

LAND AT SCHOOL LANE,
BAPCHILD

Ecological Appraisal

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1. INTRODUCTION

1.1. Background and Proposals

- 1.1.1. Aspect Ecology has been commissioned by BDB Design on behalf of Crabtree and Crabtree (Bapchild) Limited to undertake an ecological appraisal of land at School Lane, Bapchild (see Plan 4164/ECO1).
- 1.1.2. The site is proposed for residential development, along with new access and landscaping (see Appendix 1).

1.2. Site Location and Characteristics

- 1.2.1. The site is located south of the village of Bapchild, and around 0.8km east of Sittingbourne, Kent. The site is bound to the north by School Lane, beyond which lies existing residential development. To the east the site is bound by Church Street, beyond which lies an expanse of agricultural land. The southern site boundary is not demarked by an existing feature, with the field dominating the site extending offsite to the south, with further agricultural land further beyond. To the west the site is bound by an existing driveway associated with the dwelling at Morris Court Farm, beyond which lies existing residential development.
- 1.2.2. The site itself is dominated by an arable field, which extends offsite to the south. The site also includes areas of semi-improved grassland, a treeline, a number of scattered trees and Bramble thicket.

1.3. Ecological Assessment

- 1.3.1. This document assesses the ecological interest of the site as a whole. The importance of the habitats and species present is evaluated. Where necessary, mitigation measures are recommended so as to safeguard any significant existing ecological interest within the site and where appropriate, opportunities for ecological enhancement are proposed with reference to national and local Biodiversity Action Plans (BAPs).

2. SURVEY METHODOLOGY

2.1. The methodology utilised for the survey work can be split into three main areas: desktop study, habitat survey and faunal survey. These are discussed in more detail below.

2.2. Desktop Study

2.2.1. In order to compile background information on the site and its immediate surroundings, Kent and Medway Biological Records Centre (KMBRC) was contacted. Information received from KMBRC is referred to in the text and reproduced where appropriate at Plan 4164/ECO2.

2.2.2. Information on nearby ecological designations was obtained from the online Multi-Agency Geographic Information for the Countryside (MAGIC) database. This information is reproduced at Appendix 2 and, where appropriate, on Plan 4164/ECO2.

2.2.3. It is understood from the Data Access Officer for the National Biodiversity Network (NBN) database that all records have been passed on to local records centres and will therefore be returned as part of the local records centre information. On this basis, no additional search of the NBN database has been undertaken

2.2.4. In addition, the Woodland Trust database was searched for any records of veteran trees within or adjacent to the site, the Freshwater Habitats Trust database was searched for any records of priority ponds or important areas for ponds, a search of the Open Mosaic habitat Inventory database was conducted to search for any areas of Open Mosaic Habitat on Previously Developed Land BAP Habitat, and the West Kent Badger Group was contacted for Badger records in the local area.

2.3. Habitat Survey Methodology

2.3.1. The site was surveyed in February 2015 in order to ascertain the general ecological value of the land contained within the boundaries of the site and to identify the main habitats associated with the site.

2.3.2. The site was surveyed based on extended Phase 1 survey methodology (Joint Nature Conservation Committee, 2010¹), as recommended by Natural England, whereby the habitat types present are identified and mapped, together with an assessment of the species composition of each habitat. This technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential which require further survey. Any such areas identified can then be examined in more detail. This method was extended, in line with the Guidelines for Preliminary Ecological Appraisal (GPEA)², to include recording details of notable or protected species present within the survey area, or habitats present that have the potential to support notable or protected species.

¹ Handbook for Phase I habitat survey: A technique for environmental audit. JNCC, 2010.

² Chartered Institute for Ecology and Environmental Management (CIEEM) (2012) "Guidelines for Preliminary Ecological Appraisal".

2.3.3. Using the above method, the site was classified into areas of similar botanical community types, with a representative species list compiled for each habitat identified.

2.4. Faunal Surveys

2.4.1. A general faunal survey was also undertaken, including recording of any mammals or birds observed during the course of the survey, and an assessment of habitats for their potential to support any protected, rare or notable species, with specific consideration undertaken in respect of Badger and bats.

Badgers³

2.4.2. Evidence of the presence of Badgers was considered during the extended Phase 1 survey of the site in February 2015.

2.4.3. Survey work for Badger comprises two main elements. Firstly, searching thoroughly for evidence of Badger setts. For any setts that are encountered, each sett entrance is noted and plotted even if the entrance appeared disused. The following information is recorded:

- The number and location of well used, recently active or very active entrances; these are clear from any debris or vegetation and are obviously in regular use and may, or may not, have been excavated recently;
- The number and location of inactive entrances; these are not in regular use and have debris such as leaves and twigs in the entrance or have plants growing in or around the edge of the entrance;
- The number of disused entrances; these have not been in use for some time, are partly or completely blocked and cannot be used without considerable clearance. If the entrance has been disused for some time all that may be visible is a depression in the ground where the hole used to be and the remains of the spoil heap.

2.4.4. Secondly, Badger activity such as well-worn paths and push-throughs, snagged hair, footprints, latrines and foraging signs are recorded so as to build up a picture of the use of the survey area by Badgers.

Bats⁴

2.4.5. **Tree Assessment.** An examination of the trees within the site was undertaken during the extended Phase 1 survey in February 2015 to identify any features which could be of potential value to roosting bats such as splits, cracks, rot holes, coverings of ivy, peeling bark or similar. The potential for the trees to support roosting bats has been ranked in accordance with the criteria set out in the Bat Conservation Trust (BCT) guidelines (2nd Edition):

- Known or confirmed roost – Either a known roost from background records / previous survey work undertaken or a confirmed bat

³ Based on: Mammal Society (1989) "Occasional Publication No. 9 – Surveying Badgers"

⁴ Surveys based on: English Nature (2004) "Bat Mitigation Guidelines" & Bat Conservation Trust (2012) "Bat Surveys – Good Practice Guidelines" (2nd Edition)

roost tree with field evidence of the presence of bats (e.g. droppings, scratch marks, grease marks or urine staining).

- *Category 1** – trees with multiple, highly suitable features capable of supporting larger roosts.
- *Category 1* – trees with definite bat potential, supporting fewer suitable features than category 1* trees or with potential for use by single bats.
- *Category 2* – trees with no obvious potential, although the tree is of a size and age that elevated surveys may result in cracks or crevices being found; or the tree supports some features which may have limited potential to support bats.
- *Category 3* – Trees with no potential to support bats.

2.5. Survey Constraints and Limitations

- 2.5.1. All of the species that occur in each habitat would not necessarily be detectable during survey work carried out at any given time of the year, since different species are apparent at different seasons. Although the extended Phase 1 survey was conducted outside the optimal survey season for botanical work, the vegetation types present are such that it is considered that a satisfactory survey and assessment of habitat types was undertaken.
- 2.5.2. The specific Phase 2 surveys were undertaken at the optimal time of year and during suitable weather conditions to an appropriate level of survey effort. The surveys carried out are therefore considered to allow a robust assessment of the ecological interest of the survey area to be undertaken.

3. ECOLOGICAL DESIGNATIONS

3.1. Statutory and non-statutory designations of nature conservation interest that occur within the vicinity of the site are summarised below and illustrated on Plan 4164/ECO2.

3.2. Statutory Designations

3.2.1. No identified statutory nature conservation designations are located within or adjacent to the site.

3.2.2. The nearest statutory nature conservation designation to the site is The Swale Special Protection Area (SPA), Ramsar site and Site of Special Scientific Interest (SSSI), which is located approximately 1.9km north of the site. This designation qualifies as a Special Protection Area due to the presence of the Annex 1 species Avocet *Recurvirostra avosetta*, Marsh Harrier *Circus aeruginosus*, Mediterranean Gull *Larus melanocephalus*, Bar-tailed-Godwit *Limosa lapponica*, Golden Plover *Pluvialis apricaria*, and Hen Harrier *Circus cyaneus*, whilst a number of important migratory species are also supported by the designation, along with an overall assemblage of over 20,000 waterfowl. The site qualifies as a Ramsar site due to the presence of nationally scarce plants and red data book invertebrates, as well as the presence of Common Redshank *Tringa totanus totanus*, Dark-bellied Brent Goose *Branta bernicla bernicla* and Grey Plover *Pluvialis squatarola*. Finally The Swale qualifies as a SSSI for supporting internationally important breeding populations of a number of bird species, whilst parts of The Swale support 'outstanding assemblages of plants and invertebrates'.

3.2.3. The next nearest identified statutory nature conservation designation is Elmley National Nature Reserve (NNR), located approximately 4.2km north of the site. Elmley NNR is designated for comprising large areas of grazing marsh which supports a range of waterbirds, birds of prey, Brown Hare, Water Vole and a diverse invertebrate fauna. This NNR is managed by ECT (Conservation) LTD and is open to the public.

