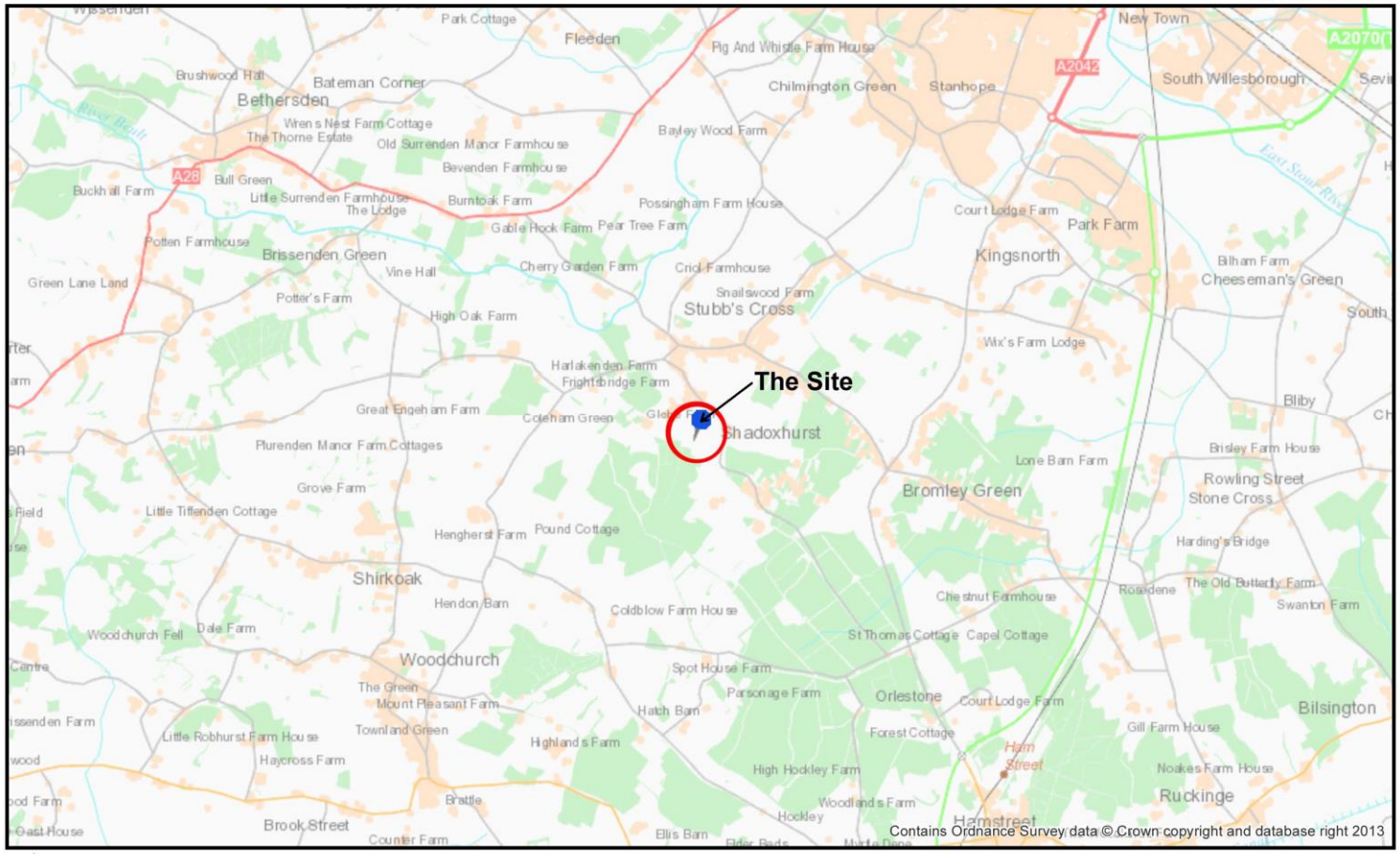

Figure 1: Green Farm, Shadoxhurst. Site Location Map. The general location of the site is depicted by the red circle

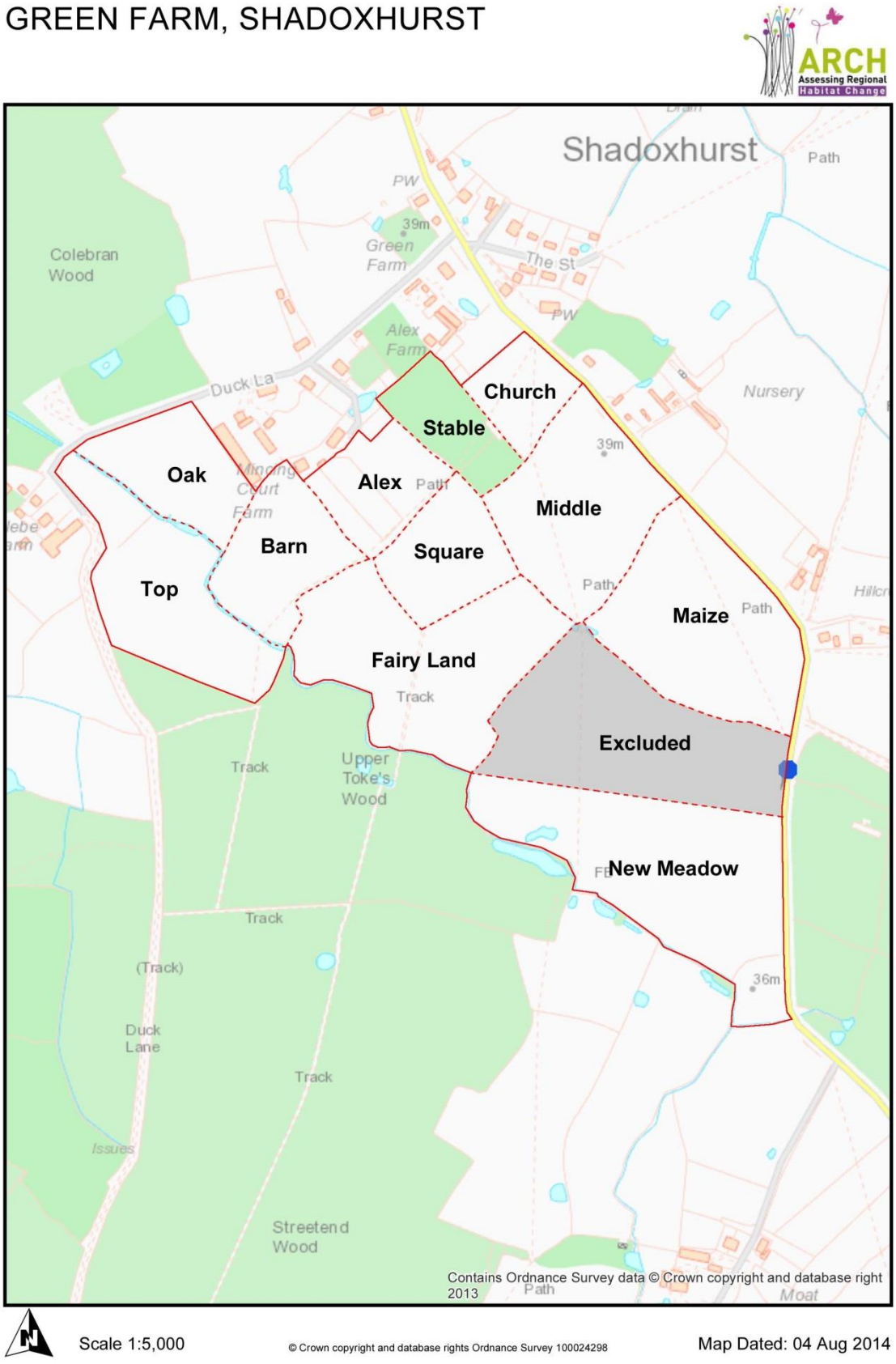

Figure 2: Green Farm, Shadoxhurst. Site Boundary and Field Names Map. One field, shown in grey, was outside the remit of this survey.

