

**Mapledurham Playing Fields
Upper Woodcote Road
Caversham
Reading
Berkshire
RG4 7LH**

Preliminary Ecological Appraisal

Ref: R2126/c

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1 SUMMARY

- 1.1.1** John Wenman Ecological Consultancy LLP was commissioned by Reading Borough Council to undertake a preliminary ecological appraisal of land at Mapledurham Playing Fields in Caversham, Berkshire. The survey was commissioned in relation to proposed work to improve the existing playing fields to mitigate for the proposal for a new primary school in the north-western corner of the site.
- 1.1.2** The proposed improvements include installing a new lit, tree-lined central footpath. The land to the east of this footpath is to be re-graded and to have drainage installed to improve the existing football pitches. These works will involve removing the existing trees around the children's play area and the existing basketball court, and relocating the play area. The land to the west of the new footpath is to remain unchanged, with the exception of a new small perimeter footpath planned for this side of the playing field.
- 1.1.3** The search of data held by the Thames Valley Environmental Records Centre (TVERC) and the MAGIC website shows that the survey site is not statutorily designated for its wildlife interest. There were however, pre-existing records of protected and notable species, such as badger and common toad, held for the site.
- 1.1.4** A Phase 1 habitat survey completed on the 29th November 2018 showed that the land surveyed at Mapledurham Playing Fields consisted almost entirely of amenity grassland used as football pitches. Other habitat types observed included semi-natural broadleaved woodland, broadleaved parkland/scattered trees; dense scrub; defunct species-poor hedge and hard standing.
- 1.1.5** The proposals will not affect land designated for its wildlife interest or habitats of principal importance for conservation (UK Priority Habitats as defined under the NERC Act 2006).
- 1.1.6** The work will result in some tree removal in order to install the pathways, re-grade the land and install drainage. The trees to be removed are planted semi-mature parkland trees of no significant ecological value beyond the site

level, and lacked features suitable for roosting bats. The grassland directly affected by the works is regularly-mown grass of negligible ecological value.

- 1.1.7** The proposed 5 metre-high columns along the central pathway will have 'warm white' LED (light emitting diodes) light, which is considered an appropriate luminaire specification to limit impacts on bats (BCT & ILE 2018). Dark corridors will be retained in the thin perimeter woodland and along the defunct hedge thus there will be no negative impact on commuting and foraging bats.
- 1.1.8** Existing survey data shows that the proposals are unlikely to affect badgers or their setts; however, a walkover survey of the site should be undertaken before any ground excavations regarding re-grading the land and installing drainage begin in order to confirm that badger activity has remained unchanged.
- 1.1.9** The removal of trees suitable for nesting birds should be timed to avoid the bird nesting season i.e. March to August inclusive, or take place only after a survey by an ecologist has confirmed that nesting birds are not present.
- 1.1.10** New tree planting planned as part of new landscaping plans should make use of locally sourced, native woody species to enhance the ecological value of the playing fields.

2 INTRODUCTION

2.1 Overview

2.1.1 John Wenman Ecological Consultancy LLP was commissioned by Reading Borough Council to undertake a preliminary ecological appraisal of land at Mapledurham Playing Fields in Caversham, Berkshire. The survey was commissioned in relation to proposals to improve the existing playing fields.

2.1.2 The proposed improvements include installing a new lit tree-lined central footpath. The land to the east of this footpath is to be re-graded and to have drainage installed to improve the existing football pitches. These works will involve: removing the existing trees around the children's play area and the existing basketball court; and relocating the play area. The land to the west of the new footpath is to remain unchanged, with the exception of a new small perimeter footpath planned for this side of the playing field (**Appendix 4**).

2.2 Site Location and Context

2.2.1 The site is located below Woodcote Road in Caversham in Reading, Berkshire (OS Grid Reference: SU 69800 75607).

2.2.2 Mapledurham Playing Fields consists of a large playing field divided into grass football pitches that undergo regular management. There is a parcel of broadleaved woodland in the eastern part of the site, and a portion of grassland managed as a wildflower meadow with planted orchard trees throughout. The site boundaries are composed of thin strips of woodland that are often reduced to scattered tree-lines and bordered on all side by fencing. The site is in the centre of a residential area, with Caversham Heath Golf Course less than 100 metres to the west and the River Thames approximately 460 metres to the south.

2.2.3 Overall, the surrounding area provides habitats suitable for a range of key faunal groups such as amphibians, reptiles, birds and mammals.

2.3 Report format

- 2.3.1** There follows: an overview of the planning policy background in Section 3 and of the protected species legislation in Section 4; details of the survey methods in Section 5; background data search findings in Section 6; Phase 1 habitat survey findings in Section 7; a discussion of the survey findings in Section 8; with recommendations being presented in Section 9. The appendices present: the site photographs (**Appendix 1**); a Phase 1 habitat survey plan with associated target notes (**Appendix 2**); a plant species list recorded during the survey (**Appendix 3**); and the proposed landscaping concept plan (**Appendix 4**).

3 PLANNING POLICY BACKGROUND

3.1 National Planning Policy

3.1.1 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.’

3.1.2 The revised National Planning Policy Framework (NPPF), published in July 2018, sets out the Government's planning policies for England and how they should be applied. Section 15 of the NPPF sets out the approach local authorities should adopt to conserve and enhancing the natural environment when preparing planning policy and when considering planning applications. Paragraph 175 sets out the principles local authorities should apply when determining planning applications as follows:

175. When determining planning applications, local planning authorities should apply the following principles:

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons⁵⁸ and a suitable compensation strategy exists; and*

- d) *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.*

3.2 Local Planning Policy

3.2.1 Reading Borough Council makes planning decisions based on the policies within the Core Strategy (adopted January 2008) which sets out their overall planning strategy and important principles for development in Reading.