Evaluation

3.3. Given the locality of The Swale SPA/Ramsar/SSSI (part of the North Kent Marshes SPAs) to the site, the potential effects of the development need to be carefully considered. Guidance in this regard is provided by the Habitat Regulation Assessment⁵ undertaken of the emerging Local Plan⁶. This HRA identifies air quality, water quality and increased recreational pressure to be factors that have potential to adversely affect the designation, and these are considered below.

3.4. In respect of air quality, the HRA concluded that air quality is unlikely to be an issue in respect of The Swale SPA/Ramsar/SSSI. The current nitrogen deposition rates for sink habitats within the designation are currently 25% below the critical load. This shortfall from the critical load is considered to be insurmountable by increased traffic alone and therefore the development

⁵ Swale Borough Council – Habitat Regulations Screening Assessment, URS, October 2014

⁶ Bearing Fruits 2031 - The Swale Borough Council Local Plan Part 1, Publication Version December 2014

of the site is unlikely to generate a significant effect on The Swale SPA/Ramsar/SSSI through alterations in air quality.

- 3.5. Similarly, the HRA concludes that water quality (sewage treatment) is also not of an overriding concern for allocated development in the area, with phytoplankton growth in the estuary not a significant issue, despite existing high nutrient levels. Therefore, it is considered that the development of the site is unlikely to generate a significant effect on The Swale SPA/Ramsar/SSSI through alterations in water quality.
- 3.5.1. Consideration also needs to be given to potential increases in recreational pressure. In this regard, research has been provided via a series of studies undertaken on behalf of the North Kent Environmental Planning Group (NKEPG) to assess the current and future levels of recreational activity at the North Kent Marshes SPAs and its potential impact on bird populations^{7,8,9,10}. The Phase 1 Bird Disturbance Report reviews the results of surveys undertaken to date and assesses the impacts of recreational disturbance on the North Kent Marshes SPAs. The report concludes that there have been declines in the number of birds using the SPAs and that disturbance is a potential cause of these declines, since human disturbance results in behavioural responses from the birds. However, behavioural responses do not necessarily give a good indication as to the impact of disturbance and there is currently insufficient information to establish whether recreational disturbance at the SPAs is responsible for the population declines recorded.
- 3.5.2. Notwithstanding the current lack of information, the report identifies that declines in bird populations are most apparent in the Medway Estuary and Marshes SPA and the declines have occurred at locations with the highest level of access. Importantly, the report states "*development within 6km of access points to the SPAs is particularly likely to lead to increase in recreational use of the SPAs*". Most of the predicted increase in recreational pressure is likely to occur on the Medway and the Thames (to the east of Gravesend). However, as The Swale SPA lies approximately 1.9km south of the site (i.e. within the 6km potential zone of influence), the potential recreational impacts on this SPA as a result of the proposed development are discussed below.
- 3.5.3. Recreational use of the SPA includes, for example, dog walking, cycling, jogging, walking and family outings. The Phase 1 Bird Disturbance Report identifies dog walking, particularly dog walking with dogs off leads, as the main cause of disturbance in the three North Kent Marshes SPAs. The report calculates average visitor rates which are currently estimated at 11,000 per day. The proposed development will provide a net increase in 21 new dwellings and, based on an average occupancy of 2.36 (the national average occupancy rate given by the Office for National Statistics), the development can expect to house a net increase of 50 people. Using the figures provided in Table 4 of the Report, houses at 2.5km from the SPA can expect to create 0.0176 visits per day per person. The formula at Figure 4

⁷ Liley, D (2011). "*What do we know about the birds and habitats of the North Kent Marshes?: Baseline data collation and analysis.*" Natural England Commissioned Reports, Number 082.

⁸ Liley, D & Fearnley, H (2011). "*Bird Disturbance Study, North Kent 2010/11.*" Footprint Ecology.

⁹ Fearnley, H. & Liley, D. (2011). "*North Kent Visitor Survey Results*". Footprint Ecology.

¹⁰ Liley, D., Lake, S. & Fearnley, H. (2012). "*Phase 1 – Bird Disturbance Report*". Footprint Ecology/GGKM/NE.

suggests that at 1.9km, this would result in 0.024 visits per day per person. Therefore the predicted number of visits to The Swale SPA arising from the development is estimated at 1.2 per day.

- 3.5.4. Research commissioned by NKEPG established that 50% of visitors arriving on foot to the North Kent Marshes SPAs lived within 0.9km of their visit location, while 90% lived within 2.7km. Although the site is approximately 1.9km from the SPA, the closest footpath route to the SPA amounts to over 3km, along various footpaths and public roads. This route would involve walking through residential and industrial development and across several roads and is therefore not likely to be an attractive or popular route (with alternate, more attractive routes being longer in length). As such, the SPA is not likely to be highly accessible to new residents on foot.
- 3.5.5. The above factors are likely to limit the increase in recreational use of the SPA, although it is acknowledged that the proposed development has the potential to lead to a very small increase in use.
- 3.5.6. The Phase 1 Bird Disturbance Report states that current housing within 5km of the North Kent Marshes SPAs is expected to generate around 9,200 person visits per day. The predicted increase in visitors resulting from the proposed development of 1 person per day, leads to a total 9,201 person visits to the SPAs per day. This represents a predicted increase of 0.01% in daily visits.
- 3.5.7. This suggests that increased recreational pressure arising from the proposed development on the North Kent Marshes SPAs is negligible and not likely to be significant. The site is considered to be sufficiently removed from the SPA such that other indirect effects, for example associated with air quality and hydrology, are unlikely to be significant, whilst the SPA is not highly sensitive to such effects.

Other statutory designations

- 3.5.8. Elmley NNR almost entirely forms part of The Swale SPA, and therefore is considered in the text above, albeit Elmley is located on the far side of the Swale estuary and is therefore poorly accessible from the site relative to closer parts of the SPA.
- 3.5.9. All other statutory nature conservation designations are further removed from the site and accordingly the proposals are not anticipated to have a significant impact on any such designation.

3.6. Non-statutory Designations

- 3.6.1. No identified non-statutory nature conservation designations are located within or adjacent to the site. The nearest non-statutory nature conservation designation to the site is Highstead Quarries Local Wildlife Site (LWS), located approximately 1.7km south west of the site. Highstead Quarries LWS is a disused quarry that contains mixed woodland including areas of Ancient Woodland.
- 3.6.2. The next-nearest non-statutory nature conservation designation is Milton Creek LWS, located approximately 2.4km north west of the site. This

designation comprises the mudflats and saltmarshes associated with Milton Creek.

- 3.6.3. All other non-statutory nature conservation designations are well-removed from the site.

Evaluation

- 3.6.4. Highstead Quarries LWS is relatively well-removed from the site and not directly linked to the site by corridors for wildlife movement such as rivers or woodland, such that it is considered unlikely that the development of the site will have any direct or indirect impact on faunal species that rely on the habitats within the LWS. Furthermore, the residential development of the site is of a relatively small scale and it is therefore not anticipated to result in any other direct or indirect effect on this LWS.

- 3.6.5. Accordingly, the development is not anticipated to have any significant effect on this or any other, more distant, non-statutory nature conservation designation.

3.7. Ancient Woodland

- 3.7.1. There are no identified areas of Ancient Woodland within or adjacent to the site. The closest area of Ancient Woodland is Scuttington Wood, located approximately 1.4km south of the site. A number of other areas of Ancient Woodland have been identified within the local area, all of which are further separated from the site.

Evaluation

- 3.7.2. All areas of Ancient Woodland are well removed from the site and are therefore considered unlikely to be directly or indirectly impacted as a result of the proposals.

- 3.7.3. It should be noted that Scuttington Wood is indirectly linked to the site via a public footpath, such that it may be vulnerable to an increase in recreational pressure. However, any increase in recreational pressure is not anticipated to be significant due to the relatively small size of the development, whilst this area of ancient woodland is well removed from the site. In any case, woodland is a robust habitat type (unlike grassland) and as such any minor increase in recreational use is considered unlikely to adversely affect the woodland.

- 3.7.4. Accordingly, the proposals are not anticipated to result in a significant detrimental impact on this or any other area of Ancient Woodland.

4. ECOLOGICAL FEATURES AND HABITATS

4.1. The following main habitat/vegetation types were identified within the site during the survey work undertaken:

- Arable
- Grassland
- Treeline
- Scattered Trees
- Scrub

4.2. The locations of these habitat types are shown at Plan 4164/ECO3. Each habitat is described below with an account of the representative plant species present, where appropriate.

Habitats of Principal Importance for Biodiversity

4.3. Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 places a duty on the Secretary of State to publish a list of the living organisms (species) and habitats considered to be of principal importance for the purposes of conserving biodiversity. This list largely reflects those species and habitats listed under the UK Biodiversity Action Plan that occur in England.

