

**Moorlands Primary School
Church End Lane
Tilehurst
RG30 4UN**

**Updated Extended Phase 1 Habitat Survey
Ref: R1512/a**

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1 SUMMARY

- 1.1.1** John Wenman Ecological Consultancy LLP was commissioned to undertake an updated phase 1 habitat survey of land at Moorlands Primary School in Tilehurst, Reading. The survey was commissioned in connection with the plans to expand to the school from a 2FE school to a 3FE school.
- 1.1.2** The updated survey follows an extended phase 1 ecological survey undertaken in May 2015 in connection with plans to construct a new classroom (Building 6) on the school grounds; its findings are reported separately (Extended Phase 1 Habitat Survey; Reference R1102/a (June 2015)).
- 1.1.3** A walkover survey completed on May 21st 2015 showed the school site to comprise predominantly of areas of hard standing and amenity grassland, with occasional scattered trees and hedges. The walkover survey completed on 24th October 2016 included an additional area of recreational land situated to the south of the school. The recreational land comprised predominantly of amenity grassland, hard standing towards the south west, and a woodland patch along the northern boundary of the school. A hedgerow was situated towards the northern end separating the school from the recreational grassland. Scattered trees and hedgerow were also situated to the south of the site.
- 1.1.4** The walkover survey showed the school site to support a low diversity of commonly occurring and widespread species of no special conservation importance, typical of regularly mown amenity grassland. A search of data held by the Thames Valley Environmental Records Centre showed the survey site not to be designated statutorily for its conservation interest but the woodland to the north of the site is designated as a Local Wildlife Site and Local Nature Reserve. The Records Centre's database has no records of protected or notable species for the site.
- 1.1.5** An inspection of the school buildings showed these were of negligible potential for roosting bats and therefore any extension of these is unlikely to have any impact on bats or their roosts.

- 1.1.6** Any expansion of the school that will affect areas of amenity grassland and hard standing would be highly unlikely to affect protected or notable habitats or species.
- 1.1.7** The woodland along the sites northern boundary is part of a Local Wildlife Site and Local Nature Reserve i.e. a site of importance for conservation within Berkshire, and any proposals that will lead to the loss of trees/shrubs would have an adverse impact on the Site, although the area of the site within the survey area is small in the context of the overall size of the site. The trees/shrubs in the woodland offer potential foraging and roosting opportunities for bats and nesting opportunities for birds; if any are to be subject to removal, further survey would need to be carried out.
- 1.1.8** The scattered trees and hedges on site have the potential for use by nesting birds, therefore any shrub or tree removal should be undertaken outside of the bird nesting season (March – August inclusive) or after a nesting bird check by an ecologist.

2 INTRODUCTION

2.1 Background

2.1.1 John Wenman Ecological Consultancy LLP was commissioned by Reading Borough Council to undertake a phase 1 habitat survey of land at Moorlands Primary School in Tilehurst, Reading. The site comprised the school, playing fields to the south west and a woodland edge to the north.

2.1.2 The survey was commissioned in connection with a planning application to be lodged with Reading Borough Council seeking consent to expand the school from a 2FE to a 3FE school.

2.2 Site Location and Context

2.2.1 Moorlands Primary School is situated on the north western side of Church End Lane in Tilehurst, Reading (OS Grid Reference SU 675 733).

2.2.2 The site is situated in the urban area of Tilehurst bordered by housing to the north east, east and south east. The woodland edge to the north of the site is part of Blundell's Copse; a woodland covering an area of approximately 5.3 hectares and provides a habitat suitable for a wide variety of mammals, birds, amphibians and reptiles adapted to urban areas, immediately adjacent to the school. Other woodland pockets are situated 275 metres to the east and 475 metres to the north east.

2.3 Report Format

2.3.1 There follows: an overview of the protected species legislation in Section 3 and of the national and local wildlife policy background in Section 4; details of the survey methods in Section 5; Phase 1 habitat findings in Section 6; building inspection survey findings in section 7, a discussion of the survey findings in Section 8 and recommendations in Section 9. The appendices present: photographs (**Appendix 1**); a phase 1 habitat survey plan with associated target notes (**Appendix 2**); a list of plant species recorded during the phase 1 habitat survey (**Appendix 3**); and the daylight bat survey findings (**Appendix 4**).

3 LEGISLATIVE BACKGROUND – PROTECTED SPECIES

3.1 Amphibians

3.1.1 The seven native species of amphibian receive protection under the Wildlife & Countryside Act 1981 (as amended). The four widespread and common amphibians (common frog, toad, smooth and palmate newts) receive limited protection – making their sale illegal.

3.1.2 Great crested newts – a relatively widespread species - receives full protection under the Wildlife & Countryside Act 1981 (as amended) and under the Conservation (Natural Habitats &c.) Regulations 2010 ('Habitat Regulations') (as amended). These make it illegal to:

- Intentionally or recklessly kill, injure or take a great crested newt;
- Possess or control any live or dead specimen or anything derived from a great crested newt;
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt;
- Intentionally or recklessly disturb great crested newts; in particular any disturbance which is likely to impair their ability to survive, breed or reproduce or nurture their young; or in the case of hibernating or migrating animals, to hibernate or migrate.

3.1.3 The great crested newt is listed as being of principal importance for the conservation of biodiversity in England, under Section 41 of the Natural Environment and Rural Communities Act 2006, (commonly referred to as a UKBAP Priority species).

3.2 Bats

3.2.1 All British bat species are fully protected by the Wildlife & Countryside Act 1981 (as amended) and by the Conservation of Habitats and Species Regulations 2010 ('Habitat Regulations'). In summary, the legislation combined makes it an offence to:

- Damage or destroy a breeding site or resting place or intentionally or recklessly obstruct access to a structure or place used for shelter by a bat;

- Deliberately, intentionally or recklessly disturb bats; in particular any disturbance which is likely to impair the ability of bats to survive, breed or reproduce or nurture their young; or in the case of hibernating or migrating bats, to hibernate or migrate; or to affect significantly the local distribution or abundance of the species;
- Deliberately kill, injure or take any bat.

3.2.2 Seven bat species including soprano pipistrelle (*Pipistrellus pygmaeus*) and brown long eared bat (*Plecotus auritus*) are listed as being of principal importance for the conservation of biodiversity in England, under Section 41 of the Natural Environment and Rural Communities Act 2006, (commonly referred to as a UKBAP Priority species).

3.3 Badgers

3.3.1 Badgers are protected by the Protection of Badgers Act 1992. The Act makes activities such as development that would harm or disturb badgers or damage, obstruct or destroy their setts illegal. If badgers are to be affected by the proposed development, activities can be undertaken only under a licence issued by Natural England.

3.4 Birds

3.4.1 All wild birds are protected under the Wildlife & Countryside Act 1981 (as amended). The Act makes it an offence to kill, injure or take a wild bird or to damage or destroy the nest of a wild bird whilst in use or being built.

3.4.2 Less common bird species of conservation concern, such as the barn owl and kingfisher, are listed on Schedule 1 of the Act, which makes it an offence to disturb the birds whilst nesting also.