2 METHODOLOGY

2.1 Desktop Study

The Kent Landscape Information System website (http://webapps.kent.gov.uk/klis/) and the Magic website (http://www.magic.gov.uk/) were used to search for designated sites on or within a 1km-radius of the site.

The Arch Habitat Survey website (http://www.archnature.eu/mapping-tools.html) was used to extract habitat data for the site and its environs.

Relevant protected species records were extracted from site files held by Kent Wildlife Trust[3].

2.2 Site Visit

Green Farm was first visited by Neil Coombs, Kent Wildlife Trust in the company of the site owners, Mr & Mrs Richmond-Coggan, on 29th April 2014. The aim of the visit was to gain an overview of the site and its features, to establish how the land is currently managed and to develop an understanding of the owners aspirations for future development of the site together with any potential constraints or opportunities which may have a bearing on the recommendations made within this report.

Two subsequent visits were made to the farm on 10th June and 25th June 2014 in order to survey the landholding and its features. The survey followed standardised methodology described in Natural England's Farm Environment Plan Manual (Natural England, 2010a)[4].

[3] These records are also publically available from Kent and Medway Biological Records Centre http://www.kmbrc.org.uk/aboutus/index/index.php

[4] Available to download from http://www.naturalengland.org.uk/ourwork/farming/funding/es/hls/fep.aspx

3 RESULTS

3.1 Designated Nature Conservation Sites

There are two Sites of Special Scientific Interest (SSSIs) [5] occurring within a one kilometre-radius of Green Farm – Alex Farm Pastures and Orlestone Forest.

Much of Green Farm itself has been designated as a Local Wildlife Site (LWS) [6] – Orlestone Pastures and Woods (AS63).

3.1.1 Alex Farm Pastures SSSI

Alex Farm Pastures SSSI is located approximately 350m to the west of Green Farm. The site was designated because, "*… it consists of two adjoining pastures separated by a small pond and shallow stream. The pastures represent one of the best surviving examples in Kent of unimproved neutral grassland, a nationally rare habitat. The grassland sward contains a range of plant species characteristic of slightly acidic Wealden clay, and supports several scarce butterflies.*"[7]

3.1.2 Orlestone Forest SSSI

Orlestone Forest SSSI is located approximately 750m to the southeast of Green Farm. The site was designated because, "*This large ancient woodland site near Ham Street is an important invertebrate locality of national significance. Several hundred invertebrate (mainly insect) species have been found there, including 39 nationally rare species (listed in the British Red Data Books: 2 Insects) and 134 nationally scarce species. Several species are known in Britain only from this locality*."[8]

3.1.2 AS63: Orlestone Pastures and Woods LWS

The northern part of the LWS incorporates much of Green Farm. The site was designated because it comprises, "*Ancient broadleaved woodland with 26 ancient woodland plant indicators recorded recently and unimproved and semi-improved acid-neutral damp pastures with a number of acid and neutral grassland indicator species. The site also has many ponds in varying stages of succession.*" A full copy of the schedule is included at Appendix A.

A map showing the overlap between the landholding and the Local Wildlife Site is included at Figure 3.

[5] Further information about SSSIs is available from http://www.naturalengland.org.uk/ourwork/conservation/designations/sssi/

[6] Further information about LWSs is available from http://www.kentwildlifetrust.org.uk/what-we-do/local-wildlife-sites

[7] The full citation is available at http://www.sssi.naturalengland.org.uk/citation/citation_photo/1006780.pdf

[8] The full citation is available at http://www.sssi.naturalengland.org.uk/citation/citation_photo/1003149.pdf

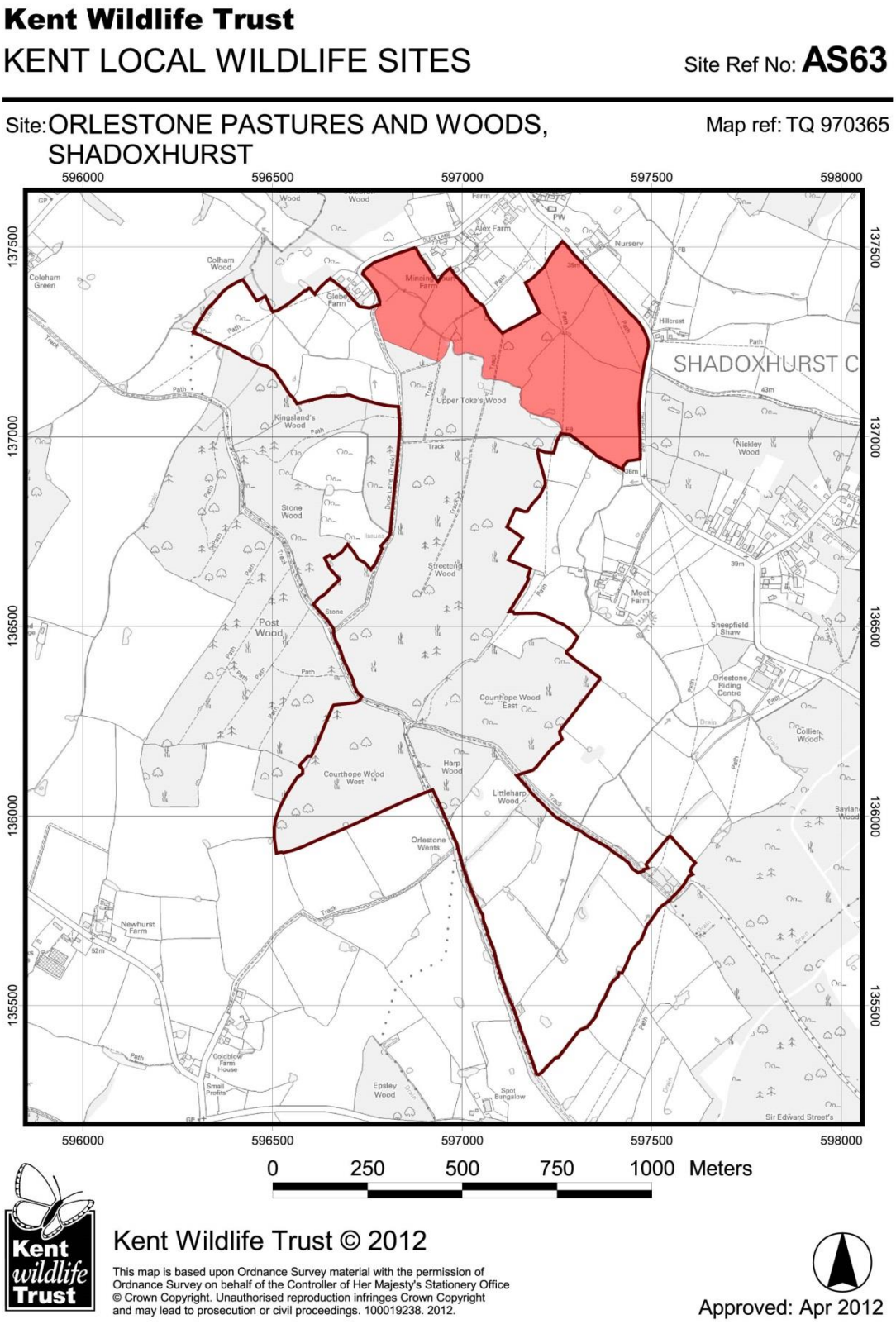

Figure 3: Green Farm, Shadoxhurst. Map showing the overlap between Green Farm (shaded red) and the Local Wildlife Site

3.2 Habitats

Green Farm is bounded by Church Lane along its northeastern and eastern perimeters and by Duck Lane along its northwestern boundary. A stream marks the southern boundary of the landholding, beyond which lies an area of broadleaved woodland (Upper Toke's Wood) and a series of neutral grassland fields. A number of ponds occur within the grassland abutting the farm.[9]

Green Farm itself is very much a reflection of the wider Low Weald landscape area, with a characteristic mix of pockets of grassland, woodland, ponds and hedgerows. It also spans both heavy clay and lighter, acidic Greensand soil types. The holding is managed by hay making and mixed grazing with Aberdeen Angus cross cattle, sheep and some haymaking. One of the fields is given over to game cover crops usually maize.

