



# Ecological Management Plan

Hare Hill Open Space, Ottershaw  
2014-2018



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Prepared for:

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## Quality Control

The information and data which has been prepared and provided is true and has been prepared and provided in accordance with the '*Code of Professional Conduct*' issued by the Chartered Institute of Ecology and Environmental Management (CIEEM). We confirm that the opinions expressed are our true and professional bona fide opinions.

		Date
Ecologist	Isobel Girvan BSc (Hons) PGCert MCIEEM	Site visit date: 15/11/2013
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## 1.0 Introduction

- 1.1 Surrey Wildlife Trust (SWT) Consultancy has been commissioned by Runnymede Borough Council to produce management plans for six sites which have been allocated as Suitable Alternative (or Accessible) Natural Greenspace Sites (SANGS). This management plan covers Hare Hill (see Appendix 1 for site photographs) and draws on previous work undertaken by SWT and other relevant information.
- 1.2 This report is based on the information gained at the time of the site visits, drawn from the findings of the suite of ecological surveys and knowledge of the site. In addition a visit was made on 15<sup>th</sup> November 2013 by Isobel Girvan to assist with making management recommendations. The management plan is to be seen as a work in progress that can evolve as more information is gathered.
- 1.3 A Site of Nature Conservation Importance survey (SNCI) was undertaken in 1999 for Hare Hill (Girvan, 1999) (see Appendix 2). An extended Phase 1 survey (Gibbs 2009), an Access Assessment (Anckorn, 2009) and a Data Search (Kirk, 2009) were undertaken in 2009 (see Appendices 3 - 5). In addition a preliminary invertebrate assessment (Dodd, 2013) and badger site visit (Williams, 2014) were undertaken (see Appendices 6 & 7). Bird, bat and reptile surveys will be undertaken in spring / summer 2014.
- 1.4 Other surveys for fungi and invertebrates were carried out in 1995 and 1996 (see Appendix 8).
- 1.5 The volunteer warden has completed a tree report (Miller) and a Glow Worm count (Miller, 2013). In addition there is also an account of the history of Hare Hill (Lane, 2012).
- 1.6 Due to constraints such as the time of year when surveys of certain species groups can be carried out, some surveys will be undertaken in spring / summer 2014. The recommendations from these surveys should be incorporated into the management plan.
- 1.7 Within the management plan the site has been evaluated for important features, for which an objective is given along with a description of the management required in order to meet that objective. Detailed prescriptions of the work to be undertaken are then listed for each feature and targets given where relevant. This is summarised in a five year work programme (see section 5.0)

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## 2.0 Description

- 2.1 Hare Hill, has a central grid reference of TQ032637, and has been owned and managed by Runnymede Borough Council since the end of 1995. It covers 13.92 hectares and is split between Foxhills Ward and Chertsey South & Row Town Ward. It is an Open Space and SANGS. There are multi-access points over the site often using existing Public Rights of Way. See Figure 1.
- 2.2 In the past the land has been common land and agricultural fields. There were orchards on part of the site until 1934 and farming most probably ceased during the 1950's, with the last of the field ploughed in the 1960's. This area was also used for clay extraction with a pottery close by. The site was quite open with grassland, mature trees and hedges. Natural succession then took place and today the site is woodland dominated, with just less than a hectare devoted to a grassland habitat. The majority of the trees are approximately 35-50 years old. There are a significant number of mature trees on the site, mostly Pedunculate Oaks and are generally located on old field boundaries – along the northern end of Spratt's Lane, along Footpath 27, 22 and 28. The mature trees are on average around 150 years old but the oldest may be up to 360 years (Miller 2006). There are a group of mature Scots Pine in the woodland to the west of Spratts Lane in the north west corner of the site. Along footpath 27 there is an impressive line of mature pollarded Hornbeams.
- 2.3 Scrub is an integral part of the site, although is sporadic in cover. There is some on the grassland/woodland edge in the north east of the site (W11/12) as well as Bramble underscrub in the south eastern glade (W5).
- 2.4 There is a pond/wet area known as Soggy Bottom located in the central part of the site by a ditch at TQ03276367 (area P), which provides pond-like conditions.
- 2.5 The open grassland has been much larger in area in the past, but encroachment from the woodland and scrub edge has much reduced it in the last 20 years. Some parts are kept short by rabbits, the management schedule suggests that it is annually cut. The composition of the grassland is not very herb-rich, being described as semi-improved.
- 2.6 The current management of the site is largely non-intervention except when health and safety issues arise in the woodland. The grassland is annually mown.

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## 3.0 Evaluation

### 3.1 **Mixed Semi-natural Woodland (including boundary banks & mature trees)**

Hare Hill supports a number of old boundary banks with some impressive mature trees. A detailed tree report has been carried out by a local Kathy Mille which maps all of the mature trees on the site. The largest oak on the site was estimated to be approximately 359 years old (Miller, 2006). These mature trees are valuable for their wildlife and visual value as well as their historical importance.

The even aged secondary woodland that covers the majority of the site is a common place habitat where wildlife, particularly birds are frequent. However it does lack structure and there is potential to enhance it and create a more varied mosaic of habitats.

Part of the suite of mosaic habitats would include the enhancement of the scrub/wood interface, by pushing back some of the woodland this would also increase the amount of open grassland habitat. This ecotone of scrub/wood edge is very important for a host of invertebrates, as well as birds, small mammals and reptiles which are known to have been on site.

### 3.2 **Ponds/wet area (Soggy Bottom)**

The pond (area P1-4 on Figure 1) is a potentially interesting ecological feature for the site and should be if possible enhanced. There are problems with drainage, which should be considered. Access will also be addressed. Once the issues have been resolved this wet area will benefit from increased invertebrates including dragonflies, damselflies and potentially newts.

### 3.3 **Grassland**

The open grassland area is situated on a slight slope, providing great views that will be improved when some of the woodland is pushed back. It is an invaluable part of the mosaic of habitats that the site supports. Long uncut edges will also enhance the scrub interface with the woodland and create ideal conditions for a variety of invertebrates. The rest of the grassland should be cut in late summer and provides further opportunities for species such as moths and butterflies.

### 3.4 **Indicator Plants**

No rarities are present on the site.

From the Phase I data there have been six ancient woodland indicators (AWI) recorded on the site (Wild Cherry, Creeping Jenny, Yellow Archangel, Hornbeam, Creeping Soft-grass and Wood Spurge). However the history as

farmland is well known and it is not designated as ancient woodland in the Surrey Inventory (Davis, 2010).

### 3.5 **Non-native, Invasive Plants**

The area has been degraded around the edges from the sheer quantity of garden waste and fly tipping. This has led to an invasion of introduced garden plants, some of which are non-native, invasive species. The Wildlife and Countryside Act (1981 as amended) includes a list of problem key species in the UK called the Schedule 9 list of invasive species, of which four were recorded during the site visit in 2013:

- Japanese Knotweed
- Variegated Yellow Archangel
- Montbretia
- Himalayan Balsam
- Cotoneaster sp. – (only some Cotoneaster species listed on Schedule 9 and identification of this plant was not made to species level).

In addition the following have also been recorded on the site and are on the Plantlife list (Thomas, 2010) intended to identify non-native plants that may become invasive in the future:

- Butterfly-bush
- False-acacia
- Snowberry
- Bamboo

Two recorded plant species are also on the draft Surrey Invasive Species (Waite, 2010) list:

- Cherry Laurel
- Sycamore

### 3.6 **Birds**

All wild birds are protected from damage or destruction of their nest whilst in use or construction. In addition some birds receive additional protection from disturbance whilst nesting under schedule 1 of the Wildlife and Countryside Act 1981, as amended. The list of 46 birds recorded from the site in 1995 revealed that 28 bird species included on Appendix II of the Bern Convention and 24 bird species listed as species of Conservation Concern in the UK Biodiversity Action Plan 1995 as well as 2 species listed as priority in the UK Biodiversity Action Plan 1995 and 2 species protected under schedule 1 of the Wildlife and Countryside Act have been recorded on Hare Hill. It is unknown whether the species are still present on the site. A bird survey during 2014 will provide up to date information. It is unlikely that any minor management work on the sites would affect these bird species, so long as



any work affecting trees or scrub avoids the bird nesting season (March-August).

### **3.7 Invertebrates**

A number of notable and local invertebrate species were recorded from the site in 1996. These included the notable Roesel's Bush Cricket, Long-winged Conehead and a jumping spider (*Evarcha arcuate*) and a harvestman (*Dicranopalpus ramosus*). However, this information is now out of date and is superseded by the data gathered during the Preliminary Invertebrate Assessment (Dodd, 2013). Only the *D. ramosus* was refound and it now not considered notable for the site. After detailed discussion with the author of this report the following two species of importance to the site have been highlighted below. These species should be taken into consideration when planning future management of the site.

### **3.8 Stag Beetle**

A local resident has reported that the site is important for this species. The Stag Beetle is a UK Biodiversity Action Plan (BAP) priority species and a nationally notable b (Nb) species. It is protected under appendix 3 of the Bern Convention. Stag Beetle larvae rely on rotting dead wood for their survival therefore it is important to ensure that the dead wood habitat on the site does not decline.

### **3.9 Glow-worm**

A Glow-worm survey is on-going (Miller, 2006). On Hare Hill they are generally found south of the pond area (Soggy Bottom – area P on Figure 1), on dead wood, trunks, on leaves by paths, in grassy areas and under hedges.

Whilst this species has no formal protection, they are thought to be declining. In addition they are a species which incite a lot of public interest. Therefore it will be important that this species is not adversely affected by any work on the site. Dead wood habitat, leaf litter, scrubby margins and varied grassland structure are also likely to be a factor (Glowworm.org.uk) in their survival on the site and management should take them into account.

### **3.10 Reptiles**

All native British reptiles are protected under the Wildlife and Countryside Act (1981) from killing and injury. Sand Lizards and Smooth Snakes also receive additional protection (but the site does not provide suitable habitat for them). All British reptiles are BAP Priority species and SPIs. Reptiles including Grass Snakes, Slow-worms and Adders have been reported on the site. Areas where they have been reported include the pond area (Soggy Bottom - area P) and the open grassy area (area G), but they could also be present in other more open woodland glade areas (areas W2 and W5). Up to date survey work on reptiles will commence in 2014, so that appropriate



enhancements can be suggested for the site and recommendations be made to avoid harming these species if they are still present.

### **3.11 Badgers**

Badgers are protected under the Protection of Badgers Act 1992, which makes it illegal to kill, injure or take a badger or to interfere with their setts for example by the use of heavy machinery nearby. A potential badger sett was found during the 2009 botanical survey. This was then confirmed during a badger site visit in 2013, see Appendix 7. Badgers are sensitive to increase in public use and especially vulnerable to small dogs which may enter their setts, therefore encouragement of dense Bramble and Nettle vegetation will help discourage people and dogs entering that area.

### **3.12 Bats**

All species of British bats are protected under the Wildlife and Countryside Act and under Regulation 38 (Schedule 2) of the Conservation (Natural Habitats etc.) Regulations 1994. This this legislation makes it an offence to kill, capture or disturb the animal, or to damage or destroy a breeding site or resting place of such an animal. Some species are BAP Priority species and SPIs. Bats are likely to forage on the site and to be roosting in mature trees with suitable features such as holes, cracks and loose bark.

A survey will be undertaken during 2014 and will provide details of species present and management recommendations which should be incorporated into this plan. It is important to take the above species into account when planning any future work on the site.

### **3.13 Position Within Living Landscape**

The position of Hare Hill within the surrounding landscape is important from an ecological point of view and should be taken into account when establishing management priorities for the site. Hare Hill Open Space creates an open area of countryside between the dense residential areas of Ottershaw to the west and Row Town to the east.

In addition the following was reported in the Ottershaw Chase Preliminary Invertebrate Assessment (Dodd, 2013) and therefore could also be true of Hare Hill:

*'In a local context the site has the potential to be an important reservoir for saproxylic invertebrates (i.e. wood decay specialists) at a landscape scale as there is an established geographic link via nearby sites with significant veteran tree interest, such as Queenwood Golf Club to the immediate north-west linking with Chobham, Wentworth and Virginia Water, to the internationally important Windsor Great Park ~9km (5-6 miles) to the north-west.'*

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### **3.14 Site of Nature Conservation Importance**

After the SNCI survey in 1999 it was felt that the site was not of sufficient ecological value to warrant selection as an SNCI. The fact that it was not selected as an SNCI does not diminish its importance of semi-natural habitat in Surrey and it is recognised that all semi-natural habitat is important for wildlife and of potential education value.

### **3.15 Access and Recreation**

The site was selected in 2008 by Runnymede Borough Council as a SANGS which means it is used to provide alternative green space to divert visitors from visiting the Thames Basin Heaths Special Protection Area (SPA) and therefore it is important that this aspect of the site be encouraged through this management plan.

The majority of visitors to Hare Hill arrive by foot due to the large residential presence adjacent to the site (RBC, 2012). Half of which are dog walkers (RBC 2012). There is an extensive network of paths throughout the site amounting to approximately 4km (Anckorn, 2009). There is a 1.6km extended walk, taking approximately 25 minutes that allow walkers the opportunity to take in the whole site, with the option of joining the Runnymede rambler walk to make a long walk of 7.2km (RBC, 2012)

According to guidelines for SANGS, car parking facilities are essential for sites over 10ha, but should also take into account anticipated use of the site. Hare Hill is over this at almost 14 hectares.

As well as natural history, there is interesting human history on the site. Providing information on this history will make the site more appealing. There is extensive material on this provided in '*Survey of the Parish of Ottershaw and its Surroundings*' (Lane, 2012).

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## 4.0 Features

### 4.1 Feature 1: Mixed semi-natural woodland (including boundary banks & mature trees)

#### Objectives

The woodland will continue to be present on the site, however its extent will change as it is cleared in strategic areas in order to create and enhance grassland/scrub interface. The woodland will have a diverse structure of at least 95% native species, with open space (both temporary and permanent), early growth, diverse field layer, understorey, maturing woodland, old growth and deadwood habitat all represented. There will be thinning and ride/path opening system to ensure that up to 20% off the woodland canopy will be open at any time to allow more light onto the woodland floor and to encourage a varied woodland flora and better structural diversity. Therefore the habitat quality will continue to support populations of plants, bryophytes, lichens, fungi, mammals, bats, birds, amphibians and reptiles, to thrive on the site. Hare Hill will continue to support mature trees as they provide continuity of habitat for wildlife and increase landscape value. All bank features are to be retained.

#### Targets

- There will be a 20% open glade/path system over 5 strategic areas.
- Open-grown parkland trees in northern part of site will be opened up.
- There will be a 25% increase in scrub interface/grassland creation.
- Thinning will create structural diversity and with an understorey to represent 20-30% of the stand area.
- There will be native seedlings growing through to young trees of sufficient density to maintain a canopy for the future.
- The mature trees on the boundary bank will become an open feature.
- There will be a minimum of 4 dead standing trees per ha, where compatible with health and safety, or retained as dead standing wood.
- Veteran trees, future veteran trees and open grown trees are to be retained and positively managed.
- As least 95% of native (or acceptable naturalised) species cover in any one woodland layer.
- Problem species will be controlled and kept at a level where they are not adversely affecting the site, ideally less than 5%.
- No new invasive, non-native plants will be introduced onto the site.
- Hare Hill will have no garden waste or rubbish.
- The Badger population will be retained in a healthy and undisturbed state.

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## Management Rationale

The management required to meet the objectives and targets above is outlined below. The location of the prescriptions is shown on Figure 1.

### **4.1.1 Rides & glades**

More open spaces will be created as much of the woodland is currently very dark which is limiting its biodiversity value. Dark closed paths will be opened up by cutting back undergrowth and young trees. This will create a series of rides and glades. There is a lot of the encroachment from Bramble in the open spaces and the woodland in general, which is contributing to the field layer homogenization of the Hare Hill woodland. See Photographs 1-5.