4.4. **Arable**

4.4.1. The site is dominated by an arable field, comprising a portion of a wider field (the remainder of which extends offsite to the south and west, see Plan 4146/ECO1). The field was recorded to support arable leys at the time of survey, comprising a uniform sward of a single species of grass likely planted as a part of a rotational management regime (see Photograph 1 at Plan 4146/ECO3). No arable weeds were recorded within the field, whilst the arable margins were noted to be particularly narrow and dominated by grassland (see below).

Evaluation

4.4.2. The arable land which dominates the site is dominated by a single grass species and appeared to be recently planted as part of a rotational management regime. The margins are limited in extent and do not appear to be managed primarily for the benefit of wildlife, such that they are unlikely to represent the Priority Habitat 'Arable Field Margins'. Accordingly, the arable land is considered to be of negligible botanical value and offers no real opportunities for wildlife. Further areas of arable land of a similar nature is also present in the local area, such that the land that dominates the site is of no local significance. As such the arable land within the site appears to represent no constraint to the proposals.

4.5. **Grassland**

4.5.1. **Habitat Description.** The western, northern and eastern margins of the arable field were noted to be dominated by grassland, which to the north and east extended to form the road margins of School Lane and Church Street (see Photograph 2 at Plan 4164/ECO3). The field is set above the level of

the road such that the grassy road margins are partially set on a bank. The grassland within the site was noted to be of a varying sward height, with a longer sward recorded along the arable margins and a close-mown sward recorded along the road margins. The grassland along the west of the arable field (understood to be partly within the site boundary) was noted to be of a developing nature, with frequent patches of bare ground and occasional piles of garden waste.

- 4.5.2. Species recorded within the grassland included Cock's-foot *Dactylis glomerata*, Yorkshire Fog *Holcus lanatus*, Creeping Buttercup *Ranunculus repens* and Common Nettle *Urtica dioica*, which were noted to be frequent throughout. The area of grassland along the west of the arable field included a higher proportion of ruderal species including dominant Common Nettle, with Cleavers *Galium aparine*, Mosses, Cut-leaved Cranesbill *Geranium dissectum*, Dove's-foot Cranesbill *Geranium molle*, Wavy Bitter-cress *Cardamine flexuosa*, Common Mouse-ear *Cerastium fontanum*, Field Speedwell *Veronica persica* and Campion *Silene* sp. also present. The areas of grassland along the north and east of the arable field also included frequent Cow Parsley *Anthriscus sylvestris*, Ivy *Hedera helix* and White Dead-nettle *Lamium album* and occasional Perennial Rye-grass *Lolium perenne*, Strawberry *Fragaria vesca*, planted Daffodils *Narcissus* agg., Yarrow *Achillea millefolium*, Stitchwort *Stellaria* sp., Ground-ivy *Glechoma hederacea* and Broad-leaved Dock *Rumex obtusifolius*.

Evaluation

- 4.5.3. The areas of grassland within the site comprise a range of common and widespread species which in combination appear to represent semi-improved grassland. Accordingly, the grassland does not appear to be of elevated botanical value. Although the grassland is likely subject to varying management, no well-developed tussocky areas were noted, and as such it is less likely to provide opportunities to wildlife such as small mammals or reptiles. Further, the total area of grassland within the site is small in extent and therefore the grassland is not considered to be of elevated ecological value at the local level.

4.6. **Tree Line**

- 4.6.1. A single tree line is present along the northern site boundary (see Photograph 3 at Plan 4164/ECO3). This treeline comprises a number of semi-mature to mature Poplar *Populus* sp. trees, in addition to occasional young to semi-mature Field Maple *Acer campestre*, with a sparse understorey of occasional Bramble *Rubus fruticosus*, Rose *Rosa* sp., Blackthorn *Prunus spinosa*, Sycamore *Acer pseudoplatanus* saplings and Poplar saplings. The ground flora was noted to be dominated by similar species to those within the adjacent grassland, in addition to Lord's and Ladies *Arum maculatum*, Ivy and Hogweed *Heracleum sphondylium*.

Evaluation

- 4.6.2. The tree line within the site includes a number of semi-mature to mature trees, which are likely to provide opportunities for a range of wildlife, whilst in the context of the site (dominated by arable land) the feature is likely to be of elevated ecological value. Under the proposals the treeline will be retained

and accordingly no direct impact on this feature is anticipated. Nonetheless, a number of recommendations are set out at section 6 to ensure that the value of this feature for wildlife is retained and enhanced where possible.

4.7. Scattered Trees

- 4.7.1. **Habitat Description.** A small number of scattered trees are present within the site, limited to a small number of semi-mature Willow *Salix* sp. trees within the grassland strip along the western site boundary (see Photograph 6 at Plan 4164/ECO3) and a single young Walnut at the south eastern corner of the site.

Evaluation

- 4.7.2. The small number of scattered trees within the site are limited to a small number of species, such that the overall botanical interest of this habitat is limited. Nonetheless, the trees increase the variety of habitats within the site and at the site level provide some elevated opportunities for wildlife. Under the proposals these trees will be retained and accordingly no direct impact on this habitat is anticipated.
- 4.7.3. In addition, new tree planting is proposed under the development, which will likely provide additional opportunities to wildlife at the site. Recommendations to maximize the value of such tree planting are set out at section 6.

4.8. Scrub

- 4.8.1. **Habitat Description.** A number of areas of dense scrub dominated by Bramble thicket were recorded to be present within the site, including an area at the north western corner of the arable field and a linear area extending along the east of the arable field from the treeline (see Photograph 5 at Plan 4164/ECO3). Alongside dominant Bramble, other species recorded within these areas included Rose, Nipplewort *Lapsana communis*, Elm *Ulmus* sp. and occasional Sycamore saplings.

Evaluation

- 4.8.2. Areas of scrub within the site are small in extent and are dominated by a small range of common and widespread species such that they are considered to be of no more than low ecological value at the local level. Nonetheless, these areas may provide some, albeit limited, opportunities for fauna (see section 5 below). Accordingly, recommendations are set out at section 6 to safeguard any faunal species that may be present within the areas of scrub.

4.9. Background Records

- 4.9.1. No records of rare or notable plants were returned within the site during the desktop study. The closest record to the site is that of Dittander *Lepidium latifolia* located approximately 2.3km to the north of the site and recorded in 1992.

- 4.9.2. No evidence for the presence of any rare or notable plant species was recorded at the site.

5. FAUNAL USE OF THE SITE

- 5.1. During the survey work, general observations were made of any faunal use of the site with specific attention paid to the potential presence of protected or notable species.

Species of Principal Importance for Biodiversity

- 5.2. Section 41 of the NERC Act 2006 places a duty on the Secretary of State to publish a list of the living organisms (species) and habitats considered to be of principal importance for the purposes of conserving biodiversity. This list largely reflects those species and habitats listed under the UK Biodiversity Action Plan that occur in England. Where appropriate the potential for the presence of species of principal importance is discussed below, within the relevant section.

5.3. **Bats**

- 5.3.1. **Legislation.** All British bats are classed as European Protected Species under the Conservation of Habitats and Species Regulations 2010, and are also listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). As such, both bats and their roosts (breeding sites and resting places) receive full protection under the legislation.

- 5.3.2. **Background Records.** Information received from KMBRC includes records of Common Pipistrelle *Pipistrellus pipistrellus*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Noctule *Nyctalus noctula*, Serotine *Eptesicus serotinus*, Brown Long-eared bat *Plecotus auritus*, Natterer's bat *Myotis nattereri*, Daubenton's bat *M. daubentonii* and Whiskered Bat *M. mystacinus* as well as a number of unspecified bat (Chiroptera) records within the search area. The closest records to the site are that of Common Pipistrelle, Soprano Pipistrelle and *Myotis* sp. bats recorded in flight approximately 30m east of the site on a number of occasions (most recently in 2005). The closest record of a bat roost is located

Survey Results and Evaluation – Roosts.

- 5.3.3. No buildings are present within the site, whilst no evidence of the presence of roosting bats was recorded during the inspection work of the trees within the site. However, a number of the Poplar trees within the tree line (along the northern site boundary) were noted to support a sparse covering of Ivy which could potentially conceal features, such as woodpecker holes, that could be utilised by roosting bats (see Plan 4164/ECO3).
- 5.3.4. **Evaluation.** Although no evidence of roosting bats was recorded, or any features of potential for roosting bats observed, a number of trees within the site may potentially support features of value for roosting bats (concealed by ivy cover). Accordingly, these trees are considered to be of low bat roosting potential (BCT Category 2).
- 5.3.5. Under the proposals, these trees are to be retained such that no direct impact on potential bat roosts are anticipated as a result of the development, albeit a number of recommendations are set out at section 6 below to ensure that indirect effects on potential bats roosts are avoided.

