

WEST SUSSEX COUNTY COUNCIL

**Walberton Village Hall and Primary School,
Walberton, West Sussex**

**Extended Ecology Phase 1 Habitat
Survey Report**

Approved By: Joe Jackson

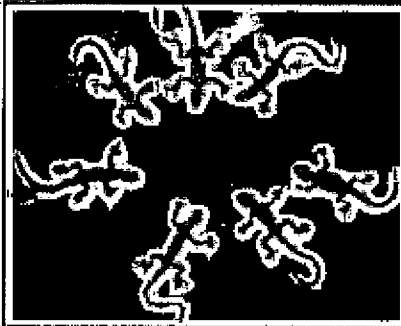
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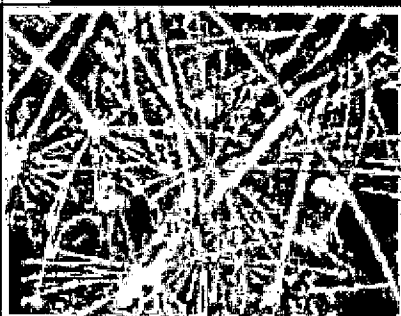
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Landscape Architecture



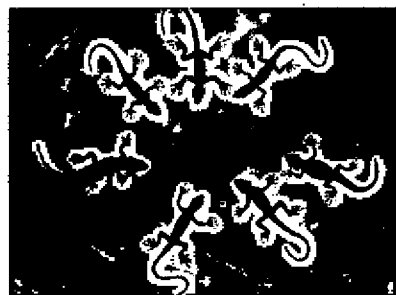
Environmental Design



Landscape Planning

Lizard Landscape Design

Lizard Landscape Design



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SUMMARY

The West Sussex County Council has commissioned Lizard Landscape Design to undertake an ecological appraisal of the Walberton Pre-School development site area. As part of the proposed development site (*hereafter called the site*), an Extended Ecology Phase 1 Habitat Survey was undertaken to appraise the ecology within the site and its surroundings. This report outlines the results of the Extended Ecology Phase 1 Habitat Survey, undertaken on the 16 June 2010.

The Ecology Phase 1 Habitat Survey was specifically targeted to identify the habitats and also to identify potential for protected species within and adjacent to the site and development area. Protected species and habitats are highlighted in PPS9 and current European Legislation and this report outlines the requirements to ensure no potential Protected Species are threatened by the proposed scheme and that there is a minimum loss of species and bio-diversity on the site.

Lizard Landscape Design has undertaken an Ecological and Phase 1 Habitat Survey of the Walberton Pre-School development proposals within the grounds of the Walberton Village Hall, and Primary School. The existing ecological habitats and landscape features found within the site have been assessed against the development proposals. Lizard Landscape Design has concluded that the existing ecological habitats and landscape features contained within the site do not represent a significant constraint to the redevelopment of the site, where further survey work is undertaken, and where any necessary mitigation measures are implemented prior to the commencement of development at an early stage of the development.

There were no habitats of interest within the site or its immediate surroundings. The site was comprised of Semi-Improved Species-Poor Grassland, Dense Scrub and Scattered Trees to the western boundary. These as a whole offered some potential for local wildlife such as Birds, Bats, Reptiles and Invertebrates.

The western boundary of Scattered Trees and Dense Scrub provided potential habitat for protected species such as Reptiles and Bats and it was recommended that detailed surveys for these species should be undertaken prior to the commencement of development to ensure that mitigation can be included at the earliest stages of the development proposal.

Trees and shrubs should be checked for nesting Birds prior to works commencing on site or if feasible works should be undertaken outside the Breeding Bird season which is considered to begin in the South of England in March and continue until at least the end of August.

The loss of existing trees and Bat foraging areas within the Pre-School development site, due to the removal of existing mature trees to the western site boundary, could be enhanced and mitigated with the planting of new Native Mixed-Species tree groups and Native Mixed-Species boundary hedgerow to the western site boundary where possible, to provide a continuous and connective habitat corridor to the western edge of the site.

Additional Reptile habitat could be created to the northern site boundary establishing rough Wildflower Grassland to the fringes of the development site in order to enhance Reptile habitat within the site area.

1.0 INTRODUCTION

- 1.1 West Sussex County Council has commissioned Lizard Landscape Design to undertake an ecological appraisal of the Walberton Pre-School development area. The site area is proposed to be re-developed with a new-build Pre-School facility to the north of the existing Walberton Village Hall, and to the east of the existing Walberton Primary School (*hereafter referred to as the 'site'*).
- 1.2 As part of the proposed development for the Walberton Pre-School facility, an Extended Ecology Phase 1 Habitat Survey was undertaken to appraise the ecology within the site and its surroundings. The survey was specifically targeted to identify the habitats and also to identify potential for protected species within and adjacent to the site. This report sets out the results of the Ecology Phase 1 Habitat Survey. The Ecological Phase 1 Habitat Survey was undertaken on site by Sophie Miller, Ecologist (*IEEM*). This report has been prepared by Sophie Miller (*IEEM*) and Joe Jackson, Landscape Architect, (*BA (Hons) DipLA CLA*) for Lizard Landscape Design, Worthing.
- 1.3 This report establishes the potential ecological resource within the site and outlines where any ecological constraints may occur and makes recommendations for ecological mitigation, and enhancements based upon the proposed development for the site. Ecological mitigation measures and bio-diversity enhancements have been identified at Section 6.0.