3.2.1 Grassland

The Arch Habitat Survey[10] indicates that five of the fields within Green Farm – Oak, Top (NW section only), Barn, Middle and New Meadow - support lowland meadow grassland which exceeds the threshold necessary to be considered a priority habitat under the UK and Kent Biodiversity Action Plans (UK BAP[11] / KBAP[12]) and is also listed as a Habitat of Principal Importance on S41of the Natural Environment and Rural Communities (NERC) Act, 2006.[13]

For the purposes of the UK and Kent BAPs, Lowland meadows are not taken only to include land cut for hay, but most forms of unimproved, and therefore species-rich, neutral grassland, including pasture (Kent Biodiversity Action Plan, Lowland Meadow Habitat Action Plan) [14].

It is estimated that 97% of species-rich lowland meadows have been lost nationally since the 1930s; this dramatic decline is usually attributable to agricultural intensification and the switch from hay production to silage making seen in the past 40 years. Most recent estimates suggest that as little as 7,500ha of lowland meadow may remain in England (Natural England, 2011).

Lowland meadows are important for the rich diversity of flora and fauna they support, including rare and declining species. Grassland swards are often dominated by grass species including sweet vernal, crested dog's tail, bents, fescues and adder's-tongue fern but it is the flowers which make this habitat aesthetically appealing to the general public. These include green-winged and common spotted-orchid, yellow rattle, oxeye daisy, dyer's greenweed and pepper saxifrage.

[9] Information obtained from the Arch Habitat Survey available at http://www.archnature.eu/mapping-tools.html
[10] http://www.archnature.eu/mapping-tools.html
[11] Further information is available at http://www.kentbap.org.uk/habitats-and-species/priority-habitat/lowland-meadow/
[12] http://www.kentbap.org.uk/habitats-and-species/priority-habitats/
[13] Further information about Habitats and Species listed on S41 of the NERC Act, 2006 is available at http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx
[14] http://www.kentbap.org.uk/habitats-and-species/priority-habitat/lowland-meadow/

Lowland meadows can also be important for reptiles, amphibians, small mammals including harvest mice, bats and birds including barn owls. Good examples of lowland meadows occur in areas where small fields and hedgerows systems are still intact, they often have small ponds associated with them. In Kent, most examples are found in the Low and High Weald (Kent Biodiversity Action Plan, Lowland Meadow Habitat Action Plan) [15].

The results of the Green Farm field survey are summarised in Table 1 below. They indicate that the farm supports a mix of improved, semi-improved and species-rich grassland, and confirm the findings of the Arch Habitat Survey that some of the fields are of Lowland Meadow UK BAP quality.

A photograph of the grassland within New Meadow, which qualifies as Lowland Meadow UK BAP habitat is shown below.

[15] http://www.kentbap.org.uk/habitats-and-species/priority-habitat/lowland-meadow/

Table 1. Green Farm, Shadoxhurst. Summary of grassland survey results
The description of the different grassland types (G01, G02,G06) is given at the end of the table.

Field Name (see Figure 2)	Area (ha)	Grassland type	Comments / Initial Recommendations
Top	2.4	G01 / G02; G06	Approximately 1.39ha is considered to be UK BAP quality lowland meadow[16]; the remainder supports low diversity improved / semi-improved grassland. The G01 / G02 areas will require enhancement, possibly through green hay strewing / seeding. The UK BAP quality lowland meadow should be managed as traditional hay meadow
Oak	1.3	G06	Lowland meadow UK BAP priority grassland. The field supports a good diversity of grasses and flowering plants characteristic of lowland meadows including frequent yellow rattle. Manage as traditional hay meadow
Barn	1.5	G06	Lowland meadow UK BAP priority grassland. Manage as traditional hay meadow
Fairy Land	3.4	N/A	Ancient semi-natural woodland
New Meadow	3.4	G06	Lowland meadow UK BAP priority grassland. The meadow is not currently in optimal condition and some restoration is necessary. Thereafter manage as traditional hay meadow
Maize	2.9	N/A	This field is currently planted with maize as a cover crop for game birds. It has wide grass margins and could be managed as cover crop with meadow re-creation and / or pollen and nectar / wild bird mix
Middle	2.5	G06?	At the time of the survey the field had been recently cut for hay and an assessment of the grassland type was not possible. However, the Arch Habitat Survey[17] has assessed the field as being Lowland meadow UK BAP priority grassland. The field was observed to have rough, thistle-dominated margins, which could be enhanced for butterfly populations. Remainder of field could be managed as traditional hay meadow.
Church	0.8	G01 / G02	Species poor improved / semi-improved grassland with good hedgerows. Sheep- grazed at time of survey. Could be considered for restoration through green hay strewing or seeding
Stable	0.7	G06?	Field was being sheep grazed at time of survey – the tightly grazed sward prevented grassland type being established, although a number of lowland meadow indicator species were recorded, which would suggest species-rich or Lowland meadow quality grassland. It has not been designated as lowland meadow by Arch Habitat Survey[18]. Re-assessment needed & monitor grazing levels for restoration potential
Square	1.3	G06	Lowland meadow UK BAP priority grassland. The meadow is not currently in optimal condition and some restoration is necessary. This may involve green hay strewing or seed enhancement. Thereafter manage as traditional hay meadow
Alex	1.1	G01 / G02	Species poor improved / semi-improved grassland. Currently of low biodiversity value. Could be considered for restoration through green hay strewing or seeding.

[16] http://www.archnature.eu/mapping-tools.html
[17] http://www.archnature.eu/mapping-tools.html
[18] http://www.archnature.eu/mapping-tools.html

Key to grassland types

GO1. Improved grassland. This is grassland that has often been improved by the addition of fertilisers and may have been re-seeded with agricultural grass varieties to produce high volume hay crops of pasture. Improved grasslands are generally of low species diversity and are of limited biodiversity value.

GO2. Semi-improved grassland. Semi-improved grassland occurs on a wide range of soils and may be derived from UK BAP grassland habitats following agricultural improvement. Typical grasses found within semi-improved grassland habitats include cock's-foot, common bent, creeping bent, crested dog's-tail, false oat-grass, meadow fescue, meadow foxtail, red fescue, sweet vernal-grass, Timothy, tufted hair-grass and Yorkshire-fog (Natural England, 2010). Depending on their management, slope and other aspects such as nutrient levels it is possible to restore such grasslands to species-rich grassland.

G06. Lowland Meadow UK BAP Habitat. Lowland meadows are species-rich, semi-natural grassland on free-draining, neutral soils in the lowlands and upland fringes, including species-rich flood plain grassland. Typical grasses include cock's-foot, common bent, crested dog's-tail, red fescue, meadow fescue, sweet vernal-grass, yellow oat-grass and Yorkshire fog. Typical wildflowers include common knapweed, common bird's-foot-trefoil, common meadow-rue, marsh valerian, meadow vetchling, meadowsweet, narrow-leaved water-dropwort and ragged robin. Lowland meadows are usually managed by cutting and / or grazing.

3.2.2 Hedgerows

A hedgerow may be defined as a more-or-less continuous line of native trees and shrubs that is, or has been, managed as a boundary and is usually at least 30 metres long, at least 1.5 metres high and 1.5 metres wide but less than 5metres wide. UK BAP quality hedgerows comprise at least 80% native woody species (Natural England, 2010a).