Survey Results and Evaluation – Foraging and Commuting Bats

- 5.3.6. The majority of the site is dominated by open arable land and therefore is considered unlikely to provide particular foraging or commuting opportunities for bats.

The single tree line along the northern site boundary may potentially provide a linear commuting corridor and foraging opportunities for bats. In any event, the line of trees will be retained, while subject to implementation of recommendations set out at section 6, these will continue to provide existing opportunities for foraging and commuting bats. Further, the proposals include landscape planting that will provide linear corridors and cover for use by this group, providing an enhancement for this species group over the existing situation.

5.4. Badger

- 5.4.1. **Legislation.** Badgers *Meles meles* receive legislative protection under the Protection of Badgers Act 1992, which aims to protect Badgers themselves as well as their setts.

- 5.4.2. **Background Records.** A number of records of Badger were returned from the West Kent Badger Group, the closest record to the site is for a road traffic accident, located approximately 0.34km south-west of the site, recorded in 2004, and for a sett, located approximately 0.34km south-west of the site, recorded in 2005.

- 5.4.3. **Survey Results and Evaluation.** No Badger setts or other evidence for the presence of Badger was recorded within the site. Anecdotal information given by a local landowner detailed an offsite Badger sett, potentially a main sett, located to the south of the site

- 5.4.4. Given the lack of any signs of Badger within the site, there is no evidence that badger makes use of the site, whilst, as the site is dominated by arable land, the site is unlikely to be of any particular elevated value to Badger in the local context.

- 5.4.5. Nonetheless, in the unlikely event that Badger frequents the site from time to time, a number of general construction safeguards are set out at section 6 to ensure that Badger are fully safeguarded under the proposals.

5.5. Other Mammals

- 5.5.1. **Background Records.** A number of records of Brown Hare *Lepus lepus*, Otter *Lutra lutra*, Water Vole *Arvicola* amphibious, Weasel *Mustela nivalis*, Stoat *Mustela erminea*, Hedgehog *Erinaceus europeaus*, Common Shrew *Sorex araneus*, Pygmy Shrew *Sorex minutus* and Dormouse *Muscardinus avellanarius* were returned by KMBRC. The closest of these records to the site is that of Water Shrew, located approximately 2.6km north of the site.

- 5.5.2. **Survey Results and Evaluation.** The site is dominated by arable land and accordingly presents no elevated opportunities for common mammal species. Although the habitats within the site may be frequented by

common mammal species, such as Fox and Rabbit, there is no evidence to suggest any significant populations of common mammal species was recorded within the site.

- 5.5.3. A number of records of Hedgehog were identified within the vicinity of the site. Whilst grassland habitats within the site are likely to offer some limited opportunities for this Priority Species, this is limited in extent and quality and accordingly is considered to not be of elevated value for this species. As such, a number of safeguards and enhancement measures are set out at section 6 to ensure that Hedgehog is fully safeguarded under the proposals.
- 5.5.4. Mammal species likely to utilise the site, potentially including Fox, Weasel, Stoat and Field Vole, remain common in both a local and national context. As such, these species carry no legal protection and the loss of potential opportunities for these species to the proposals would be of little importance. In any event, it is likely that this species would continue to use the site and site surrounds following completion of construction works.

5.6. **Birds**

- 5.6.1. **Legislation.** All wild birds and their nests receive protection under Section 1 of the Wildlife and Countryside Act 1981 (as amended) in respect of killing and injury, and their nests, whilst being built or in use, cannot be taken, damaged or destroyed. Species included on Schedule 1 of the Act receive greater protection and are subject to special penalties.
- 5.6.2. **Background Records.** A number of records of protected and notable bird species were returned from KMBRC within the vicinity of the site, including a number of species that could potentially utilise the habitats within the site. The closest records to the site are that of Honey Buzzard *Pernis apivorus*, Hobby *Falco subbuteo* and Swift *Apus apus* located approximately 200m north of the site within the residential area of Bapchild. Honey Buzzard is a Schedule 1 species, and is typically recorded within areas of woodland. A number of records of Barn Owl *Tyto alba* were returned, all of which are specific only to the 10x10km grid square that contains the site.
- 5.6.3. **Survey Results and Evaluation.** Bird species recorded within the site during the extended Phase 1 survey work undertaken include Chaffinch *Fringilla coelebs*, Blue Tit *Cyanistes caeruleus*, House Sparrow *Passer domesticus* and Wood Pigeon *Columba palumbus*. Overall, the site is small in nature, and dominated by arable land, such that it is considered that no elevated opportunities are presented for birds in the context of the local area. Overall, it is therefore considered that the site is of no elevated importance for birds and that this species group presents no constraint to the proposals.
- 5.6.4. The nearby background record of Honey Buzzard is considered somewhat unusual considering the local landscape and residential nature of the area it was recorded within. The site does not comprise any woodland or other habitats which are likely to be of significance to this species, such that it is considered unlikely that Honey Buzzard will be affected by the proposals.
- 5.6.5. The site provides limited opportunities for Barn Owl, limited to potential hunting opportunities by the arable field margins. These in themselves are

small in extent and therefore although the site provides opportunities to this species in principal, it is not considered that the site is of any significance to Barn Owl at the local level.

- 5.6.6. House Sparrow is a Priority Species, classified as such due to significant recent declines in the UK. However, this species is still common and widespread, with strong populations within urban areas. The residential development of the site is therefore considered unlikely to have a detrimental impact on House Sparrow, with this species considered likely to recolonise the site following works. A number of recommendations are set out at Section 6 below, including the provision of nest boxes, which will provide new opportunities to House Sparrow and other common bird species that are likely to use the site. In addition, tree and landscape planting is proposed which is likely to provide additional foraging and nesting opportunities for birds, potentially of higher ecological value than the arable land that currently dominates the site.

5.7. Reptiles

- 5.7.1. **Legislation.** All reptile species receive protection under legislation in the UK. Due to their relatively common and widespread status, Slow-worm *Anguis fragilis*, Grass Snake *Natrix natrix*, Common Lizard *Lacerta vivipara* and Adder *Vipera berus* receive only partial protection under the Wildlife and Countryside Act 1981 (as amended) being protected from deliberate killing or injury, their habitat receiving no statutory protection. These species are also listed as UK Priority Species.

- 5.7.2. **Background Records.** A number of records of Common Lizard, Slow-worm and Grass Snake were returned from KMBRC, none of which are located within the site. The closest record to the site is that of Slow Worm located approximately 470m north of the site.

- 5.7.3. **Survey Results and Evaluation.** No reptiles were recorded within the site during the general survey work undertaken, whilst the site is dominated by arable land which appears to be under rotational management, such that this is of little to no ecological value to this species group. The areas of grassland and scrub, whilst in isolation may represent suitable habitat for common reptiles, are small in extent and somewhat isolated from offsite areas of suitable habitat. Accordingly, it is considered highly unlikely that the site supports a significant population of reptiles and accordingly this species group does not appear to represent a constraint on the proposals. Nevertheless, in the highly unlikely event that individual common reptiles are present within the site, measures are recommended at section 6 to ensure that this species group is fully safeguarded during site clearance works.

5.8. Amphibians

- 5.8.1. **Legislation.** All British amphibian species receive a degree of protection under the Wildlife and Countryside Act 1981 (as amended). Great Crested Newt *Triturus cristatus* is fully protected under Schedule 5 of this legislation, and is also classed as a European Protected Species under the Conservation of Habitats and Species Regulations 2010 (as amended). As such, both Great Crested Newt and habitats utilised by this species are afforded protection. This species is also listed as a UK Priority Species.

5.8.2. **Background Records.** No location-specific background records of the fully protected species Great Crested Newt were returned from the data search. A number of records of Common Frog *Rana temporaria*, Common Toad *Bufo bufo* and Smooth Newt *Lissotriton vulgaris* have been returned from KMBRC. The closest of these records is that of Common Frog located approximately 940m north west of the site.

5.8.3. **Survey Results and Evaluation.** There is a lack of background records of Great Crested Newt within the local area, suggesting that this species may be locally scarce or absent. The site does not include any waterbodies, whilst no ponds have been identified within the near vicinity of the site (within the 250m regular commutable distance of Great Crested Newts). Further, the site is dominated by arable land which is of no elevated ecological value to amphibians in their terrestrial phase. Accordingly, it is considered highly unlikely that the site supports a Great Crested Newts, such that this species does not appear to represent a constraint on the proposals.

5.9. Invertebrates

5.9.1. **Background Records.** A number of records of invertebrates, the majority of which being from local woodlands, marshes or waterbodies, were returned from the KMBRC. No records of invertebrates were located within the site, the closest being that of Stag Beetle *Lucanus cervus*, located approximately 70m west of the site, and recorded in 2002.