2.0 SCOPE OF SURVEY

- 2.1 The specific site survey area comprises Semi-Improved Grassland Playing Field, Tall Ruderal Weed Species, Plantation Woodland, Dense Scrub, Scattered Mature Trees, Species-Poor Intact Hedge line, and Bare Ground / Footpaths, which together is 0.096 hectares in area. The specific development site area is located to the north of Walberton Village Hall, and to the eastern edge of Walberton Primary School. A grassed playing field / cricket ground is located along the eastern edge of the site area, and residential properties are located further south, along 'The Street' Walberton.

- 2.2 The Scattered Mature Trees to the western edge of the site run northwards to meet a Hedgerow boundary with mature Scattered Trees, running east-west along the northern boundary of the site area, the Primary School grounds, and the playing fields to the northern edge.
- 2.3 The development proposals consist of a new Pre-School facility; including internal play space, kitchen area, storage and staff facilities.
- 2.4 The aim of the Ecology walkover survey was:
- *To identify main habitat types and plant communities;*
 - *To identify habitats with potential for protected species; and;*
 - *To provide recommendations for surveys of protected species.*
- 2.5 In order to achieve the aims, an extended Survey Area was established including the margins of the site to include habitats within and adjacent to the site. The detailed survey methodology is set out in Section 3.0. Legislation for relevant protected species is outlined in Appendix No. 2.

3.0 METHODOLOGY

- 3.1 A walkover survey was undertaken by an experienced Ecologist on the 16th June 2010 (*Sophie Miller IEEM*) and the site subjected to an Ecology Phase 1 Habitat Survey using guidelines set out in the '*Handbook for Phase 1 Habitat Survey – a Technique for Environmental Audit*' (*JNCC, 2003*). This has resulted in a Phase 1 Habitat Plan (*Figure No. 1*) and Target Notes in Table 1.0. Habitats within the site were classified and the presence, or potential presence, of certain protected and/or notable species of flora and fauna were identified. Summary descriptions of habitat classifications following the Ecology Phase 1 Habitat Survey methodology are presented in Section 4.0.
- 3.2 Due to the field survey consisting of only one site visit certain species, particularly some of flowering plants, may not have been visible or may have been otherwise inconspicuous at the time of survey, and hence overlooked. These are accepted constraints associated with the standard Ecology Phase 1 Habitat Survey Method.

- 3.3 Habitats within and immediately adjacent to the site were assessed for their potential for uncommon and protected fauna including mammals, Birds, Reptiles, and Amphibians. This involved identifying features which may be used by protected species, potential foraging areas and other signs of use. Stones, dead wood and rubble were turned over and any dug holes studied for recent activity by mammals. Trees were assessed in general for overall Bat potential. Bats may use any crack or hole (*such as Woodpecker holes*), splits or flaking bark and ivy (*Mitchell-Jones, 1999*). Bats will also use different roosts at different times of the year. It can therefore often be difficult to definitely locate Bat roosts in trees.
- 3.4 The Sussex and UK Biodiversity Action Plans (*BAP*), the New Flora of the British Isles and Ireland (*Preston et al., 2002*) and web sites of statutory bodies such as Natural England and Defra were all referred to, to enable consideration of the habitat and species interest within the site. Records of protected species or habitats were not requested from the local Biodiversity Records Centre but have been researched through the National Bio-diversity Network website.
- 3.5 The Government Circular on Biodiversity and Geological Conservation Planning Policy Statement 9 (*PPS9, ODPM, 2006*) states 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. Paragraph 99 of PPS9 states that all protected species surveys should be completed and detailed mitigation proposed prior to submitting a planning application. It also indicates that further strict provisions apply where a European Protected Species is concerned (*for example, Great Crested Newts Triturus cristatus*). The Conservation of Habitats and Species Regulations 2010 now provide the up-to-date legislation for European Protected Species in the UK.
- 3.6 The NERC Act of 2006 also ensures Local Authorities and other Statutory Authorities and landowners to promote and enhance biodiversity and to make sure that it is considered in all Local Authority decisions and policies. The UK Government recommends Local Authorities to conserve species that are highlighted in the UK and local Biodiversity Action Plans, including Amphibian and Reptile species. Therefore mitigation for the proposed Pre-School development scheme on within the site considers PPS9 in its regard to data collection of the species on site, and maintaining species and bio-diversity within the scheme.