3.5 Dormice

3.5.1 Dormice receive full protection under the Wildlife & Countryside Act 1981 (as amended) and under the Conservation (Natural Habitats &c.) Regulations 2010 ('Habitat Regulations') (as amended). These make it illegal to

- Intentionally or recklessly kill, injure or take a dormouse;
- Possess or control any live or dead specimen or anything derived from a dormouse;

- Damage or destroy a breeding site or resting place or intentionally or recklessly obstruct access to a structure or place used for shelter by a dormouse;
- Intentionally or recklessly disturb dormice; in particular any disturbance which is likely to impair their ability to survive, breed or reproduce or nurture their young; or in the case of hibernating or migrating animals, to hibernate or migrate.

3.6 Otters

3.6.1 Otters are fully protected by the Wildlife & Countryside Act 1981 (as amended) and by the Conservation of Habitats and Species Regulations 2010 ('Habitat Regulations'). In summary, the legislation combined makes it an offence to:

- Damage or destroy a breeding site or resting place or intentionally or recklessly obstruct access to a structure or place used for shelter by an otter;
- Deliberately, intentionally or recklessly disturb otters; in particular any disturbance which is likely to impair the ability of otters to survive, breed or reproduce or nurture their young; or to affect significantly the local distribution or abundance of the species;
- Deliberately kill, injure or take any otter.

3.6.2 The government's statutory conservation advisory organisation, Natural England, is responsible for issuing European Protected Species licences that would permit activities that would otherwise lead to an infringement of the Habitat Regulations. A licence can be issued if the following three tests have been met:

- **Regulation 53(9)(a)** - there is "no satisfactory alternative" to the derogation, and;
- **Regulation 53(9)(b)** - the derogation "will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range" and;

- **Regulation 53(2)(e)** - the derogation is for the purposes 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”.

3.6.3 Local authorities have a statutory duty under Regulation 9(5) of the Habitat Regulations to have regard to requirements of the Habitats Directive in the exercise of their functions. The Council must therefore consider and determine whether these three tests are likely to be satisfied by an application affecting European protected species, where a licence is required, before granting planning permission. **N.B. the requirements set out in 3.6.2 and 3.6.3 apply to development that would affect bats, great crested newts and dormice, which are European Protected Species also.**

3.7 Reptiles

3.7.1 The four widespread reptiles most likely to be encountered (Adder, grass snake, slow worm and viviparous lizard) are protected under the Wildlife & Countryside Act 1981 (as amended). The Act makes it an offence to intentionally kill, injure, possess or sell any of the species.

3.7.2 The four reptile species are listed as being of principal importance for the conservation of biodiversity in England, under Section 41 of the Natural Environment and Rural Communities Act 2006, (commonly referred to as a UKBAP Priority species).

3.8 Water Voles

3.8.1 Since April 2008, water voles have received full protection under Section 9 of the Wildlife & Countryside Act 1981 (as amended). This makes it an offence to intentionally kill, injure or take water voles or to possess or control live or dead water voles or derivatives. It is an offence to intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection or intentionally or recklessly disturb water voles whilst occupying a structure or place used for that purpose.

3.8.2 The water vole is listed as being of principal importance for the conservation of biodiversity in England, under Section 41 of the Natural Environment and

Rural Communities Act 2006, (commonly referred to as a UKBAP Priority species).

3.9 Invasive Non-Native Plants

3.9.1 The Wildlife and Countryside Act 1981 (as amended) provides the primary controls on the release of non-native species into the wild in Great Britain. It is an offence under section 14(2) of the Act to 'plant or otherwise cause to grow in the wild' any plant listed in Schedule 9, Part II. The species listed in the Act includes Japanese knotweed (*Fallopia japonica*), giant hogweed (*Heracleum mantegazzianum*) and himalayan balsam (*Impatiens glandulifera*).

3.10 Injurious Weeds

3.10.1 Five native plants are listed as injurious weeds under the Weeds Act 1959: common ragwort (*Senecio jacobaea*), spear thistle (*Cirsium vulgare*), creeping or field thistle (*Cirsium arvense*), broad-leaved dock (*Rumex obtusifolius*) and curled dock (*Rumex crispus*). The Act means it is not an offence to have these weeds growing on your land and species such as ragwort have significant conservation benefits. However they must not be allowed to spread to agricultural land, particularly grazing areas or land which is used to produce conserved forage. Enforcement notices can be issued following complaints requiring landowners to take action to prevent the spread of these weeds.

3.11 Wild Mammals

3.11.1 Under the Wild Mammals (Protection) Act 1996 it is an offence to intentionally inflict unnecessary suffering, as specified by the Act, on any wild mammal.

4 POLICY BACKGROUND

4.1 National Planning Policy

4.1.1 The ODPM Circular 06/2005 provides guidance on the application of the law relating to planning and nature conservation stating that *'the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat.'*

4.1.2 The Natural Environment and Rural Communities (NERC) Act 2006 requires all public bodies, including local authorities, to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'Biodiversity duty'

4.1.3 The National Planning Policy Framework (NPPF) published in March 2012 sets out the Government's planning policies for England and how they should be applied. Paragraph 117 of the NPPF states that *'To minimise impacts on biodiversity and geo-diversity, planning policies should promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan.'*

4.2 Local Planning Policy

4.2.1 The Reading Borough Local Plan comprises a number of individual documents that together guide the future development of the Borough. The Plan includes a Core Strategy (adopted January 2008; altered January 2015).

4.2.2 Policy CS38 within the Strategy sets out the Council's approach to biodiversity and geology when considering planning applications as follows:

Biodiversity and Geology

CS36: Biodiversity and Geology

a) Development should retain, protect and incorporate features of biodiversity or geological interest (including protected species and their habitats) found within the application site into their schemes.

On sites with recognised biodiversity or geological value, development will not be permitted where there would be a direct or indirect adverse impact on the site, unless it can be clearly demonstrated that: -

i. The need for development clearly outweighs the need to protect the value of the site; and

ii. Appropriate compensation, impact minimisation, mitigation and compensation are provided.

b) Local Nature Reserves and Wildlife Heritage Sites will be safeguarded and where possible, enhanced. Permission will not be granted for any development that would adversely affect a designated nature reserve or Wildlife Heritage Site.

c) Any development that would sever or threaten the integrity of an established wildlife link, as indicated on an adopted proposals map, will not be permitted. Where applicable, developments should be designed to protect, consolidate, extend and enhance the network of wildlife links and corridors in and adjoining the Borough, working with neighbouring authorities where appropriate.

5 SURVEY METHODS

5.1 Walkover Survey

5.1.1 A walkover survey was undertaken on the 24th October 2016 by a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM). During the surveys the habitats present were noted and plotted on a site plan (Appendix 2) using definitions based on the standard phase 1 ecological survey definitions (JNCC 2010). Key features of the site were photographed (**Appendix 1**) and plotted on the site plan using target notes (**Appendix 2**).

5.1.2 Any features of ecological importance were recorded, and plant species observed during the survey noted (**Appendix 3**). Particular attention was given to any evidence of the presence of protected species and the site's potential to support such species and those of principal importance for conservation (as defined under Section 41 of the NERC Act 2006).