5.9.2. **Survey Results and Evaluation.** The habitats recorded at the site are likely to offer a limited range of opportunities for common species of invertebrates and no evidence was recorded to suggest the presence of a significant invertebrate assemblage or any rare or notable invertebrate species. In respect of Stag Beetle, this species typically favours woodland which is not present within the site.

5.9.3. Accordingly, invertebrates are not considered likely to pose a constraint to the proposals. In any event, new planting and garden areas included within the proposals will provide opportunities for invertebrates at the site in the long term (which will represent an enhancement over the existing arable situation). Recommendations to incorporate deadwood features are set out at Section 6, which will provide elevated opportunities to saproxylic species such as Stag Beetle.

6. RECOMMENDATIONS AND ECOLOGICAL ENHANCEMENTS

6.1. The habitats within the site appear largely unconstrained in respect of the proposed development and appear to be of no more than low ecological value, providing few opportunities to support wildlife.

6.2. Nonetheless, the treeline, scrub and scattered trees within the site provide some potential to support faunal species and therefore appropriate recommendations for suitable mitigation and safeguarding measures are set out below.

6.3. **Construction safeguards**

6.3.1. In order to reduce potential adverse effects associated with construction activities, a number of general safeguarding measures should be implemented, including the following:

- Storage of chemicals and hazardous materials should be in line with best practice guidelines, ensuring that they are kept secure and away from the site boundaries and cannot be accessed or knocked over by roaming animals;
- Fires should only be lit in secure compounds and not allowed to remain lit during the night;
- Any excavations or deep pits within the site that are to be left open overnight should be provided with a means of escape should mammals enter. This could simply be in the form of a roughened plank of wood placed in the pit as a ramp to the surface. Any such excavations or pits should be inspected each morning to ensure no animals have become trapped overnight.

6.4. **Habitats**

Treeline

6.4.1. The treeline within the north of the site is likely to provide foraging and commuting opportunities for a range of wildlife. This treeline is to be retained under the proposed layout. It is recommended that the treeline is fully protected under the proposals, in line with the provisions of BS 5837:2012.

6.5. **Protected Species**

Bats

6.5.1. In terms of roosting bats, as set out above, a number of trees within the site provide low bat roosting potential (BCT Category 2) due to the presence of Ivy growth which may serve to hide features of potential for roosting bats. It is understood that these will be retained under the proposals and therefore no direct adverse effects are anticipated in respect of roosting bats (in the unlikely event that bats are present).

- 6.5.2. In terms of foraging bats, as set out above, the majority of the site is not considered to likely provide particular opportunities for bats, albeit the tree line along the northern site boundary is likely to offer some opportunities. Accordingly, in order to maintain existing opportunities for foraging bats along this site boundary, it is recommended that any new lighting be kept to a minimum and directional lighting and deflectors be utilised where necessary in order to direct the light into the site and away from the vegetated areas, thereby maintaining dark corridors for bats and other nocturnal/crepuscular wildlife.

Badger

- 6.5.3. The recommended precautionary safeguards set out at paragraph 6.3.1 will ensure that, in the unlikely event that any foraging Badgers use the site, the proposed construction works will have no adverse effects on Badger.

Birds

- 6.5.4. To avoid any potential offence under the Wildlife & Countryside Act, any vegetation clearance work carried out within the site should be undertaken outside of the bird-nesting season (i.e. outside of March to August inclusive). If this is not practicable, any vegetation to be removed should first be checked by a suitably qualified ecologist in order to determine the location of any nests prior to removal. Any nests identified would then need to be cordoned off and protected until the end of the nesting season or until the birds have fledged.

Reptiles

- 6.5.5. No evidence of reptiles was recorded on site, whilst only limited areas of grassland of low ecological value are present, such that it is considered unlikely that common reptiles are likely to be present. However, by way of a precautionary approach, it is recommended that a number of safeguards are implemented when clearing the limited areas of grassland on site. This would involve vegetation clearance being undertaken outside of the winter in warm weather conditions when reptiles are likely to be active, and being preceded by a hand search of vegetation and any potential refugia to search for any reptiles that may be present. This should also include dismantling of any point features of raised potential for reptiles (e.g. rubble or brash piles). Vegetation clearance should then proceed, using hand tools to initially cut vegetation back to a height of 15cm. A further search of the area should then be carried out, before cutting of the vegetation to ground level. In the unlikely event that any reptiles are found during the works, these should be placed within adjacent areas of suitable habitat once clearance works are complete. Vegetation within cleared areas should be maintained at ground height until development works proceed.

6.6. Ecological Enhancements

- 6.6.1. The National Planning Policy Framework (NPPF) encourages developments to maximise the opportunities for biodiversity through incorporation of enhancement measures. The proposals present the opportunity to deliver ecological enhancements at the site for the benefit of local biodiversity, thereby making a positive contribution towards the broad objectives of

national and local Biodiversity Action Plans (BAP). Recommendations and enhancements, considered appropriate for the site, are summarised below.

New Landscape Planting and Hedgerows

- 6.6.2. New planting will be provided under the proposals in the form of amenity landscape planting and a wooded acoustic barrier (see the Sketch Site Layout at Appendix 1). Where possible this will include a range of native shrubs and trees, including fruit-bearing species, which will provide cover and potential foraging opportunities for wildlife. Further, it is recommended that new native planting is provided to strengthen existing boundary features and that new hedgerows are planted at the site boundaries, where possible, providing corridors for wildlife movement within the site.

Bats

- 6.6.3. New landscape planting will include new hedgerows and vegetated corridors of value to bats whilst sensitive lighting will further ensure these commuting habitats are protected under the proposals. In addition, it is recommended that a variety of bat boxes be incorporated into the proposed development, for example within the design of new buildings, to provide additional roosting opportunities. Suitable examples of bat boxes are provided at Appendix 3.

Birds

- 6.6.4. If possible, it is recommended that a variety of bird boxes be incorporated into the proposed development, for example within the design of new buildings, to provide additional nesting opportunities. In particular, it is recommended that such features focus on boxes and / or terraces for declining species such as the UK Priority species House Sparrow, along with House Martin and Swift *Apus apus*. Suitable examples of nest boxes are given at Appendix 4.

Hedgehogs

- 6.6.5. It is recommended that cut-outs at ground level be provided within garden fences to ensure that small mammals such as Hedgehogs are able to move freely between gardens.

Invertebrates

- 6.6.6. It is recommended that, where possible, features such as deadwood piles are incorporated into the scheme to provide new opportunities for invertebrate species such as Stage Beetle. Where possible these should be located within boundary habitats or undisturbed areas of amenity planting, and should be created using timbers cut during vegetation clearance works within the site where possible. Suitable designs of log piles are provided at Appendix 5.

6.7. Summary of Recommendations

- Retention and safeguarding of hedgerows;
- Safeguards in respect of roosting bats, nesting birds and reptiles (if present) particularly during vegetation clearance works;

- New native tree and shrub planting, and hedgerow bolstering;
- Provision of bat and bird nesting boxes within the site;
- Cut-outs in fences for Hedgehog; and
- Provision of log piles for invertebrates.

7. SUMMARY AND CONCLUSIONS

- 7.1. Aspect Ecology has been commissioned by BDB Design on behalf of Crabtree and Crabtree (Bapchild) Limited to undertake an ecological appraisal of land at School Lane, Bapchild.
- 7.2. The site has been surveyed based around extended Phase 1 methodology as recommended by Natural England. In addition, a general assessment of faunal species was undertaken with particular attention paid to the potential presence of any protected, rare or notable species.
- 7.3. **Ecological Designations.** The site itself is not subject to any statutory or non-statutory nature conservation designations, albeit The Swale SPA/Ramsar/SSSI is located approximately 1.9km north of the site. Following a detailed consideration of the proposals (set out within this report) it is considered that proposed development is unlikely to impact this, or any other, statutory or non-statutory nature conservation designation.
- 7.4. **Habitats.** The site itself is dominated by arable land, with a single tree line present along the northern site boundary. Accordingly, the majority of habitats are considered to be of no more than low ecological value at the local level. As such, these habitats are not considered likely to pose a particular constraint on the proposals. However, the treeline is of elevated value within the context of the site and this is retained and protected under the proposals.
- 7.5. **Fauna.** The site provides few opportunities for faunal species, being dominated by arable land. Nonetheless, limited opportunities are provided by the habitats within the site for bats and birds. Appropriate safeguards are provided to fully protect these faunal species groups under the proposals should they be present.
- 7.6. **Enhancements.** A number of enhancements for the benefit of biodiversity are available under the proposals with a range of recommendations set out within this report. Such measures aim to maximise opportunities for wildlife at the site.
- 7.7. **Conclusions.** In conclusion, based on the evidence obtained from the ecological survey work undertaken and with the implementation of the recommendations set out in this report, there is no reason to suggest that any ecological designations, habitats of nature conservation interest or any protected species would be adversely affected by the proposed development. As such, there is no evidence to suggest that there are any overriding ecological constraints to the proposals, while the opportunity exists to deliver enhancements for biodiversity under the scheme.