- 3.7 Records of protected species or habitats have been researched from the National Bio-diversity Network website (*nbn.org.uk*) due to the scope of existing habitats contained within the development area. Protected Species Records from the National Bio-diversity Network within 10.0 kilometres of the development area are described below within Section 4.0

4.0 RESULTS

4.1 Background information

Protected Sites

- 4.1.1 The site lies within the Natural Area '*South Coast Plain and Hampshire Lowlands*' (*Natural England*) which is highlighted for its low lying and mostly featureless plains, with harbours, estuaries and narrow inlets. Further inland the land is undulating with occasional Woodland set within a dominant arable landscape. Natural habitats include Saline Lagoons, Coastal Marsh, Sand Dunes and adjacent Neutral Grassland and Fen Meadows.
- 4.1.2 The Natural Area profile highlights bio-diversity targets of maintaining and improving Neutral Grasslands and Coastal habitats. National Vegetation Classification (*NVC*) Grassland type **MG5 *Cynosurus cristatus* – *Centaurea nigra* Grassland Crested Dog's-Tail-Common Knapweed** is a Nationally Important Grassland habitat with associated species including Common Spotted Orchid *Dactylorhiza fuchsii*, Meadow Vetchling *Lathyrus pratensis*, Rough Hawkbit *Leontodon hispidus* and Meadow Buttercup *Ranunculus acris*.
- 4.1.3 Within 1.0 kilometre of the site there are no statutory or non-statutory Sites of Nature Conservation Interest. The South Downs National Park lies within 1.0 km to the north of the site and is highlighted for its Chalk Grassland and Scrub habitats.

Habitats

- 4.1.4 Within the Sussex Biodiversity Action Plan (BAP) relevant Habitat Action Plans (HAPs) include Lowland Meadow and Species-Rich Hedgerows. Hedgerows are highlighted within the UK BAP as they are important as connective features between important wildlife habitats, provide navigation routes for species such as Bats and provide a food source and shelter for wildlife in the immediate surroundings. They are considered species-rich if they have five woody species or more within a 30.0 m length and have added value for bio-diversity if they contain mature or veteran trees. Grassland is noted within the Lowland Meadow BAP in Sussex, which is highlighted for not only its floral interest but its value for insects and birds. Sussex's Lowland Meadows are predominantly made up of Crested Dog's-Tail and Common Knapweed Grassland NVC **MG5**. There are approximately 1300 hectares in Sussex, mainly in the High and Low Weald, which represents a significant proportion of the UK resource which is under threat from lack of or mis-management and fragmentation of the habitat.

Species

- 4.1.5 Species Action Plans (SAP's) that are relevant within the UK include Bats such as the Pipistrelle Bat *Pipistrellus pipistrellus*, Song Thrush *Turdos philomelos* and Reptiles such as Slow Worm *Anguis fragilis*. Further species of interest include Insects associated with deadwood found in Sussex such as the Stag Beetle *Lucanus cervus* that particularly needs dead wood in its breeding cycle and is a UK BAP species. Dead wood also provides valuable nesting sites for Birds. Hedgehog *Erinaceus europaeus* is also a UK BAP species as its numbers have declined in recent years.
- 4.1.6 On the National Biodiversity Network (NBN) database records of Dormouse *Muscardinus avellanarius* are noted to the west at Binstead Wood. Bats are recorded in the wider area including Pipistrelle Bat species. Records of Common Newts *Lissotriton vulgaris* and Palmate Newt *L. helveticus* are noted in Fontwell and Barnham. Reptiles are noted within the whole Hectad (10.0 km square area) including Slow Worm in Walberton itself; Grass Snake *Natrix natrix* in Barnham and Common Lizard *Lacerta vivipara* noted to the west at Binstead Wood.

4.2 Description of Habitats

4.2.1 The following standard Ecology Phase I Habitats and landscape features were recorded within the extended Survey Area. Each habitat has been described in turn, along with dominant plant species, plants of high nature conservation value and a brief description of the habitat's physical characteristics. These are shown on the detailed Ecology Phase I Habitat Plan; Figure No. 1 with Target Notes listed Table No. 1.

- *Semi-Improved Neutral Grassland;*
- *Improved Grassland;*
- *Broad-Leaved Plantation Woodland;*
- *Dense Scrub;*
- *Scattered Trees;*
- *Intact Hedge Species-Poor;*
- *Tall Ruderal;*
- *Refuse-Tip;*
- *Buildings; and;*
- *Bare Ground.*

4.2.2 Surrounding the site to the north and south are playing fields and to the east and west there are rural residential areas.