5.2 Building Inspection Survey

5.2.1 The buildings on the site were inspected for evidence of use by bats and/or nesting birds and were assessed for their potential to support roosting bats. The inspection was undertaken by an ecologist registered under Natural England Class Licence CL018 supported by an assistant ecologist on the 24th October 2016.

5.2.2 The surveys were undertaken with the aid of a ladder and a high power (1 million candle power) torch. Signs of occupation by bats, and features that could offer potential roosting sites were searched for, following standard survey guidelines (Collins (ed.) 2016; Mitchell-Jones 2004; Mitchell-Jones & McLeish 2004). The following signs may indicate the presence of a bat roost within a building:

- Bat droppings (these can be found externally, especially in sheltered areas such as window sills, underneath roost entrances or internally within a roof space);
- Piles of insect remains e.g. moth wings (these maybe indicative of regular feeding sites used by species such as brown long eared bat);

- Staining at roost entrances or within the roost (urine and oil from bat fur can leave stains on timbers when bats are gathered for long periods);
- Bats (live or dead).

5.2.3 Flat roofed buildings may offer potential roosting sites in a number of locations; favoured locations include:

- At the eaves – gaining access via gaps between the soffits and wall.
- Behind roof or wall coverings.

5.3 Background Data Search

5.3.1 The Thames Valley Environmental Records Centre was commissioned to undertake a search of the survey site and a one kilometre radius search for notable or protected species and statutorily or non-statutorily designated sites.

5.4 Survey Constraints

5.4.1 The ecological survey was subject to seasonal constraints; not all plant and animal species are visible throughout the year and therefore the report represents a snapshot of the site at the time of the survey only. The plant species list presented should not be considered a comprehensive list of species present. Full access was available to the site and therefore the survey had no significant access constraints.

6 PHASE 1 HABITAT SURVEY FINDINGS

6.1 Site Overview

- 6.1.1** The survey site covered just under four hectares comprising predominantly amenity grassland and hard standing.
- 6.1.2** Within the schools boundary an intact, species-poor hedgerow formed part of the north eastern boundary and there were scattered trees at the front southern side of the school, to the north east of the school buildings and on the playing field boundaries.
- 6.1.3** Outside of the schools fence an intact hedgerow formed part of the northern end of the boundary between the school grounds and the recreation area, and in the southern most corner of the recreational fields. There were scattered trees on the southernmost boundary of the recreational fields. Dense scrub and a woodland patch were situated beyond the schools fence line on the northern boundary.
- 6.1.4** The following phase 1 habitat types were observed within the site boundary during the survey: amenity grassland, intact species-poor hedgerow, scattered trees, introduced shrubs, dense scrub and woodland.
- 6.1.5** The habitat types are described below in detail; their distribution is shown on the site plan in **Appendix 2**, photographs of the site are shown in **Appendix 1**.

6.2 Amenity Grassland

- 6.2.1** The amenity grassland covering the northern side of the school site to the rear of the school buildings within the school fence line comprised grasses such as common bent (*Agrostis capillaris*), perennial rye grass (*Lolium perenne*), annual meadow grass (*Poa annua*), Yorkshire fog (*Holcus lanatus*), and cock's foot (*Dactylis glomerata*). Herbaceous species amongst the sward included daisy (*Bellis perennis*), ribwort plantain (*Plantago lanceolata*), red clover (*Trifolium pratense*), common mouse-ear (*Cerastium fontanum*), greater plantain (*Plantago major*), meadow buttercup (*Ranunculus acris*), yarrow (*Achillea millefolium*), creeping buttercup

(*Ranunculus repens*), dove's foot crane's-bill (*Geranium molle*) and dandelion (*Taraxacum officinale* agg.) (**Photograph 1; Target note 1**).

6.2.2 The grassland beneath the scattered trees to the north east of the school buildings had been left uncut during the survey in 2016. The grassland had similar species composition; however the herbaceous species were more dominant compared to the grass species and several other species were present (**Photograph 2; Target note 2**). Additional species included red fescue (*Festuca rubra*), rough hawkbit (*Leontodon hispidus*), knot grass (*Polygonum aviculare*), thyme leaved speedwell (*Veronica serpyllifolia*), broad leaved dock (*Rumex obtusifolius*), wood avens (*Geum urbanum*), common flea bane (*Pulicaria dysenterica*), ground ivy (*Glechoma hederacea*), ragwort (*Senecio jacobaea*) and a crane's bill species (*Geranium* sp.).

6.2.3 The amenity grassland covering the recreation fields to the western and southern side of the site outside of the school fence line comprised grasses such as common bent (*Agrostis capillaris*), perennial rye grass (*Lolium perenne*), annual meadow grass (*Poa annua*), and wall barley (*Hordeum murinum*) (**Photograph 3; Target note 3**). Herbaceous species amongst the sward included white clover (*Trifolium repens*), daisy (*Bellis perennis*), yarrow (*Achillea millefolium*), ribwort plantain (*Plantago lanceolata*), dandelion (*Taraxacum officinale* agg.) and greater plantain (*Plantago major*).

6.3 Scattered Trees

6.3.1 The scattered trees in the southern side of the school grounds within the fence line comprised hawthorn (*Crataegus monogyna*), goat willow (*Salix caprea*), false acacia (*Robinia pseudoacacia*), cherry (*Prunus* sp.), sweet chestnut (*Castanea sativa*) and oak (*Quercus robur*) (**Photograph 4; Target note 4**).

6.3.2 The scattered trees to the north east of the school buildings comprised a Norway maple (*Acer platanoides*), lime (*Tilia* sp.), horse chestnut (*Aesculus hippocastanum*), cherry (*Prunus* sp.), cypress and fir (*Abies* sp.) (**Photograph 5; Target note 5**). A sycamore (*Acer pseudoplatanus*) and a lime (*Tilia* sp) tree had been removed in order to build the new classroom referred to in the previous survey undertaken in 2015.

- 6.3.3** The scattered trees to the south east of the school buildings comprised a cherry (*Prunus* sp), oak (*Quercus robur*), horse chestnut (*Aesculus hippocastanum*), beech (*Fagus sylvatica*) and hawthorn (*Crataegus monogyna*) (**Photograph 6, Target note 6**).
- 6.3.4** There were scattered trees and shrubs on the schools northern boundary fence such as aspen (*Populus tremula*), elm (*Ulmus procera*), oak (*Quercus robur*), Norway maple (*Acer platanoides*), apple (*Malus* sp.), ash (*Fraxinus excelsior*), cherry (*Prunus* sp.), hazel (*Corylus avellana*), field maple (*Acer campestre*), hornbeam (*Carpinus betulus*), dog wood (*Cornus sanguinea*) and spindle (*Euonymus europaeus*) (**Photograph 7, Target note 7**).
- 6.3.5** There were also scattered trees on the southernmost boundary of the recreational fields and sports courts to the south of the school such as aspen (*Populus tremula*), cypress, non-native cherry species (*Prunus* sp.) and maple species (*Acer* sp.) (**Photograph 8; Target note 8**).