3.2.2 Policy CS36 within the Strategy sets out the Council's approach to biodiversity and geology when considering planning applications as follows:

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.

4 LEGISLATIVE BACKGROUND – PROTECTED SPECIES

4.1 Amphibians

4.1.1 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.

4.1.2 Of the seven native amphibian species, the widespread great crested newt receives full protection under the Wildlife & Countryside Act 1981 (as amended) and under the Conservation of Species and Habitats Regulations 2017 ('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.

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

4.2 Reptiles

4.2.1 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.

4.2.2 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).

4.3 Birds

4.3.1 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.

4.3.2 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.

4.4 Bats

4.4.1 All British bat species are fully protected by the Wildlife & Countryside Act 1981 (as amended) and by the Conservation of Habitats and Species Regulations 2017 ('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.

4.5 Badgers

4.5.1 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. The issue of a licence would be subject to the development of a suitable mitigation strategy.

4.6 Otters

4.6.1 Otters are fully protected by the Wildlife & Countryside Act 1981 (as amended) and by the Conservation of Habitats and Species Regulations 2017 ('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.

4.7 Hazel Dormice

4.7.1 Hazel dormice receive full protection under the Wildlife & Countryside Act 1981 (as amended) and under the Conservation of Habitats and Species Regulations 2017 ('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.

4.7.2 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 55(9)(a)** - there is “no satisfactory alternative” to the derogation, and;
- **Regulation 55(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 55(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”.

4.7.3 Local authorities have a statutory duty under Regulation 7(3e) 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 before granting planning permission. **N.B. the requirements set out in 4.7.2 and 4.7.3 apply to development that would affect bats, great crested newts and otters, which are European Protected Species also.**

4.8 Water Voles

4.8.1 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.

4.8.2 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).

4.9 Invasive Non-Native Plants

- 4.9.1** 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*).

4.10 Injurious Weeds

- 4.10.1** 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.

4.11 Wild Mammals

- 4.11.1** 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.

5 SURVEY METHODS

5.1 Phase 1 Habitat Survey

5.1.1 An ecological walkover survey was undertaken on the 29th November 2018, by a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM). During the survey, the habitats present were noted and plotted on a site plan (**Appendix 2**) using definitions based on the standard Phase 1 Habitat 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 conservation importance (i.e. UK Priority Species as defined under Section 41 of the NERC Act 2006).

5.2 Background Data Search

5.2.1 The Thames Valley Environmental Records Centre (TVERC) was commissioned to undertake a search of pre-existing records of protected and/or notable species and statutorily and non-statutorily designated wildlife sites held by them for the site and land within a 1km radius search area.

5.2.2 The Multi-Agency Geographic Information for the Countryside (MAGIC) website was referred to for pre-existing data on habitats of conservation importance and to understand the nature of surrounding habitats.

5.3 Survey Constraints

5.3.1 Full access was available to the site and therefore there were no significant access constraints to the walkover survey findings. The 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.

6 BACKGROUND ECOLOGICAL DATA SEARCH

- 6.1.1** The search of data held by the Thames Valley Environmental Records Centre (TVERC) and the MAGIC website shows that the survey site is not statutorily designated for its wildlife interest; however, one statutorily designated site does fall within a 1km radius of the site. The Chilterns Area of Outstanding Natural Beauty (AONB) lies less than 100 metres to the west and is a landscape with historically and nationally important habitats such as chalk streams, grasslands and woodland.
- 6.1.2** There is one Local Wildlife Site (LWS) – a non-statutorily designated site of importance for nature conservation in Berkshire – within the 1km search radius of the site. The Warren Woodlands Complex LWS is situated approximately 365 metres south of the survey site. The LWS is a strip of six interconnecting sites situated along the chalk scarp of The Warren. The western end of the LWS also falls within the Chilterns Escarpment South CTA (Conservation Target Area) – a 763 hectare area consisting of the escarpment from Goring to Mapledurham and dry valleys that cut into the Chilterns plateau.
- 6.1.3** One amphibian species has been recorded on the survey site: two records of common toad (*Bufo bufo*) – a UK Priority Species – from 2004.
- 6.1.4** One reptile species has been recorded within the 1km search radius: one slow worm (*Anguis fragilis*) – a protected and UK Priority Species – record from The Warren Woodlands Complex in 2009.
- 6.1.5** There are a number of historical records of protected and notable bird species within the 1km search area. A species of worthy note is the lesser spotted woodpecker (*Dendrocopos minor*) – a UK Priority Species and on the Birds of Conservation Concern Red List – recorded on the survey site in 2005. The records come mainly from The Warren Woodlands Complex LWS and include: song thrush (*Turdus philomelos*); mistle thrush (*Turdus viscivorus*) and marsh tit (*Poecile palustris*) - all of which are on the Birds of Conservation Concern Red List.
- 6.1.6** At least six bat species have been recorded within a 1km radius of the survey site: common pipistrelle (*Pipistrellus pipistrellus*); serotine (*Eptesicus*

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serotinus); noctule (*Nyctalus noctula*); soprano pipistrelle (*Pipistrellus pygmaeus*); brown long-eared (*Plecotus auritus*); and a *Myotis* species.