Semi-Improved Neutral Grassland

4.2.3 The Grassland on site is classified as Semi-Improved Neutral Grassland which was mown short at the time of survey. Grassland at Target Note 08 (TN08) is mostly comprised of Perennial Rye-Grass *Lolium perenne* with occasional Herbs such as Dandelions *Taraxacum officinalis*, Creeping Butter-Cup *Ranunculus repens* and Ribwort Plantain *Plantago lanceolata*. On the grass bank at TN10 where the sward is longer, other species noted include Rough-Stemmed Meadow-Grass *Poa trivialis*, Creeping Bent Grass *Agrostis stolonifera*, Cut-Leaved Geranium *Geranium dissectum*, White Clover *Trifolium repens* and Prickly Sowthistle *Sonchus asper*. Photograph No. 1, Appendix No. 1 shows the Grassland on site and western boundary Dense Scrub vegetation.

- 4.2.4 Adjacent to the site to the west at TN15 is a horse-grazed paddock which is also classified as Semi Improved Grassland with sward comprised of grasses such as Perennial Rye-Grass and Creeping Bent with occasional clumps of Common Nettle *Urtica dioica*.

Improved Grassland

- 4.2.5 The playing field at TN17 is classified as Improved Grassland which has a closely mown sward dominated by Perennial Rye-Grass with occasional Daisy *Bellis perennis*, Greater Plantain *Plantago major*, Yarrow *Achillea millefolium* and White Clover.

Broad-Leaved Plantation Woodland

- 4.2.6 The small copse in the north-west corner at TN12 is classified as Plantation Woodland with dominant deciduous trees of Hawthorn *Crataegus monogyna*; Elm *Ulmus* species and Cherry *Prunus* species. One mature Yew *Taxus baccata* tree is in the far north-west corner. The ground flora is comprised of large clumps of Common Nettle and Bramble *Rubus fruticosus*, with some Ivy *Hedera helix*, Creeping Buttercup *Ranunculus repens* and Sterile Brome *Anisantha sterilis*. The Copse and Grassland bank are shown in Photograph No. 2, Appendix No. 1.

Dense Scrub

- 4.2.7 Bramble is noted at TN01 and TN05 with some Elder *Sambucus nigra* bushes along much of the length of the western boundary of the site. Ivy, Cleavers *Galium aparine* and Common Nettle border the edge of the Dense Scrub.

Scattered Trees

- 4.2.8 Mature trees noted along the western boundary include the Lombardy Poplar *Populus nigra 'Italica'* at TN06 and the adjacent Hybrid Black Poplar *Populus x canadensis* agg. at TN07. A line of Lime trees *Tilia* sp. border the field boundary to the north-east and two mature Horse Chestnut trees *Aesculus hippocastanum* are noted south of the Village Hall. These trees are described further in the Bat section.

Intact Hedge Species-Poor

- 4.2.9 Bordering the northern boundary with the Primary School at TN13 is a planted Hornbeam Hedgerow *Carpinus betulus* with occasional Elm tree scrub.

Tall Ruderal

- 4.2.10 Bordering the Dense Scrub along the western boundary is Tall Ruderal 'Weed' vegetation classified as Tall Ruderal habitat. At TN04 this is dominantly Common Nettle with occasional Cow Parsley *Anthriscus sylvestris*, Cleavers, False Oat-Grass *Arrhenatherum elatius*, Burdock *Arctium minor*, Garlic Mustard *Alliaria petiolata* and Broad-Leaved Dock *Rumex obtusifolius*. Daffodils *Narcissus* species have also been planted along this edge.

Refuse-tip

- 4.2.11 Also along the western boundary at TN03 are small piles of grass clippings classified as Refuse-Tip for the purpose of this survey.

Buildings

- 4.2.12 The Village Hall appears modern with brick walls and pitched tile roof. The adjacent Primary School is also modern with brick walls and plastic eaves. These are discussed further in the Bat section.

Bare Ground

- 4.2.13 A narrow path runs along the eastern boundary of the site which has no vegetation growing on it. There is also a basketball court in the middle of the Grassland on site.

4.3 Protected and Uncommon Species

Bats

- 4.3.1 The Village Hall is a modern building with few gaps visible under the plastic eaves or in the tiled roof. The Primary School to the north also has plastic eaves and offers very limited potential to provide sites for Bat roosts. The trees along the western boundary provide 'good' potential for Bat roosts with both Poplar trees at TN06 and TN07 providing suitable sites for Bat roosts. The Lombardy Poplar is tall with much of its lower trunk covered in Ivy, which Bats may use to roost in. The taller Hybrid Black Poplar has three visible holes in the trunk which may be used by Bats (Photograph No. 3, Appendix No. 1). Other trees in the Copse at TN13, offer 'low' to 'limited' potential for Bats to roost within. The Lime trees to the east offer 'low' potential with smooth trunks and no holes visible.

- 4.3.2 The western boundary provides good connective habitat and corridor which Bats may use for navigation between foraging and roosting sites. The other Hedgerow and Scattered Tree features around the playing field also provide good navigational corridors. In the village there are many old houses which may provide roosting sites for Bats which could use the adjacent playing field for foraging.