PLANS

PLAN 4164/ECO1

Site Location



KEY:

 SITE LOCATION

aspect ecology

Aspect Ecology Limited - West Court - Hardwick Business Park
 Noral Way - Banbury - Oxfordshire - OX16 2AF
 01295 276066 - info@aspect-ecology.com - www.aspect-ecology.com

SCHOOL LANE, BAPCHILD PROJECT

SITE LOCATION TITLE

4164/ECO1 DRAWING NO.

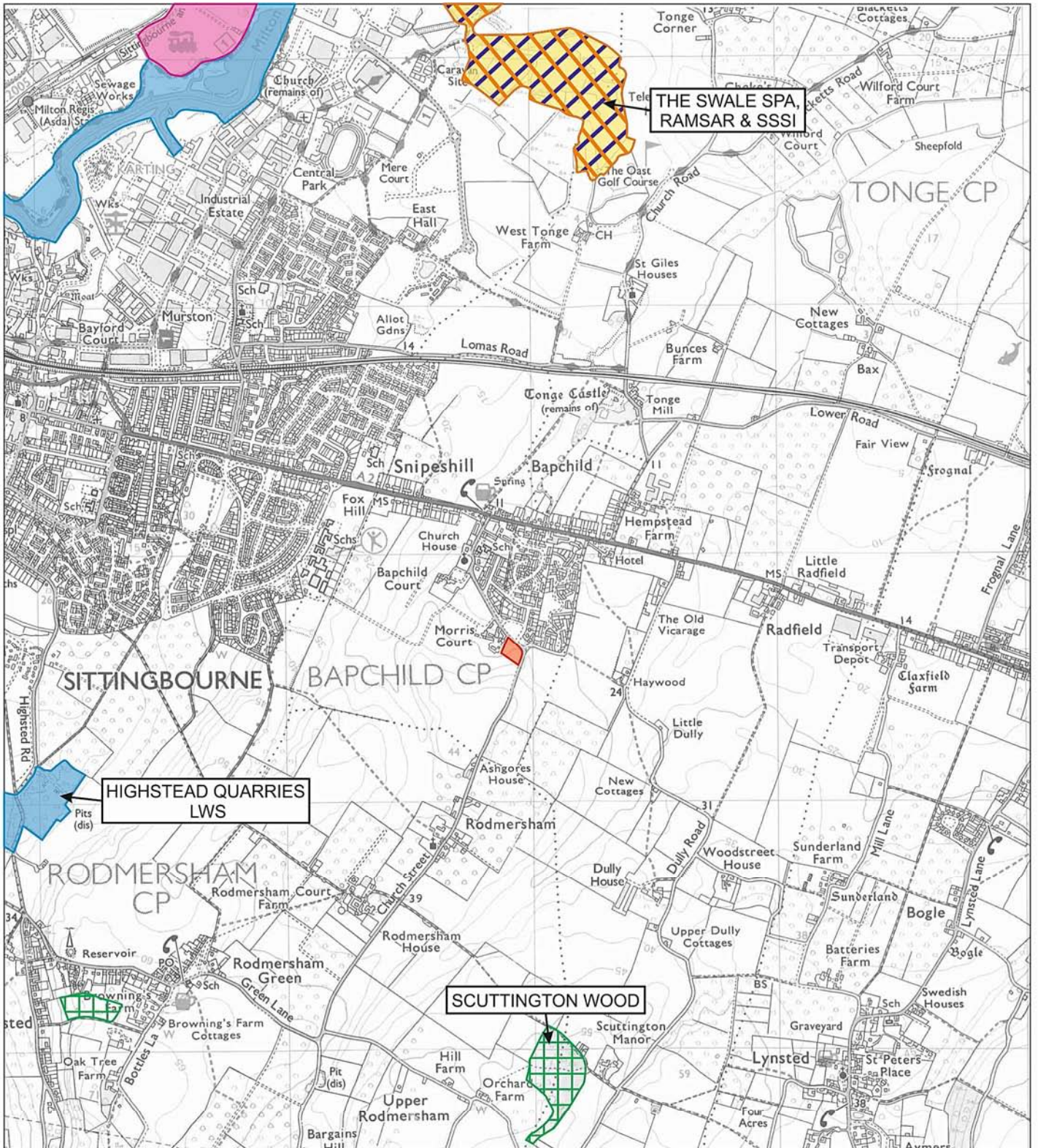
- REV.

MARCH 2015 DATE



PLAN 4164/ECO2

Ecological Designations



THE SWALE SPA, RAMSAR & SSSI

HIGHSTEAD QUARRIES LWS

SCUTTINGTON WOOD

KEY:

-  SITE LOCATION
-  SPECIAL PROTECTION AREA (SPA)
-  RAMSAR
-  SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)
-  LOCAL WILDLIFE SITE (LWS)
-  COUNTRY PARK
-  ANCIENT WOODLAND



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SCHOOL LANE, BAPCHILD PROJECT

ECOLOGICAL DESIGNATIONS TITLE

4164/ECO2 DRAWING NO.

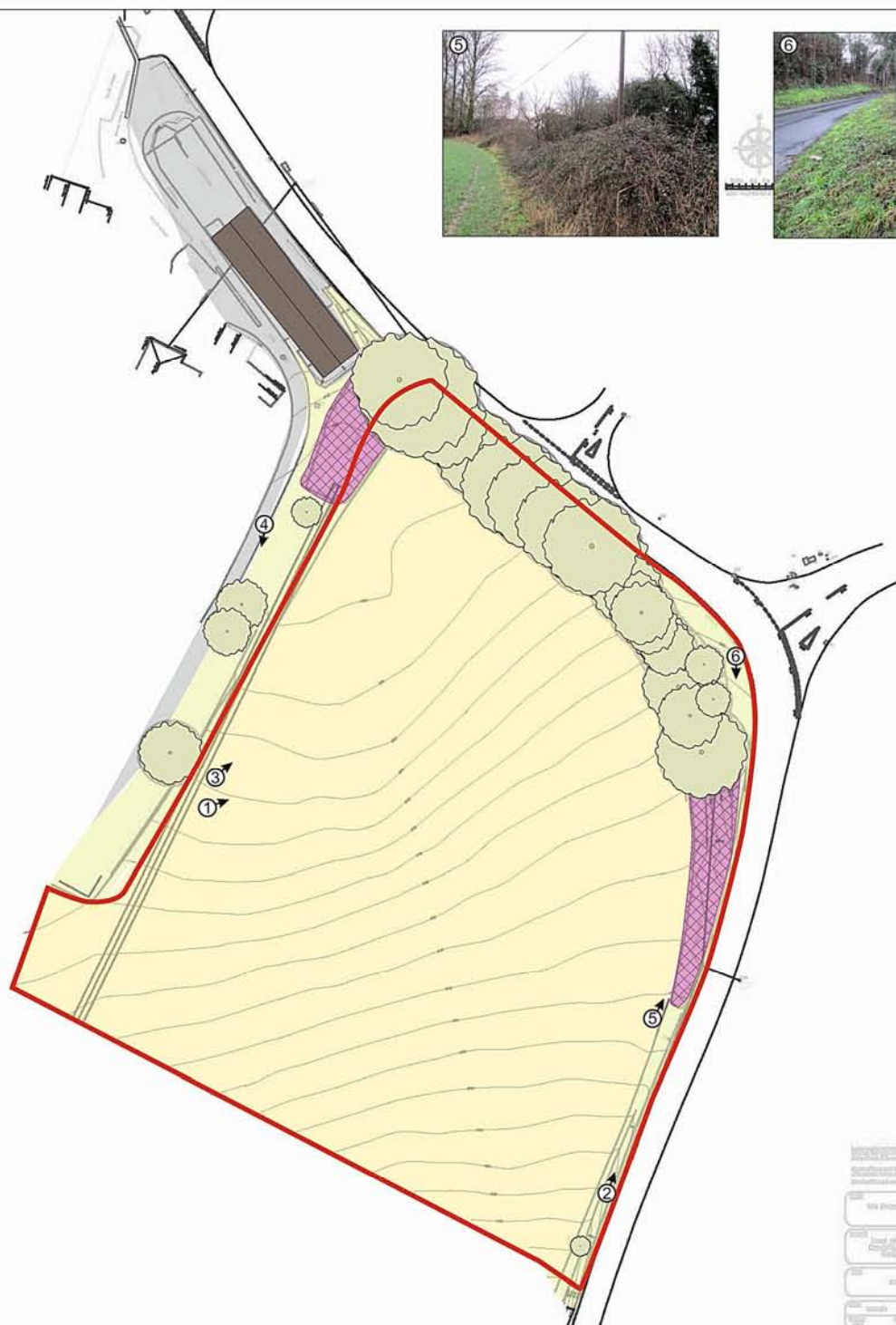
- REV.