6.4 Intact Species-Poor Hedgerow

- 6.4.1** A thick beech (*Fagus sylvatica*) hedgerow formed the north eastern site boundary up to the gates with the occasional sycamore (*Acer pseudoplatanus*) and horse chestnut (*Aesculus hippocastanum*) (**Photograph 9; Target note 9**).
- 6.4.2** A hawthorn (*Crataegus monogyna*) hedgerow formed part of the boundary of the school with the recreational fields towards the northwest of the site (**Photograph 10; Target note 10**).
- 6.4.3** A non-native *pyracantha* and rose (*Rosa* sp.) hedgerow was present towards the southernmost corner of the recreational fields (**Photograph 11; Target note 11**).

6.5 Introduced shrub

- 6.5.1** A planted bed was present towards the east of the school buildings and included a number of vegetables, herbs and fruits such as strawberry (*Fragaria* sp.), redcurrant (*Ribes rubrum*), rhubarb (*Rheum rhabarbarum*), chive (*Allium* sp.), and radish (*Raphanus sativus*). Herbaceous species also present included wavy bitter-cress (*Cardamine flexuosa*), dandelion (*Taraxacum officinale* agg.), herb Robert (*Geranium robertianum*), creeping

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buttercup (*Ranunculus repens*), ragwort (*Senecio jacobaea*), broadleaved willowherb (*Epilobium montanum*), smooth sow thistle (*Sonchus oleraceous*), red shank (*Persicaria maculosa*), broad leaved plantain (*Plantago major*), yarrow (*Achillea millefolium*), and chickweed (*Stellaria media*) (**Photograph 12; Target note 12**).

6.6 Dense Scrub

6.6.1 Beyond the fence boundary on the north western side of the site, there was dense scrub dominated by common nettle (*Urtica dioica*) and bramble (*Rubus fruticosus* agg.) with the occasional young scattered tree such as field maple (*Acer campestre*), dogwood (*Cornus sanguinea*), oak (*Quercus robur*), beech (*Fagus sylvatica*), hazel (*Corylus avellana*), rose (*Rosa* sp.) and hawthorn (*Crataegus monogyna*) (**Photograph 13; Target note 13**).

6.7 Woodland

6.7.1 Beyond the scrub on the northern side of the site, there was a woodland patch, which was dominated by oak (*Quercus robur*), ash (*Fraxinus excelsior*) aspen (*Populus tremula*), hazel (*Corylus avellana*) and willow (*Salix* sp.) in the canopy layer. The ground cover was dominated by common nettle (*Urtica dioica*), cleavers (*Galium aparine*), fescue species (*Festuca* sp.), wood avens (*Geum urbanum*), bracken (*Pteridium aquilinum*), creeping thistle (*Cirsium arvense*), dandelion (*Taraxacum officinale* agg.) and hedge bindweed (*Calystegia sepium*) (**Photograph 14; Target note 14**).

6.8 Incidental Fauna

6.8.1 There was a mammal run under the fence in the western corner and north western boundary, which during the survey undertaken in 2015 was typical of a fox and not large enough to be used by a badger. During the survey undertaken in 2016, the gap had become larger and was partially blocked with timber boards. The gap was considered to still be used by foxes (**Photograph 15; Target note 15**).

6.9 Background Data Search

6.9.1 The updated search of data held by the Thames Valley Environmental Records Centre revealed no records of notable or protected species for the

site, and showed that the site is not statutorily or non-statutorily designated for its wildlife conservation interest. Within the one kilometre radius search area, there are no statutorily designated sites of national importance, and five Local Wildlife Sites (LWSs); four of which are designated also as Local Nature Reserves (LNRs). The woodland patch on site to the north of the school grounds forms part of Blundell's Copse and The Moor LWS and LNR. The site covers an area of 5.48 hectares and comprises a small parcel of broadleaved woodland in a shallow valley, which has a wide range of plant species characteristic of ancient woodland. During a survey of the woodland in 2006, 29 ancient woodland indicator species were found.

- 6.9.2** Lousehill Copse LWS and LNR consists of three parcels of broadleaved semi-natural woodland covering an area of 13.16 hectares situated 270 metres to the east of the school. The woodland contains some locally scarce plant species such as ramsons, soft shield-fern, hard shield-fern, scaly male-fern and opposite-leaved golden saxifrage. During a survey of the woodland in 2007, 31 ancient woodland indicator species were found in the largest, central area.
- 6.9.3** McIlroy Park and Round Copse LWS and LNR is a hilltop park with areas of grassland that are mown occasionally along with areas of scrub and woodland including an old gravel pit. Round Copse is an area of lowland mixed deciduous woodland with some species typical of long-established woodland. Meadway Fringe LWS is a narrow strip of broadleaved woodland and unimproved grassland covering 2.13 hectares sandwiched between residential areas, 700 metres to the south east of the school site.
- 6.9.4** The species records held by the Records Centre are similar broadly to those held by them in 2015. Recent records (within 10 years) of protected and notable plant species recorded in the search radius include the bluebell (*Hyacinthoides non-scripta*) recorded in all of the surrounding Local Wildlife Sites, the butcher's-broom (*Ruscus aculeatus*) recorded at Churchend Copse in 2008 about 840 metres to the south west of the school, the stinking hellebore (*Helleborus foetidus*) recorded at Round Copse in 2008 and the corn marigold (*Glebionis segetum*) recorded at McIlroys Park in 2008.
- 6.9.5** Invertebrates recorded within the search area included the stag beetle (*Lucanus cervus*), which has been recorded on several occasions and most

recently in 2013, approximately 750 metres to the north west of the school site. The closest record dates from 2006, 340 metres to the south east of the school site. Additional invertebrates within the search area include a small number of notable moths and bees, which have been recorded at the nearby LWSs including a record of sawfly moth (*Xanthia icteritia*) – a priority species under the Nerc Act 2006 – recorded at Bludells Copse and the Moor immediately to the north of the school.

6.9.6 Amphibian records include the common frog (*Rana temporaria*) and smooth newt (*Lissotriton vulgaris*) recorded on sites over 500 metres from the school; an additional record of smooth newt at Lousehill Copse has been added to the database since 2015. The reptile records on the database in 2016 match those on the database in 2015: slow worm (*Anguis fragilis*) has been recorded between 2010 and 2013 on the allotments 770 metres to the north west of the school, and in Lousehill Copse in 2009; about 560 metres to the east. The grass snake (*Natrix natrix*) was recorded in a residential garden 470 metres to the west of the school.

6.9.7 The bat records for the search radius held in 2015 were for the common pipistrelle (*Pipistrellus pipistrellus*) and the brown long-eared bat (*Plecotus auritus*), and were for roosts in residential dwellings. Injured bat records from the local bat group were for pipistrelle bats in the 1km square, within which the school site lies, and within the 1km square to the west. Records added to the database in 2016 include: a record of Leisler's bat (*Nyctalus leisleri*) and noctule (*Nyctalus noctula*) in flight to the north west, dating from 2013; and additional records of brown long eared bat and an unidentified long eared species in flight and from a roost in the square to the north west, and dating from 2013 also.