Badger

- 4.3.3 No signs of Badger were noted within 30.0 m of the site. The Grassland would provide some foraging habitat for Badger but no digging by badgers was noted within the site and its surroundings.

Dormouse

- 4.3.4 The Dense Scrub of Bramble along the western boundary provides only few fodder species for Dormouse including Bramble and Elder but is very dense and isolated from other suitable habitat.

Reptiles

- 4.3.5 The western boundary provides a small area suitable for Reptiles which may use the Dense Scrub as protective / hibernation habitat and the Grassland playing field for basking in. The small piles of grass clippings at TN03 also provides habitat for species such as Grass Snake that use compost areas to lay their eggs in. It is suggested that possibly a small population of Slow Worm or an occasional Grass Snake may use this habitat.

Amphibians

- 4.3.6 There are no ponds on site and those closest are 300.0 m to the north along a rife, the other side of the Walberton Primary School. The site provides only terrestrial habitat suitable for Amphibians on the western boundary and in the small Copse at TN12.

Birds

- 4.3.7 Common Songbirds were noted on site including Blackbird, Robin and Wren. The Scrub and mature Scattered Trees offer good nesting habitat for Birds with the playing field providing good foraging habitat for them.

Invertebrates

- 4.3.8 The site has limited potential for Invertebrates with the western boundary providing Bramble and other Herbs suitable to attract Bees, Moths and Butterflies. Some dead wood is noted in the Dense Scrub at TN05 and in the Copse at TN12 which provides some habitat for Beetles.

5.0 EVALUATION

5.1 Habitats

- 5.1.1 No habitats of interest were noted on site within the western boundary Scattered Trees and Dense Scrub offering habitat for wildlife. The Grassland on site also appeared to have a good proportion of sown species in the sward and had a Species-Poor sward.
- 5.1.2 As a whole the site was located within the rural setting of Walberton and provided good semi-natural habitat along the western boundary for local wildlife. The Scattered Trees, Dense Scrub and Tall Ruderal habitats provided potential habitat for species such as Birds, Bats, Reptiles, and Invertebrates.

5.2 Protected and Uncommon Species

Plants

- 5.2.1 No uncommon or rare plants were found during the survey. Species in the Dense Scrub and Grassland habitats were common species of Southern England. The Hybrid Black Poplar tree at TN07 was identified and suggested to be a hybrid species which are also common in Southern England.

Bats

- 5.2.2 The adjacent buildings including the Village Hall and Primary School had very limited potential to support Bat roosts however adjacent houses in the village provided good potential. The mature Scattered Trees along the western boundary including the Poplars at TN06 and TN07 provided good potential for Bat roosts. The site was located within a playing field which may be used by Bats for foraging and the boundaries of the site provided good navigational roosts for Bats.

- 5.2.3 Therefore it is recommended that a Licensed and experienced Bat Surveyor should check any of the Scattered Trees that are proposed to be removed (*at TN06 and TN07*) or lie close to the proposed scheme with Bat roost potential and also assess the adjacent existing buildings. An Initial Bat Roost Assessment Survey should be undertaken prior to the commencement of development in order to inform any required mitigation measures for Bats at an early stage of the development process. This survey would then advise the need for further Bat activity surveys to inform any Bat mitigation required for the proposed scheme. Down-faced lighting should be used on external walls within the scheme to minimise disturbance to Bats along the boundaries of the site.

Badgers

- 5.2.4 No signs of Badger were noted on site or within 30.0 m of the boundary of the site. The site would provide a small area of foraging habitat for Badger but the playing field adjacent would be maintained and also provided good foraging habitat for Badgers.

Dormouse

- 5.2.5 The western boundary Scattered Trees and Dense Scrub had few fodder species for Dormouse and was isolated from other Woodland habitat. It is suggested that the possibility of Dormouse here is very low.

Reptiles

- 5.2.6 The western boundary Dense Scrub and Grassland bank provided good opportunities for Reptiles and records of Reptiles such as Slow Worm, Common Lizard, and Grass Snake were known to be in the local area. It is recommended that a presence / absence survey for Reptiles should be undertaken, prior to the commencement of development, for protected species such as Grass Snake or Slow Worm.

Amphibians

- 5.2.7 No water bodies are closely linked to the site and it is suggested that only the western boundary provided terrestrial habitat for Amphibians such as Frogs and Toads and small Newt species.

Birds

- 5.2.8 Scattered Trees and Dense Scrub provided some nesting habitat for Birds. It would be advisable to check all trees and bushes for nesting Birds prior to any works commencing within the Bird nesting season. Preferable works should be undertaken outside the breeding Bird season which runs inclusively from March to at least the end of August.