**Prescription W1:** Thin out trees from the northern tip of the site (at the entrance by Spratts Lane and Hare Hill junction) towards the existing open grassland to a width of 5-8m. Cut back Bramble unevenly approximately 1m from the path edge to open it up and allow grasses to recolonise. Retain Dog Rose shrub, preferentially thin out Silver Birch. Retain open-grown or future open-grown oaks and allow to grow uninhibited.

**Prescription W2:** There is a previously open glade area along paths to the west of the grassland. It is now overgrown with an underscrub of Bramble. It is recommended that the north/south path has the surrounding trees pushed back by 3-4m and that the Bramble by the path edges by 1-2m is trimmed back unevenly. The open area running east towards the grassland should have some of the Bramble trimmed away too, but if possible done sympathetically in a way that creates a 'dead-end' glade and does not encourage people to walk through. Overhanging branches may need to be cleared too.

**Prescription W3:** Thin out some of the smaller trees on the approach to the pond area to create a wide open path and good views towards the pond.

**Prescription W4:** There are two overgrown small glades in the south west part of the woodland almost side by side that could be managed as one, 25-30 Silver Birch can be removed to open them up, connect the glades and encourage ground flora, although with the presence of Common Nettle, Bramble and Bracken it is likely to remain depauperate.

**Prescription W5:** This existing open glade in the southern part of the site has been overtaken by Bramble, which should be trimmed back to create an open area with an uneven edge, bays and tongues. Whilst the surrounding woodland should be pushed back by up to 5m to retain an open feature with a scrub buffer zone and Bramble/grassy core.

### **Thinning**

Tree thinning will be undertaken in parts of the woodland. As much of the wood stock is relatively young and densely packed, periodic thinning will

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boost woody growth. It would also ensure light penetrates the woodland floor for the field layer to flourish and will allow the more mature or maturing trees to benefit. Removing younger, competing trees may also bring advantages to the mature trees underground mycorrhizal fungi and other supporting micro organisms. It also provides a structural diversity to increase the niches for different flora and fauna.

Sycamore can be a problem in Surrey woodlands as it comes into leaf early, shading spring flowering plants. The leaf litter rots slowly and does not provide a good environment for ground flora. In addition it supports a lower diversity of insects than native trees, therefore there will be a principle of preferentially thinning the Sycamore.

In general thinning should avoid mature trees, if this becomes unavoidable, all trees older than 100 years, or with obvious cavities, or with a girth greater than 1m at chest height should be surveyed for bats by a licensed bat worker before any work takes place.

All thinning/clearing works should avoid the bird nesting season which is between the beginning of March to the end of August.

Common Ivy will be left on the trees for the benefit of invertebrates, bats and birds.

**Prescription W6:** There is a section of open-grown Pedunculate Oaks along the northern edge of the site (by Hare Hill road). Over the years smaller trees have grown up around them and are competing for light and water. In order to ensure their longevity and create a feature out of them, the interloper trees should be thinned out, preferentially the Sycamore. This will be in conjunction with ride creation recommendation (W1) to create an open parkland feature.

**Prescription W7:** Beside the glade to the west of the grassland (marked W2 on Figure 1) there is an open-grown oak that should be 'haloed' i.e. have the younger trees around it thinned out to expose it to the light once more and make it a feature tree.

**Prescription W8:** To the east of Spratts Lane and just north of the house on the site, there is potential for some thinning, preferentially the Sycamore and Holly thickets, to create structural diversity, open up the mature trees and link into the western glade (W2) and the grassland. Wild Cherry, some Holly, Hawthorn and Hazel should be retained.

**Prescription W9:** In order to make mature boundary bank trees more of a feature along Footpath 27, some judicious thinning will help to open up the woodland canopy and retain the banks.

**Prescription W10:** In this area of woodland, to the west of Spratts Lane there is suckering Aspen, a general thin around these trees will help promote further growth and could prove useful from an invertebrate point of view.

#### **4.1.2 Scrub Woodland Interface**

The intermediate scrub habitat found between woodland edge and tall grasses is of great importance to a site. This provides valuable shelter for small mammals, food and warmth for invertebrates and creates a graduated gentle profile from woodland to grassland which looks more natural.

**Prescription W11:** The woodland is closing in on the open grassland, gradually encroaching and degrading it. By unevenly pushing back the woodland between 8-20m and then allowing scrub to grow back on the woodland edge and then a buffer zone of long uncut grass, this will create a unique feature for the site. Thereafter every 3 years small sections should be cut back to maintain it.

#### **4.1.3 Brash Habitat Piles/Decaying Wood**

Decaying wood is an invaluable resource. The aim for the site should be to have a variety of different types from decaying standing wood including hollowed cavities to different ages of decaying lying wood in the form of trunks, branches and smaller types. It is vital to think about the next generation of decaying wood and to ensure there is a succession for the future. See Photographs 6 & 7.

When thinning some of the sub-mature trees could be ring-barked, pollarded or stripped of branches and crown to create decaying woodsticks.

When felling trees, some of the resulting brash (finer branches) and trunks will be ideally strewn randomly around the site, or used to create log or habitat piles in a variety of different situations i.e. shady, sunny and damp. Although too many logpiles can suppress ground flora. This will create habitat for a range of fungi, invertebrates, reptiles and amphibians. Some brash can be tied into tight bundles and then stacked so as to be more valuable for invertebrates (eg. Stag Beetles and Glow-worms) and occupy less space. A succession of piles of different ages will aid diversity. Half burying some of the logs in a vertical position will be particularly beneficial to invertebrates such as Stag Beetles.

**Prescription W12:** Brash from clearance operations can be used to create 3-4 reptile habitat piles along the woodland/grassland ecotone. This should be done once the encroached woodland edge has been pushed back in order that they are situated in the new scrub location. Decaying wood refugia habitat for reptiles and other wildlife can be created by digging a 1m wide hole to a depth of about 50cm and infilling with logs horizontally or vertically (and perhaps some rubble), sticks and soil and then overtopping with the original soil and vegetation.



**Prescription W13:** Grass Snakes have been seen in the Soggy Bottom area and as this feature will be enhanced, it will be beneficial to further enhance the area by creating 2 brash piles and a reptile underground hibernacula close to the wet hollow area (south or west).

#### **4.1.4 Non-intervention**

Not all areas of the woodland will require or have work recommended and non-intervention is a valid woodland practice.

**Prescription W14:** Apart from the work on the two glades, (W4 and W5), non-intervention is proposed in the woodland south and west of Footpath 28 as the dense dark nature of the woodland will be preferable for bat species, this is subject to recommendations that come out of the bat survey 2014.

#### **4.1.5 Bird & Bat Enhancement**

There are several mature trees across the site with features such as holes and peeling bark which are utilised by bats and birds. However, there are a large proportion of younger trees and therefore providing some additional features may prove advantageous.

Once the bird and bat surveys have provided recommendations, these should be followed and may include the erection of a variety of bird and bat boxes on younger trees.

#### **4.1.6 Invasive Non-native Species**

As a matter of priority all Schedule 9 listed species should be removed from the site, see Evaluation section. Removal of the remaining listed invasive species is also important. See Photograph 8.

In general the non-native invasive shrubby plants should be managed by cutting stems by hand or chainsaw, as close to the ground as possible and treating the stumps with appropriate herbicide if possible. Chip or remove the cut material from the area. The stumps will then need to be monitored regularly for regrowth. Non-shrubby plants should be hand-pulled and carefully composted.

**Prescription W15:** Remove all Butterfly-bush located on the eastern side of the site, on the edge of Spratts Lane, so that it does not encroach further. Despite its popularity with butterflies, this invasive shrub quickly crowds out more important plants creating dense shade and nutrient-rich soil from its fallen and decomposing leaves.

**Prescription W16:** Remove all False Acacia trees, also found in the eastern side of the site across Spratts Lane.

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**Prescription W17:** Another area of planted exotics along Spratts Lane to be removed including Cotoneaster sp., Cherry Laurel and Spotted Laurel. The Cherry Laurel extends along the southern edge of the site here as well.

**Prescription W18:** Japanese Knotweed is present by a main path in the central western side of the site near Spratts Lane and should be removed. It is a highly invasive plant that forms tall thickets with a dense leaf canopy that excluded other plants. In the autumn the fallen leaves decompose slowly forming impenetrable mulch that prevents anything else germinating. Spread of the plant can also come from small pieces of the plant material, hence why cutting it down as a method of ridding it from the site would have to be done very carefully. Cut material should be burnt on site, where current by-laws allow. Cutting should be followed up by a treatment of a glyphosate-based herbicide, in the late summer. It may take two or three years to completely kill the entire plant. Alternatively the quickest option, but most expensive is to remove the whole area of contamination including down to a depth of 2m and send to a licensed Waste Disposal site under strict site controls.

**Prescription W19:** Variegated Yellow Archangel is present along Spratts Lane and should be removed via hand pulling.

**Prescription W20:** Along Spratts Lane and by a small path onto Hare Hill other exotics have been planted, such as a Yucca and Cherry Laurel, and should be removed to show that this is a piece of land this is actively being management for conservation and not an extended garden.

**Prescription W21:** Snowberry is present in the south west part of the site by Fletcher Close and should be removed.

**Prescription W22:** Cherry Laurel is present as a thick boundary hedge to a large house in the north east corner of the site, running south along the eastern boundary. This should be cut back, preferably by the owners, and then not to be allowed to encroach again onto Hare Hill as it is an aggressive coloniser and shades out other plants.

**Prescription W23:** Along Hare Hill a Yucca, Butterfly-bush sp., Bamboo and other garden species have been left/planted and should be removed.

**Prescription W24:** There are Cherry Laurel, variegated Yellow Archangel (large, spreading patch) and Montbretia along the bottom gardens of The Ridings to the east of the site and should be removed.

**Prescription W25:** Remove the Snowberry and Rose of Sharon are present along the bottom gardens of The Ridings to the east of the site.

**Prescription W26:** Remove the Variegated Yellow Archangel is present along the bottom of The Ridings gardens to the east of the site.

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**Prescription W27:** Remove the Cherry Laurel, conifer hedge and variegated Yellow Archangel are present along the bottom of The Ridings gardens.

**Prescription W28:** This area in the eastern corner has been sold off to a local resident. They have unfortunately chosen to plant their boundary with Cherry Laurel, which ideally would be removed, but in reality it will be left and monitored to make sure it does not encroach.

**Prescription W29:** Himalayan Balsam is present in the south western corner of the site and should be removed during the early summer and prior to seeds setting.

#### **4.1.7 Litter**

There are pockets of garden waste and general fly tipping that requires clearing. It is unsightly, a health and safety issue, encourages more tipping and is introducing and spreading exotic species. There is even a hammock on the boundary edge along the bottom of The Ridings gardens. The following Prescription code W30 is mapped several times on Figure 1 to indicate those areas that were seen during the site visit.

**Prescription W30:** Key litter/garden waste areas to be removed.

#### **4.1.8 Badgers**

There is a small badger sett on the western side of Spratts Lane in the north west of the site. See Photograph 9.

**Prescription W31:** It would be an advantage to discourage people from entering too close to this sett area, fencing is an option, but this also attracts attention. A more discreet method, would be leaving the vegetation long and undertaking additional planting, to discourage people and dogs from entering the area.

**Prescription W32:** The sett should be monitored and the surrounding areas surveyed every 6 months.

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## 4.2 Feature 2: Pond/wet area (Soggy Bottom)

### Objectives

The Soggy Bottom wet area will be enhanced by dealing with the drainage issues. The resulting pond will not be shaded by more than 50% of the area so that enough sunlight reaches the water surface to allow native vegetation to flourish. No invasive species will be present within the pond. Invertebrates such as dragonflies will flourish and this will indicate the general wellbeing of the waterbody.

### Targets

- One permanent waterbody present on site by 2018 that can be easily visited by the public.

### Management rationale

The management required to meet the objectives and targets above is outlined below. The location of the prescriptions is shown on Figure 1.

There is a natural hollow, known locally as Soggy Bottom, where winter water accumulates and ditch water flow is impeded. It is located on the 90 degree angled bend between Footpath 27 and 28. There is a ditch running from the wet hollow to the west. A sluice gate has been installed, however due to ongoing issues and differences of opinions between locals, the water levels are not constant as the sluice board is moved (and in some cases removed). This issue should be addressed, with the installation of a more robust gate to help retain set water levels, enough to create a permanent water feature.

A pond on the site, would help diversify the biodiversity on the site, compliment the mosaic of habitats and provide a focal point for visitors. Access to the area can be difficult as it becomes very muddy during the winter, however this can be alleviated by the construction of a boardwalk.

**Prescription P1:** Drainage issues to be addressed.

**Prescription P2:** A boardwalk to be constructed around the northern portion of the wet area to enable restricted access, limiting disturbance, whilst benefiting wildlife and producing a focal point for the site. This prescription also relates to the Access Feature.

**Prescription P3:** In order to maintain good light levels onto the water, some branches of the mature over hanging oaks should but cut back, without harming the trees themselves.

**Prescription P4:** Further recommendations may be made subject to the 2<sup>nd</sup> invertebrate assessment results.

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## 4.3 Feature 3: Grassland

### Objectives

The grassland should be extended in area to curtail the woodland encroachment from the last twenty years. There should be an increase in the number of herbs present over the grassland area. The grassland edges, next to the scrub interface will be left long to enhance the site for invertebrates including grasshoppers and butterflies. The open grassland area will link into ride corridors. See Photograph 10.

### Targets

- Increase the ratio of herbs in the sward to up to double to the number of grasses.
- Enhance structural diversity of grassland.

### Management rationale

The management required to meet the objectives and targets above is outlined below. The location of the prescriptions is shown on Figure 1.

The ratio of grasses to herbs provides a rough indication of how valuable grassland is. In general, semi-natural swards in good condition have a much higher number of herbs compared to grasses.

A range of heights over the grassland will be more beneficial to wildlife, although this is in the hands (or paws) of the rabbits who are successfully grazing it at the moment. Give an annual cut in late summer, this is flexible to allow for seasonal changes, to help to diversify the sward composition. Leave a buffer zone around the edges to ensure there is invertebrate refuge and encourage a scrub and underscrub ecotone. Clippings must be removed and taken off site or they will cause enrichment and prevent seeds from reaching the soil surface and germinating and can make cutting the following year difficult to get through the resulting 'thatch'.

**Prescription G1:** Annual cut of the main body of grassland in late summer, i.e. September to a height of around 5cm and remove arisings.

**Prescription G2:** Leave a buffer zone of between 2-5m and strim up to one third every three years to ensure that it remains long grass and is not encroached by scrub.

**Prescription G3:** Following cutting leave 1-2 piles of arisings in small piles in scrub/woodland margins to provide refugia for reptiles and small mammals.

**Prescription G4:** Cut back Bramble along small path to the east of the grassland and link to open 'ride' at the back of the houses and strim back scrub/Bramble heading north towards, but not including the Gorse. Retain

pinch point, so as not to create additional access for the public. The resulting 'dead-end' ride will be relatively undisturbed and a hot spot for invertebrates and birds.



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## 4.4 Feature 4: Access

### Objectives

The site will be a welcoming, safe and attractive place for local people to visit. A network of informal paths will provide a route through a variety of habitats. Information will be provided about the site and routes available, so visitors can get the most from their visit.

### Targets

- There will be increased opportunities for the public to visit and walk around the woodland.
- Install a bench in pond area.
- Provide interpretation material on the history of the site.
- Engage with visitors and locals to achieve sense of ownership.
- Overall management of the site will improve the visitor experience.
- Better understanding who uses the site and why.

### Management rationale

The management required to meet the objectives and targets above is outlined below. The location of the prescriptions is shown on Figure 1.

The site is heavily used by the public for access (RBC, 2012) and recreation. There is a network of informal paths through the site.

The mosaic of habitats and proximity to local housing estates gives the site potential for local schools to use it as an educational resource.

Thinning and glade clearance in the woodland is designed to attract more people to use the site. Positive conservation management will show that the site is being cared for. The woodland areas will be readily accessible for the use of the public via a network of informal paths that are well maintained whilst not leading to a decrease in biodiversity. The grassland areas will be used for recreational purposes whilst also enhancing the sward composition with varied heights.