6.9.8 In 2015, the database included records (dating from 2009) of a badger (*Meles meles*) sett, which is relatively isolated from the school site by a residential estate and older records of setts from squares to the south and south east. In 2016, seven records of badger had been added to the database. These included sett records from sites over 600m to the north east and south east respectively, and historic records of two setts from a grid square to the south east.

- 6.9.9** In 2015, there were three records of hedgehog (*Erinaceus europaeus*) in the local area; by 2016 this had increase to 12 records.
- 6.9.10** The database in 2015 included a range of notable bird species records within the search radius - mostly species associated with the woodland in the nearby LWSs and more than 10 years old. By 2016, two records (dating from 2012) of swift (*Apus apus*) from School Road had been added to the database.

7 BUILDING INSPECTION SURVEY FINDINGS

- 7.1.1** The external bat survey findings are detailed on a plan with target notes in **Appendix 4**; photographs of the site are shown in **Appendix 1**. There follows a description of the external survey findings:
- 7.1.2** The nursery building was a prefabricated building with pebbledash covered walls and a pitched roof covered tightly with bitumen felt. The roof was tight to the external walls, offering limited crevice roosting opportunities for bats (**Photograph 16**).
- 7.1.3** The Reception building was a prefabricated building covered with a tightly fitted flat bitumen covered roof (**Photograph 17**).
- 7.1.4** The southern section of the school comprised of flat roofed buildings with tight uPVC barge boards around the eaves (buildings 1 & 2), offering no crevice opportunities for bats (**Photograph 18**). A narrow gap was present on the eastern side of the kitchen between two pieces of timber above a window (**Photograph 19; Target note 1**).
- 7.1.5** The hall towards the centre of the school had a pitched roof, which internally, was open to the underside of the roof. The roof was lined tightly with bitumen felt, and had closely fitting uPVC barge boards at the gable ends (**Photograph 20**).
- 7.1.6** The classrooms towards the northern end of the school were two storey buildings with flat bitumen felt covered roofs (buildings 3 & 4). There was a narrow gap where lead flashing was lifted around a drain pipe on the north western corner of the building 3 (**Photographs 21 & 22; Target note 1**). and on the southern side of building 4 (**Photograph 23; Target note 2**). The gaps were superficial and considered unsuitable for providing crevices for roosting bats. The metal roof on the ICT building was overlapping; however felt could be seen beneath (**Photograph 24; Target note 3**).
- 7.1.7** Building 6 was a separate building towards the north eastern end of the school. It was a new pre-fabricated building with a flat roof tightly fitted with bitumen felt (**Photograph 25**).

8 DISCUSSION

8.1 Assessment of Ecological Value

8.1.1 The area of scrub/woodland on the northern boundary of the school site falls within Blundell's Copse Local Wildlife Site and Local Nature Reserve – a site of importance for wildlife within Berkshire. Blundell's Copse LWS contains a number of ancient woodland indicators and has potential for nesting birds and roosting bats, and supports notable birds and invertebrates. The school site itself is not statutorily or non-statutorily designated for its wildlife interest and therefore not of international, national or county level conservation importance.

8.1.2 The scattered trees to the north east of the school buildings amongst the amenity grassland, and on the recreational ground to the south of the site, had no visible roosting features suitable for bats, and there was no current or former evidence of nesting birds; the trees are considered to be of no special ecological value, but of some ecological value within the site context. The scattered trees and hedgerows have the potential for use by commonly occurring nesting birds.

8.1.3 The amenity grassland covering the majority of the survey area supported a low diversity of commonly occurring and widespread plant species typical of managed playing fields and of no special conservation importance.

8.1.4 The site showed no evidence of use by badgers – a mammal receiving legal protection; there were two mammal runs under the fence on the northern boundaries most likely to be used by foxes and not large enough to indicate use by badgers.

8.1.5 The school buildings were simply constructed flat roofed buildings with no enclosed roof spaces. The buildings had no features suitable for roosting bats and therefore are considered to be of negligible value to roosting bats.

8.2 Impact of Proposals

8.2.1 The early proposals are for the expansion of the school from a 2FE school to a 3FE school, including areas of new build and extensions.

- 8.2.2** Any expansion of the existing school buildings into the areas of hard standing and amenity grassland – areas of no special ecological value, which cover the majority of the survey area – would be highly unlikely to have any impact on habitats or species of conservation importance or those receiving legal protection.
- 8.2.3** The existing school buildings were simply constructed and lacked features suitable for roosting bats and therefore work to extend existing buildings would be highly unlikely to have any impact on bats or their roosts.
- 8.2.4** The woodland and scrub on the north western boundary forms a small part of the neighbouring Blundells Copse – a Local Wildlife Site of county level importance for wildlife conservation. The area that falls within the survey site forms a very small part of the Wildlife Site, and is an area used regularly as a footpath by local residents. Any expansion of the school into the woodland/scrub would have an adverse impact on the ecological value of the Wildlife Site through some loss of trees/scrub cover, but any impact from habitat loss would be minimal due to the limited size of the area. In addition, any loss of trees/scrub could affect protected and notable species associated with the trees/shrubs, particularly roosting bats and nesting birds and further survey work would be required to confirm if there would be any impacts (refer to Section 9).
- 8.2.5** The scattered trees and hedgerows within the school site are of no special ecological importance, but could support nesting birds, and therefore any proposals that would require the removal of isolated trees and hedges could result in current bird nests being damaged or destroyed in the absence of appropriate precautions (mitigation recommendations to ensure the work proceeds lawfully are set out in Section 9). The loss of isolated trees and hedges would be unlikely to have an adverse impact on the ecological value of the school site, particularly as there would be scope to plant new trees and hedges to compensate for any loss.

9 RECOMMENDATIONS

9.1 Bats

- 9.1.1** The woodland on the northern boundary of the site is considered to be of low to moderate habitat value to bats. In the event that any of the trees will need to be removed, further detailed surveys comprising high-level inspections and/or emergence and/or re-entry surveys should be carried out to establish if bats are present or likely to be absent to ensure such work proceeds lawfully.
- 9.1.2** If further survey reveals the presence of a current bat roost on site, a European Protected Species (EPS) licence would be required to allow the lawful removal of trees supporting bats, and this must be obtained before the commencement of the work and can be issued by Natural England if the three licensing tests (detailed in 3.5.2) have been met by the proposed work. A licence can be sought once all necessary planning consents for the development proposals have been granted and any wildlife related conditions discharged. For an EPS licence to be issued permitting the work, it would be necessary to demonstrate that the 'favourable conservation status' of bats using the trees would be maintained throughout the work by employing mitigation measures during the course of the works to minimise the risk of bats being harmed, and by providing adequate alternative roosting sites during the course of the work and in longer term.

9.2 Nesting Birds

- 9.2.1** Any tree or shrub removal should be completed outside of the peak bird nesting season (May to August inclusive) or otherwise only following an inspection by an ecologist confirming that there is no current nesting activity. In the event that nesting birds are discovered prior to, or during the course of any work, it should stop immediately and should continue only once bird nesting has finished i.e. young have fledged and left the nest.