Invertebrates

- 5.2.9 The site provided limited habitat for Invertebrates in the Dense Scrub and Scattered Trees on the western boundary and in the Grassland sward. Dead wood in the Plantation Woodland in the north-west corner at TN12 should be kept on site and post construction other suitable deciduous trees should also be planted. It would be recommended that planting within the proposed scheme, should consist of both garden and wildlife planting of native species would be beneficial to local Invertebrates such as Butterflies, Moths, Bees, Wasps and other Invertebrates which would in turn provide food sources for a variety of wildlife such as small Mammals, common Song Birds, Raptors such as Buzzard, and Bat species.

6.0 CONCLUSIONS

- 6.1 There were no habitats of interest within the site or its immediate surroundings. The site was comprised of Semi-Improved Species-Poor Grassland, Scrub and Scattered Trees on the western boundary. These as a whole offered some potential for local wildlife such as Birds, Bats, Reptiles and Invertebrates.
- 6.2 Lizard Landscape Design has undertaken an Ecological and Phase 1 Habitat Survey of the Walberton Pre-School development proposals within the grounds of the Walberton Village Hall, and Primary School. The existing ecological habitats and landscape features found within the site have been assessed against the development proposals. Lizard Landscape Design has concluded that the existing ecological habitats and landscape features contained within the site do not represent a significant constraint to the redevelopment of the site, where further survey work is undertaken, and where any necessary mitigation measures are implemented prior to the commencement of development at an early stage of the development.

- 6.3 The western boundary of Scattered Trees and Scrub provided potential habitat for protected species such as Reptiles and Bats and it was recommended surveys for these Protected Species should be undertaken prior to the commencement of development.
- 6.4 Protected species surveys and data should be collected to inform detailed mitigation prior to the commencement of development on site in accordance with PPS9. The following surveys are recommended and should be used to ensure mitigation can be included at the earliest stages of the development proposal.

<i>Survey</i>	<i>Appropriate Timing</i>
<i>Initial Bat Roost Assessment of Buildings / Trees</i>	<i>Survey - All year;</i>
<i>Bat Activity Surveys (if required)</i>	<i>May to September;</i>
<i>Reptiles</i>	<i>April to June, September.</i>

- 6.5 The loss of existing trees and Bat foraging areas within the Pre-School development site, due to the removal of existing mature trees to the western site boundary, could be enhanced and mitigated with the planting of new Native Mixed-Species tree groups and Native Mixed-Species boundary hedgerow to the western site boundary where possible, to provide a continuous and connective habitat corridor to the western edge of the site.
- 6.6 Additional Reptile habitat could be created to the northern site boundary establishing rough Wildflower Grassland to the fringes of the development site in order to enhance Reptile habitat within the site area.
- 6.7 It is suggested that protected species of Reptile, Bats, and Birds may be using the site and therefore before any vegetation clearance, limb or tree felling or other major activity on the site is commenced, advice should be sought on the appropriate methods or timing of any activity to ensure no illegal operations are undertaken.

7.0 REFERENCES

Joint Nature Conservancy Council. (2003). Handbook for Phase 1 Habitat Survey - A Technique for Environmental Audit. JNCC, Peterborough.

Mitchell-Jones A.J & McLeish A.P. (1999). Bat Worker's Manual. JNCC, Peterborough.

Stace, C. (1997). New Flora of the British Isles. Cambridge University Press, Cambridge.