An area along the northern edge of the site off Hare Lane has been proposed as a potential car park, and this along with other areas should be considered.

Footpaths should incorporate natural surfaces wherever possible depending on site conditions.

The local community and other interested parties should be able to help self-police the site and encourage people to be more sensitive towards the site. An annual clearance, or more frequently, may be required. This could be part of the national campaign such as '*Make a difference day*'.

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**Prescription A1:** The pond area could be made a focal point by installing a bench. See also P2 in Pond/wet area.

**Prescription A2:** Provide visitors with information on this history.

**Prescription A3:** Gauge visitor opinion via informal means.

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## 4.5 Feature 5: Monitoring

### Objective

Monitoring the site will help establish changes over time, will be a valuable record, help establish if the project is a success and provide a guide to the on-going management programme.

### Targets

- Regularly review work programme.
- Gather regular information on biodiversity of the site to guide on-going management.
- Produce before and after management photographs.

**Prescription M1:** The work programme should be reviewed annually.

**Prescription M2:** The management plan should be reviewed in its entirety in 2018.

**Prescription M3:** It is suggested that the recommendations from the 2014 surveys are carried out.

**Prescription M4:** Monitoring of the woodland should take the form of a repeat Phase 1 SNCI style survey in 5 and 10 years time. This should be undertaken at optimal times of the year i.e. May. It will be useful to measure the following aspects:

- The % of open space
- The % of canopy cover
- The % of shrub cover
- The % of field layer
- The presence and abundance of invasive non-native species
- The abundance of standing and fallen dead wood
- Review of before and after management photographs.

**Prescription M5:** Use simple or detailed monitoring/surveys to ascertain if the current management is increasing the herb to grass ratio.

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## 4.6 Legal Considerations

All wild birds are protected from damage or destruction of their nest whilst in use or construction. All tree and scrub clearance should avoid the bird nesting season which is between the beginning of March and the end of August.

Any thinning or felling operations greater than 5m<sup>3</sup> will require a felling licence from the Forestry Commission.

All species of British bats are protected under the Wildlife and Countryside Act and under Regulation 38 (Schedule 2) of the Conservation (Natural Habitats etc.) Regulations 1994. It should not be necessary to fell any mature trees as part of the work advised in this plan. However should it be necessary to fell any trees older than 100 years, or with obvious cavities, or with a girth greater than 1m at chest height, these should be surveyed for bats by a licenced bat worker before any work takes place.

The recommended thinning operations could potentially have an impact on bat roosts. A bat survey is to be undertaken on the site in the summer of 2014. It is recommended that no thinning of trees takes place until advice has been received from a bat expert.

Great Crested Newts are protected under schedule 5 of the Wildlife and Countryside Act 1981 and Regulation 39 of the Conservation (Natural Habitats &c) Regulations 1994. No newts have been recorded within 1km of the site and the pond/wet area is not a permanent water body and therefore the likelihood of it supporting a population of Great Crested Newts is low. However, it would be good practice to carry out any management work on the pond during the winter months when the effects on pond life are minimised.

All native British reptiles are protected under the Wildlife and Countryside Act (1981) from killing and injury. A reptile survey will be undertaken in spring/summer 2014 and any recommendations from this survey should be undertaken when undertaking management on the site.

## 5.0 5 Year Work Programme

All the prescriptions detailed in the plan are summarised in the table below. It is understood that the amount of work that RBC can undertake on this site each year will depend on funding which may vary from year to year and is currently unknown. Therefore the year suggested to undertake the work, which has aimed to spread the work out evenly over the 5 years, is given only as a guide. The priority given for each action can be used to prioritise work depending on funding available.

1 High priority 2 Medium priority 3 Low priority

**Table 1 Full Prescription list with priorities**

Prescription list	Year with priority				
	2	2	2	2	2
	0	0	0	0	0
	1	1	1	1	1
	3	4	5	6	7
<b>Woodland Feature</b>					
<b>Prescription W1:</b> Create ride effect alongside path from north western entrance towards open grassland. Unevenly trim Bramble by up to 1m, thin trees to a width of 5-8m, retain open-grown oaks.	1				
<b>Prescription W2:</b> Open up small glade to the west of the open grassland. Open up either side of north/south path to a width of 6-8m, unevenly trim Bramble 1-2m either side of path. Open area running east should have Bramble trimmed to create discrete 'dead end' glade that does not encourage people to walk through. Trim overhanging branches.		1			
<b>Prescription W3:</b> Thin out some of the smaller trees on the approach to the pond area to create a wide open path towards the pond.					3
<b>Prescription W4:</b> Connect two overgrown glades in the south west part of the woodland by thinning out 25-30 Silver Birch.			2		
<b>Prescription W5:</b> The southern Bramble dominated glade should be trimmed to create an uneven edge, bays and tongues into the Bramble. The surrounding woodland should be pushed back by up to 5m.		2			
<b>Prescription W6:</b> Preferentially thin out Sycamore and Silver Birch trees along northern edge to expose parkland feature of open-grown oaks.		1			
<b>Prescription W7:</b> Beside the western glade thin out young trees to expose an open-grown oak to make it a feature tree.		1			
<b>Prescription W8:</b> To the east of Spratts Lane and just north of the house preferentially thin Sycamore, to open up the mature trees and link into the western glade (W2) and the grassland. Wild Cherry, some Holly, Hawthorn and Hazel should be retained.				2	
<b>Prescription W9:</b> Thin smaller trees along Footpath 27 to make mature boundary bank trees more of a feature.		2			
<b>Prescription W10:</b> Thin around Aspen to promote sucker growth to the west of Spratts Lane.				3	
<b>Prescription W11:</b> Unevenly cut back the woodland on the edge of the grassland by between 8-20m and allow scrub to grow back followed by a buffer zone of long uncut grass.	1				
<b>Prescription W12:</b> Once the encroached woodland has been pushed back away from the edges of the grassland use brush to create 3-4 reptile habitat piles along the new woodland/grassland ecotone.	1				

Prescription list	Year with priority				
	2013	2014	2015	2016	2017
<b>Prescription W13:</b> Create 2 brash piles and a reptile underground hibernacula to the south or west of Soggy Bottom.			1		
<b>Prescription W14:</b> Apart from the work on the two glades, (W4 and W5), non-intervention is proposed in the woodland south and west of Footpath 28.					
<b>Prescription W15:</b> Remove all Butterfly-bush located on the eastern side of the site, on the edge of Spratts Lane.	1				
<b>Prescription W16:</b> Remove all False Acacia trees, also found in the eastern side of the site across Spratts Lane.	1				
<b>Prescription W17:</b> Another area of planted exotics along Spratts Lane to be removed including Cotoneaster sp., Cherry Laurel and Spotted Laurel. The Cherry Laurel extends along the southern edge of the site here as well.	1				
<b>Prescription W18:</b> Japanese Knotweed must be removed using the correct procedure.	1				
<b>Prescription W19:</b> Remove variegated Yellow Archangel from along Spratts Lane.	1				
<b>Prescription W20:</b> Along Spratts Lane and by a small path onto Hare Hill other exotics have been planted and should be removed.			2		
<b>Prescription W21:</b> Snowberry is present in the south west part of the site by Fletcher Close and should be removed.	1				
<b>Prescription W22:</b> Cut back and maintain Cherry Laurel boundary hedge in the north east corner of the site, running south along the eastern boundary.	1				
<b>Prescription W23:</b> Along Hare Hill a Yucca, Butterfly-bush sp., Bamboo and other garden species have been left/planted and should be removed.	1				
<b>Prescription W24:</b> There are Cherry Laurel, variegated Yellow Archangel (large, spreading patch) and Montbretia along the bottom gardens of The Ridings to the east of the site.	1				
<b>Prescription W25:</b> Snowberry and Rose of Sharon are present along the bottom of The Ridings gardens to the east of the site.	1				
<b>Prescription W26:</b> Variegated Yellow Archangel is present along the bottom of The Ridings gardens to the east of the site.	1				
<b>Prescription W27:</b> Cherry Laurel, conifer hedge and variegated Yellow Archangel are present along the bottom of The Ridings gardens.	1				
<b>Prescription W28:</b> This area in the eastern corner has a Cherry Laurel boundary hedge which should be monitored and not allowed to encroach.	1				
<b>Prescription W29:</b> Himalayan Balsam is present in the south western corner of the site and should be removed during the early summer and prior to seeds setting.	1				
<b>Prescription W30:</b> Key litter/garden waste areas to be removed.	1	1	1		
<b>Prescription W31:</b> Leave Bramble and Common Nettle vegetation long around the Badger sett and consider additional planting of Holly and Hawthorn to further discourage people and dogs from entering the area.					
<b>Prescription W32:</b> The sett should be monitored and the surrounding areas surveyed every 6 months.	2	2	2	2	2
<b>Pond Feature</b>					
<b>Prescription P1:</b> Drainage issues to be addressed.	1				
<b>Prescription P2:</b> A boardwalk to be constructed around the northern portion of the pond area.			2		
<b>Prescription P3:</b> Cut back some of the overhanging branches.		2			
<b>Prescription P4:</b> Further recommendations may be made subject to the second invertebrate assessment results.					



Prescription list	Year with priority				
	2013	2014	2015	2016	2017
<b>Grassland Feature</b>					
<b>Prescription G1:</b> Annually cut the main body of grassland in late summer, i.e. September to a height of around 5cm and remove arisings.	1	1	1	1	1
<b>Prescription G2:</b> Leave a buffer zone of between 2-5m and strim up to one third every three years to ensure that it remains long grass and is not encroached by scrub.	2	2	2	2	2
<b>Prescription G3:</b> Leave 1-2 piles of arisings in small piles in scrub/woodland margins to provide refugia for reptiles and small mammals.		3			3
<b>Prescription G4:</b> Cut back Bramble along small path and open 'ride' at the back of the houses heading north towards. Retain Gorse. Retain pinch point to create 'dead-end' ride.				2	
<b>Access Feature</b>					
<b>Prescription A1:</b> The pond area could be made a focal point by installing a bench.		3			
<b>Prescription A2:</b> Provide visitors with information on the history of the site.			2		
<b>Prescription A3:</b> Gauge visitor opinion via informal means.	2	2	2	2	2
<b>Monitoring Feature</b>					
<b>Prescription M1:</b> The work programme should be reviewed annually.					
<b>Prescription M2:</b> The management plan should be reviewed in its entirety in 2018.					1
<b>Prescription M3:</b> It is suggested that the recommendations from the 2014 surveys are carried out.	2	2	2	2	2
<b>Prescription M4:</b> Monitoring of the woodland should take the form of a repeat Phase 1 SNCI style survey in 5 and 10 years time					2
<b>Prescription M5:</b> Use simple or detailed monitoring/surveys to ascertain if the current management is increasing the herb to grass ratio.					2

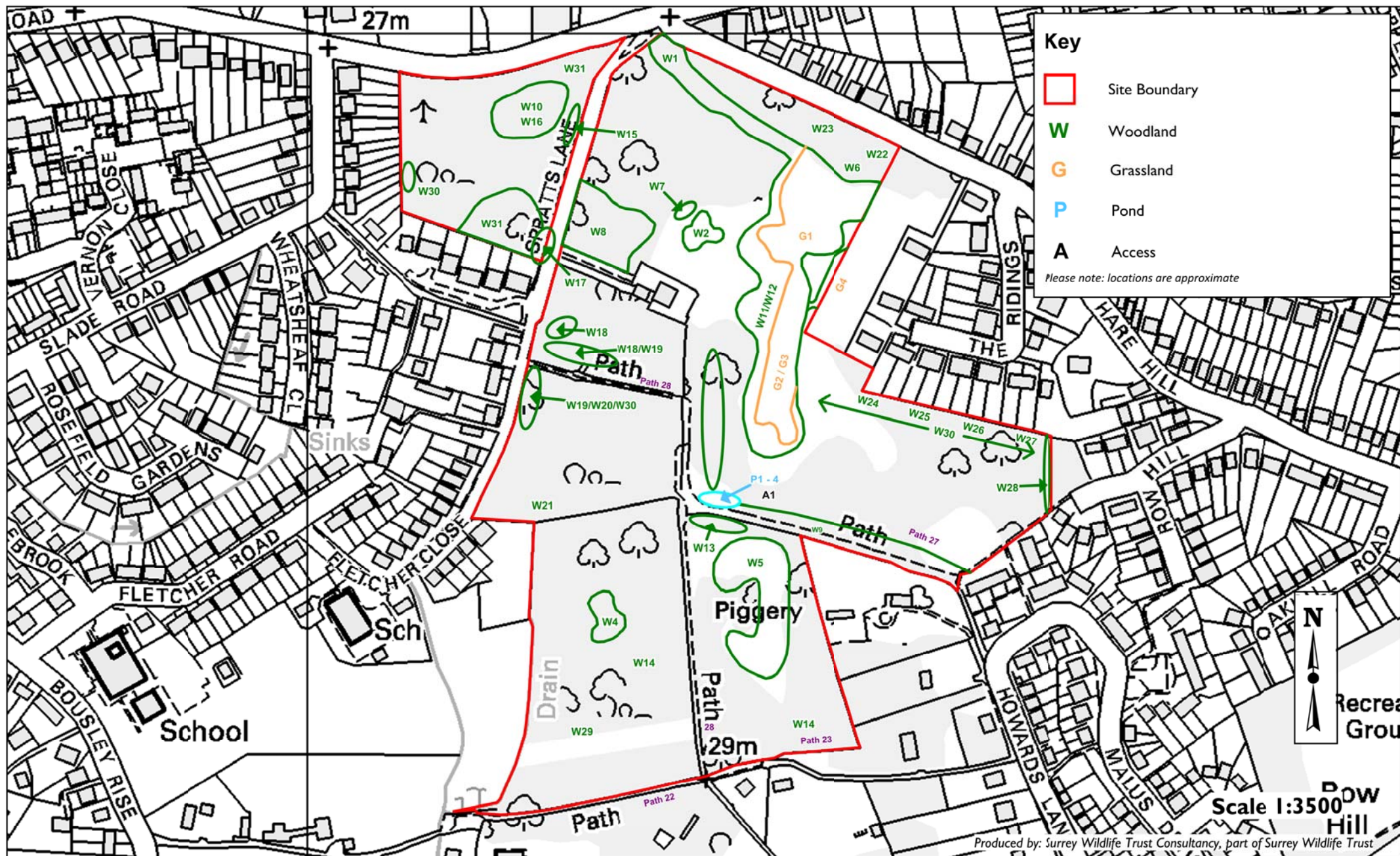
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## Figure 1 Management Prescriptions



Based upon the Ordnance Survey 1:10 000 Map with the permission of The Controller of Her Majesty's Stationery Office. Crown Copyright. Licence Number AL100031669. C2409, March 2014