Generally speaking, hedgerows are of high ecological value as they support a large diversity of flora and fauna – it is estimated that there are at least 130 UK BAP species associated with hedgerow habitats, and many more species (including bats, birds, insects and small mammals) use them for feeding and sheltering (Woodland Trust, 2014). Hedgerows also perform an important function, linking together areas of isolated countryside, helping to create networks which enable animals to move freely through the landscape.

It is estimated that during the 20th Century, half of all hedgerows were lost, mostly due to agricultural intensification which took place between the 1940s and the 1970s (Woodland Trust, 2014).

The hedgerows across Green Farm are generally considered to be in good condition, with a number showing evidence of historic layering and coppicing, as evident along the hedgerow marking the boundary between Green Farm and Church Lane and the hornbeam *Carpinus betulus* hedgerow between Church Field and Middle Field – see photograph below. It is likely that many of the hedgerows are historic, with similar field patterns and hedged boundaries being shown on the Landmark Edition 1 maps of 1871 – 1890 (see Figure 4).

3.2.3 In-field Trees

There are a number of in-field trees within the holding.

The photograph below shows a mature pedunculate oak tree *Quercus robur* in Middle Field.

The presence of in-field trees can provide an important additional habitat within a site. Often such trees are over-mature and may support a number of features associated with veteran trees such as cavities and standing deadwood. As such they can provide

suitable habitat for a range of deadwood specialists such as invertebrates (particularly beetles) and lower plants, including fungi, mosses and lichens. They can also provide valuable nesting, foraging and sheltering habitat for birds and bats.

3.2.4 Ponds

Ponds can support a large number of plants and animals, and have more than 100 UK BAP priority species associated with them. Recent research shows that 80% of wildlife ponds in the UK are in a 'poor' or 'very poor' state and the UK is believed to have lost almost half a million ponds in the last century.[19]

One significant pond was recorded within the holding. Located within New Meadow, at OS grid reference TQ 972370, the pond covers approximately 295 square metres (0.03 hectares). Although not surveyed in detail, the pond was observed to support a diverse aquatic, emergent and marginal flora, which contributes to the varied structural diversity and mosaic of habitat types found across the farm. The open water and vegetated margins are likely to provide important feeding and breeding sites for a number of species including amphibians, nesting water birds, invertebrates, mammals – particularly water voles and bats – and grass snakes, which are likely to use the marginal habitat for hunting.

The wildlife value of this pond is further enhanced by its position within the wider environment – it forms part of a network of ponds in the vicinity and so helps to link up the countryside enabling species to move about freely.

[19] http://www.wildlifetrusts.org/wildlife/habitats/ponds

3.2.5 Woodland

The Magic website[20] indicates that Upper Toke's Wood, which includes the area within Green Farm known as Fairy Land, comprises ancient semi-natural woodland. Ancient woodland in England is defined as an area that has been wooded continuously since at least 1600 AD. It is considered to be of prime ecological and landscape importance, providing a vital part of a rich and diverse countryside.

In particular, ancient woodland:

- Is exceptionally rich in wildlife, and supports many rare and threatened species;
- May contain surviving descendants and features from the original natural forests;
- Acts as reservoirs from which wildlife can spread into new woodlands;
- Has valuable soils due to their undisturbed nature;
- Is an integral part of England's historic landscapes and the biological and visual functioning of a landscape;
- Contains a wealth of features of historical and archaeological importance little altered by modern cultivation or disturbance;
- Contributes to people's sense of place and imagination.[21]

3.2.6 Field corners / Field Margins / Cover crops

Green Farm has set aside one field, known as Maize, for the growing of game cover crops. The field margins have been allowed to develop and comprise rough grassland with tall, ruderal flowering plants, see photograph below.

[20] http://www.magic.gov.uk/

[21] Natural England has produced a standing advice sheet about ancient woodland which is available at http://www.naturalengland.org.uk/Images/ancient-woodland-standing-advice_tcm6-37627.pdf

The combination of the cover crop, together with the presence of grassy margins and flowering plants and adjacent hedgerow along the boundary with Church Lane, means that Maize Field has the potential to support a good diversity of wildlife including bumblebees, butterflies and other insects which in turn will encourage foraging and nesting birds, and species such as bats which will use the hedgerows and margins for commuting / foraging.

3.3 Species

A summary of records of protected / notable species occurring within or close to Green Farm, together with an assessment of the potential of the site to support protected / notable species is presented below. A summary of the legislation relating to protected species is included at Appendix B.

Amphibians. There are records of common frog *Rana temporaria*, and common toad *Bufo bufo* within the LWS. There are also records of great crested newt *Triturus cristatus* occurring in ponds close to Green Farm.

It is considered likely that all these species may well occur within the Green Farm landholding; the pond in New Meadow may be suitable for supporting breeding great crested newt, and potentially also other newt species.

Reptiles. There are records of viviparous lizard *Zootoca vivipara* occurring within the LWS. It is considered likely that the grassland areas may also support populations of slow-worm *Anguis fragilis*. The ponds and streams within the landholding are also considered to offer suitable habitat for grass snake *Natrix natrix*.

Mammals. There are records of water vole *Arvicola terrestris* occurring in a stream to the east of Green Farm. The pond in New Meadow, together with the stream which marks the southern boundary of the landholding, is considered to have potential for supporting water voles. The landholding is also likely to support a range of other common mammal species such as hedgehog *Erinaceus europaeus*, fox *Vulpes vulpes*, woodmice and voles.

Bats. Bats are likely to be present in the woodlands and may also utilise fields and hedgerow trees, aquatic features and buildings.

Birds. The woodland, hedgerows, marginal vegetation around the pond and the mature trees all provide suitable opportunities for nesting birds.

3.4 Historic Landscape

The Landmark Edition 1 (1871 – 1890)[22] historic mapping for the area shows that many of the historic field patterns are still maintained today. There are a few observed differences however. For example, the boundary between Middle and Maize now appears narrower and there appears to have been a woodland shaw bisecting what is now known as New Meadow.

The relevant extract of the Landmark Edition 1 map overlain with the Green Farm site boundary is enclosed at Figure 4.