The UK BAP – www.ukbap.org.uk

The Sussex BAP – www.sussexbiodiversity.org.uk

www.magic.gov.uk

www.naturalengland.org.uk

www.data.nbn.org.uk

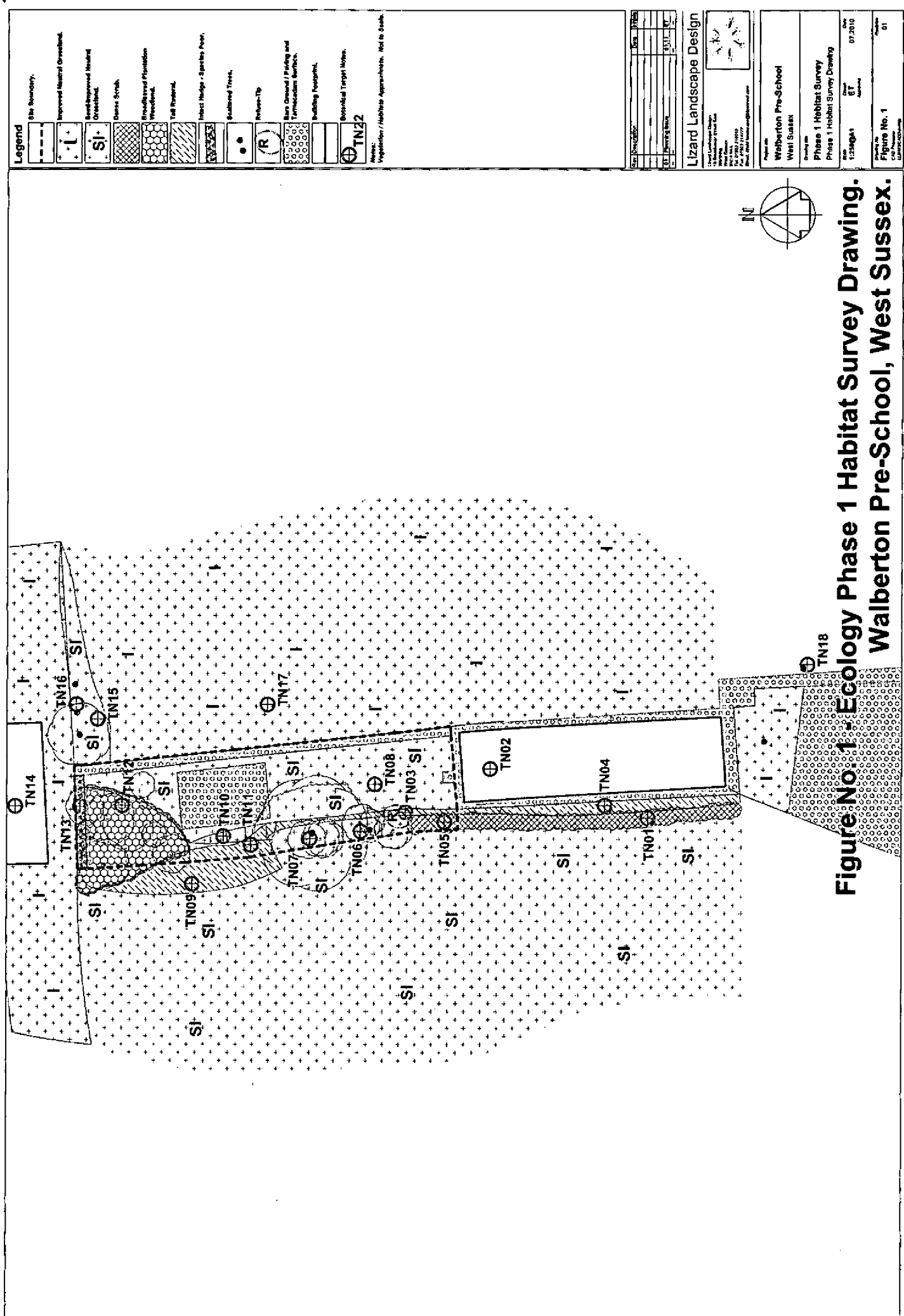


Figure No. 1: Ecology Phase 1 Habitat Survey Drawing.
Walberton Pre-School, West Sussex.

Table No. 1 - Target Notes for Ecology Phase 1 Habitat Plan

Target Note Number	Phase 1 Description	Description	Species	Protected Species Potential
01	Dense Scrub.	Scrub Along Western Boundary.	Bramble, Nettle, Elder, Ivy, Ground-Ivy.	Birds, Invertebrates.
02	Building.	Village Hall.	Brick Walls, Pitched Slate Tiles, Few Visible Gaps.	'Low' Bats.
03	Refuse-Tip.	Grass Cuttings.	Cleavers.	Reptile, Invertebrates.
04	Tall Ruderal.	Tall Weeds.	Common Nettle, Cleavers, Creeping Buttercup, False Oat-Grass, Burdock, Bramble, Garlic Mustard, Broad-Leaved Dock, Daffodils.	Reptile, Invertebrates.
05	Dense Scrub.	Scrub Along Western Boundary.	Bramble, Elder.	Birds, Invertebrates.
06	Scattered Trees.	Tree.	Lombardy Poplar – No Visible Holes Or Cracks.	Bat, Birds, Invertebrates.
07	Scattered Trees.	Tree.	Black Poplar Hybrid – 3 no. Visible Holes, Mature Tree.	Bat, Birds, Invertebrates.
08	Semi-Improved Neutral Grassland.	Mown Grass.	Perennial Rye-Grass, Cock's-Foot, Yorkshire Fog, White Clover, Dandelion, Yarrow, Creeping Buttercup, Ribwort Plantain.	Invertebrates.
09	Tall Ruderal.	Adjacent Tall Weeds.	Nettle, Docks.	Birds, Invertebrates.
10	Semi-Improved Neutral Grassland.	Tall Grass Sward On Bank.	Rough-Stemmed Meadow-Grass, Cow Parsley, Creeping Bent.	Invertebrates.
11	Tall Ruderal.	Tall Weeds On Site.	Nettle, Cow Parsley, Creeping Thistle, Hedge Mustard, White Dead-Nettle, Cleavers.	Reptiles, Invertebrates.
12	Broad Leaved Plantation Woodland.	Copse In North-West Corner.	Hawthorn, Elm, Cherry, Ivy, Nettle, Bramble, Sterile Brome.	Birds, Invertebrates.
13	Intact Hedge Species-Poor.	Hedge Bordering School.	Hornbeam, Elm.	Birds, Reptiles, Invertebrates.
14	Building.	Primary School.	Brick Walls And Plastic Eaves.	Reptile, Invertebrates.
15	Semi-Improved Neutral Grassland.	Adjacent Field.	Perennial Rye-Grass, False Oat-Grass, Docks, Thistles.	Reptile, Invertebrates.
16	Scattered Trees.	Line Of Trees To East.	Lime.	Birds, Invertebrates.
17	Improved Grassland.	Playing Field.	Perennial Rye-Grass, White Clover, Greater Plantain, Yarrow.	Invertebrates.
18	Scattered Trees.	2 no. Trees.	Horse Chestnut.	'Low' Bats.