**Figure 1**  
**Hare Hill**  
**Management Prescriptions**





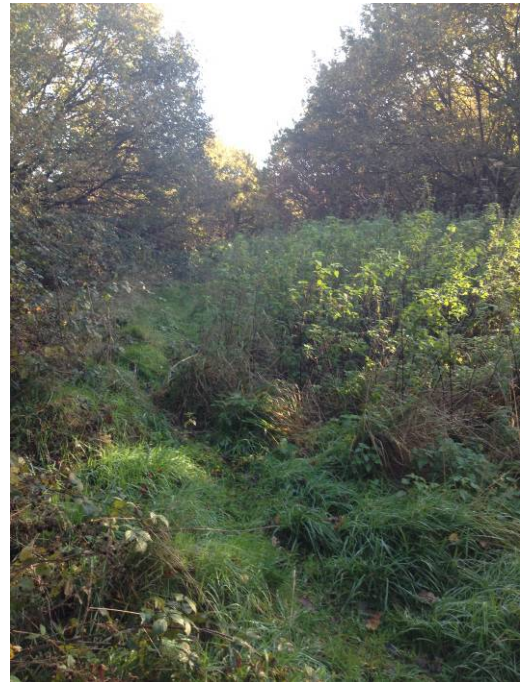
## Appendix 1      Photographs



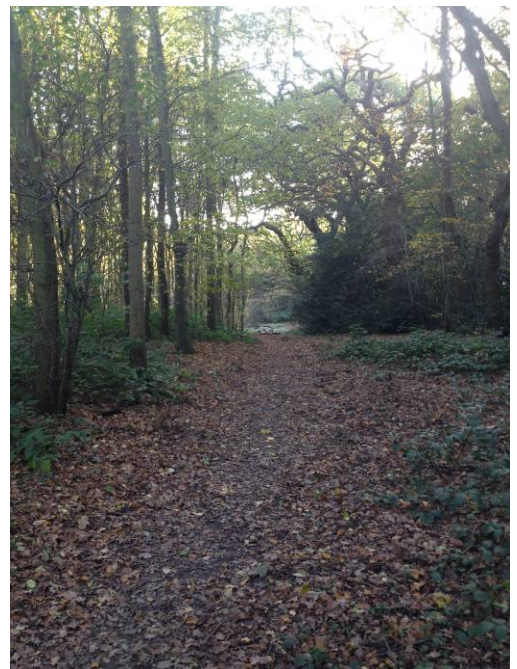
**Photograph 1: North entrance (W1)**



**Photograph 2: Former open glade  
by northern entrance (W1)**

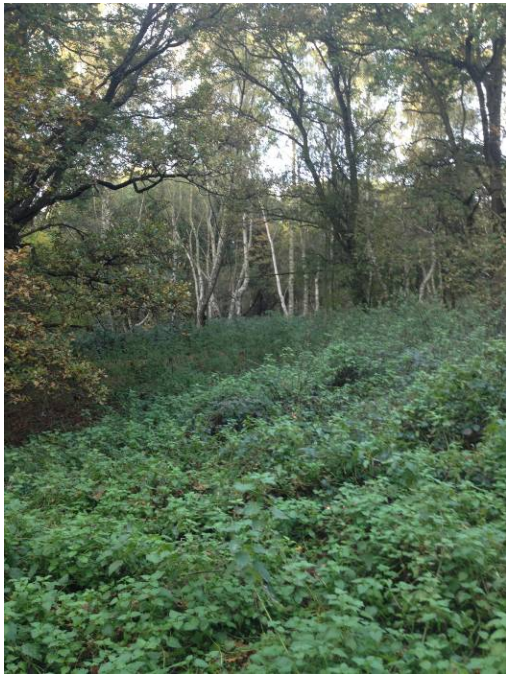


**Photograph 3: Overgrown glade to  
east of grassy area (W2)**

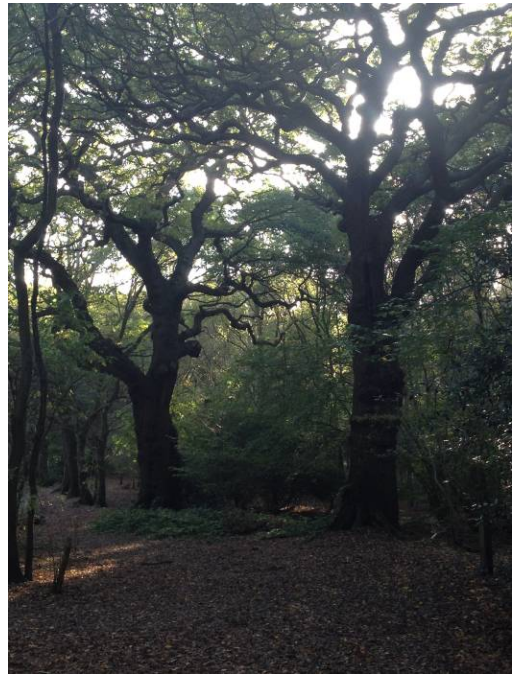


**Photograph 4: Avenue  
enhancement towards pond (W3)**





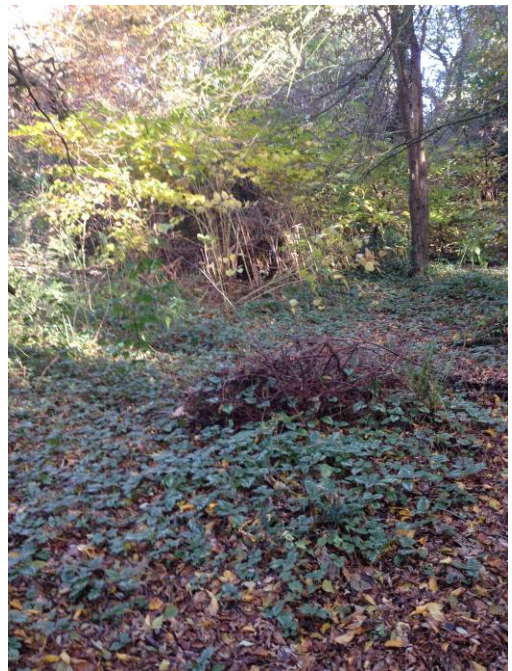
**Photograph 5: Birch glade (W4)**



**Photograph 7: Mature trees (W9)**



**Photograph 6: Hornbeam avenue**



**Photograph 8: Japanese Knotweed  
& variegated Yellow Archangel  
(W18/19)**





**Photograph 9: Badger entrance  
(W31)**



**Photograph 10: Open grassy area  
(W11/12 & G2/3)**

## Appendix 2 Phase 1 survey of Hare Hill 1999

### Isobel Girvan BSc MCIEEM

#### Site Description

This site is sandwiched between Ottershaw and Row Town, known locally as The Common. The geology over this site is Bracklesham Beds with Stanwick soils that are typical argillic gley soils.

Hare Hill as seen today is relatively recent grassland with secondary woodland. It was farmed with orchards until the 1960's and now is an important public open space for local residents.

The woodland is mainly composed of Pedunculate Oak and occasional Beech with an understory of Elder, Holly and Hawthorn. Apple and Wild Plum are still frequent. Generally the field layer consists of Bramble and Ivy with Bracken in the more open areas.

#### Site Notes (Target Notes 1-4)

- 1 Recent secondary semi-natural broadleaved woodland.
- 1a Predominantly Pedunculate Oak (*Quercus robur*) and Beech (*Fagus sylvatica*) canopy. Under this comes frequent to occasional Silver Birch (*Betula pendula*), which is struggling under the dense Oak canopy. Other trees in the sub-canopy include frequent Elder (*Sambucus nigra*), Hawthorn (*Crataegus monogyna*) and Holly (*Ilex aquifolium*) with rare young Hornbeam (*Carpinus betulus*) and Ash (*Fraxinus excelsior*). Plum (*Prunus domestica*) and Apple (*Malus domestica*) are locally abundant. There is very little underscrub except for Bramble (*Rubus fruticosus*), which does become dense and tangly in parts. Due to the heavy shade from the canopy the field layer is mainly concentrated on the woodland boundary and includes Cock's-foot (*Dactylis glomerata*), False Oat-grass (*Arrhenatherum elatius*) and Common Bent (*Agrostis capillaris*). Herbs present include Herb Bennet (*Geum urbanum*). Ivy (*Hedera helix*) carpets the floor and Honeysuckle (*Lonicera periclymenum*) is also present. Where the canopy opens the resulting vegetation includes frequent Bracken (*Pteridium aquilinum*) with Common Nettle (*Urtica dioica*), Wood Sage (*Teucrium scorodonia*) and some Greater Stitchwort (*Stellaria holostea*).

To the east of this, a small pathway has been lined with crazy paving and a number of garden varieties have been planted including Orpine (*Sedum telephium*), Bamboo (*Sasa spp*) and Cherry Laurel (*Prunus laurocerasus*). It is also within this area that young Sycamore (*Acer pseudoplatanus*) appears.

- 1b Pedunculate Oak is also dominant in this canopy. Silver Birch is a rare component. The underscrub consists of occasional Hawthorn, Hazel (*Corylus*

*avellana*) with young Sycamore. The field layer includes abundant/frequent Bramble and carpets of Ivy with patches of Common Nettle and Rosebay Willowherb (*Chamerion angustifolium*). There are several garden escapees including Montbretia (*Crocasmia x crocosmiiflora*) and Variegated Yellow Archangel (*Lamiasstrum galeobdolon ssp argentatum*). Towards the east Ash and Sycamore appear in the canopy with Plum and Elder.

- 1c Very similar woodland to before with mature Pedunculate Oak over Silver Birch with occasional Holly, Hazel and Hawthorn understory. The canopy is dense and therefore the resulting field layer is sparse, although the constants Bramble and Common Nettle are present along with occasional Male Fern (*Dryopteris filix-mas agg*). Bracken and Ground-ivy (*Glechoma hederacea*) occur in more open gaps.

The southern boundary follows an old boundary/ditch and pathway with Elder, Holly and planted Lawson Cypress (*Chamaecyparis lawsoniana*). It is here that Hop (*Humulus lupulus*) is found climbing on some Oaks and worryingly Japanese Knotweed (*Fallopia japonica*) is also present, although in relatively small quantities. A small stand of Silver Birch lies to the centre of this area and further north Apple once again enters the sub-canopy. Along the eastern path running south are a number of mature Pedunculate Oaks that would have been part of the old farm field boundaries. It is along this path that the canopy opens a little and the ground becomes seasonally waterlogged. Yellow Iris (*Iris pseudocorus*) is frequent along the deeper more permanently wetter areas. Other species present include frequent Creeping Bent (*Agrostis stolonifera*), Broad-leaved Dock (*Rumex obtusifolius*) and Creeping Buttercup (*Ranunculus repens*).

- 1d An old boundary with ditch and bank lined with stands of multi- and single stemmed Hornbeams. Holly is the locally abundant understorey and the dense shade proves too much for the field layer. The Hornbeam stand continues north accompanied by Pedunculate Oak, frequent Sycamore and Hawthorn with some Elder and Holly.
- 2 Mesotrophic grassland with associated scrub surrounded by the aforementioned woodland. Most of the grass is mown, but there are buffer zones to the woodland and scrub areas where the grass is taller. Common and Creeping Bents are abundant throughout, whilst Perennial Rye-grass (*Lolium perenne*) is abundant along the paths used by the local dog walkers. Other grasses present include frequent Cock's-foot and Yorkshire-fog (*Holcus lanatus*). Herbs are infrequent and include Common Ragwort (*Senecio jacobea*), White Clover (*Trifolium repens*), Daisy (*Bellis perennis*) and Cat's-ear (*Hypochaeris radicata*).

Along the eastern top boundary Broom (*Cytisus scoparius*), Rose sp (*Rosa sp*), Hawthorn and Plum bushes have been planted. Scrub areas south of this have much Bramble sprawling over longer grass with Common Ragwort, Creeping Thistle (*Cirsium arvense*), Common Nettle and locally abundant Creeping

Buttercup (*Ranunculus repens*). Also local patches of Common Knapweed (*Centaurea nigra*), Agrimony (*Agrimonia eupatoria*) and Wild Carrot (*Daucus carota*) are present.

- 2b Rank grassland with sprawling undergrowth extending into the surrounding woodland. Again False Oat-grass and Cock's-foot are abundant with frequent Yorkshire-fog and Common Bent. This is intermingled with clumps of Rosebay Willowherb and occasional Common Knapweed, Common Ragwort, Hogweed (*Heracleum sphondylium*) and Broad-leaved Dock. Abundant Creeping Buttercup and occasional Soft Rush (*Juncus effusus*) denote wetter areas running into the woodland.
- 3 Open mixed woodland with abundant Beech frequent Sweet Chestnut (*Castanea sativa*) with Pedunculate Oak and Scot's Pine (*Pinus sylvestris*). The understory is comprised of False Acacia (*Robinia pseudoacacia*), Holly and scattered Hawthorn, local patches of Rose and rare Hazel. Abundant Ivy and Bramble cover the floor with occasional Bracken and small areas of Common Nettle, which become dominant to the south. However overall the woodland floor tends to be bare or covered with leaf litter.
- 4 Open scrub with ruderal vegetation. This area has been colonised by wasteland plants such as frequent Creeping Thistle, Common Nettle, Rosebay Willowherb and Butterfly Bush (*Buddleja davidii*). Also present occasionally are Great Mullien (*Verbascum thapsus*), Common Teasel (*Dipsacus fullonum*), Common Evening-primrose (*Oenothera biennis*), Bristly Ox-tongue (*Picris echioides*), White Clover and Yarrow (*Achillea millifolium*).

## Management

Until the 1960's the site was worked as a farm and nursery. After this time there was very little to no management carried out and a short rabbit grazed grassland developed with secondary woodland surrounding it with associated scrub. Some older features still exist such as the Hornbeam avenue and mature Oaks, which were field boundaries in 1870. In 1996 Runnymede Borough Council secured the site as Public Open Space and a 10 year management plan has been drawn up. This will help maintain the mosaic of habitats and diversify the secondary woodland structure.

At present the woodland is quite uniform in age and a programme of thinning is planned to diversify the structure, which in turn will encourage species diversity. As the site is used heavily by locals it will be necessary to inform the public what is happening and why before carrying out the work. The majority of the grassland is kept short by rabbit-grazing. There are also areas of longer vegetation and scrub all adding to the variety of habitats and given time the species diversity will increase. The management plan also tackles the unsightly problem of household littering found throughout the site, which is particularly bad in target note 3.

There is some concern over the non-native species Japanese Knotweed. It is highly invasive and will need some expert attention before it starts to spread. The Himalayan Balsam known on the site should also be kept in check.

### **Additional Information**

The historical map from John Senex dated 1729 notes Hare Hill and in 1768 John Roque shows the site being used for agriculture. In 1793 J Lindley and W Crosley describe the northern part as grassland. By 1811 the OS old series maps calls the site Spinney Wood (the current Spinney Wood can be found across Spinney Hill Road). By 1823 J Greenwood again refers to the site as Hare Hill. More recently the OS map of 1957 shows the site as mostly open and used for agriculture. To the west there is an orchard and on the other side of Sprats Lane there is mixed woodland with an open area, much as we see it today.

The vegetation communities of the site can be defined using the National Vegetation Classification (NVC). The woodland conforms to W10 (*Quercus robur-Pteridium aquilinum-Rubus fruticosus*) woodland. The grassland corresponds to MG1 (*Arrhenatherum elatius*) grassland. The scrub areas whilst patchy can be defined as W24 (*Rubus fruticosus-Holcus lanatus*) underscrub.

### **Nature Conservation Interest**

The site comprises secondary woodland with old boundary features, short and rank grassland and associated scrub areas. Although no rare species were recorded, it is an important area for local residents and walkers, who visit the site regularly. It is also a significant landscape feature between Ottershaw and Row Town. The management plan for the site is sympathetic to nature conservation, aiming to increase the mosaic of habitats and increase structural diversity whilst ensuring that the needs of the locals are also taken into account.