[22] Available from KLIS http://webapps.kent.gov.uk/klis/

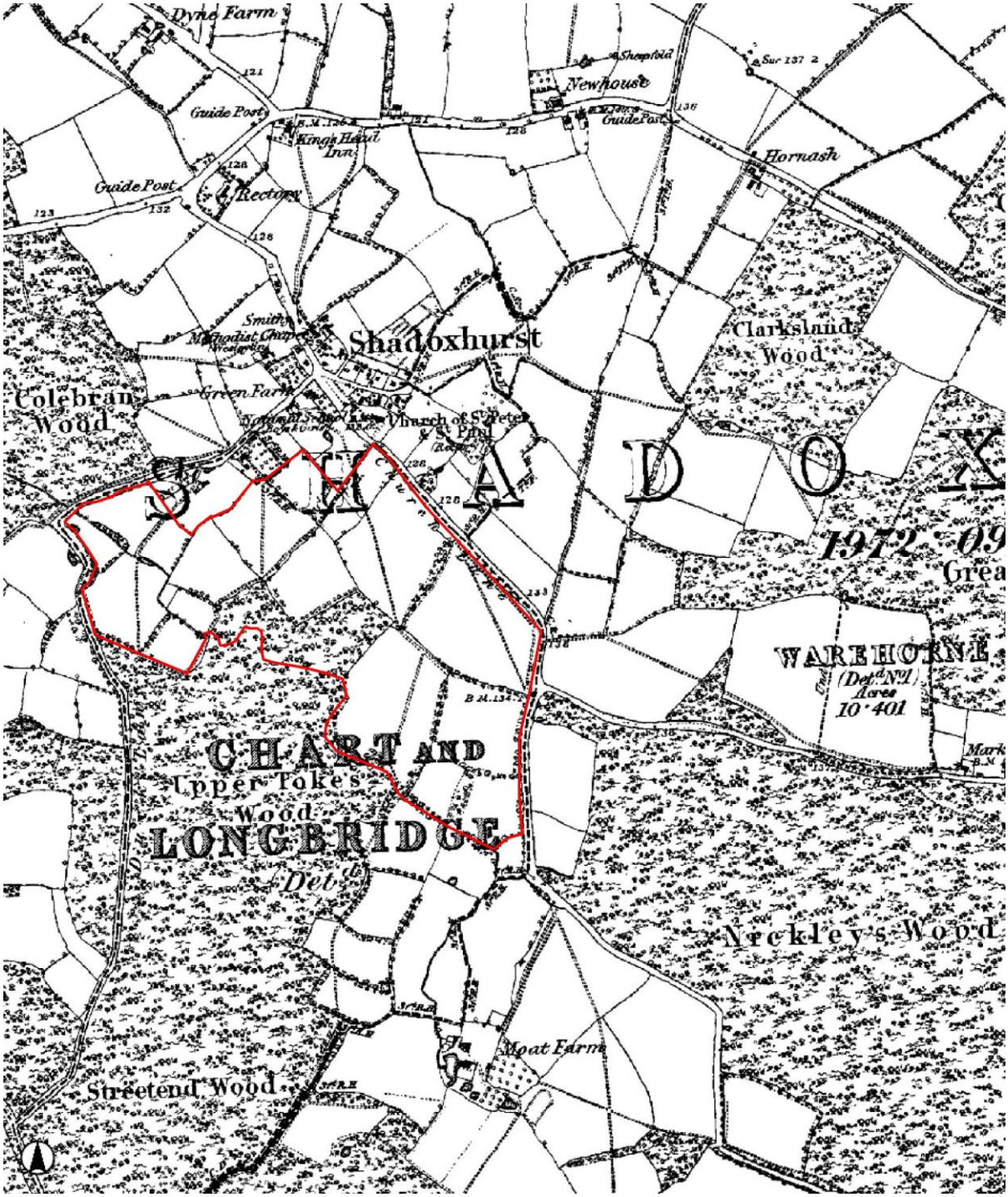

Figure 4: Green Farm, Shadoxhurst. Extract from Landmark Edition 1 historic map (1871 – 1890)[23] . The boundary of the present day Green Farm landholding is shown outlined in red. *The boundary is indicative only. Do not scale*

[23] Extracted from http://webapps.kent.gov.uk/klis/

4 SITE EVALUATION AND KEY RECOMMENDATIONS

This is a diverse traditional low weald farm habitat managed through hay-making, low intensity mixed stock grazing and small scale game shooting which is part of a wider complex of important grassland and woodland habitats.

Arguably the habitat of most conservation importance within the landholding is the semi-natural grassland resource. Most of the fields are species-rich and a number meet the threshold for designation as Lowland Meadow UK BAP priority grassland / Habitat of Principle Importance under NERC.

The creation, maintenance and enhancement of the species-rich / lowland meadows at Green Farm is considered to be of paramount importance for:

- The associated rich flora and fauna communities
- The physical and psychological well-being of local communities across the county
- The resilience of the Kent Countryside to respond to pressures including climate change and food security
- The communication of our natural and cultural rural heritage to local communities.

It is recommended that the species-rich / lowland meadows should be managed by traditional methods, while management of the remaining species-poor improved / semi-improved fields should concentrate on restoration to species-rich grassland, with the long-term aim being to create UK BAP quality habitat.

The hedgerows, ancient woodland and aquatic features are an integral part of the habitat mosaic, creating a wildlife-rich landscape that is more than the sum of its parts. They also have the potential to support protected and notable species. These features should also be retained and enhanced through appropriate management.

A series of outline management recommendation of each habitat type is presented below. It is recommended that these should be used as the basis for the preparation of a five-year nature conservation management plan covering Green Farm.

4.1 Grassland

4.1.1 Species-rich and Lowland meadow UK BAP habitat grassland

The species-rich and Lowland Meadow UK BAP quality habitat at Green farm are a vital resource and the management infrastructure is already in place. Depending on the species, terrain and soil composition it should be possible to fine tune the traditional hay meadow management summarised in Table 2 in order to maximise the wildlife value of these grasslands.

Table 2: The Traditional Hay Meadow Year (adapted from Peterken, 2013)

Production Driven Options (PDO)		**Traditional Hay-making Year**				**PDO**
JAN/FEB	MAR	APRIL	MAY/ JUNE	JULY/ AUGUST	SEPT/OCT/NOV	DEC
		Traditionally Shut for hay	Major period of grass growth	Hay making	Aftermath grazing until grass stops growing, ground becomes too wet	Potential aftermath grazing but livestock now fed on hay
Possible grazing by cattle but often too wet.	Grazing first flush of grass growth. Sheep/lambs may be grazing	Weaning lambs might graze through, benefiting from herbs		Nutrient value declines/nutrients back to soil. Fine tuning either for quality/species possibly invertebrates or wild flowers	Cattle usually preferred	

4.1.2 Improved and species-poor semi-improved grassland

The species-poor improved and semi-improved grasslands are currently of low biodiversity value. It is recommended that consideration should be given to enhancing their wildlife interest by increasing their botanical diversity through green hay strewing or seeding as appropriate.

Green hay strewing. This will involve spreading species-rich green hay taken from one of the Lowland Meadow UK BAP quality fields elsewhere on the farm. The methodology should follow the detailed advice provided within the Natural England Technical Information Note TIN 063 (Natural England, 2010b) [24].

Seeding. This will involve over-sowing and slot seeding the existing sward. The methodology should follow the detailed advice provided by the Natural England Technical Information Note TIN 064 (Natural England, 2010c)[25].

4.2 Hedgerows

Hedgerows should be managed carefully to minimise any negative impacts on the wildlife they support. Active management of hedgerows can restrict the growth and expansion of woody vegetation and heavy or badly timed management can reduce the amount of flowers and berries available to UK's fauna (Woodland Trust, 2014).

[24] Available to download from http://publications.naturalengland.org.uk/category/9001
[25] Available to download from http://publications.naturalengland.org.uk/category/9001

It is recommended that:

- A hedgerow management plan should be drawn up. This should comprise a detailed survey of each hedgerow on the landholding following the standard methodology described in the Hedgerow Survey Handbook (Defra, 2007).
- The results of the hedgerow survey should be used to establish the most appropriate management regime i.e. coppice, layer, or trim.
- The management regime adopted will dictate timing and extent of operations, but in general no more than one-third of the hedgerows should be managed in any one year and all management work should avoid the bird breeding season (i.e. avoid the period 1st March – 31st August).
- Consideration should be given to planting a new native species hedgerow between Alex and Church.

4.3 In-field Trees

- All in-field trees should be retained, and any fallen branches should be left nearby so that invertebrates can have continuity of habitat.
- Where possible the root zone (to at least the canopy edge), should be protected from over-grazing, the storage of materials and fertilisers and manure.

4.4 Ponds

The pond in New Meadow is considered to be in good condition and unlikely to require management in the short-to-medium term. The pond should be monitored to determine when management becomes necessary.

4.5 Woodland

Ideally all the woodland should be brought back into active management, with coppicing being preferred where it has taken place historically (in the last sixty years). Coppicing helps to create and maintain structural and species diversity within the ground flora, shrub layer and tree canopy and create a mosaic of micro-habitats for wildlife. All management work should avoid the bird breeding season (i.e. avoid the period 1st March – 31st August).