- 6.1.7** Three other mammal species have been recorded within the 1km search radius: west European hedgehog (*Erinaceus europaeus*) – a UK Priority Species; European otter (*Lutra lutra*) – a European Protected Species (EPS); and Eurasian badger (*Meles meles*) – protected by the Badgers Act 1992. There are pre-existing records of a badger sett is present in the woodland on the eastern side of Mapledurham Playing Fields and a likely commuting route leads beneath the northern fence-line (beyond the survey boundary) (refer to Preliminary Ecological Appraisal by ADAS UK Limited; January 2016).
- 6.1.8** The invertebrate records include principally important species such as: stag beetle (*Lucanus cervus*); wall (*Lasiommata megera*); small heath (*Coenonympha pamphilus*); and a significant number of historical moth records from a moth trap at 25 Matlock Road in 1981.

7 PHASE 1 HABITAT SURVEY FINDINGS

7.1 Site Overview

7.1.1 The land surveyed at Mapledurham Playing Fields consisted almost entirely of amenity grassland set out as football pitches. There was a line of mature Lombardy poplar trees on the western side of the fields, and a line of semi-mature broadleaved trees growing around the northern side of a central playground. The western and southern boundaries of the survey site had thin strips of broadleaved woodland and tree-lines, which formed the edge of the site boundaries; a defunct hedge also ran along the western boundary. The north eastern boundary of the site was lined with scattered trees with a thin strip of dense bramble scrub in front. On the eastern side of the survey site, there was a basketball court next to woodland just beyond the survey boundary. The isolated area surveyed on the northern edge of the Playing Fields comprised of amenity grassland and broadleaved woodland.

7.1.2 The following Phase 1 habitat types were observed during the survey: amenity grassland; semi-natural broadleaved woodland; broadleaved parkland/scattered trees; dense scrub; species-poor defunct hedge and hard standing/bare ground (other habitat).

7.1.3 The habitat types are detailed below; the site photographs are in **Appendix 1**, their distribution is shown on the site plan with associated target notes with detailed species compositions are described in **Appendix 2**, and a list of species recorded in **Appendix 3**.

Amenity grassland (AM1 & AM2)

7.1.4 The grassland was regularly cut and set out as football pitches or for recreational use (**Photograph 1; AM2**). The grassland was defined by abundant perennial ryegrass (*Lolium perenne*), with occasional common daisy (*Bellis perennis*). Other rarely distributed species included: yarrow (*Achillea millefolium*); catsear (*Hypochaeris radicata*); ribwort plantain (*Plantago lanceolata*); creeping buttercup (*Ranunculus repens*) and dandelion (*Taraxacum officinale*).

- 7.1.5** The small section of grassland at the northern edge of the survey site was continuous with rest of the playing fields and under the same management regime (**Photograph 2; AM1**). The grassland was similarly defined by abundant perennial ryegrass (*Lolium perenne*), with frequent common daisy (*Bellis perennis*). Other rarely-distributed species included: Cock's-foot (*Dactylis glomerata*); dove's-foot cranesbill (*Geranium molle*); creeping buttercup (*Ranunculus repens*); groundsel (*Senecio vulgare*) and dandelion (*Taraxacum officinale*).

Semi-natural broadleaved woodland (BW1 & BW2)

- 7.1.6** There were small wooded areas in the north western and south western corners of the site, which connected through scattered tree-lines that followed the site boundaries (**Photographs 3 & 4; BW1**). The tree species included: frequent field maple (*Acer campestre*) and common lime (*Tilia x europaea*); occasional Norway maple (*Acer platanoides*); rarely-distributed hazel (*Corylus avellana*), hawthorn (*Crataegus monogyna*), holly (*Ilex aquifolium*) and pedunculate oak (*Quercus robur*). The ground flora comprised abundant ivy (*Hedera helix*) and occasional bramble (*Rubus fruticosus* agg.) scrub.

- 7.1.7** The section of woodland surveyed to the north of the survey site formed a small part of the thin woodland strip running along the site boundaries (**Photograph 5; BW2**). The species included: occasional blackthorn (*Prunus spinosa*); rarely-distributed Norway maple (*Acer platanoides*), *Cotoneaster* species, *Prunus* species and elder (*Sambucus nigra*). The ground flora was composed of abundant ground ivy (*Glechoma hederacea*) and rarely-distributed common nettle (*Urtica dioica*).

Broadleaved parkland/scattered trees (SBW1, SBW2 & SBW3)

- 7.1.8** There was a line of mature Lombardy poplar (*Populus nigra* 'Italica') extending into the playing fields from the western site boundary (**Photograph 6; SBW1**).
- 7.1.9** In the centre of the playing fields, there were planted, semi-mature trees on the northern side of a children's play area (**Photograph 7; SBW2**). The tree species included: frequent Norway maple (*Acer platanoides*); occasional ash

(*Fraxinus excelsior*); rarely-distributed horse chestnut (*Aesculus hippocastanum*), whitebeam (*Sorbus aria*) and lime (*Tilia* sp.).

- 7.1.10** A strip of scattered trees followed the site perimeter in the northwestern part of the playing fields (**Photograph 8; SBW3**). The species included: occasional hawthorn (*Crataegus monogyna*), a *Prunus* species, bramble (*Rubus fruticosus* agg.) and elder (*Sambucus nigra*); rarely-distributed snowberry (*Symphoricarpos* sp.), Norway maple (*Acer platanoides*), hazel (*Corylus avellana*), wild privet (*Ligustrum vulgare*), pedunculate oak (*Quercus robur*), common whitebeam (*Sorbus aria*) and a *Virburnum* species.