## Species list for Hare Hill

Recorder site number 80040

Survey date 12 OCT 1999

Scientific Name	Common Name	Abundance
<i>Acer pseudoplatanus</i>	Sycamore	locally dominant
<i>Achillea millefolium</i>	Yarrow	locally frequent
<i>Aegopodium podagraria</i>	Ground-elder	occasional
<i>Aesculus hippocastanum</i>	Horse-chestnut	rare
<i>Agrimonia eupatoria</i>	Agrimony	occasional
<i>Agrostis capillaris</i>	Common Bent	locally abundant
<i>Agrostis stolonifera</i>	Creeping Bent	occasional
<i>Anthriscus sylvestris</i>	Cow Parsley	occasional
<i>Arctium minus</i>	Lesser Burdock	rare
<i>Arrhenatherum elatius</i>	False Oat-grass	occasional
<i>Artemisia vulgaris</i>	Mugwort	rare
<i>Bellis perennis</i>	Daisy	occasional
<i>Bergenia cordifolia</i>	an elephant-ears	rare
<i>Betula pendula</i>	Silver Birch	locally dominant
<i>Betula pubescens</i>	Downy Birch	rare
<i>Bromopsis ramosa</i>	Hairy Brome	rare
<i>Buddleja davidii</i>	Butterfly-bush	locally frequent
<i>Calystegia sepium</i>	Hedge Bindweed	locally frequent
<i>Carpinus betulus</i>	Hornbeam	locally abundant
<i>Castanea sativa</i>	Sweet Chestnut	rare
<i>Centaurea nigra</i>	Common Knapweed	locally frequent
<i>Cerastium fontanum</i>	Common Mouse-ear	rare
<i>Chamaecyparis lawsoniana</i>	Lawson's Cypress	rare
<i>Chamerion angustifolium</i>	Rosebay Willowherb	locally abundant
<i>Chelidonium majus</i>	Greater Celandine	rare
<i>Circaea lutetiana</i>	Enchanter's-nightshade	rare
<i>Cirsium arvense</i>	Creeping Thistle	occasional
<i>Conyza canadensis</i>	Canadian Fleabane	rare
<i>Corylus avellana</i>	Hazel	occasional
<i>Crataegus monogyna</i>	Hawthorn	abundant
<i>Crepis capillaris</i>	Smooth Hawk's-beard	rare
<i>Crepis vesicaria</i>	Beaked Hawk's-beard	occasional
<i>Crocasmia x crocosmiiflora</i>	Montbretia	rare
<i>Cytisus scoparius</i>	Broom	rare
<i>Dactylis glomerata</i>	Cock's-foot	frequent
<i>Daucus carota ssp. carot</i>	Wild Carrot	rare
<i>Digitalis purpurea</i>	Foxglove	rare
<i>Dipsacus fullonum</i>	Wild Teasel	occasional
<i>Dryopteris dilatata</i>	Broad Buckler-fern	rare
<i>Dryopteris filix-mas agg</i>	Male Fern	occasional
<i>Epilobium ciliatum</i>	American Willowherb	rare
<i>Epilobium hirsutum</i>	Great Willowherb	rare
<i>Epilobium montanum</i>	Broad-leaved Willowherb	occasional

<i>Euphorbia amygdaloides</i>	Wood Spurge	rare
<i>Fagus sylvatica</i>	Beech	rare
<i>Fallopia japonica</i>	Japanese Knotweed	rare
<i>Fraxinus excelsior</i>	Ash	locally frequent
<i>Galium aparine</i>	Cleavers	rare
<i>Geranium robertianum</i>	Herb-robert	rare
<i>Geum urbanum</i>	Herb Bennet	frequent
<i>Glechoma hederacea</i>	Ground-ivy	frequent
<i>Hedera helix</i>	Ivy	locally dominant
<i>Heracleum sphondylium</i>	Hogweed	occasional
<i>Holcus lanatus</i>	Yorkshire-fog	frequent
<i>Holcus mollis</i>	Creeping Soft-grass	locally frequent
<i>Humulus lupulus</i>	Hop	locally frequent
<i>Hyacinthoides non-scripta</i>	Bluebell	rare
<i>Hypochaeris radicata</i>	Cat's-ear	occasional
<i>Ilex aquifolium</i>	Holly	frequent
<i>Iris pseudacorus</i>	Yellow Iris	locally dominant
<i>Juncus effusus</i>	Soft Rush	rare
<i>Lamium album</i>	White Dead-nettle	locally frequent
<i>Lapsana communis</i>	Nipplewort	rare
<i>Lobelia sp.</i>	a lobelia	rare
<i>Lolium perenne</i>	Perennial Rye-grass	locally abundant
<i>Lonicera periclymenum</i>	Honeysuckle	occasional
<i>Lotus corniculatus</i>	Common Bird's-foot-trefoil	rare
<i>Malus domestica</i>	Apple	frequent
<i>Oenothera biennis</i>	Common Evening-primrose	rare
<i>Phleum pratense</i>	Timothy	rare
<i>Picris echioides</i>	Bristly Oxtongue	locally frequent
<i>Pinus sylvestris</i>	Scots Pine	locally frequent
<i>Plantago lanceolata</i>	Ribwort Plantain	locally frequent
<i>Plantago major</i>	Greater Plantain	locally frequent
<i>Poa annua</i>	Annual Meadow-grass	locally frequent
<i>Polygonum sp.</i>	a knotgrass	rare
<i>Potentilla anserina</i>	Silverweed	rare
<i>Prunella vulgaris</i>	Selfheal	occasional
<i>Prunus avium</i>	Wild Cherry	rare
<i>Prunus domestica</i>	Wild Plum	rare
<i>Prunus laurocerasus</i>	Cherry Laurel	rare
<i>Pteridium aquilinum</i>	Bracken	occasional
<i>Quercus robur</i>	Pedunculate Oak	abundant
<i>Ranunculus repens</i>	Creeping Buttercup	locally abundant
<i>Robinia pseudoacacia</i>	False Acacia	locally frequent
<i>Rosa canina</i> agg.	Dog Rose	rare
<i>Rosa sp.</i>	a rose	locally frequent
<i>Rubus fruticosus</i> agg.	Bramble	frequent
<i>Rumex acetosella</i>	Sheep's Sorrel agg.	occasional
<i>Rumex obtusifolius</i>	Broad-leaved Dock	frequent

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<i>Salix cinerea</i>	Grey Willow	rare
<i>Salix fragilis</i>	Crack Willow	rare
<i>Sambucus nigra</i>	Elder	occasional
<i>Sasa sp.</i>	a bamboo	rare
<i>Sedum telephium</i>	Orpine	rare
<i>Senecio jacobaea</i>	Common Ragwort	occasional
<i>Solanum dulcamara</i>	Bittersweet	locally frequent
<i>Sonchus oleraceus</i>	Smooth Sow-thistle	rare
<i>Sorbus aucuparia</i>	Rowan	occasional
<i>Stellaria holostea</i>	Greater Stitchwort	occasional
<i>Tanacetum vulgare</i>	Tansy	rare
<i>Taraxacum officinale agg</i>	Dandelion	occasional
<i>Teucrium scorodonia</i>	Wood Sage	locally frequent
<i>Trifolium repens</i>	White Clover	locally frequent
<i>Tripleurospermum inodorum</i>	Scentless Mayweed	rare
<i>Ulex europaeus</i>	Gorse	rare
<i>Urtica dioica</i>	Common Nettle	frequent
<i>Verbascum thapsus</i>	Great Mullein	rare
<i>Veronica chamaedrys</i>	Germander Speedwell	occasional
<i>Vicia sativa</i>	Common Vetch	rare



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## Hare Hill Phase I Survey Map

Site Name:- Hare Hill<sup>pt</sup>

Grid Reference:- TQ 033638

Area:- 13.8 ha

RECORDE Number:- 80040

Borough/District:- Runnymede

Date of Survey:- 12th October 1999

Surveyed By:- Isobel Girvan





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## **Appendix 3      Phase 1 Survey of Hare Hill 2009**

**Claire Gibbs BSc MSc MCIEEM** 4<sup>th</sup> August 2009

### **Site description**

Hare Hill is approximately 12 hectares of public open space between Ottershaw and Row Town. It has a central grid reference of TQ032 637. The geology of the site is Bracklesham Beds with Stanwick soils which are typical argillic gley soils.

Local historic knowledge indicates that the site was once farmed with orchards until the 1960's. Following the cessation of farming in the 1960s, the site was quite open with grassland, mature trees and hedges. Natural succession then took place and today the site is a mosaic of secondary woodland, scrub and grassland. The site is becoming less open as scrub and woodland gradually invade the open areas.

### **Target notes (description of habitats)**

#### **Woodland & scrub**

The majority of the site is covered by secondary broadleaved woodland. Trees are even aged, dating from the 1960s. Boundary banks are a distinctive feature of the site and support a number of more mature trees. The most notable banks are shown on the target note map.

As is often the case with woodland surrounded by housing, there are some areas where garden waste has been dumped at the back of gardens, some garden plants for example Snowberry have naturalised into the woodland.

- 1) Pedunculate oak is abundant in the canopy with a variety of other occasional tree species including ash, silver birch and sycamore. Species in the shrub layer include elder, hazel, hawthorn, holly and young sycamore. Cherry is locally frequent. The ground is a tangle of bramble which is abundant with occasional other species including lord's and ladies and wood avens. Ash and sycamore seedlings are locally frequent.
- 2) In this area the woodland opens up and the trees are more scattered. Pedunculate oak is frequent with sycamore and apple also present. Bramble remains abundant in areas. There are also some more open grassy glades. Grasses in the glades include frequent Yorkshire fog and black bent with occasional false oat-grass and cock's-foot. Herbs include locally frequent rosebay willowherb and occasional agrimony and groundsel. There is also a small stand of grey willow in this area which is bare below.
- 3) The woodland here differs from that described above in that although pedunculate oak remains abundant in the canopy with occasional silver birch, there is little else present. The ground is bare over much of the area. Bramble

is only locally frequent. There is little in the shrub layer other than rare elder and hawthorn.

- 4) The woodland in the north of the site is similar to target note 1 described above. Rowan is also occasional in the canopy. Sycamore is dominant in the north east corner. Hawthorn and plum are occasional in the shrub layer. Again bramble is abundant on the ground and dominates an open area. Ivy is frequent as a climber. A cherry laurel hedge forms the eastern boundary here.
- 5) Pedunculate oak remains abundant in the canopy here and ash is more frequent than in other areas. Occasional species in the shrub layer include hawthorn, holly, apple, plum, cherry and ash saplings. The ground is quite bare in this area with bramble only locally frequent. Other species include occasional male fern and rosebay willowherb. Ivy and ash seedlings are locally frequent.
- 6) Here the woodland is more open and scrubby. Pedunculate oak and silver birch are occasional, but shrubs including holly, elder, hazel, privet and young sycamore are the dominating feature. Bramble is also abundant making the area quite inaccessible.
- 7) Uniform oak woodland returns here. Hornbeam, silver birch and sycamore are also occasional in the canopy. Holly and hawthorn are occasional in the shrub layer. The ground is quite bare here, enchanter's nightshade, nettle and sycamore seedlings are occasional. Along the path to the north of this target note is a row of mature pollarded hornbeam trees.
- 8) Pedunculate oak and silver birch form the canopy here with birch dominating the canopy in the south east. Elder is locally frequent in the shrub layer and hawthorn is occasional. Common nettle is abundant on the ground here with locally frequent ground ivy and rosebay willowherb. The surveyor was informed by a local resident that grass snakes and glow worms have been seen in this area. The bank to the south of this area has a number of mature trees one of which was supporting an active honey bee nest. The surveyor was informed by a local resident that solitary bees nest in the bank here.
- 9) The woodland to the west of Spratts Lane has a very mixed canopy and shrub layer. Species in the canopy include Scot's pine, beech, oak, sweet chestnut, hornbeam, ash, grey willow and alder. Species in the shrub layer include hawthorn, elder, plum, butterfly-bush, robinia, hazel, cherry laurel and holly. The latter is locally frequent in places. The ground flora is fairly bare. Bramble is occasional and ivy locally frequent. Nettle begins to dominate the ground flora near to the edges of the open area (target note 15).
- 9i) Significant animal holes were observed in this area. 6 holes were found near to each other with evidence of some digging. The shape of the holes suggests they could have been dug by badgers although rabbit droppings were found near to the holes.

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### **Other habitats**

- 10) This is an open area with a wet hollow. Grey willow is locally frequent at the edges. Within the hollow, water forget-me-not is abundant. Creeping Jenny is locally abundant. Yellow iris and redshank are locally frequent and broadleaved dock and broadleaved willowherb are occasional. A small clump of a cultivated form of reed canary-grass is present which may have been planted there. The surveyor was informed by a local resident that grass snakes, *Natrix natrix*, have been seen in this area.
- 11) This is the main open grassland area on Hare Hill. However the grassland is becoming squeezed out by encroaching scrub and bramble. The grassland is very short and bare in places being heavily grazed by rabbits and well used by dog walkers. Bent grasses and Yorkshire fog appear to dominate the grasses with occasional perennial rye-grass and meadow grass. The grassland is species poor. White clover is frequent with occasional creeping buttercup, greater plantain, sheep's sorrel and cat's-ear. Longer grass is present at the edges and additional species here include bird's-foot trefoil, ribwort plantain, lesser stitchwort, creeping thistle and common ragwort. The surveyor was informed by a local resident that slow worms, *Anguis fragilis*, and adders, *Vipera berus*, have been reported in the north of this open area.
- 12) This is an area of tall ruderal vegetation. Common nettle is abundant, false oat-grass, creeping thistle and bramble are locally frequent.
- 13) Significant open areas are present in this section which are dominated by bramble. Short grass is present along the paths and longer grass is present at the edge of the bramble. Rosebay willowherb is locally frequent. The open areas are surrounded by even aged oak woodland, bramble dominating the ground flora in some areas and bare in others.
- 14) This is an open area in the south east of the site which is being invaded by bramble scrub. Tall species poor rank grassland dominates. The dominant grasses include Yorkshire fog, creeping bent, perennial rye-grass and false oat-grass. Timothy is occasional. Herbs include frequent hedge bindweed and occasional bramble, broadleaved dock and great willowherb, the latter being locally dominant.
- 15) To the west of Spratts Lane, is an area of tall ruderal vegetation with scattered trees and scrub. It is quite impenetrable. Common nettle dominates with frequent creeping thistle and bramble.

### **6.3 Ecological value of site / possible ecological constraints**

Hare Hill was surveyed by Surrey Wildlife Trust in 1999 as part of a project to identify Sites of Nature Conservation Importance (SNCIs) in Surrey. At that time it was felt that the site was not of sufficient ecological value to warrant selection as an

SNCI. Nevertheless as a good sized area of natural habitat, the site does have local ecological value.

The ecological features of the site which are of particular note on the site are described below. It is important that any work on the site protects and maintains these features.

### **Boundary banks/Mature trees**

Hare Hill supports a number of old boundary banks with some impressive mature trees. A detailed tree report has been carried out (Kathy Miller, 2006) which maps all of the mature trees on the site. The largest oak on the site is estimated to be approximately 359 years old. These mature trees are valuable for their wildlife and visual value as well as their historical importance.

### **Pond/wet area**

The pond area described in target note 10 is a good ecological feature on the site and should be maintained and if possible enhanced. This will benefit a number of species including notable dragonflies and damselflies which the data search revealed are in the local area.

### **Rare and/or protected species**

The data search for this site revealed that the following species of note have been recorded on the site;

#### **- Birds**

All wild birds are protected from damage or destruction of their nest whilst in use or construction. In addition some birds receive additional protection from disturbance whilst nesting under schedule 1 of the Wildlife and Countryside Act 1981, as amended. The data search revealed that 27 bird species included on Appendix II of the Bern Convention and 26 bird species listed as species of Conservation Concern in the UK Biodiversity Action Plan 1995 as well as 3 species listed as priority in the UK Biodiversity Action Plan 1995 and 2 species protected under schedule 1 of the Wildlife and Countryside Act have been recorded on Hare Hill. These records are from 1995, so it is unknown whether the species are still present on the site. It is unlikely that any minor management work on the sites would affect these bird species. Any work affecting trees or scrub should avoid the bird nesting season (March-August).

#### **- Invertebrates**

A number of notable and local invertebrate species have been recorded on the site in the past. These include the notable Roesel's bush cricket, *Metrioptera roeselii*, long-winged conehead, *Conocephalus discolor* and a jumping spider, *Evarcha arcuata* and the local holy blue, *Celastrina argiolus britanna*, purple hairstreak, *Quercusia quercus* and a harvestman, *Dicranopalpus ramosus*. These species should be taken into consideration when planning future management of the site.

In addition, the following species have been reported on the site;

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- Stag beetle, *Lucanus cervus*.

A local resident has reported that the site is important for this species. The stag beetle is a UK Biodiversity Action Plan (BAP) priority species and a nationally notable b (Nb) species. It is protected under appendix 3 of the Bern Convention. Stag Beetle larvae rely on rotting dead wood for their survival therefore it is important to ensure that the dead wood habitat on the site does not decline.

- Glow worm, *Lampyris noctiluca*

These have been reported on the site. Whilst this species has no formal protection, they are thought to be declining. In addition they are a species which incites a lot of public interest. Therefore it will be important that this species is not adversely affected by any work on the site.