Woodland glades and rides are generally rich in wildlife and should be maintained in order to create a mosaic of habitats at varying ages and stages of succession. They are ideally comprised of three zones: a central, short grassy area, a zone of taller herbs and grasses on either side, and finally a shrubby zone on either side beyond that, grading into the mature woodland. Woodland edges are also richer in wildlife when they grade from woodland to grassland.

Dead wood, both standing and fallen, should be maintained wherever possible as it supports a range of specialist invertebrates, lower plants and birds.

4.6 Field Corners / Field Margins / Cover Crops

Maize Field is currently used for growing maize as a game bird cover crop. Whilst this function needs to be retained, this field has considerable potential to support biodiversity and it is recommended that consideration should be given to the following:

- The creation of floristically-enhanced grass margins. This will involve enhancing the existing grass margins to provide a greater variety of wild flowers. These margins will provide valuable pollen and nectar sources which boost the abundance and diversity of a range of invertebrates which, in turn, provides an important source of invertebrate and seed food for fledgling and adult birds. A number of studies suggest that such margins are also beneficial for small mammals[26] .
- Giving over some of the field to grow a pollen and nectar wild bird seed mix. This type of seed mix does not include any grass species and it requires re-establishment every few years. A mix of particularly rich pollen and nectar species is sown, encouraged to flower and then managed to provide plants the following year. Such mixes are particularly valuable for encouraging pollinating insects and provide an additional source of invertebrates for feeding birds. The planting may also potentially be utilised as suitable ground-nesting habitat.
- Giving over some of the field for arable reversion to floristically-enhanced meadow grassland. This is potentially very important as the creation of a diverse grassland sward can provide habitat for a wide variety of flora and fauna.

[26] http://www.conservationevidence.com/actions/246

5 REFERENCES

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Appendix A. AS63 Orlestone Pasture and Woods LWS

KENT LOCAL WILDLIFE SITE

Site Name:	Orlestone Pastures and Woods, Shadoxhurst	**Site Ref. No:**	AS63
LPA:	Ashford	**Central Grid Ref:**	TQ 970365
Parish:	Shadoxhurst / Warehorne / Woodchurch	**Category:**	Grassland, standing water, woodland, scrub
Owner:	Private	**Natural Area:**	Low Weald & Pevensey
Area:	126.39 Hectares	**AONB:**	No
Date first notified:	1988	**TPO:**	Part
Dates revised:	1992, 1995 (map), June 2010		
Date last approved:	April 2012		

REASON FOR DESIGNATION
Ancient broadleaved woodland with 26 ancient woodland plant indicators recorded recently and unimproved and semi-improved acid-neutral damp pastures with a number of acid and neutral grassland indicator species. The site also has many ponds in varying stages of succession.

RATIONALE FOR SITE BOUNDARY
The boundary surrounds the block ancient broadleaved woodland and the areas of acid to neutral grassland around it.

DESCRIPTION
This large mosaic of pastures with good, species-rich hedges, ditches, ponds, shaws, small copses and woods, situated on the western side of the Orlestone Forest complex, is important and complementary to the adjacent Alex Farm Pastures Site of Special Scientific Interest.

Most of the small fields are unimproved and semi-improved acid-neutral damp pastures, but some are drier and more acid in nature. A few are less species-rich currently but are retained as they could recover and are surrounded by good, thick hedgerows. Most are managed without the use of agrochemicals, generally being cut for hay and then cattle grazed. The rich flora, with many species characteristic of unimproved traditional farm methods, includes pepper-saxifrage *Silaum silaus*, dyer's greenweed [1] *Genista tinctoria*, adder's-tongue [1] *Ophioglossum vulgatum*, sneezewort [1] *Achillea ptarmica*, betony *Stachys officinalis*, ragged-robin *Silene flos-cuculi*, yellow rattle *Rhinanthus minor*, creeping jenny *Lysimachia nummularia*, oval sedge *Carex ovalis*, tufted vetch *Vicia cracca* and common knapweed *Centaurea nigra*. Devil's-bit scabious *Succisa pratensis* and bitter vetch *Lathyrus*

linifolius occur in the drier areas. A wide range of rushes and sedges are present, including the acid-loving sharp-flowered rush *Juncus acutiflorus*.

The grasses are varied, the damper pastures being dominated by Yorkshire fog *Holcus lanatus*, meadow foxtail *Alopecurus prat*ensis, tall fescue *Festuca arundinacea* and meadow barley *Hordeum secalinum*. In the drier parts, crested dog's-tail *Cynosurus cristatus*, common bent *Agrostis capillaris* and creeping bent *A. stolonifera* are more common. Sweet vernal grass *Anthoxanthum odoratum* is dominant in the southern meadows. Bryophytes are common in the turf and indicate low use of artificial fertilisers. Anthills are present in the under-managed fields at the northern end of the complex.

There is a large number of ponds both in the meadows and in the woodland. Some ponds are open, others heavily silted. They support a variety of common marginal and aquatic species such as hemlock water dropwort *Oenanthe crocata*, water plantain *Alisma plantago-aquatica* and bog pondweed *Potamogeton polyponifolius*. Water violet [1] *Hottonia palustris*, an uncommon plant, has been recorded in several of these and is likely to regenerate following a pond restoration programme. Fine-leaved water-dropwort *Oenanthe aquatica*, another notable plant, is present and skullcap *Scutellaria galericulata* occurs on the margin of a woodland pond.

Most of the woodland is actively managed as hornbeam coppice with pedunculate oak standards, but there is also an area of sessile oak high forest which has evolved from oak coppice. Glades and grassy rides have been created. Ash, hazel and holly occur in addition to wild service tree, aspen and Midland hawthorn. These are relict Wealden ancient woodlands, as are the shaws and hedgerows. Sallow and blackthorn occur along their margins in part and these small, scrubby areas add to the diversity. The ground flora is dominated by bluebell *Hyacinthoides non-scripta* with occasional primrose *Primula vulgaris*, goldilocks buttercup *Ranunculus auricomus*, hairy wood-rush *Luzula pilosa* and hard fern *Blechnum spicant*. Woodland grasses include tall brome *Festuca gigantea*, hairy brome *Bromopsis ramosa* and wood millet *Milium effusum*. Common cow-wheat *Melampyrum pratense* is frequent. Violet helleborine *Epipactis purpurata* and the common spotted-orchid *Dactylorhiza fuchsii* are present.

An excellent invertebrate fauna is present. The site supports an interesting selection of lepidoptera including small pearl-bordered fritillary [2, 3, 4] and pearl-bordered fritillary [3, 4, 5, 6, 7], both now very restricted in Kent. Dingy [3, 4] and grizzled [3, 4] skippers, white admiral [3, 4] and purple hairstreak also occur in addition to more common species. Grasshoppers and dragonflies were also present.

Common lizard [3, 4, 5], toad [3, 4, 5] and frog [5] are breeding species.

Water vole [3, 4, 5, 7, 8] is present in the stream. There are rabbit warrens within the woodland edges.

Birds have not been fully investigated, but various finches, tits, yellowhammer [3, 4, 7, 9], green woodpecker [10], great-spotted woodpecker, chiffchaff, common whitethroat [10], spotted flycatcher [3, 4, 7, 9], willow warbler [10] and heron [11] were all observed on day of visit. Nightingale [10, 11] was very common in north-eastern part of site. The site would benefit from further survey in early summer when other species are likely to be more obvious.

The woods are used for pheasantry.

1 County Scarce. Atlas of Kent Flora. Philp. 1982.
2 Kent Red Data Book Status 1. A. Waite (Ed.) 2000.
3 Priority Species UK Biodiversity Action Plan.
4 S.41 Species NERC Act 2006
5 Protected under Wildlife & Countryside Act 1981.
6 National Status Nb.
7 Kent Red Data Book Status 2. A. Waite (Ed.) 2000.
8 Red Data Book species
9 Red List. Birds of Conservation Concern 2002-2007.
10 Amber List. Birds of Conservation Concern 2002-2007.
11 Kent Red Data Book Status 3. A. Waite (Ed.) 2000.