MARCH 2015 DATE



PLAN 4164/ECO3

Habitats, Ecological Features and Photographs



- KEY:**
- SITE BOUNDARY
 - ARABLE
 - GRASSLAND
 - TREES
 - BUILDING
 - HARDSTANDING
 - SCATTERED SCRUB
 - BRAMBLE THICKET AND DENSE SCRUB
 - PHOTOGRAPH LOCATION

SCHOOL LANE, BAPCHILD PROJECT

HABITATS, ECOLOGICAL FEATURES AND PHOTOGRAPHS TITLE

4164/ECO3 DRAWING NO.

MARCH 2015 DATE



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APPENDICES

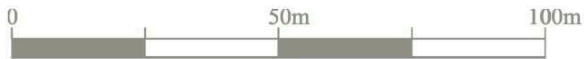
APPENDIX 1

Illustrative Masterplan

Crabtree & Crabtree (Bapchild) Ltd



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Sketch Site Layout
Land at School Lane, Bapchild, Sittingbourne

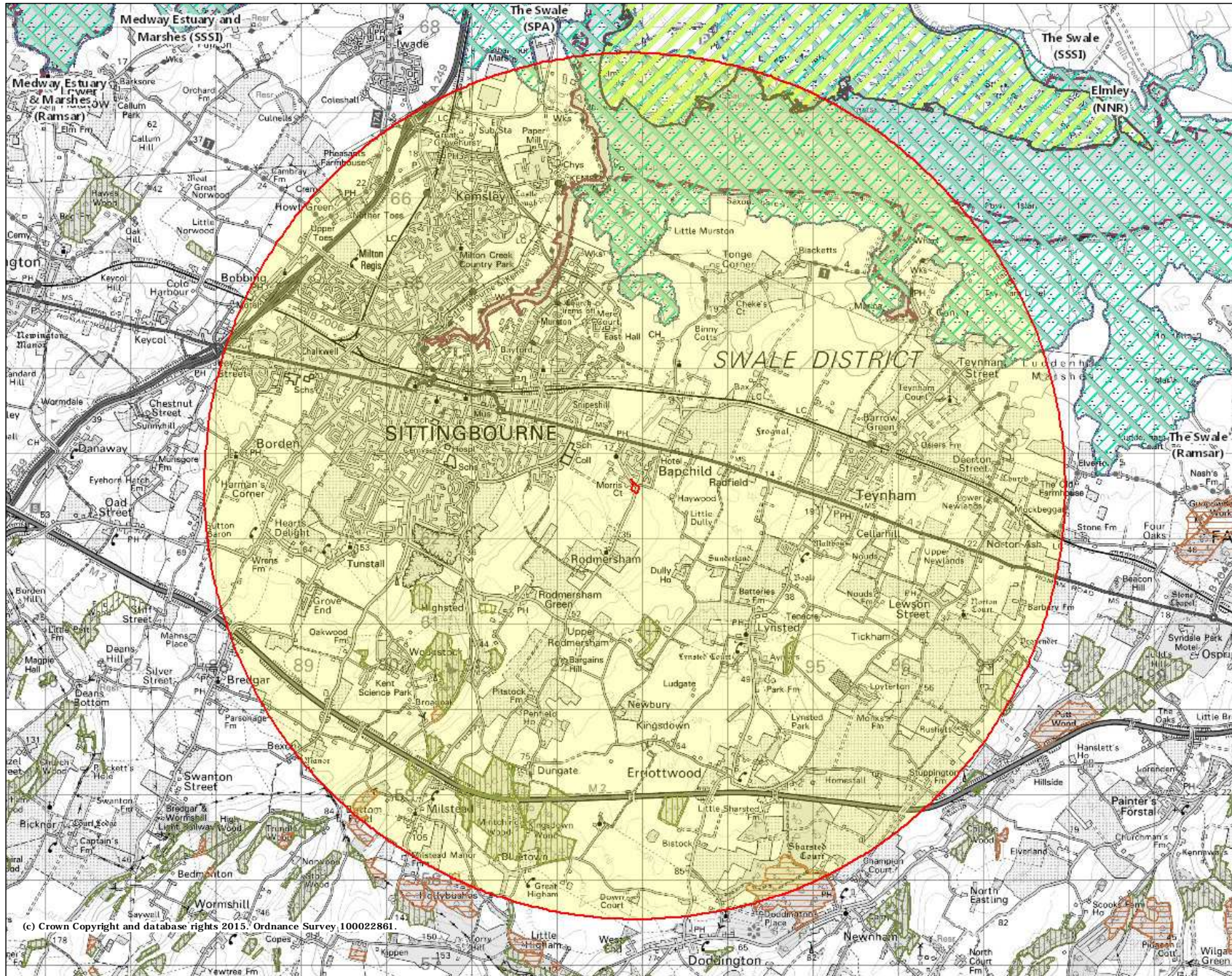
Client Crabtree & Crabtree (Bapchild) Ltd	Project Land at School Lane, Bapchild, Sittingbourne	Drawing Sketch Site Layout
		Scale 1:1000 @ A3
		Drawn By SJB
		Date January 2015
		Drawing No. 2540-SK01D



Church Barn, Milton Manor Farm, Ashford Road, Canterbury, CT4 7PP
t: 01227 456699 www.bdb-design.co.uk

APPENDIX 2

Information obtained from Multi-Agency Geographic Information for the Countryside
(MAGIC) online database



Legend

- Local Nature Reserves (England)
- National Nature Reserves (England)
- Ramsar Sites (England)
- Sites of Special Scientific Interest (England)
- Special Areas of Conservation (England)
- Special Protection Areas (England)
- Ancient and Semi-Natural Woodland
- Ancient Replanted Woodland

Projection = OSGB36
 xmin = 582800
 ymin = 156900
 xmax = 602800
 ymax = 168300

Map produced by MAGIC on 19 February, 2015. Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGIC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.

National Nature Reserves (England)

Name	ELMLEY
Reference	1007024
Hectares	1212.43
Hyperlink	http://www.naturalengland.org.uk/ourwork/conservation/designatedareas/nnr/1007024.aspx

Ramsar Sites (England)

Name	THE SWALE
Reference	UK11071
Hectares	6509.88

Sites of Special Scientific Interest (England)

Name	THE SWALE
Reference	1000326
Natural England Contact	LISA FROST
Natural England Phone Number	0845 600 3078
Hectares	6509.35
Citation	1003678
Hyperlink	http://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s1003678

Special Protection Areas (England)

Name	THE SWALE
Reference	UK9012011
Hectares	6509.88

Ancient Woodland (England)

Wood Name	PROVENDER WOOD
Theme Name	Ancient & Semi-Natural Woodland
Theme ID	1486676
Area (Ha)	7.05

Wood Name	CHENEY HILL WOOD
Theme Name	Ancient & Semi-Natural Woodland
Theme ID	1486838
Area (Ha)	1.64

Wood Name	TOLL WOOD
Theme Name	Ancient & Semi-Natural Woodland
Theme ID	1486862
Area (Ha)	3.46

Wood Name	SCUTTINGTON WOOD
Theme Name	Ancient & Semi-Natural Woodland
Theme ID	1486795
Area (Ha)	5.81

Wood Name	SHARSTED WOOD
Theme Name	Ancient Replanted Woodland
Theme ID	1486817
Area (Ha)	0.13

Wood Name	PROVENDER WOOD
Theme Name	Ancient & Semi-Natural Woodland
Theme ID	1486818
Area (Ha)	1.41

Wood Name	SHARSTED WOOD
Theme Name	Ancient Replanted Woodland
Theme ID	1498407
Area (Ha)	0.08

Wood Name	SHARSTED WOOD
Theme Name	Ancient Replanted Woodland
Theme ID	1498408
Area (Ha)	0.11

Wood Name	SHARSTED WOOD
Theme Name	Ancient Replanted Woodland
Theme ID	1498409
Area (Ha)	46.75