Species-poor defunct hedge (PH-1)

- 7.1.11** There was a hedge with numerous gaps along a broken fence-line along the western site boundary (**Photograph 9; PH-1**). The species included: frequent bramble (*Rubus fruticosus* agg.); occasional Norway maple (*Acer platanoides*); rarely-distributed holly (*Ilex aquifolium*) and pedunculate oak (*Quercus robur*).

Dense scrub (DS1)

- 7.1.12** A thin strip of dense scrub was present in front of the strip of scattered trees in the northwestern part of the playing fields (**Photograph 10; DS1**). The scrub comprised abundant bramble (*Rubus fruticosus* agg.); occasional young *Prunus* trees; rarely-distributed fir trees (*Abies* sp.), maple (*Acer* sp.), *Choisya* sp., hawthorn (*Crataegus monogyna*), cypress (*Cupressus* sp.) and young pedunculate oak (*Quercus robur*).

Other habitat (OH1 & OH2)

- 7.1.13** In the centre of the playing fields was a children's play area comprising of bark chippings and a sand pit; a short metal fence separated it from the playing fields (**OH1; Photograph 11**).

- 7.1.14** On the eastern side of the playing fields was a small section of hard standing used as a basketball court (**OH2; Photograph 12**). There were a couple stand-alone broadleaved trees – a cherry (*Prunus* sp.) and Norway

Maple (*Acer platanoides*) - between the court and the nearby woodland
(**Photograph 13**).

- 7.1.15** The broadleaved woodland to the east of the Mapledurham Playing Fields (beyond the survey boundary) consisted of abundant ivy (*Hedera helix*); pedunculate oak (*Quercus robur*) and bramble (*Rubus fruticosus* agg.); field maple (*Acer campestre*), sycamore (*Acer pseudoplatanus*), hazel (*Corylus avellana*), rough meadow grass (*Poa trivialis*); silver birch (*Betula pendula*), hawthorn (*Crataegus monogyna*), holly (*Ilex aquifolium*), wild cherry (*Prunus avium*), blackthorn (*Prunus spinosa*), elder (*Sambucus nigra*), and English elm (*Ulmus procera*). Within this woodland, there were signs of animal digging (**Photograph 14; TN1**) and a badger sett with four visible entrances (**Photograph 15; TN2**).

8 DISCUSSION

8.1 Assessment of Existing Ecological Value

Habitats

- 8.1.1** Pre-existing data has shown the site is not designated for its wildlife interest and therefore not recognised as being of international, national or county level wildlife conservation importance.
- 8.1.2** The main extent of the site consisted of amenity grassland managed for the purpose of sports and recreational use. The grassland's plant community supported relatively low numbers of native grassland and herbaceous species typical of regularly mown and improved grassland. Due to the low species diversity and lack of species of conservation importance, in combination with the lack of structural diversity, the grassland is of negligible ecological value.
- 8.1.3** The thin strips of broadleaved woodland and scattered trees on the northern, western and southern boundaries, and the defunct hedge bordering the playing fields on the western edge, are not examples of UK Priority Habitats, but are of higher ecological value at the site level as a resource for a range of species such as birds, bats and invertebrates.
- 8.1.4** The woodland block just beyond the eastern edge of the survey area is example of Deciduous Woodland – a UK Priority Habitat as defined under the NERC Act 2006 – and therefore of conservation importance at a local level. The woodland supports badgers and is likely to provide habitats suitable for a wide range of fauna including bats, birds, invertebrates and small mammals; potentially including notable species.

Bats

- 8.1.5** The thin strips of broadleaved woodland and the defunct hedge bordering the playing fields offer commuting and foraging habitat to bats. Despite the urban setting, the site is in close proximity to The Warren Woodlands Complex LWS, Caversham Heath Golf Course and the River Thames, which provide high quality foraging habitat nearby. At least six bat species have

been recorded within the local area indicating their likely presence in the vicinity of the site.

Hazel Dormice

- 8.1.6** The defunct hedge and thin strips of broadleaved woodland, connecting to the parcel of broadleaved woodland on the eastern side of Mapledurham Playing Fields (beyond the survey boundary), offer opportunities suitable for dormice to traverse and forage on the site. However, there are no records of hazel dormice (*Muscardinus avellanarius*) within a 1km radius of the site and the urban surroundings disconnect the site from the wider landscape; making the presence of dormice on site unlikely.

Amphibians

- 8.1.7** There are no waterbodies on site and OS base mapping indicates there are no waterbodies in proximity to the site. There is, however, the chance garden ponds are unmapped, but the urban setting surrounding the site is likely to restrict the movement of amphibians. The lack of suitable breeding habitat and urban setting, in combination with an absence of great crested newt (*Triturus cristatus*) records within a 1km radius of the site, indicates this species is unlikely to be present. Other amphibians of conservation importance, such as common toad (*Bufo bufo*) recorded in the woodland in the east of Mapledurham Playing Fields (beyond the survey boundary), may use the wooded perimeter to traverse the site and potentially to shelter and hibernate. The current management regime of the playing fields means that amphibians are unlikely to be present in the areas of open grassland.