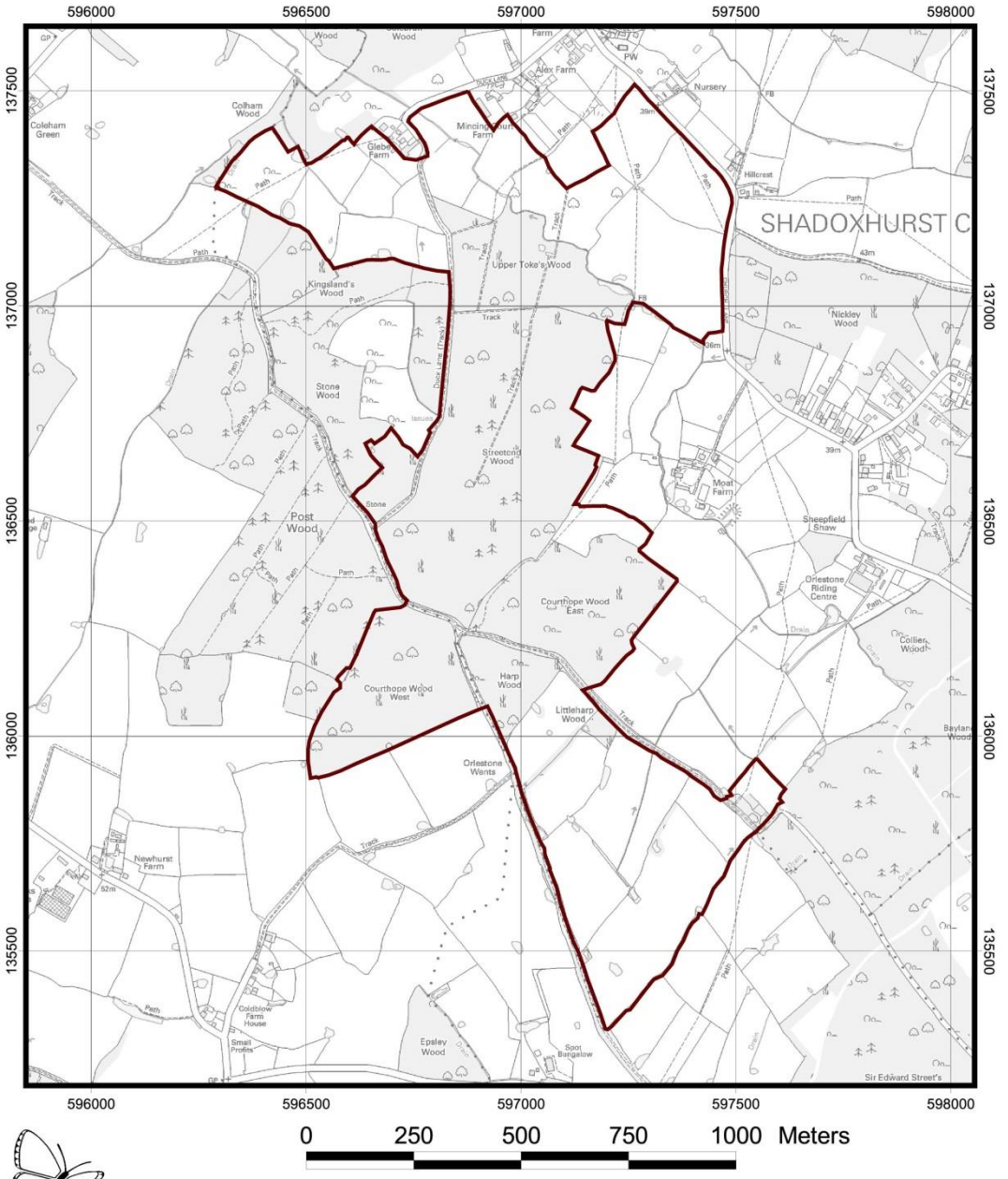
Kent Wildlife Trust

KENT LOCAL WILDLIFE SITES

Site Ref No: **AS63**

Site: ORLESTONE PASTURES AND WOODS, SHADOXHURST

Map ref: TQ 970365



Approved: Apr 2012

Appendix B. Wildlife Legislation and Policy

The following is a summary of wildlife legislation and planning policy which affords protection to plants and animals and seeks to conserve, enhance and restore biodiversity. This section is provided for general guidance only. While every effort has been made to ensure accuracy, this section should not be relied upon as a definitive statement of the law.

For further information, please see:
http://www.naturalengland.org.uk/ourwork/planningtransportlocalgov/spatialplanning/standingadvice/legislation.aspx

Commonly encountered protected species

Many species of plants, invertebrates and animals receive protection under the legislation detailed above. However, of these, the following are the most likely to be affected by development in the southeast:

Species	Legislation
Bats (all species) Dormice Great crested newts Otters Sand lizards and smooth snakes	The Wildlife and Countryside Act 1981 (as amended) & The Conservation of Habitats and Species Regulations 2010. These make it an offence to: • Deliberately or recklessly capture, injure or kill any wild animal of a European protected species • Deliberately or recklessly disturb wild animals of any such species • Damage or destroy their breeding site or resting place • Keep, transport, sell or exchange, or offer for sale or exchange, any live or dead animal, or any part of, or anything derived from these species. Disturbance of animals includes in particular any disturbance which is likely • to impair their ability: - to survive, to breed or reproduce, or to rear or nurture their young, or - in the case of animals of a hibernating or migratory species, to hibernate or migrate; • to affect significantly the local distribution or abundance of the species to which they belong.
Breeding birds (in particular barn owls)	The Wildlife and Countryside Act 1981 (as amended). This makes it illegal to intentionally kill, injure or take any wild bird and to take, damage or destroy the nest (whilst being built or in use) or eggs.
Adders, grass snakes, common lizards and slow worms	The Wildlife and Countryside Act 1981 (as amended) (intentional killing and injuring only). This makes it illegal to kill or injure these animals.
Water voles	The Wildlife and Countryside Act 1981 (as amended). This makes it illegal to intentionally damage, destroy or obstruct access to any structure or place which water voles use for shelter or protection; it is also an offence to intentionally disturb water voles while they are using these places.
White clawed crayfish	The Wildlife and Countryside Act 1981 (as amended). This makes it an offence to:

Species	Legislation
	• intentionally, or recklessly, kill or injure any of the above species, and/or; • sell, or attempt to sell, any part of the species, alive or dead. Advertises that he buys or sells, or intends to buy or sell.
Badgers	The Protection of Badgers Act 1992. This makes it an offence to: • Willfully killing, injures or takes, or attempts to kill, injure or take, a badger. • Cruelly ill-treating a badger, digging for badgers, using badger tongs, using a firearm other than the type specified under the exceptions within the Act. • Interfering with a badger sett by damaging, destroying, obstructing, causing dog a dog to enter a sett, disturbing an occupied sett - either by intent or by negligence. • Selling or offering for sale a live badger, having possession or control of a live badger. • Marking a badger or attaching any ring, tag, or other marking device to a badger.

The Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 (as amended) implements the Birds Directive (1979) and the Berne Convention (1979) into national legislation. The Wildlife and Countryside Act 1981 (as amended) includes a number of Schedules which are reviewed (usually every five years) on which details of the protected species, and their level of protection, are detailed. A detailed summary of the sections of the Wildlife and Countryside Act, along with the protection afforded under them can be found within Paragraphs 118-122 of ODPM Circular 06/2005 (Circular06/2005)

Full details of the legislation can be found at www.jncc.gov.uk/page-3614 and details of the species listed on the Schedules can be found at:

- Birds www.jncc.gov.uk/PDF/waca1981_schedule1.pdf
- Animals www.jncc.gov.uk/page-1815
- Plants www.jncc.gov.uk/page-1816

There are no licensing functions within the Wildlife and Countryside Act for development activities which may affect a species protected under The Wildlife and Countryside Act 1981 (as amended) and works need to proceed following good practice and if appropriate rely on the 'incidental result of an otherwise lawful operation defence'. However, with regards to the water vole, where translocation of animals is proposed, Natural England does not feel this could be considered the incidental result of other activities and so would not be covered by the defence in the legislation. If there is no alternative to translocation, Natural England may be able to issue a licence to trap and translocate the water voles for the purpose of conservation.