- Reptiles

All native British reptiles are protected under the Wildlife and Countryside Act (1981) from killing and injury. Sand Lizards and Smooth Snakes also receive additional protection. Reptiles including Grass Snakes, Slow-worms and Adders have been reported on the site. Areas where they have been reported include target note 10 and 11, but they could also be present in other more open woodland glade areas, target notes 13, 14 and 15. If any major work were to take place in any of these areas so that appropriate mitigation be undertaken to avoid harming these species.

- Badgers, *Meles meles*

Badgers are protected under the Protection of Badgers Act 1992, which makes it illegal to kill, injure or take a badger or to interfere with their setts for example by the use of heavy machinery nearby. A potential badger sett was found at target note 9i, although this would need to be confirmed by further survey. Badgers would be sensitive to an increase in public use of this area which is currently quite inaccessible. They would be especially vulnerable to small dogs which may enter their setts.

It is also likely that the following protected species to be present on the site;

- Bats

All species of British bats are protected under the Wildlife and Countryside Act and under Regulation 38 (Schedule 2) of the Conservation (Natural Habitats etc.) Regulations 1994. Together this legislation makes it an offence to kill, capture or disturb the animal, or to damage or destroy a breeding site or resting place of such an animal. Bats are likely to forage on the site and to be roosting in the more mature trees. If possible any work on the site should avoid damaging the mature trees. If this is unavoidable, all trees older than 100 years, or with obvious cavities, or with a girth greater than 1m at chest height should be surveyed for bats by a licensed bat worker before any work takes place.

It is important to take the above species into account when planning any future work on the site.

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## Hare Hill Species List

Abundance uses the DAFOR system;

(Locally)      **D**ominant, **A**bundant, **F**requent, **O**ccasional, **R**are

[Please note that plants ranked as 'rare' means that they were not found often over this site and does not necessarily indicate that they are a County rarity]:

Scientific name	Common name	Abundance
<i>Acer pseudoplatanus</i>	Sycamore	O
<i>Aesculus hippocastanum</i>	Horse-chestnut	R
<i>Agrimonia eupatoria</i>	Agrimony	R
<i>Agrostis capillaris</i>	Common Bent	LF
<i>Agrostis stolonifera</i>	Creeping Bent	O
<i>Alnus glutinosa</i>	Alder	R
<i>Arrhenatherum elatius</i>	False Oat-grass	LF
<i>Arum maculatum</i>	Lords-and-ladies	O
<i>Betula pendula</i>	Silver Birch	O
<i>Buddleja davidii</i>	Butterfly-bush	R
<i>Calystegia sepium</i>	Hedge Bindweed	R
<i>Carex pendula</i>	Pendulous Sedge	R
<i>Carpinus betulus</i>	Hornbeam	O
<i>Castanea sativa</i>	Sweet Chestnut	R
<i>Cerastium fontanum</i>	Common Mouse-ear	R
<i>Chamaecyparis lawsoniana</i>	Lawson's Cypress	R
<i>Chamerion angustifolium</i>	Rosebay Willowherb	LF
<i>Circaea lutetiana</i>	Enchanter's-nightshade	O
<i>Convolvulus arvensis</i>	Field Bindweed	R
<i>Corylus avellana</i>	Hazel	O
<i>Crataegus monogyna</i>	Hawthorn	O
<i>Cytisus scoparius</i>	Broom	R
<i>Dactylis glomerata</i>	Cock's-foot	O
<i>Dryopteris filix-mas</i> agg.	Male Fern	O
<i>Epilobium hirsutum</i>	Great Willowherb	LA
<i>Epilobium montanum</i>	Broad-leaved Willowherb	O
<i>Fagus sylvatica</i>	Beech	LF
<i>Fallopia japonica</i>	Japanese Knotweed	R
<i>Fraxinus excelsior</i>	Ash	LF
<i>Geranium robertianum</i>	Herb-robert	R
<i>Geum urbanum</i>	Herb Bennet	LF
<i>Glechoma hederacea</i>	Ground-ivy	O
<i>Heracleum sphondylium</i>	Hogweed	R
<i>Holcus lanatus</i>	Yorkshire-fog	LA
<i>Humulus lupulus</i>	Hop	R
<i>Hypochaeris radicata</i>	Cat's-ear	R
<i>Ilex aquifolium</i>	Holly	O



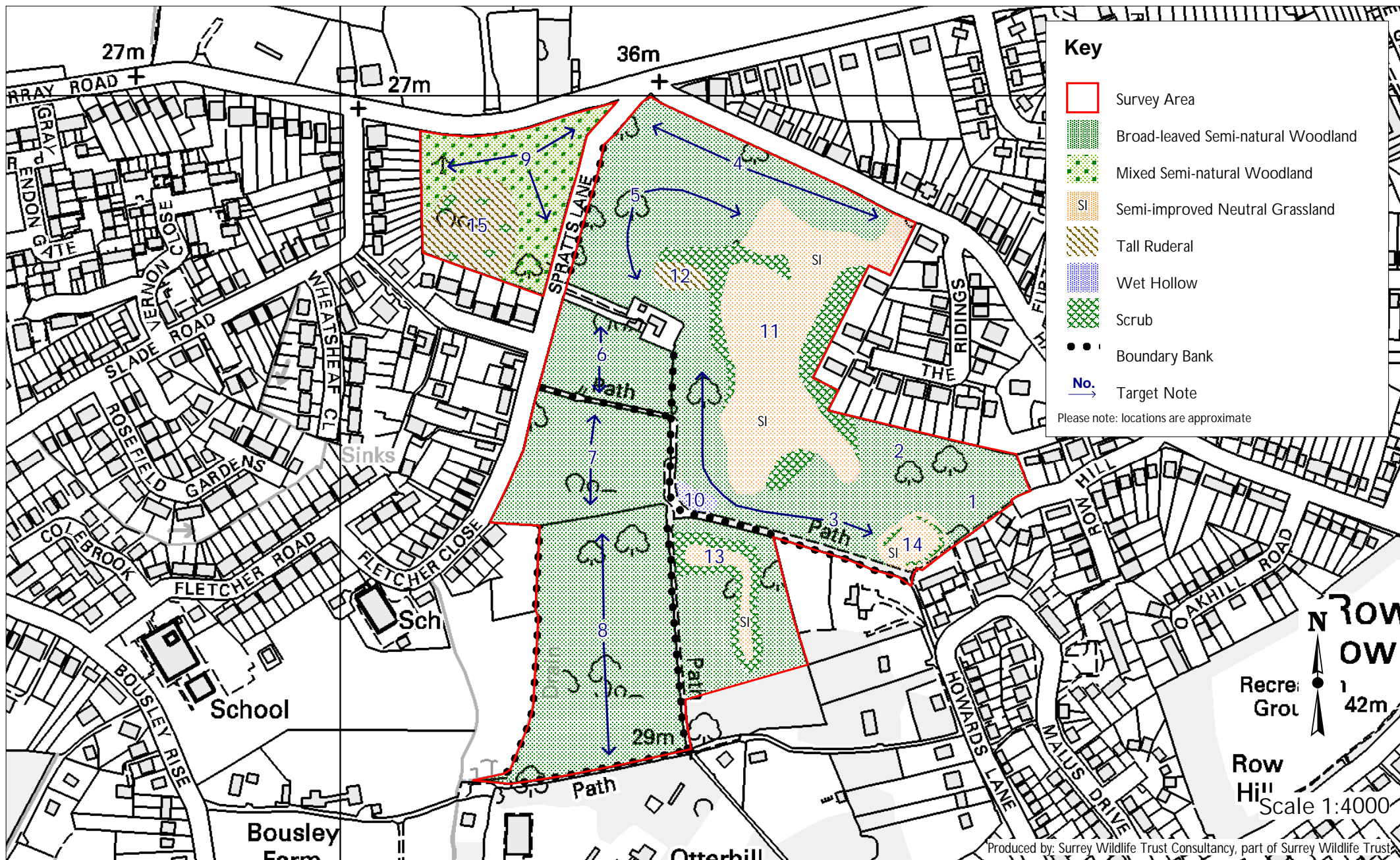
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<i>Iris pseudacorus</i>	Yellow Iris	R
<i>Juncus effusus</i>	Soft Rush	R
<i>Lamium galeobdolon</i>	Yellow Archangel	R
<i>Ligustrum vulgare</i>	Wild Privet	R
<i>Lolium perenne</i>	Perennial Rye-grass	O
<i>Lonicera periclymenum</i>	Honeysuckle	R
<i>Lotus corniculatus</i>	Common Bird's-foot-trefoil	R
<i>Lysimachia nummularia</i>	Creeping-Jenny	LA
<i>Malus domestica</i>	Apple	O
<i>Malva sylvestris</i>	Common Mallow	R
<i>Myosotis scorpioides</i>	Water Forget-me-not	LA
<i>Persicaria maculosa</i>	Redshank	LF
<i>Phalaris arundinacea</i>	Reed canary-grass	
var <i>picta</i>	'gardener's garters'	R
<i>Phleum pratense sens.str.</i>	Timothy	O
<i>Pinus sylvestris</i>	Scots Pine	R
<i>Plantago lanceolata</i>	Ribwort Plantain	R
<i>Plantago major</i>	Greater Plantain	O
<i>Poa annua</i>	Annual Meadow-grass	R
<i>Polygonum aviculare sens.str.</i>	Knotgrass	R
<i>Prunella vulgaris</i>	Selfheal	R
<i>Prunus avium</i>	Wild Cherry	O
<i>Prunus domestica ssp. insititia</i>	Damson	O
<i>Prunus domestica</i>	Wild Plum	O
<i>Pteridium aquilinum</i>	Bracken	R
<i>Quercus robur</i>	Pedunculate Oak	F
<i>Ranunculus repens</i>	Creeping Buttercup	LF
<i>Ribes rubrum</i>	Red Currant	R
<i>Robinia pseudoacacia</i>	False Acacia	LF
<i>Rosa canina agg.</i>	Dog Rose	R
<i>Rubus fruticosus agg.</i>	Bramble	F
<i>Rumex acetosella</i>	Sheep's Sorrel [agg.]	R
<i>Rumex obtusifolius</i>	Broad-leaved Dock	R
<i>Rumex sanguineus</i>	Wood Dock	R
<i>Salix caprea</i>	Goat Willow	R
<i>Sambucus nigra</i>	Elder	O
<i>Senecio jacobaea</i>	Common Ragwort	O
<i>Sorbus aucuparia</i>	Rowan	O
<i>Tanacetum vulgare</i>	Tansy	R
<i>Taraxacum officinale agg.</i>	Dandelion	R
<i>Trifolium pratense</i>	Red Clover	LF
<i>Ulmus glabra</i>	Wych Elm	R
<i>Urtica dioica</i>	Common Nettle	LA

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## Hare Hill Phase 1 Survey Map



Based upon the Ordnance Survey 1:10 000 Map with the permission of The Controller of Her Majesty's Stationery Office. Crown Copyright. Licence Number AL100031669. C1869, August 2009

Figure 6  
Hare Hill  
Phase 1 Survey Results



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## **Appendix 4      Access Survey of Hare Hill 2009**

### **Ken Anckorn BSc (Hons) DipMus DipEnv**

Hare Hill today is a site, approximately 12 hectares, of predominantly secondary woodland with small areas of grassland. These open areas are gradually being taken over by scrub, ruderal vegetation and finally woodland, losing much of the biodiversity value of the site in the process. Although the site is still used by local people for recreation, the gradual loss of the more open areas of the site will have resulted in fewer people using the site as it becomes more enclosed and less inviting. The darker woodland areas and dense holly scrub will have made the site less user friendly for many visitors, particularly females and consequently fewer visitors are using the site today, than will have enjoyed it in the past.

The other major restriction to visitor numbers on the site is the lack of any car park facilities. Parking on roadsides on the edge of the woodland is difficult owing to lack of safe parking spots and the speed and volume of traffic using the roads. Consequently the site must be predominantly used by people living close enough to the site to walk there.

### **Current Facilities**

#### **Car Parks**

On site none. Restricted parking opportunities on surrounding roads.

#### **Pathways**

The existing pathways through the woodland are informal but on a dry day are easily walked. In wet weather there will inevitably be wet areas, leading to restricted access and the inevitable damage to habitat as walkers leave the path to find drier ground. The network is extensive amounting to approximately 4km and covers most of the site. The part of the site to the west of Spratts Lane does not have a clear well used path but an informal circular route is present.

There are public footpaths crossing the site and these are marked by 1 metre wooden posts with the usual coloured way mark indicators.

#### **Furniture**

Dog bins are provided at the main entrance and exit points onto the site and edge of the largest area of open grassland. Litter bins are also on site. Two benches, occupying sheltered sunny locations, on the higher edge of the largest grassed area.

#### **Special Features**

There are no obvious special features on this site providing a significant visitor attraction. The woodland is relatively young, although there are a number of older trees on the earth banks marking the edge of an old track way which crosses the site from the corner near Howards Lane to Spratts Lane. This path is also one of the public rights of way, which crosses the site. Near the centre of the site the path takes a 90 degree turn round what is normally a small pond and wet area. This feature was dry at the time of the survey.

There are no significant ecological areas on this site which need to be completely protected, although there are some interesting species which will require some level of protection from any SANGS related works and the consequent increase in both human and pet activity.

## **Recommendations**

### **a) Car Parking**

It will be necessary to improve access to the site for visitors living over 0.5 km from the site by providing a car park or car parks. Several potential sites have been identified and are indicated on the access map. The creation of car parks will result in the loss of some biodiversity but this should be more than compensated for by improvements to habitat on site. It may be better to provide two or more smaller car parks than one large one but other factors may affect this decision.

### **b) Improving Site Interest**

To be able to attract visitors away from the SPA this site must offer the visitor easier access and reasons to use this site rather than the larger and more visually attractive SPA sites.

This site has an interesting human history and many of the more interesting features on site are there as a result of this history. Visitors must therefore be made aware of the human history of the site as well as its natural history. On this site both of these elements can be closely linked.

The old track through the site is the remains of a track way connecting a clay extraction site below Row Hill to a pottery sited on Spratts Lane. Much of the history of this industry is known and would prove of interest to visitors, as would the reinstatement of this track as a key feature on the site. The track way is still delineated with its old embankments in places and on these features are to be found some magnificent oak trees, the oldest of which has been dated at some 350 years. It was a sapling at the time of the Great Fire of London.

The neglected wet area at the 90 degree bend in the track could be reinstated as a pond, with benches to form the focal point of the SANGS.



From this central feature with its specimen oak trees, pond, improved aspect and vistas, smaller paths could radiate out to allow the visitor to take walks of a variety of lengths, onto the open grassy areas or through the rest of the woodland.

#### c) Visitor Access

At the time of the site survey, a long period of dry weather had resulted in all paths being dry and easily walked, except for two seepage areas leading down to the pond site. It is evident however that in wet weather some paths will become very muddy and less attractive to visitors. Using local knowledge of conditions, the main paths should be improved by drainage works and/or resurfacing with suitable material, to provide an all weather series of main paths around the reserve. If this can be achieved visitors will appreciate that they can visit the site at all times of the year and in all weathers and still enjoy a walk. This will help prevent walkers seeking alternative walking sites, possibly choosing the SPA.

If the suggested car park site off Hare Hill Road is selected it should be possible to construct an 'all users' path from this car park to the proposed 'new' pond. This will help make the site attractive to a greater variety of users.

#### d) Visitor Information

Visitor information on the site must be provided in the form of Notice Boards at any car parks and main points of access. These noticeboards should provide:

- A history of the site;
- A natural history of the site;
- A map of the site showing paths and features of interest; and
- Event and other information. E.g. Guided Walks.

#### e) Habitat Improvements

Many of the paths are overgrown and shaded by dense stands of holly scrub and ruderal vegetation. Much of this should be cleared to open up paths, make them lighter and less secluded. This will allow more light to reach the woodland floor, encouraging more diverse ground flora and helping to dry paths after wet weather.