Wood Name	
Theme Name	Ancient & Semi-Natural Woodland
Theme ID	1498486
Area (Ha)	0.53
Wood Name	
Theme Name	Ancient & Semi-Natural Woodland
Theme ID	1498352
Area (Ha)	1.81
Wood Name	ERRIOT WOOD
Theme Name	Ancient & Semi-Natural Woodland
Theme ID	1498355
Area (Ha)	8.2
Wood Name	
Theme Name	Ancient & Semi-Natural Woodland
Theme ID	1498494
Area (Ha)	0.72
Wood Name	HIGHSTED WOOD
Theme Name	Ancient & Semi-Natural Woodland
Theme ID	1498287
Area (Ha)	5.32
Wood Name	CHENEY WOOD
Theme Name	Ancient & Semi-Natural Woodland
Theme ID	1498364
Area (Ha)	2.59
Wood Name	CROMERS WOOD
Theme Name	Ancient Replanted Woodland
Theme ID	1498437
Area (Ha)	1.78
Wood Name	CROMERS WOOD
Theme Name	Ancient & Semi-Natural Woodland
Theme ID	1498440
Area (Ha)	25.15
Wood Name	MILSTEAD/BASSILNE WOOD
Theme Name	Ancient & Semi-Natural Woodland
Theme ID	1498502
Area (Ha)	3.7
Wood Name	BIRCH WOOD
Theme Name	Ancient & Semi-Natural Woodland
Theme ID	1498312
Area (Ha)	3.61
Wood Name	CONCHERS/GRIBBLES WOODS
Theme Name	Ancient Replanted Woodland
Theme ID	1498462
Area (Ha)	8.07
Wood Name	MINTCHING/KINGSDOWN WOOD
Theme Name	Ancient & Semi-Natural Woodland
Theme ID	1498318
Area (Ha)	0.55
Wood Name	MINTCHING/KINGSDOWN WOOD
Theme Name	Ancient & Semi-Natural Woodland
Theme ID	1498319
Area (Ha)	2.87
Wood Name	MINTCHING/KINGSDOWN WOOD
Theme Name	Ancient & Semi-Natural Woodland
Theme ID	1498320
Area (Ha)	4.66
Wood Name	MINTCHING/KINGSDOWN WOOD
Theme Name	Ancient & Semi-Natural Woodland
Theme ID	1498321
Area (Ha)	20.309999
Wood Name	MINTCHING/KINGSDOWN WOOD
Theme Name	Ancient & Semi-Natural Woodland
Theme ID	1498322
Area (Ha)	25.52

Wood Name MINTCHING/KINGSDOWN WOOD
Theme Name Ancient & Semi-Natural Woodland
Theme ID 1498323
Area (Ha) 35.110001

Wood Name HOGSHAW WOOD/REASONS BIT
Theme Name Ancient Replanted Woodland
Theme ID 1501682
Area (Ha) 24.129999

Local Nature Reserves (England) - points
No Features found

Local Nature Reserves (England)
No Features found

National Nature Reserves (England) - points
No Features found

Ramsar Sites (England) - points
No Features found

Sites of Special Scientific Interest (England) - points
No Features found

Special Areas of Conservation (England) - points
No Features found

Special Areas of Conservation (England)
No Features found

Special Protection Areas (England) - points
No Features found

APPENDIX 3

Examples of Suitable Bat Boxes

Bat Boxes

These bat boxes are designed for buildings, or underneath bridges, arches or tunnels, where conditions are relatively humid. They are particularly useful for siting in new buildings or bridges to attract bats, or to provide new roost sites where existing buildings with bats are being renovated.

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.

Holes in the sides allow multiple tubes to be placed next to each other to form a much larger roost.

Woodcrete construction, width 20cm, height 47cm, depth 12.5cm, weight 13kg.

Ibstock Bat Box

Designed with the Pipistrelle Bat in mind. Available in all brick types and various sizes. A discrete home for bats with several roosting zones created inside the box. Ideal for new build and conservation work. Maintenance free as the entrance is at the bottom.

Dimensions 215 x 215 or 215 x 290mm.



Bat Boxes

Schwegler bat boxes are made from 'woodcrete' and have the highest rates of occupation of all types of box.

The 75% wood sawdust, clay and concrete mixture is ideal, being durable whilst allowing natural respiration and temperature stability. These boxes are rot and predator proof and extremely long lasting.

Boxes can be hung from a branch near the tree trunk or fixed using 'tree-friendly' aluminum nails.



2FN Bat Box

A large bat box featuring a wide access slit at the base as well as an access hole on the underside. Particularly successful in attracting Noctule and Bechstein's bats.

Woodcrete construction, 16cm diameter, height 36cm.

1FF Bat Box

The rectangular shape makes the 1FF suitable for attaching to the sides of buildings or in sites such as bridges, though it may also be used on trees. It has a narrow crevice-like internal space to attract Pipistrelle and Noctule bats.

Woodcrete (75% wood sawdust, concrete and clay mixture)

Width: 27cm

Height: 43cm

Weight: 7.3kg



APPENDIX 4

Examples of Bird Boxes

Bird Boxes

Schwegler bird boxes have the highest rates of occupation of all types of box. They are designed to mimic natural nest sites and provide a stable environment with the right thermal properties for chick rearing and winter roosting. Boxes are made from 'Woodcrete'. This 75% wood sawdust, clay and concrete mixture is breathable and very durable making these bird boxes extremely long lasting.



1SP Sparrow Terrace

House sparrows are gregarious and prefer to nest close to each other, so this woodcrete box provides room for three families under one roof.

For siting on buildings of all kinds at a height of at least 2m (e.g. under eaves.)

Schwegler No 18 Swift Box

This nest box is suitable for fixing high under the eaves or under the guttering of a building.

Interior dimensions 14 x 34 x 15 cm.

Exterior dimensions 19 x 50 x 22 cm



House Martin Nests

Schwegler bird boxes are designed to mimic natural nest sites and provide a stable environment with the right thermal properties for chick rearing and winter roosting. Boxes are made from 'Woodcrete'. This 75% wood sawdust, clay and concrete mixture is breathable and very durable making these bird boxes extremely long lasting.



Schwegler No 11 House Martin Nest

This nest has been developed to enable House Martins to breed successfully on external facades without overhanging eaves and has proved highly successful. Position on unobstructed walls without eaves or directly beneath eaves at a height of 2m or above.

Dimensions: 175H x 430W x 175D mm. Weight 5.5kg

Schwegler 9A House Martin Nests

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.



Droppings Board

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

APPENDIX 5

Suitable Log Pile Designs

Buried “Loggery”

Dead and decaying wood is an important wildlife habitat, used by many species of beetle and other invertebrates

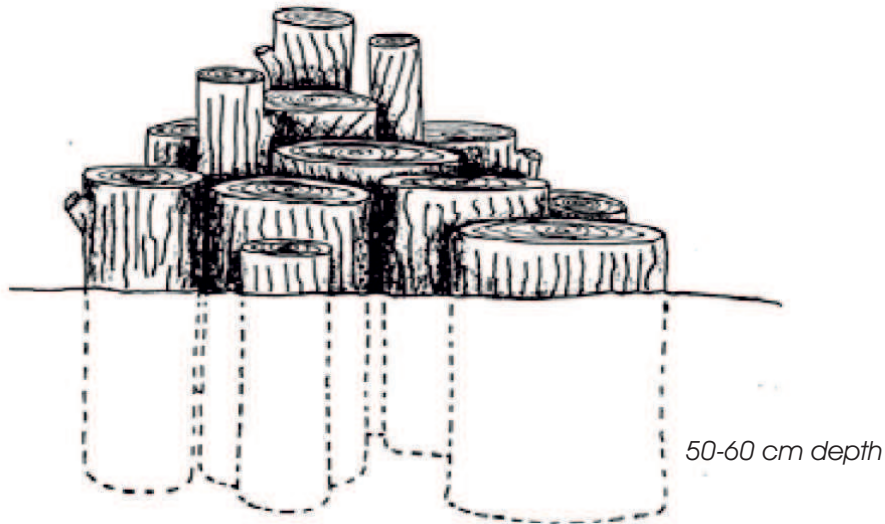


Image taken from the London Wildlife Trust publication: Stag Beetle: an advice note for its conservation in London, 2000.

Create a “loggery”, by simply partially burying hardwood logs (with bark still attached) c.60cm into the ground, packing logs as closely together as possible. Position in partially shaded areas to prevent dessication. Avoid making log piles too high, or the timber will dry out. The logs should be at least the thickness of an adult’s arm (10-50cm diameter).

Wood from any broadleaved tree can be used, but oak, beech or fruit trees (such as apple/pear) are best, as these support the richest insect communities.

A buffer zone should be created around the logs so that the soils and vegetation are protected as much as possible from disturbance, and ideally the surrounding vegetation should not be cut between May-September. Allowing plants to grow over the log pyramid both retains moisture and provides shade for invertebrate species.

Numerous holes drilled in exposed ends of logs to provide nesting opportunities for insects

Log pile capped with soil and turf to form mound, or built into earth bank



Partially buried log piles will be created to provide additional invertebrate habitat. These will be positioned within banks or to form mounds, with numerous holes drilled in the exposed ends of the logs, providing opportunities for invertebrate species such as solitary bees and wasps. The log piles will also form habitat for saproxylic insects (associated with dead wood) and a refuge for small mammal, amphibian and reptile species.

Materials used for construction of the hibernacula will be obtained from site where possible, including logs from vegetation clearance.

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