Reptiles

- 8.1.8** The grassland management regime means the grassland's short sward is unsuitable for reptiles. The thin strips of woodland, scrub and defunct hedge around the edge of the site provide cover for reptiles and link to higher quality reptile habitat in the form of a wildflower meadow and rough grassland areas in the Playing Fields (beyond the survey area). There are records of slow-worm (*Anguis fragilis*) within a 1km radius in The Warren Woodlands Complex LWS south of the site; though the lack of habitat

connectivity in the urban environment between sites suggests the presence of these reptiles on site is considered unlikely.

Badgers

There are pre-existing records of badger (*Meles meles*) in the woodland on the eastern side of Mapledurham Playing Fields (beyond the survey boundary) and further records within The Warren Woodlands Complex LWS to the south of the site. A badger sett with four entrances and signs of recent activity, i.e. digging, was present in the woodland on the eastern side of the playing fields in the location noted during the pre-existing survey in 2016 showing that badgers utilise the woodland beyond the survey area and are likely to forage in areas of nearby grassland.

Nesting birds

- 8.1.9** The thin strips of broadleaved woodland and the defunct hedge along the site boundaries, and the scattered trees within the playing fields, all provide nesting opportunities for common and widespread species adapted to wooded habitat but considered highly unlikely to be of ecological value to birds beyond the site level.

Other Mammals

- 8.1.10** There are pre-existing records of otter (*Lutra lutra*) within a 1km radius of the site to the south along the River Thames. A 0.5km stretch of urban development forms an impassable barrier between the River Thames and the survey site, thus it is considered unlikely that otters are using the site.
- 8.1.11** The thin strips of woodland and defunct hedge on site is a habitat suitable for a range of small mammal species - including UK Priority Species, such as the hedgehog (*Erinaceus europaeus*), which has been recorded within the search area - to commute, forage and take refuge.

Invertebrates

- 8.1.12** Although stag beetle – a UK Priority Species - has been recorded within a 1km radius, the management regime of the playing fields is unlikely to allow for the build-up of fallen dead wood used by female stag beetles (*Lucanus*

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cervus) to lay eggs; however, the woodland on the eastern side of Mapledurham Playing Fields (beyond the survey boundary) is likely to possess deadwood suitable for this species and other deadwood specialists.

- 8.1.13** The management regime of the grassland within the surveyed area of Mapledurham Playing Fields has negligible ecological value for the locally recorded invertebrates: wall (*Lasiommata megera*) and small heath (*Coenonympha pamphilus*) butterflies; however, the wildflower meadow in the southeast of the playing fields (beyond the survey area) is high quality habitat for these principally important species.

8.2 Impact of Proposals

- 8.2.1** The proposals involve works to improve the existing playing fields (**Appendix 4**); which include installing a new lit tree-lined central footpath, and re-grading and installing drainage to the land to the east of this footpath. These works will involve removing existing trees around the children's play area and existing basketball court, and relocating the play area. A small perimeter footpath is to be added to the western side of the playing fields.

Designated Wildlife Sites

- 8.2.2** The proposals will not affect a site designated for its wildlife interest. The boundary of the Chilterns Area of Outstanding National Beauty (AONB) - designating a landscape with historically and nationally important habitats such as chalk streams, grasslands and woodland - is less than 100 metres to the west of the site; however, it is considered that the works within the play area will have no impact on the AONB.

Habitats

- 8.2.3** The proposals to improve Mapledurham Playing Fields will result in some tree removal in order to install the pathways, re-grade the land and install drainage. The trees to be removed are planted, semi-mature parkland trees, which are of no significant ecological value beyond the scale of the site. The grassland that will directly be affected by the drainage and re-grading works is regularly-mown grass of negligible ecological value.

Bats

- 8.2.4** The proposals are unlikely to have an adverse impact on the availability of commuting and foraging habitat for bats. The habitats on, and just off-site, of value to feeding bats, i.e. the thin strip of perimeter woodland and defunct hedge within the survey boundary, and block of woodland just beyond the survey area, are to be retained unaffected by the planned work and therefore no loss of foraging habitat is foreseen. The scattered trees to be removed were semi-mature and lacked features suitable for roosting bats and as such the loss of bat roosts is highly unlikely. These scattered trees, whilst potentially of some limited feeding value to bats, are considered to be of negligible importance in the context of the mature tree lines and woodland that will be retained; furthermore, new planting will avoid any long term tree loss.
- 8.2.5** Artificial lighting has been shown to affect bat behavior. Insects can be attracted to artificial lighting, and because of this several species of bats - including pipistrelles, noctule, Leisler's and serotine - have been shown to be attracted to lighting to forage (Stone 2015b). Other species of bats, particularly the slower flying species – such as long-eared bats and *Myotis* species, have on the other hand been shown to avoid lighting, possibly as a consequence of the risk of increased predation from diurnal raptors (Stone 2015a). In addition, several species may be sensitive to increased lighting, particularly UV light, which may disrupt visual foraging behavior in groups such as long-eared bats (Fure 2006). Furthermore, the artificial attraction of insects to lighting may have an adverse impact on the availability of insects in nearby habitats and therefore an impact on the foraging success of bats that avoid lighting.
- 8.2.1** The proposed 5 metre-high columns along the central pathway will have 'warm white' LED (light emitting diodes) light, which is considered an appropriate luminaire specification to limit potential impacts on bats (BCT & ILE 2018). The light emitted is a more directional, narrow beam and will be targeted at the pathway; therefore dark corridors will be retained through the thin perimeter woodland and defunct hedge highlighted as suitable commuting and foraging habitat for bats. LED light typically features no UV component and research by Stone (2015a, 2015b) indicates that while lower

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UV components attract fewer invertebrates, the warmer colour temperatures with peak wavelengths greater than 550nm (~3000°K) cause less impacts on bats. Furthermore, the path will pass through an area of open sports fields of negligible potential for bats currently. Therefore, the lighting proposed is highly unlikely to have an adverse impact of bat behavior.