10 REFERENCES

Collins (ed.) (2016). Bat Surveys for Professional Ecologists – Good Practice Guidelines 3rd Edition. Bat Conservation Trust, London.

Joint Nature Conservation Committee (JNCC) (2010). Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit. JNCC, Peterborough.

Mitchell-Jones, A. J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough.

Mitchell-Jones, A. J. & McLeish, A. P. (2004). Bat Workers' Manual (3RD Edition). JNCC, Peterborough.

APPENDIX 1 - SITE PHOTOGRAPHS



1. The amenity grassland within the schools boundary (Target note 1).



2. The amenity grassland under the scattered trees (Target note 2).



3. The amenity grassland on the recreation fields to the western and southern side of the school (Target note 3).



4. The scattered trees to the southern side of the school grounds (Target note 4).



5. The scattered trees to the north east of the school buildings (Target note 5).



6. The scattered trees to the south east of the school buildings (Target note 6).



7. Scattered trees on the schools northern boundary (Target note 7).



8. Scattered trees on the southernmost boundary of the recreational fields (Target note 8).



9. The intact beech hedgerow on the north eastern boundary (Target note 9).



10. The intact hawthorn hedgerow on the boundary between the school and recreational fields towards the northwest of the site (Target note 10).



11. The intact hedgerow in the southernmost corner of the recreational fields (Target note 11).



12. Planted beds to the east of the school buildings (Target note 12).



13. The dense scrub and trees beyond the north western boundary (Target note 7).



14. Woodland patch to the north of the school.



15. The mammal run under the fence in the western corner of the site.



16. Nursery building situated to the south west of the school with prefabricated walls and a pitched roof.



17. Reception building situated to the south of the school with prefabricated walls and a flat roof.



18. Southern section of the school with single storey flat roof buildings.



19. Gap between timbers above the kitchen window (Target note 1).



20. Sports hall with a pitched roof.



21. One of the two storey buildings to the northern end of the school.



22. Warped metal on the western side of building 3 by the drain pipe (Target note 2).



23. Warped metal on the southern side of building 4 (Target note 3).

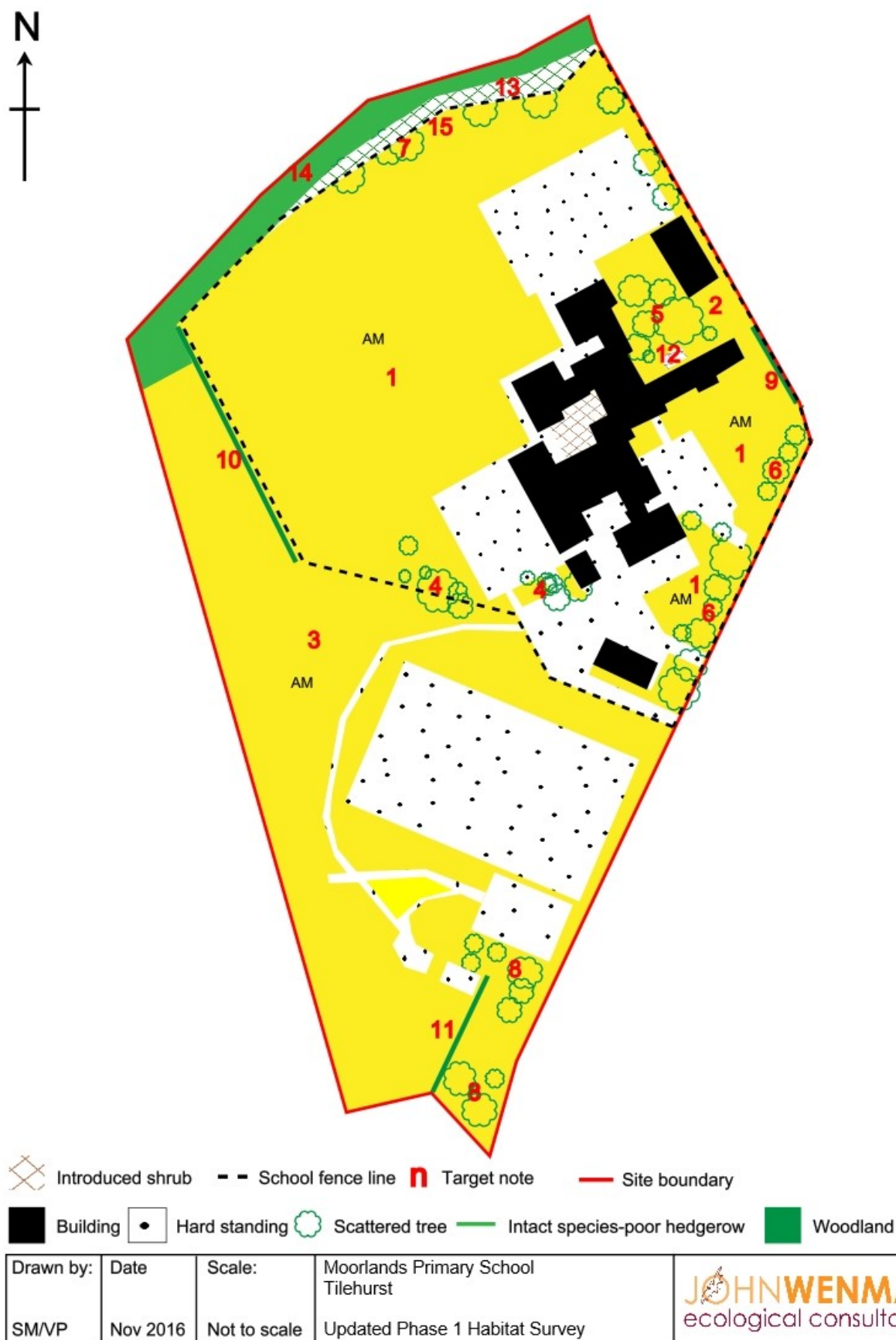


24. ICT building with the metal overhanging on the roof.



25. Building 6 situated to the north of the school with a flat roof

APPENDIX 2 - PHASE 1 SURVEY PLAN AND TARGET NOTES



John Wenman Ecological Consultancy

Moorlands Primary School, Tilehurst - Updated & Extended Phase 1 Habitat Survey (R1512a)