Selective thinning of younger trees will also allow more light on to the woodland floor and help improve diversity and structure. There are various points around the site where glades can be opened up in the woodland to create pleasant well lit areas which, when a ground flora develops will attract insects such as butterflies and more bird species. Benches should be provided in these areas.

The two grassy areas on site should be extended and encroaching scrub and ruderal vegetation cut well back.

The lines of the public rights of way and the old pottery track should be made more obvious by selective felling of young trees and clearing of scrub encroaching onto the paths to expose the historic earth banks along the path sides and highlight the specimen oak trees. The oldest oak tree should be featured.

A permanent pond should be created in the bend of the main track to make a key feature and focal point. Benches should be provided but part of the pond edge should be kept 'wild' to protect wildlife including nesting birds.

#### f) Management Plan

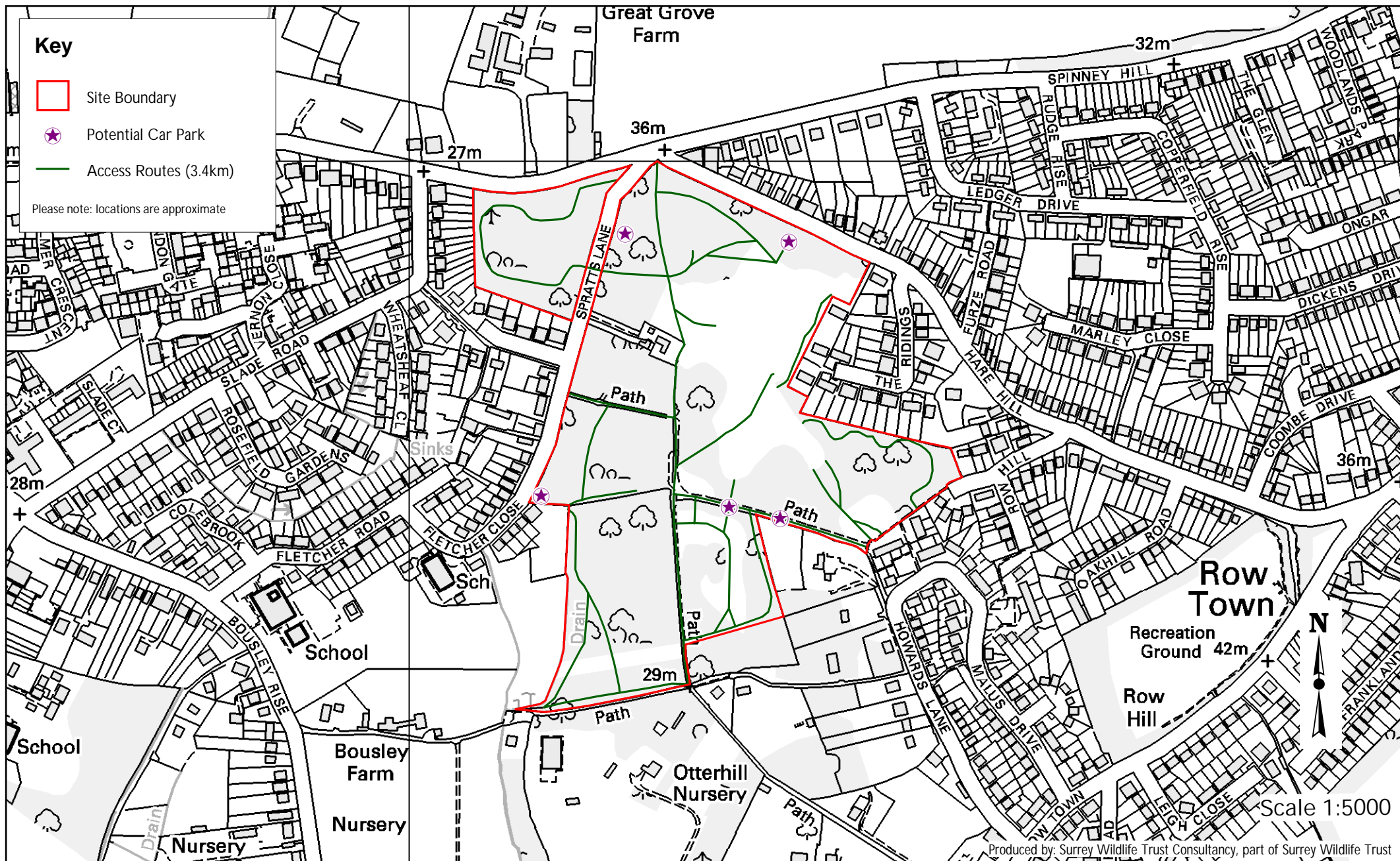
All of the above works should only be done after a careful management plan has been drawn up and agreed. Protected and important species data should be used in order that more sensitive features (e.g. glow worm site, see Phase 1 survey report), on site are not damaged and the more interesting flora and fauna on site is protected. This can be achieved by careful vegetation control and re-routing paths where necessary to avoid ecologically sensitive areas.

### **Conclusion**

It is recommended that the above works are given full consideration should the Local Authority wish to proceed with its plan to turn this site into a SANGS. By adopting these measures, the SANGS criteria can be satisfied and the biodiversity of the site improved. Surrey Wildlife Trust will be happy to assist with producing a Management Plan to achieve these aims.

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## Hare Hill Access Routes and Potential Car Parks



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## Hare Hill Access Routes and Potential Car Parks



Produced by: Surrey Wildlife Trust Consultancy, part of Surrey Wildlife Trust

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## Appendix 5      Hare Hill Data Search 2009



Background Ecological Data Search;  
Area Around Hare Hill,  
Ottershaw, Surrey

Runnymede Borough  
Suitable Alternative Natural Greenspace  
Site Assessment

Produced by  
Alistair Kirk  
Biological Records Centre Manager

Surrey Biological Records Centre  
September 2009

for  
Surrey Wildlife Trust Consultancy



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# Background Ecological Data Search; Around Hare Hill, Ottershaw, Surrey

## 1.0 Introduction

The following report has been compiled by the Surrey Biological Records Centre on behalf of Surrey Wildlife Trust Consultancy as part of a desktop ecological assessment of candidate Suitable Alternative Natural Greenspace (SANG) land near Ottershaw, Surrey. Based on our standard data search service it includes information on a) protected species, b) rare/notable species and c) Priority Species/Species of Conservation Concern as identified in the UK Biodiversity Action Plan recorded from sites falling within 500 metres of land to between Spratts Lane and Hare Hill (Hare Hill, approximate site centre Ordnance Survey grid reference TQ033637). The report is completed by a map of the search area (Annex A).

## 2.0 Protected Species

The Records Centre currently holds information on a number of species protected either by national <sup>1,2</sup> or international <sup>3,4,5</sup> legislation which have been recorded from sites falling within the 500 metre search area. This list should not be regarded as definitive and it is likely that further detailed survey work would be necessary prior to any development to ascertain the full extent of any activity. Furthermore, it should also be noted that although the Records Centre currently has data sharing agreements with many of Surrey's specialist recording societies we may only hold limited information for a number of important taxonomic groups. Similarly, although data transfers take place on a regular basis, we may not always hold the most upto date records for a particular area.

The following table lists species in taxonomic order by each kilometre square of the study area. Information on the national status of each species is taken from the RECORDER species database and Checklist of Legally Protected British Species (Betts, 2008) <sup>6</sup>. In each case the relevant Schedule or Annex which describes the nature and level of protection is also shown. Species information held by the Records Centre has been compiled from a variety of different sources and the precise survey methodology followed in each case may not always be available. However, the following table will attempt to identify the source of each record according to one of four different categories, namely; a) SNCI site survey, b) other SWT survey, c) Surrey Wildlife Atlas Project record, d) records supplied to the BRC by Surrey's specialist recording societies, a member of the County's biological recording community or compiled as part of a wider national survey scheme.

Please note, Appendix III of the Bern Convention includes all species of birds not listed in Appendix II with the exception of 11 abundant /perceived pest species. Species included in this list have are omitted from the following table but readers should nonetheless take note of its existence. Similarly, where a site straddles the edge of the search area all relevant records recorded from that site have been included in this report. Species records for a site are commonly assigned a locational reference based on the Ordnance Survey grid reference for the centre of that site. On occasions although part of a site may legitimately fall inside a search area, its geographical centre may lie outside. As a result the following tables may include species apparently recorded from one kilometre squares falling outside your original search area. (N.B Throughout this report, where this occurs, the relevant 1 kilometre squares are enclosed by brackets).

Finally species recorded from sites which make up the candidate SANG are shown in bold, species recorded from sites falling within the wider search area are shown in normal type.

1Km Grid Square	Common Name	Scientific Name	Wildlife & Countryside Act Schedule or Other UK Legislation	International Status	Date Last Recorded	Source of Record
TQ0263	Snowdrop	<i>Galanthus nivalis</i>		EC Annex Vb	bef. 1995	Other Record
TQ0363	Stag Beetle	<i>Lucanus cervus</i>	5 (Sale only)	Bern III. EC IIa.	1998	Other Record
	Sparrowhawk	<i>Accipiter nisus</i>		Bern App II	-1995	Other Record
	Kestrel	<i>Falco tinnunculus</i>		Bern App II	-1995	Other Record
	Tawny Owl	<i>Strix aluco</i>		Bern App II	-1995	Other Record
	Green Woodpecker	<i>Picus viridis</i>		Bern App II	-1995	Other Record
	Great Spotted Woodpecker	<i>Dendrocopos major</i>		Bern App II	-1995	Other Record
	Lesser Spotted Woodpecker	<i>Dendrocopos minor</i>		Bern App II	-1995	Other Record
	Pied Wagtail	<i>Motacilla alba yarrellii</i>		Bern App II	-1995	Other Record
	Wren	<i>Troglodytes troglodytes</i>		Bern App II	-1995	Other Record
	Duncock	<i>Prunella modularis</i>		Bern App II	-1995	Other Record
	Robin	<i>Erithacus rubecula</i>		Bern App II	-1995	Other Record
	Fieldfare	<i>Turdus pilaris</i>	1 Part 1		-1995	Other Record
	Redwing	<i>Turdus iliacus</i>	1 Part 1		-1995	Other Record
	Blackcap	<i>Sylvia atricapilla</i>		Bern App II	-1995	Other Record
	Chiffchaff	<i>Phylloscopus collybita</i>		Bern App II	-1995	Other Record
	Willow Warbler	<i>Phylloscopus trochilus</i>		Bern App II	-1995	Other Record
	Goldcrest	<i>Regulus regulus</i>		Bern App II	-1995	Other Record
	Long-tailed Tit	<i>Aegithalos caudatus</i>		Bern App II	-1995	Other Record
	Coal Tit	<i>Parus ater</i>		Bern App II	-1995	Other Record
	Blue Tit	<i>Parus caeruleus</i>		Bern App II	-1995	Other Record
	Great Tit	<i>Parus major</i>		Bern App II	-1995	Other Record
	Nuthatch	<i>Sitta europaea</i>		Bern App II	-1995	Other Record
	Treecreeper	<i>Certhia familiaris</i>		Bern App II	-1995	Other Record
	Magpie	<i>Pica pica</i>		Bern App II	-1995	Other Record
	Greenfinch	<i>Carduelis chloris</i>		Bern App II	-1995	Other Record
	Goldfinch	<i>Carduelis carduelis</i>		Bern App II	-1995	Other Record
	Siskin	<i>Carduelis spinus</i>		Bern App II	-1995	Other Record
	Redpoll	<i>Carduelis flammea</i>		Bern App II	-1995	Other Record
	Yellowhammer	<i>Emberiza citrinella</i>		Bern App II	-1995	Other Record



	Reed Bunting	Emberiza schoeniclus		Bern App II	-1995	Other Record
TQ0463	Stag Beetle	Lucanus cervus	5 (Sale only)	Bern III. EC IIa.	1998	Other Record

Any work or activity likely to affect any species covered by a relevant schedule of the Wildlife and Countryside Act, must first be referred to the local office of Natural England.

### 3.0 Notable / Rare Species

The Records Centre currently holds information on the following species recorded from sites falling within the 500 metre search area which are thought to be rare or notable at either a national or a regional level. In each case, the known distribution of all populations (both native and non-native) as shown in the relevant County atlas is also shown where available.

Once again, the following table lists species by kilometre square and then alphabetically by taxonomic order and scientific name. Species recorded from sites which make up the candidate SANG are shown in bold, species recorded from sites falling within the wider search area are shown in normal type. Information on the national status of each species is taken from the RECORDER species database.

1Km Grid Square	Common Name	Scientific Name	National Species Status	Surrey Status	Date Last Recorded	Source of Record
TQ0363	Roesel's Bush Cricket	<i>Metrioptera roeselii</i>	Notable/Nb <sup>7</sup>	Has recently become widespread and quite common, spreading from the north-east <sup>8</sup>	1995	Other Record
	Long-winged Conehead	<i>Conocephalus discolor</i>	Notable/Na <sup>9</sup>	First recorded 1990 but now widespread and abundant	1995	Other Record
	Stag Beetle	<i>Lucanus cervus</i>	Notable/Nb	Local <sup>10</sup>	1998	Other Record
	a jumping spider	<i>Evarcha arcuata</i>	Notable/Nb		1995	Other Record
TQ0463	Stag Beetle	<i>Lucanus cervus</i>	Notable/Nb	Local	1998	Other Record

### 3.1 Local Species

The Records Centre also holds information on a number of species classed as Nationally Local <sup>11</sup>. Once again, the known distribution as shown in the relevant County atlas is also shown.

1Km Grid Square	Common Name	Scientific Name	National Species Status	Surrey Status	Date Last Recorded	Source of Record
TQ0262	Red-eyed Damselfly	<i>Erythromma najas</i>	Local	128 tetrads, Confirmed, with some very large colonies <sup>12</sup>	-1980	Atlas
	Banded Demoiselle	<i>Calopteryx splendens</i>	Local	169 tetrads, Confirmed "widespread and common"	-1984	Atlas
	Migrant Hawker	<i>Aeshna mixta</i>	Local	152 tetrads, Confirmed, Widespread	-1980	Atlas
	Black-tailed Skimmer	<i>Orthetrum cancellatum</i>	Local	117 tetrads, Confirmed, Widespread	-1980	Atlas
TQ0363	Holly Blue	<i>Celastrina argiolus britanna</i>	Local	Widespread and Fairly Common <sup>13</sup> , 2000; 431 tetrads <sup>14</sup>	1995	Other Record
	Purple Hairstreak	<i>Quercusia quercus</i>	Local	Widespread and Common, 2000; 319 tetrads	1995	Other Record
	a harvestman	<i>Dicranopalpus ramosus</i>	Local		1995	Other Record

## 4.0 UK Biodiversity Action Plan; Priority Species and Species of Conservation Concern

The following species which appear on either the Priority or the Conservation Concern lists of the UK Steering Group Report on Biodiversity<sup>15</sup> have also been recorded from sites falling within the 500 metre search area.