Amphibians

- 8.2.2** There are no waterbodies on site or within proximity to the site that provide suitable breeding habitat for great crested newts and therefore adverse impacts on this species are considered unlikely. In addition, other amphibians are unlikely to be found on the regularly-mown grassland to be affected by the works. If present, they are likely to be utilising the thin perimeter woodland and defunct hedge which are to be retained unaffected by the planned work.

Reptiles

- 8.2.3** The regular management of the playing fields for the purpose of sports and recreational use means it is unsuitable habitat for reptiles, which may be found in the more marginal taller areas of vegetation to be retained, thus it is considered unlikely that they will be adversely affected by the proposed works.

Badgers

- 8.2.4** As part of the proposed work, re-grading the land will require ground excavations and additions of soil that would have the potential to destroy and/or disturb badger setts and tunnels and/or harm or disturb badgers; however, although there was a well-used badger sett in the woodland east of Mapledurham Playing Fields (beyond the survey boundary), the planned work will take place more than 40 metres away from the nearest sett entrance, and as such, the proposals are highly unlikely to lead to badger sett being damaged or to badgers occupying the sett being disturbed or harmed, and therefore based on existing survey data, it is considered that work can go ahead lawfully with no requirement for a licence issued by Natural England. However, badgers may open new sett entrances in the future in areas that could be affected by the proposed works and therefore

an updated walkover survey should be carried out before work starts to ensure the location of the badger sett remains unchanged (refer to recommendations in Section 9.2).

Nesting birds

- 8.2.5** The scattered trees within the playing fields, consisting of planted semi-mature parkland trees, provide potential nesting opportunities for common and widespread bird species, and therefore the removal of these trees may lead to the disturbance of nesting birds and as such necessary precautions must be adopted refer to recommendations in Section 9.3).

Other mammals

- 8.2.6** The proposed works will retain the thin perimeter woodland and defunct hedge, thus habitats important to the locally recorded west European hedgehog (a UK Priority Species) will remain intact.

Invertebrates

- 8.2.7** The proposed works will not be have an impact on the habitats to the east of Mapledurham Playing Fields such as the woodland and wildflower meadow (beyond the survey boundary), thus the locally recorded invertebrate species of note will not be negatively affected.

9 RECOMMENDATIONS

9.1 Badgers

- 9.1.1** An updated walkover survey of the site should be undertaken before any ground works commence, in order to determine whether the badger activity has remained unchanged. **N.B. If updated surveys show that the distribution of badger sett entrances has changed so that they are in areas that will be affected by the works, further detailed survey may be required to support a Natural England licence application to permit the damage and/or disturbance of badgers.**

9.2 Nesting Birds

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

9.3 Ecological Enhancement

- 9.3.1** The landscaping plans could seek to enhance the ecological value of the site by making use of native plant species of local provenance sourced from suppliers following the Flora Locale Code of Practice for the collection, growing and supply of native flora.

10 REFERENCES

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APPENDIX 1 - SITE PHOTOGRAPHS



1. Amenity grassland covering the playing fields (AM2).



2. Section of amenity grassland continuous with the rest of the playing fields (AM1).



3. Wooded north western corner of the playing fields (BW1).



4. Thin strips of woodland and scattered tree-lines around the site boundaries (BW1).



5. Densely growing, young woodland (PBW1).



6. Line of Lombardy poplar on the western side of the playing fields (SBW1).



7. Planted semi-mature parkland trees to the north of the children's play area to be removed (SBW2).



8. Scattered trees along the north-western perimeter of the playing fields (SBW3).



9. Defunct species-poor hedge along the western boundary of the site (PH-1).



10. Thin strip of dense scrub in front of scattered trees along north-western boundary (DS1).



11. Children's play area in the centre of the playing fields (OH1).



12. Basketball court on the eastern side of the playing fields (OH2).



13. Scattered tree in proximity to the basketball court (OH2).



14. Signs of animal digging in nearby woodland (TN1).



15. Badger sett with four entrances in nearby woodland (TN2).

APPENDIX 2 - PHASE 1 HABITAT SURVEY PLAN



Legend

- A1.1.1 - Broadleaved woodland - semi-natural
- A2.1 - Scrub - dense/continuous
- A3.1 - Broadleaved Parkland/scattered trees
- J1.2 - Cultivated/disturbed land - amenity grassland
- J5 - Other habitat
- J2.2.2 - Defunct hedge - species-poor

Phase 1 Habitat Plan
 Location: Mapledurham Playing Fields
 Drawn by: JW
 Survey Date: Nov 2018 Report Date: Dec 2018