	Comments
1	Amenity grassland supporting grasses such as common bent (<i>Agrostis capillaris</i>), perennial rye grass (<i>Lolium perenne</i>), annual meadow grass (<i>Poa annua</i>), Yorkshire fog (<i>Holcus lanatus</i>), and cock's foot (<i>Dactylis glomerata</i>). Herbaceous species amongst the sward included daisy (<i>Bellis perennis</i>), ribwort plantain (<i>Plantago lanceolata</i>), red clover (<i>Trifolium pratense</i>), common mouse-ear (<i>Cerastium fontanum</i>), greater plantain (<i>Plantago major</i>), meadow buttercup (<i>Ranunculus acris</i>), yarrow (<i>Achillea millefolium</i>), creeping buttercup (<i>Ranunculus repens</i>), dove's foot crane's-bill (<i>Geranium molle</i>) and dandelion (<i>Taraxacum officinale</i> agg.)
2	Uncut grassland beneath the trees. The grassland had similar species composition to nearby grassland; however the herbaceous species were more dominant compared to the grass species and several other species were present. Additional species included red fescue (<i>Festuca rubra</i>), rough hawkbit (<i>Leontodon hispidus</i>), knot grass (<i>Polygonum aviculare</i>), thyme leaved speedwell (<i>Veronica serpyllifolia</i>), broad leaved dock (<i>Rumex obtusifolius</i>), wood avens (<i>Geum urbanum</i>), common flea bane (<i>Pulicaria dysenterica</i>), ground ivy (<i>Glechoma hederacea</i>), ragwort (<i>Senecio jacobaea</i>) and a crane's bill species (<i>Geranium</i> sp.).
3	Amenity grassland outside of the school fence line had a sward with grasses such as common bent (<i>Agrostis capillaris</i>), perennial rye grass (<i>Lolium perenne</i>), annual meadow grass (<i>Poa annua</i>), and wall barley (<i>Hordeum murinum</i>). Herbaceous species amongst the sward included white clover (<i>Trifolium repens</i>), daisy (<i>Bellis perennis</i>), yarrow (<i>Achillea millefolium</i>), ribwort plantain (<i>Plantago lanceolata</i>), dandelion (<i>Taraxacum officinale</i> agg.) and greater plantain (<i>Plantago major</i>).
4	Scattered trees within the fence line - hawthorn (<i>Crataegus monogyna</i>), goat willow (<i>Salix caprea</i>), false acacia (<i>Robinia pseudoacacia</i>), cherry (<i>Prunus</i> sp.), sweet chestnut (<i>Castanea sativa</i>) and oak (<i>Quercus robur</i>).
5	Scattered trees to the north east - Norway maple (<i>Acer platanoides</i>), lime (<i>Tilia</i> sp.), horse chestnut (<i>Aesculus hippocastanum</i>), cherry (<i>Prunus</i> sp.), cypress and fir (<i>Abies</i> sp.). A sycamore (<i>Acer pseudoplatanus</i>) and a lime (<i>Tilia</i> sp.) tree had been removed in order to build the new classroom referred to in the previous survey undertaken in 2015.
6	Scattered trees - cherry (<i>Prunus</i> sp.), oak (<i>Quercus robur</i>), horse chestnut (<i>Aesculus hippocastanum</i>), beech (<i>Fagus sylvatica</i>) and hawthorn (<i>Crataegus monogyna</i>).
7	Scattered trees and shrubs such as aspen (<i>Populus tremula</i>), elm (<i>Ulmus procera</i>), oak (<i>Quercus robur</i>), Norway maple (<i>Acer platanoides</i>), apple (<i>Malus</i> sp.), ash (<i>Fraxinus excelsior</i>), cherry (<i>Prunus</i> sp.), hazel (<i>Corylus avellana</i>), field maple (<i>Acer campestre</i>), hornbeam (<i>Carpinus betulus</i>), dog wood (<i>Cornus sanguinea</i>) and spindle (<i>Euonymus europaeus</i>).
8	Scattered trees on as aspen (<i>Populus tremula</i>), cypress, non-native cherry species (<i>Prunus</i> sp.) and maple species (<i>Acer</i> sp.)
9	Beech (<i>Fagus sylvatica</i>) hedgerow with the occasional sycamore (<i>Acer pseudoplatanus</i>) and horse chestnut (<i>Aesculus hippocastanum</i>).
10	A hawthorn (<i>Crataegus monogyna</i>) hedgerow.
11	A hedgerow formed of non-natives: <i>Pyracantha</i> sp. and rose (<i>Rosa</i> sp.).
12	A planted bed - included a number of vegetables, herbs and fruits such as strawberry (<i>Fragaria</i> sp.), redcurrant (<i>Ribes rubrum</i>), rhubarb (<i>Rheum rhabarbarum</i>), chive (<i>Allium</i> sp.), and radish (<i>Raphanus sativus</i>). Herbaceous species also present included wavy bitter-cress (<i>Cardamine flexuosa</i>), dandelion (<i>Taraxacum officinale</i> agg.), herb Robert (<i>Geranium robertianum</i>), creeping buttercup (<i>Ranunculus repens</i>), ragwort (<i>Senecio jacobaea</i>), broadleaved willowherb (<i>Epilobium montanum</i>), smooth sow thistle (<i>Sonchus oleraceus</i>), red shank (<i>Persicaria maculosa</i>), greater plantain (<i>Plantago major</i>), yarrow (<i>Achillea millefolium</i>), and chickweed (<i>Stellaria media</i>).
13	Dense scrub dominated by common nettle (<i>Urtica dioica</i>) and bramble (<i>Rubus fruticosus</i> agg.) with the occasional young scattered tree such as field maple (<i>Acer campestre</i>), dogwood (<i>Cornus sanguinea</i>), oak (<i>Quercus robur</i>), beech (<i>Fagus sylvatica</i>), hazel (<i>Corylus avellana</i>), rose (<i>Rosa</i> sp.) and hawthorn (<i>Crataegus monogyna</i>).
14	Woodland canopy dominated by oak (<i>Quercus robur</i>), ash (<i>Fraxinus excelsior</i>) and aspen (<i>Populus tremula</i>), with hazel (<i>Corylus avellana</i>) and willow (<i>Salix</i> sp.) in the canopy layer. The ground flora was dominated by common nettle (<i>Urtica dioica</i>), cleavers (<i>Galium aparine</i>), fescue species (<i>Festuca</i> sp.), wood avens (<i>Geum urbanum</i>), bracken (<i>Pteridium aquilinum</i>), creeping thistle (<i>Cirsium arvense</i>), dandelion (<i>Taraxacum officinale</i> agg.) and hedge bindweed (<i>Calystegia sepium</i>).
15	Mammal run under the fence. During the survey undertaken in 2015 was typical of a fox and not large enough to be used by a badger. During this survey, the gap had become larger and was partially blocked with timber boards. The gap was considered to still be used by foxes