The Countryside and Rights of Way Act 2000

The Wildlife and Countryside Act 1981 was amended by the Countryside and Rights of Way Act (CRoW Act) in 2000. The CRoW Act strengthened the protection afforded to species listed within the Schedules of the Wildlife and Countryside Act by adding 'reckless' to several of the offences and increased the penalties for wildlife offences.

In addition, Section 74 of the CRoW Act introduced a new duty on Government Ministers and Department to further the conservation of biodiversity for habitats and species of principal importance. This was superseded by Sections 40 and 41 of the Natural Environment and Rural Communities (NERC) Act of 2006. Section 40 provides that every public authority must, in exercising its functions, have regard to the purpose of conserving biodiversity. Details of the lists of habitats and species provided for at Section 41 of the NERC act can be found at www.ukbap-reporting.org.uk/news/details.asp?X=45. The ODPM Circular 06/2005 (Circular06/2005) place a clear responsibility on Local Planning Authorities to further the conservation of habitats and species of principal importance where a planning proposal may adversely affect them.

Full details of the legislation contained within the Countryside and Rights of Way Act can be found at www.opsi.gov.uk/acts/acts2000/ukpga_20000037_en_1.

The Protection of Badgers Act 1992

The legislation affording protection to badgers is primarily concerned with animal welfare and the need to protect badgers from activities such as baiting and deliberate harm. The Protection of Badgers Act 1992 makes it an offence to:

- Wilfully kill, injure, take, possess or cruelly ill-treat a badger, or attempt to do so;
- To intentionally or recklessly interfere with a sett (this includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it).

As with The Wildlife and Countryside Act 1981 (as amended), there are several defences to prosecution in the legislation and the text should be consulted for details of these. Penalties for offences include fines up to £5,000, plus up to six months imprisonment for each illegal sett interference, or badger death or injury.

Full Details of the legislation can be found at
www.opsi.gov.uk/ACTS/acts1992/ukpga_19920051_en_1.

Conservation of Habitats and Species Regulations 2010 (SI 2010/490) came into force (the "2010 Regulations").

From 1st April 2010, these are now the principal means by which the Habitats Directive is transposed in England and Wales. This updates and consolidates all the amendments to the Regulations since they were first made in 1994.

The 2010 Regulations implement the European Habitats Directive into national legislation. Details of those species (often referred to as European protected species or EPS) which receive protection under these regulations can be found in Schedule 2 of the 2010 Regulations.

Full details of the legislation can be found at
http://www.opsi.gov.uk/si/si2010/uksi_20100490_en_1

The Regulations state that:

Part 3 - 41.—
(1) A person who:
(a) deliberately captures, injures or kills any wild animal of a European protected species,
(b) deliberately disturbs wild animals of any such species,
(c) deliberately takes or destroys the eggs of such an animal, or
(d) damages or destroys a breeding site or resting place of such an animal,

is guilty of an offence.

(2) For the purposes of paragraph (1)(b), disturbance of animals includes in particular any disturbance which is likely:

(a) to impair their ability:

(i) to survive, to breed or reproduce, or to rear or nurture their young, or
(ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate;
Or

(b) to affect significantly the local distribution or abundance of the species to which they belong.

(3) It is an offence for any person:
(a) to be in possession of, or to control,
(b) to transport,
(c) to sell or exchange, or
(d) to offer for sale or exchange, anything to which this paragraph applies.

(4) Paragraph (3) applies to—
(a) any live or dead animal or part of an animal—
(i) which has been taken from the wild, and
(ii) which is of a species or subspecies listed in Annex IV(a) to the Habitats Directive; and
(b) anything derived from such an animal or any part of such an animal.

(5) Paragraphs (1) and (3) apply regardless of the stage of the life of the animal in question.

(6) Unless the contrary is shown, in any proceedings for an offence under paragraph (1) the animal in question is presumed to have been a wild animal.

(7) In any proceedings for an offence under paragraph (3), where it is alleged that an animal or a part of an animal was taken from the wild, it is presumed, unless the contrary is shown, that that animal or part of an animal was taken from the wild.

(8) A person guilty of an offence under this regulation is liable on summary conviction to imprisonment for a term not exceeding six months or to a fine not exceeding level 5 on the standard scale, or to both.

(9) Guidance as to the application of the offences in paragraph (1)(b) or (d) in relation to particular species of animals or particular activities may be published by—
(a) the appropriate authority; or
(b) the appropriate nature conservation body, with the approval of the appropriate authority.

(10) In proceedings for an offence under paragraph (1)(b) or (d), a court must take into account any relevant guidance published under paragraph (9).

(11) In deciding upon the sentence for a person convicted of an offence under paragraph (1)(d), the court must in particular have regard to whether that person could reasonably have avoided the damage to or destruction of the breeding site or resting place concerned.

Licences may be obtained to permit activities that would otherwise be unlawful, but they can only be granted for certain purposes. Those purposes include that of preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment (Regulation 42(10). It is the imperative reasons of overriding public interest element of this that is relied upon by those seeking to carry out development where those activities affect a European protected species or their places used for shelter or protection. Even where that purpose is met, however a licence may only granted where:

- There is “no satisfactory alternative”; and
- The action authorised “will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range”

Natural England issues licences for this purposes under Regulation 44(2)(e).

It is not the responsibility of Natural England staff to decide when a licence is required/recommended. This decision is down to the proposer of the operation who should consider whether, on balance and usually with the assistance of an ecological consultant, the operation would be reasonably likely to result in the commission of an offence under these Regulations. This view should be formed in the light of survey information and specialist knowledge. A licence simply permits an action that is otherwise unlawful. A licence should be applied for if, on the basis of survey information and specialist knowledge, it is considered that the proposed activity is reasonably likely to result in an offence (killing, breeding site destruction, etc – see above).

It should be noted that the protection afforded to species under the UK and EU legislation referred to here is in addition to that provided by the planning system and the applicant must ensure that any activity they undertake on the application site (regardless of whether or not planning permission has been obtained) complies with the appropriate wildlife legislation. Failure to do so may result in fines and, potentially, a custodial sentence.

Biodiversity Action Plans

Biodiversity Action Plans (BAPS) set out actions for the conservation and enhancement of biological diversity at various spatial scales. They consist of both Habitat Action Plans (HAPs) and Species Action Plans (SAPs).

The UK BAP was the UK's response to the 1992 Convention on Biological Diversity in Rio de Janeiro. Following a review in 2007 a list of 1149 priority species and 65 priority habitats has been adopted, which are given a statutory basis for planning consideration under Section 40 of the NERC Act 2006.

Further information about Kent BAP can be found here: http://www.kentbap.org.uk/habitats-and-species/priority-species/

Red Data Books

British Red Data Books (RDB) are an additional method for classifying the rarity of species, and are often seen as a natural progression from Biodiversity Action Plans.

RDB species have no automatic legal protection (unless they are protected under any of the legislation previously mentioned). Instead they provide a means of assessing rarity and highlight areas where resources may be targeted. Various categories of RDB species are recorded, based on the IUCN criteria and the UK national criteria based on presence within certain numbers of 10x10km grid-squares (see http://www.jncc.gov.uk/page-3425). As with Biodiversity Action Plans, where possible, steps should be taken to conserve RDB species which are to be affected by development.