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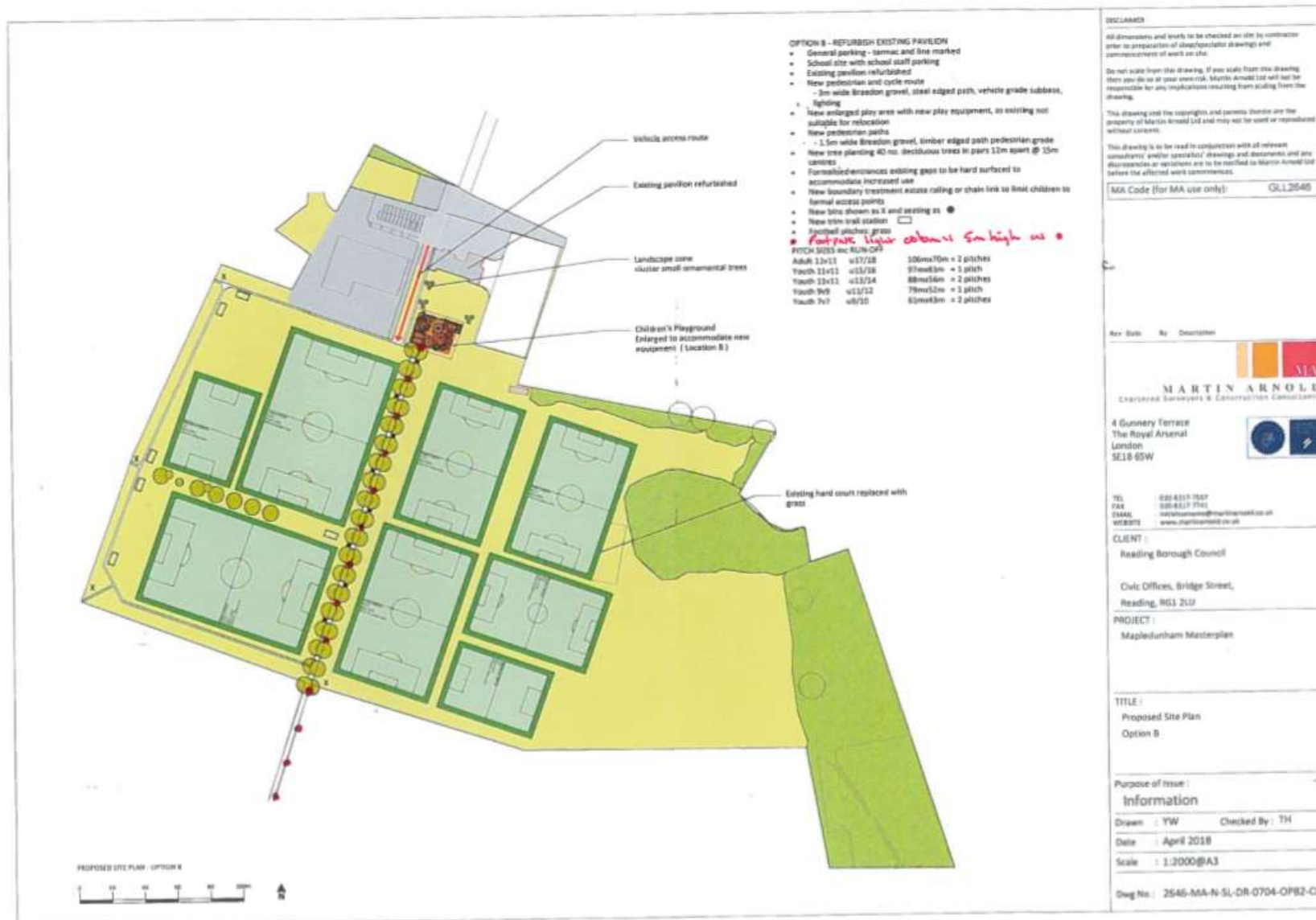
PHASE 1 HABITAT SURVEY NOTES