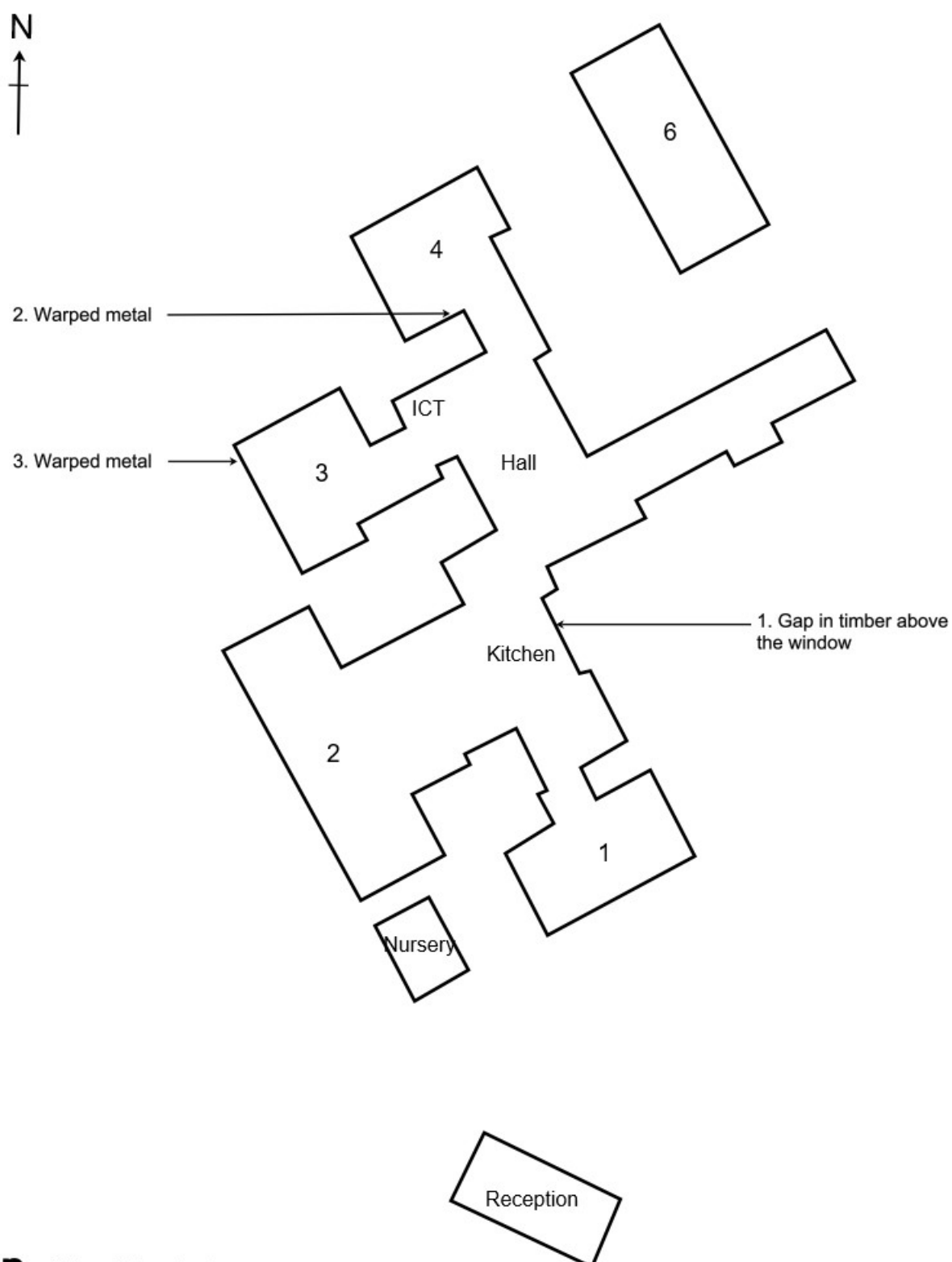
APPENDIX 3 - PLANT SPECIES RECORDED DURING THE SURVEY

Plant common name	Scientific name
Annual meadow grass	<i>Poa annua</i>
Apple	<i>Malus</i> sp.
Ash	<i>Fraxinus excelsior</i>
Aspen	<i>Populus tremula</i>
Beech	<i>Fagus sylvatica</i>
Bracken	<i>Pteridium aquilinum</i>
Bramble	<i>Rubus fruticosus</i> agg.
Broad leaved dock	<i>Rumex obtusifolius</i>
Broadleaved willowherb	<i>Epilobium montanum</i>
Cherry	<i>Prunus</i> sp.
Chickweed	<i>Stellaria media</i>
Chives	<i>Allium</i> sp.
Cleavers	<i>Galium aparine</i>
Clover	<i>Trifolium</i> sp.
Cock's-foot	<i>Dactylis glomerata</i>
Common bent	<i>Agrostis capillaris</i>
Common flea bane	<i>Pulicaria dysenterica</i>
Common mouse ear	<i>Cerastium fontanum</i>
Common nettle	<i>Urtica dioica</i>
Crane's-bill	<i>Geranium</i> sp.
Creeping bent	<i>Agrostis stolonifera</i>
Creeping buttercup	<i>Ranunculus repens</i>
Creeping thistle	<i>Cirsium arvense</i>
Cypress	<i>Fagus sylvatica</i>
Daisy	<i>Bellis perennis</i>
Dandelion	<i>Taraxacum officinale</i> agg.
Dogwood	<i>Cornus sanguinea</i>
Dove's foot crane's-bill	<i>Geranium molle</i>
Elm	<i>Ulmus procera</i>
False acacia	<i>Robinia pseudoacacia</i>
Fescue	<i>Festuca</i> sp.
Field maple	<i>Acer campestre</i>
Fir	<i>Abies</i> sp.
Goat willow	<i>Salix caprea</i>
Great willowherb	<i>Epilobium hirsutum</i>
Greater plantain	<i>Plantago major</i>
Ground ivy	<i>Glechoma hederacea</i>
Hawthorn	<i>Crataegus monogyna</i>
Hazel	<i>Corylus avellana</i>
Hedge bindweed	<i>Calystegia sepium</i>
Herb robert	<i>Geranium robertianum</i>
Hornbeam	<i>Carpinus betulus</i>
Horse chestnut	<i>Aesculus hippocastanum</i>
Ivy	<i>Hedera helix</i>
Knot grass	<i>Polygonum aviculare</i>
Lime	<i>Tilia</i> sp.
Meadow buttercup	<i>Ranunculus acris</i>
Norway maple	<i>Acer platanoides</i>
Oak	<i>Quercus robur</i>
Pyracantha	<i>Pyracantha</i> sp.
Perennial rye grass	<i>Lolium perenne</i>
Radish	<i>Raphanus sativus</i>
Ragwort	<i>Senecio jacobaea</i>
Red clover	<i>Trifolium pratense</i>
Red fescue	<i>Festuca rubra</i>
Redcurrant	<i>Ribes rubrum</i>
Red shank	<i>Persicaria maculosa</i>
Rhubarb	<i>Rheum rhabarbarum</i>
Ribwort plantain	<i>Plantago lanceolata</i>
Rose	<i>Rosa</i> sp.
Rough hawkbit	<i>Leontodon hispidus</i>

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Smooth sow thistle	<i>Sonchus oleraceus</i>
Spear thistle	<i>Cirsium vulgare</i>
Spindle	<i>Euonymus europaeus</i>
Strawberry	<i>Fragaria</i> sp.
Sweet chestnut	<i>Castanea sativa</i>
Sycamore	<i>Acer pseudoplatanus</i>
Thyme leaved speedwell	<i>Veronica serpyllifolia</i>
Wall barley	<i>Hordeum murinum</i>
Wavy bitter-cress	<i>Cardamine flexuosa</i>
White clover	<i>Trifolium repens</i>
Willow	<i>Salix</i> sp.
Wood avens	<i>Geum urbanum</i>
Yarrow	<i>Achillea millefolium</i>

APPENDIX 4 –DAYLIGHT BAT SURVYE FINDINGS



n. External Target note

Drawn by:	Date	Scale:	Moorlands Primary School Tilehurst	
VP	Nov 2016	Not to scale	Daylight Bat Survey Findings	

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