Appendix 1 – Site Photographs

APPENDIX NO. 1 - SITE PHOTOGRAPHS



Photograph No. 1 - Grassland (TN08) and adjacent Tall Ruderal (TN11) and Dense Scrub (TN05).



Photograph No. 2 - Edge of Bank (TN10 / TN11) and Plantation Woodland (TN12).

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APPENDIX NO. 1 - SITE PHOTOGRAPHS



Photograph No. 3 - Mature Poplar Tree (TN07) with 3 no. Visible Holes.



Appendix 2 – Summary of Protected Species Legislation

APPENDIX No. 2 – SUMMARY OF PROTECTED SPECIES LEGISLATION

Bats

- A1** All Bat species and their roosts in Britain are protected under the Wildlife and Countryside Act 1981, through inclusion on Schedule 5. They are also included on Annex IV of Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (*known as the Habitats Directive*). As a result of the UK ratifying this directive, all British Bats are protected under The Conservation of Habitats and Species Regulations 2010. These make it an offence to intentionally or deliberately kill, injure, capture or disturb Bats or obstruct access to, damage or destroy Bat roosts. Under the law, a Bat roost is any structure or place used for shelter or protection. This could be any structure including any building or mature tree. It is also an offence if an act is made unintentionally thereby it will mean that those carrying out activities that may have the effect of killing, capturing or disturbing, or damaging or destroying a breeding site or resting place of Bats will now have to give greater consideration to whether the risk that their proposed activity may have such effects on these species can be avoided.

Dormouse

- A2** The Dormouse (*Muscardinus avellanarius*), is one of the rarest members of the British rodent fauna. This is because much of its habitat has been lost. They are covered by the same legislation as that described above for Bats being listed on Schedule 5 of the Wildlife & Countryside Act 1981 (*as amended*) and within Annex IV of The Conservation of Habitats and Species Regulations 2010. This makes it an offence to unintentionally, intentionally or deliberately kill or injure a Dormouse or to recklessly damage or destroy its nest.

Reptiles

- A3** Adders *Vipera berus*, Grass Snakes *Natrix natrix*, Common Lizards *Lacerta vivipara* and Slow Worms *Anguis fragilis* are protected against killing, injury or sale under the Wildlife and Countryside Act 1981 (*following Statutory Instruments 1991 No. 367*). Smooth Snakes (*Coronella austriaca*) and Sand Lizards (*Lacerta agilis*) are within Annex IV of the Habitats Directive and accorded full protection against reckless or intentional damage, destruction or obstruction of access to their place of shelter or protection, and against intentional killing or injuring of the Reptiles themselves, under the Wildlife and Countryside Act 1981, as amended and The Conservation of Habitats and Species Regulations 2010.

Amphibians

- A4** The Great Crested Newt *Triturus cristatus* is covered by the same level of protection as Bats and Dormice discussed above. It is therefore accorded full protection against unintentionally, reckless or intentional damage, destruction or obstruction of access to their place of shelter or protection, and against intentional killing or injuring of the Newts themselves, under the Wildlife and Countryside Act 1981, as amended and the Habitats Directive, as amended. The Common Newts *Lissotriton vulgaris*, Palmate Newts *L. helveticus*, Common Frogs *Rana temporaria* and Common Toads *Bufo bufo* are protected only against sale under this Act. The Natterjack Toad *Bufo calamita* is fully protected but is very restricted in its distribution and would not occur in this study area (Gent, 1998).

Birds

- A5** All Wild Birds are protected primarily through the Wildlife and Countryside Act 1981, as amended. This makes it an offence to intentionally kill, injure or take any Wild Bird; take, damage or destroy a nest (*whilst in use or under construction*); take, damage or destroy its eggs and possess Wild Birds (*dead or alive*) or their eggs. Further restrictions are placed on any Schedule 1 Species (*listed in the WCA 1981*) whereby 'the intentional or reckless disturbance of... whilst nest building, at a nest containing eggs or young, or disturbing dependent juveniles' is an offence and carries more serious penalties. The IUCN guidelines also highlight species through 'Red' and 'Amber' lists. 'Red' list species are globally threatened or whose population or range has rapidly declined over recent years. 'Amber' list species are less threatened although still of conservation concern.

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