Habitat code	Habitat Description
AM1 (0.03ha)	Amenity grassland – A section of regularly-managed grassland to the north of the site continuous with rest of the playing fields (Photograph 2). Species recorded: abundant perennial ryegrass (<i>Lolium perenne</i>); frequent common daisy (<i>Bellis perennis</i>); rarely-distributed cock's-foot (<i>Dactylis glomerata</i>), dove's-foot cranesbill (<i>Geranium molle</i>), creeping buttercup (<i>Ranunculus repens</i>), groundsel (<i>Senecio vulgaris</i>) and dandelion (<i>Taraxacum officinale</i>).
AM2 (5.67ha)	Amenity grassland – Regularly-managed grassland covering the extent of the playing fields (Photograph 1). Species recorded: abundant perennial ryegrass (<i>Lolium perenne</i>); occasional common daisy (<i>Bellis perennis</i>); rarely-distributed yarrow (<i>Achillea millefolium</i>), catsear (<i>Hypochaeris radicata</i>), ribwort plantain (<i>Plantago lanceolata</i>), creeping buttercup (<i>Ranunculus repens</i>) and dandelion (<i>Taraxacum officinale</i>).
BW1 (0.46ha)	Semi-natural broadleaved woodland – Small wooded areas in the north western and southwestern corners of the site connected through scattered tree-lines that following the site boundaries (Photographs 3 & 4). Species recorded: abundant ivy (<i>Hedera helix</i>); frequent field maple (<i>Acer campestre</i>) and common lime (<i>Tilia x europaea</i>); occasional Norway maple (<i>Acer platanoides</i>) and bramble (<i>Rubus fruticosus</i> agg.); rarely-distributed hazel (<i>Corylus avellana</i>), hawthorn (<i>Crataegus monogyna</i>), holly (<i>Ilex aquifolium</i>), pedunculate oak (<i>Quercus robur</i>) and an unidentified evergreen species.
BW2 (0.02ha)	Semi-natural broadleaved woodland – A section of woodland to the north of the survey site forming a small part of the thin woodland strip running along the site boundaries (Photograph 5). Species recorded: abundant ground ivy (<i>Glechoma hederacea</i>); occasional blackthorn (<i>Prunus spinosa</i>); rarely-distributed Norway maple (<i>Acer platanoides</i>), Cotoneaster species, <i>Prunus</i> species, elder (<i>Sambucus nigra</i>) and common nettle (<i>Urtica dioica</i>).
SBW1 (0.06ha)	Parkland/scattered broadleaved trees – A line of mature Lombardy poplar (<i>Populus nigra</i> 'Italica') trees protruding into the playing fields from the western site boundary (Photograph 6).
SBW2 (0.05ha)	Parkland/scattered broadleaved trees – A group of planted semi-mature parkland trees on the north side of a children's' play area (Photograph 7). Species recorded: frequent Norway maple (<i>Acer platanoides</i>); occasional ash (<i>Fraxinus excelsior</i>); rarely-distributed horse chestnut (<i>Aesculus hippocastanum</i>), lime (<i>Tilia</i> sp.), and whitebeam (<i>Sorbus aria</i>).
SBW3 (0.11ha)	Parkland/scattered broadleaved trees – A strip of scattered trees followed the site perimeter in the north western part of the playing fields (Photograph 8). Species recorded: occasional hawthorn (<i>Crataegus monogyna</i>), a <i>Prunus</i> species, bramble (<i>Rubus fruticosus</i> agg.) and elder (<i>Sambucus nigra</i>); rarely-distributed snowberry (<i>Symphoricarpos</i> sp.), Norway maple (<i>Acer platanoides</i>), hazel (<i>Corylus avellana</i>), wild privet (<i>Ligustrum vulgare</i>), pedunculate oak (<i>Quercus robur</i>), common whitebeam (<i>Sorbus aria</i>) and a <i>Virburnum</i> species.
PH-1 (204m)	Defunct species-poor hedge – A hedge possessing numerous gaps along a broken fence-line along the western site boundary (Photograph 9). Species recorded: frequent bramble (<i>Rubus fruticosus</i> agg.); occasional Norway maple (<i>Acer platanoides</i>); rarely-distributed holly (<i>Ilex aquifolium</i>) and pedunculated oak (<i>Quercus robur</i>).
DS1 (0.05ha)	Dense/continuous scrub – A thin strip of dense scrub in front of scattered trees in the north western part of the playing fields (Photograph 10). Species recorded: abundant bramble (<i>Rubus fruticosus</i> agg.); occasional <i>Prunus</i> sp.; rarely-distributed fir trees (<i>Abies</i> sp.), maple (<i>Acer</i> sp.), <i>Choisya</i> sp., hawthorn (<i>Crataegus monogyna</i>), cypress (<i>Cupressus</i> sp.) and pedunculate oak (<i>Quercus robur</i>).
OH1 (0.05ha)	Other habitat – A children's play area comprising of bark chippings and a sand pit; a short metal fence formed the perimeter (Photograph 11).
OH2 (0.07ha)	Other habitat – A small section of hard standing in the form of a basketball court with a few stand-alone semi-mature trees (cherry (<i>Prunus</i> sp.) and Norway maple (<i>Acer platanoides</i>) nearby (Photographs 12 & 13).
TN1	Signs of digging activity in the nearby woodland (Photograph 14).
TN2	Badger sett with four entrances in the nearby woodland (Photograph 15).

APPENDIX 3 - PLANT SPECIES RECORDED DURING THE SURVEY

Plant common name	Scientific name
Ash	<i>Fraxinus excelsior</i>
Blackthorn	<i>Prunus spinosa</i>
Bramble	<i>Rubus fruticosus</i> agg.
Catsear	<i>Hypochaeris radicata</i>
Cherry	<i>Prunus</i> sp.
Cock's-foot	<i>Dactylis glomerata</i>
Common daisy	<i>Bellis perennis</i>
Common lime	<i>Tilia x europaea</i>
Common nettle	<i>Urtica dioica</i>
Cotoneaster	<i>Cotoneaster</i> sp.
Creeping buttercup	<i>Ranunculus repens</i>
Daisy	<i>Bellis perennis</i>
Dandelion	<i>Taraxacum officinale</i>
Dove's-foot cranesbill	<i>Geranium molle</i>
Elder	<i>Sambucus nigra</i>
Field maple	<i>Acer campestre</i>
Ground ivy	<i>Glechoma hederacea</i>
Groundsel	<i>Senecio vulgare</i>
Hawthorn	<i>Crataegus monogyna</i>
Hazel	<i>Corylus avellana</i>
Holly	<i>Ilex aquifolium</i>
Horse chestnut	<i>Aesculus hippocastanum</i>
Ivy	<i>Hedera helix</i>
Lime	<i>Tilia</i> sp.
Lombardy poplar	<i>Populus nigra</i> 'Italica'
Norway maple	<i>Acer platanoides</i>
Pedunculate oak	<i>Quercus robur</i>
Perennial ryegrass	<i>Lolium perenne</i>
Ribwort plantain	<i>Plantago lanceolata</i>
Whitebeam	<i>Sorbus aria</i>
Yarrow	<i>Achillea millefolium</i>
	<i>Viburnum</i> sp.

APPENDIX 4 – PROPOSED SITE PLAN



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