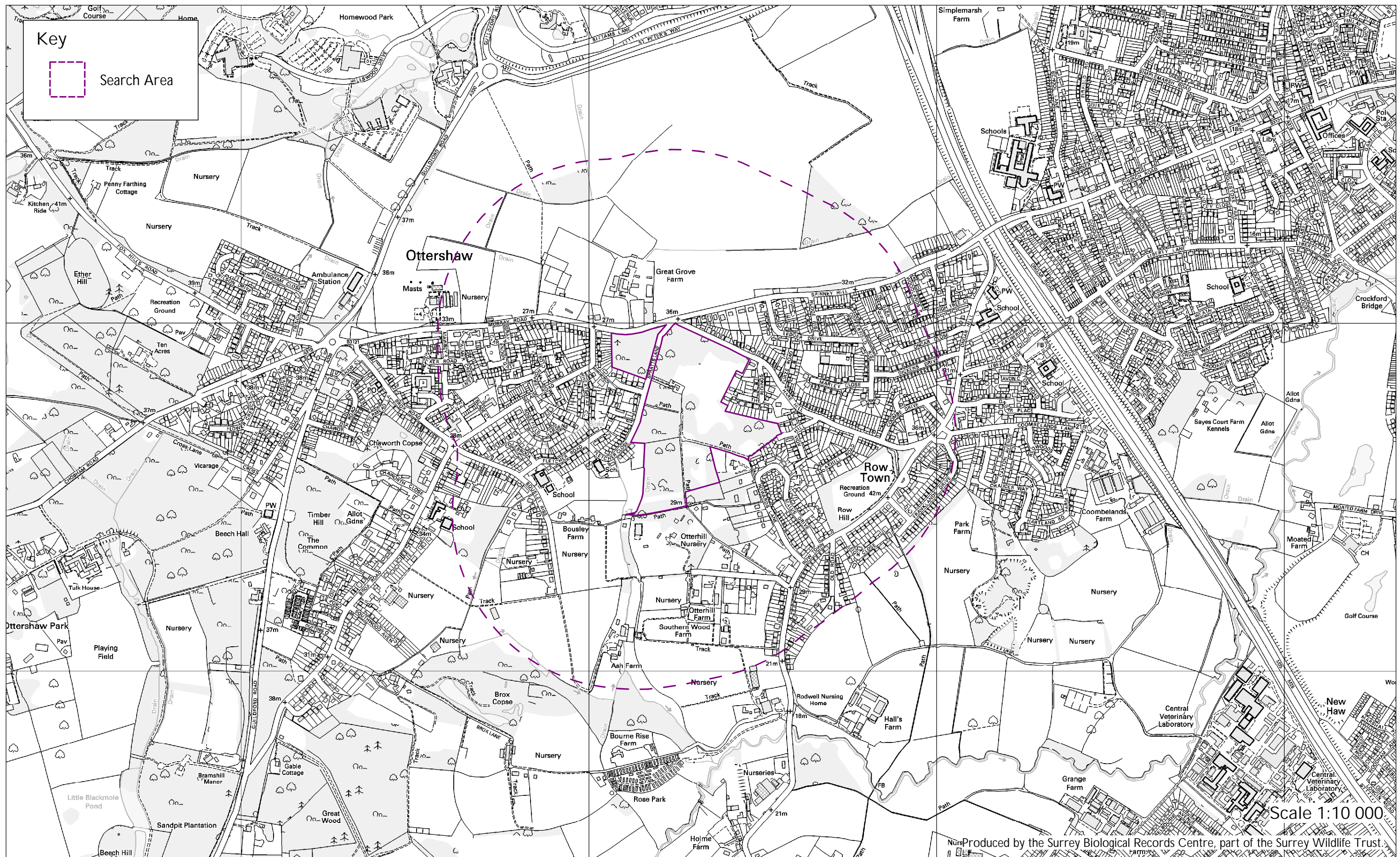
1Km Grid Square	Common Name	Scientific Name	UK Biodiversity Action Plan Status	Date Last Recorded	Source of Record
TQ0263	Stag Beetle	Lucanus cervus	Priority	1998	Other Record
	Bluebell	Hyacinthoides non-scripta	Conservation Concern	bef. 1995	Other Record
TQ0363	Bluebell	Hyacinthoides non-scripta	Conservation Concern	1995	Other Record
	Stag Beetle	Lucanus cervus	Priority	1998	Other Record
	Mallard	Anas platyrhynchos	Conservation Concern	-1995	Other Record
	Sparrowhawk	Accipiter nisus	Conservation Concern	-1995	Other Record
	Kestrel	Falco tinnunculus	Conservation Concern	-1995	Other Record
	Tawny Owl	Strix aluco	Conservation Concern	-1995	Other Record
	Green Woodpecker	Picus viridis	Conservation Concern	-1995	Other Record
	Great Spotted Woodpecker	Dendrocopos major	Conservation Concern	-1995	Other Record
	Lesser Spotted Woodpecker	Dendrocopos minor	Conservation Concern	-1995	Other Record
	Pied Wagtail	Motacilla alba yarrellii	Conservation Concern	-1995	Other Record
	Wren	Troglodytes troglodytes	Conservation Concern	-1995	Other Record
	Dunnock	Prunella modularis	Conservation Concern	-1995	Other Record
	Fieldfare	Turdus pilaris	Conservation Concern	-1995	Other Record
	Song Thrush	Turdus philomelos	Priority	-1995	Other Record
	Redwing	Turdus iliacus	Conservation Concern	-1995	Other Record
	Blackcap	Sylvia atricapilla	Conservation Concern	-1995	Other Record
	Chiffchaff	Phylloscopus collybita	Conservation Concern	-1995	Other Record
	Willow Warbler	Phylloscopus trochilus	Conservation Concern	-1995	Other Record
	Goldcrest	Regulus regulus	Conservation Concern	-1995	Other Record
	Coal Tit	Parus ater	Conservation Concern	-1995	Other Record
	Blue Tit	Parus caeruleus	Conservation Concern	-1995	Other Record
	Great Tit	Parus major	Conservation Concern	-1995	Other Record
	Nuthatch	Sitta europaea	Conservation Concern	-1995	Other Record

	Treecreeper	<i>Certhia familiaris</i>	Conservation Concern	-1995	Other Record
	Greenfinch	<i>Carduelis chloris</i>	Conservation Concern	-1995	Other Record
	Goldfinch	<i>Carduelis carduelis</i>	Conservation Concern	-1995	Other Record
	Siskin	<i>Carduelis spinus</i>	Conservation Concern	-1995	Other Record
	Redpoll	<i>Carduelis flammea</i>	Conservation Concern	-1995	Other Record
	Bullfinch	<i>Pyrrhula pyrrhula</i>	Priority	-1995	Other Record
	Yellowhammer	<i>Emberiza citrinella</i>	Conservation Concern	-1995	Other Record
	Reed Bunting	<i>Emberiza schoeniclus</i>	Priority	-1995	Other Record
TQ0463	Stag Beetle	<i>Lucanus cervus</i>	Priority	1998	Other Record



## Annex A – Site Map





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Background Ecological Data Search;  
Area Around Hare Hill, Surrey  
Nature Reserves and Non-Statutory  
Designated Sites





## References

- <sup>1</sup> Wildlife and Countryside Act, 1981 (as amended).
- <sup>2</sup> Protection of Badgers Act, 1992
- <sup>3</sup> Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora ("Habitats and Species Directive"). Implemented within the UK by the Conservation (Natural Habitats & c.) Regulations 1994, amended in England by The Conservation (Natural Habitats, & c.) (Amendment) (England) Regulations 2000.
- <sup>4</sup> EC Directive 79/409 on the Conservation of Wild Birds (the Birds Directive), As amended by Council Directive 92/43 and implemented within the UK by The Conservation (Natural Habitats & c.) Regulations 1994, amended in England by The Conservation (Natural Habitats, & c. ) (Amendment) (England) Regulations 2000.
- <sup>5</sup> Convention on the Conservation of European Wildlife and Natural Habitats ("The Bern Convention").
- <sup>6</sup> Betts C.J., (2008) Checklist of Legally Protected British Species; Third Edition, Christopher Betts Environmental Biology, Worcester.
- <sup>7</sup> Nationally Notable/Nb; species estimated to occur within 31-100 10 kilometre squares of the National Grid system. For more information on the criteria used see Eversham, B., (1983); Defining Rare and Notable Species – a discussion document, Invertebrate Site Register Report No 49, Nature Conservancy Council and Ball, S.G. (1986); Terrestrial and Freshwater Habitats with Red Data Book, Notable or Habitat Indicator Status, Invertebrate Site Register Internal Report Number 66, Nature Conservancy Council.
- <sup>8</sup> Baldock, D.W., (1999); Grasshoppers and Crickets of Surrey, Surrey Wildlife Trust, Pirbright.
- <sup>9</sup> Nationally Notable/Na; species estimated to occur within 16-30 10-kilometre squares of the National Grid system. For more information on the criteria used see Eversham, B., (1983); Defining Rare and Notable Species – a discussion document, Invertebrate Site Register Report No 49, Nature Conservancy Council and Ball, S.G. (1986); Terrestrial and Freshwater Habitats with Red Data Book, Notable or Habitat Indicator Status, Invertebrate Site Register Internal Report Number 66, Nature Conservancy Council.
- <sup>10</sup> Denton, Dr J., (2005); Beetles of Surrey – a checklist, Surrey Wildlife Trust, Pirbright.
- <sup>11</sup> Nationally Local; species estimated to occur within 101-700 10 kilometre squares of the National Grid system. For more information on the criteria used see Eversham, B., (1983); Defining Rare and Notable Species – a discussion document, Invertebrate Site Register Report No 49, Nature Conservancy Council See Ball, S.G. (1986); Terrestrial and Freshwater Habitats with Red Data Book, Notable or Habitat Indicator Status, Invertebrate Site Register Internal Report Number 66, Nature Conservancy Council.
- <sup>12</sup> Follett, P., (1996); Dragonflies of Surrey, Surrey Wildlife Trust, Pirbright.
- <sup>13</sup> Collins, G.A., (1995); Butterflies of Surrey, Surrey Wildlife Trust, Pirbright.
- <sup>14</sup> Jeffcote, G., Enfield, M., Gerrard, B., (2000); Surrey Butterfly Report, Butterfly Conservation, Surrey and SW London Branch
- <sup>15</sup> UK Biodiversity Group (1995), Biodiversity: The UK Steering Group Report. Volume 2: Action Plans, HMSO, London.

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## **Appendix 6 Preliminary Invertebrate Assessment Hare Hill 2013**

### **Scotty Dodd MSc MCIEEM**

The site was visited on 1<sup>st</sup> October 2013 to assess the habitats present for invertebrate potential. Not as full an assessment as hoped was achieved due to failing light levels. Much of the site is wooded with a similar composition to Ottershaw Chase, though there were areas of mixed broadleaved/coniferous woodland not found to be present at the former site. In general the woodland is younger with less wood decay interest. A network of open areas of grassland and scrub provide a varied and extensive woodland edge-effect to the east of the site. Shrubby growth of Hawthorn, Blackthorn, Alder Buckthorn, Dog Rose and Broom provide an excellent nectar resource for invertebrates throughout the year.

#### **Features of particular note include:**

- Aspen TQ031639 (in small wooded area to west of Spratts Lane)
- Young open grown Oak woodland TQ033639
- Grassland/scrub matrix TQ034639 south to TQ033637
- Woodland pond/wet flush TQ032637

#### **Management recommendations:**

- Remove non-native Buddleja from woodland understory in area to west of Spratts Lane.
- General thin of the above area to promote Aspen sucker growth.
- The young open grown Oaks to the north of the grassland area has the potential to be managed as parkland, i.e. selective thinning to encourage mature open-grown Oaks to develop.
- Subject to survey the wooded pond/wet flush area has potential for ecological enhancements.

#### **Further survey recommendations:**

- General survey of grassland/scrub edge habitat and woodland wetland feature.

## Hare Hill species list (26spp) 1st October 2013.

Order	Family	Taxon	Common Name	Status	Broad Habitat	Comment	Field Notes
Arachnida: Araneae	Araneidae	<i>Araneus diadematus</i>	a spider		Eurytopic		
<b>Arachnida: Araneae</b>	<b>Philodromidae</b>	<b><i>Philodromus albidus</i></b>	<b>a spider</b>	<b>Nb</b>	<b>Arboreal</b>		
Arachnida: Araneae	Tetragnathidae	<i>Metellina segmentata</i>	a spider		Eurytopic		
Arachnida: Araneae	Theridiidae	<i>Theridion tinctum</i>	a spider	Local	Arboreal		
Arachnida: Opiliones	Leiobunidae	<i>Dicranopalpus ramosus</i>	a harvestman		Arboreal		
Arachnida: Opiliones	Leiobunidae	<i>Leiobunum rotundum</i>	a harvestman		Arboreal		
Arachnida: Opiliones	Phalangiidae	<i>Paroligolophus agrestis</i>	a harvestman		Eurytopic		
<b>Coleoptera</b>	<b>Phloiophilidae</b>	<b><i>Phloiophilus edwardsii</i></b>	<b>a beetle</b>	<b>Nb</b>	<b>Wood Decay</b>	<b>Bark/Sapwood decay</b>	<b>Moribund Oak branches</b>
Coleoptera	Tenebrionidae	<i>Nalassus laevioctostriatus</i>	a beetle		Arboreal		
Dermaptera	Forficulidae	<i>Forficula auricularia</i>	Common Earwig		Eurytopic		
Diplopoda: Julida	Julidae	<i>Tachypodoiulus niger</i>	White-legged Snake-millipede		Eurytopic		
Diptera	Agromyzidae	<i>Phytomyza ilicis</i>	a leaf-miming fly		Arboreal		Holly
Diptera	Anthomyiidae	<i>Chirosia betuleti</i>	a gall-midge fly		Shaded habitats		Ferns
Hemiptera: Heteroptera	Acanthosomatidae	<i>Elasmotethus interstinctus</i>	Birch Shieldbug		Arboreal		Birch



Order	Family	Taxon	Common Name	Status	Broad Habitat	Comment	Field Notes
Hemiptera: Heteroptera	Nabidae	<i>Himacerus apterus</i>	a predatory bug		Arboreal		
Hymenoptera: Parasitica	Cynipidae	<i>Andricus quercuscalicis</i> <i>f. agamic</i>	Knopper gall causer		Arboreal		Oak
Hymenoptera: Parasitica	Cynipidae	<i>Neuroterus albipes f.</i> <i>agamic</i>	Smooth-spangle gall causer		Arboreal		Oak
Hymenoptera: Parasitica	Cynipidae	<i>Neuroterus anthracinus</i> <i>f. agamic</i>	Oyster-gall gall causer		Arboreal		Oak
Hymenoptera: Parasitica	Cynipidae	<i>Neuroterus numismalis</i> <i>f. agamic</i>	Silk-button gall causer		Arboreal		Oak
Hymenoptera: Parasitica	Cynipidae	<i>Neuroterus</i> <i>quercusbaccarum f.</i> <i>agamic</i>	Common spangle gall causer		Arboreal		Oak
Lepidoptera	Gracillariidae	<i>Phyllonorycter esperella</i>	a micro moth	Local	Arboreal		Hornbeam
Lepidoptera	Gracillariidae	<i>Phyllonorycter</i> <i>maestingella</i>	a micro moth		Arboreal		Beech
Lepidoptera	Gracillariidae	<i>Phyllonorycter</i> <i>messaniella</i>	a micro moth		Arboreal		Beech
Lepidoptera	Nepticulidae	<i>Stigmella aurella</i>	a micro moth		Grassland/Scrub		Bramble
Lepidoptera	Nepticulidae	<i>Stigmella microtheriella</i>	a micro moth		Arboreal		Hornbeam
Malacostraca: Isopoda	Porcellionidae	<i>Porcellio scaber</i>	Rough Woodlouse		Eurytopic		

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## **Appendix 7      Badger Site Visit Findings of Hare Hill 2014**

### **Dave Williams MCIEEM**

The site was visited the site on November 14 by the Mammal Officer from SWT. The vegetation was low enough to be able to see any field signs. The whole of the site, known as Hare Hill Open Space, including the area west of Spratts Lane, between The Potteries and Murray Road, was surveyed. The purpose of the survey was to look for any signs of badgers, which included setts, paths, latrines footprints. Some parts were completely overgrown and inaccessible, signs such as badger paths were relied upon to ascertain the presence of badgers in those areas.

There is a small badger sett on the area to the west of Spratts Lane, TQ03144 63861, this comprise of 5 holes, showing some sign of recent activity. There were fresh latrines about 10 metres away.

It is preferable for the sett area to have as little disturbance as possible. The area is currently used by the general public including dog walkers. Dogs can cause problems to badgers, it is not unusual for inquisitive small dogs to crawl into a badger sett, causing stress to the badgers and also putting the dog in danger from attacks from the badgers in self-defence. Dogs can also get themselves stuck in badger setts, causing distress to the owners and of course the dog.

It would be an advantage to discourage people from entering too close to the sett area, fencing is an option, but this also attracts attention. More discreet methods, such as leaving the vegetation long and even additional planting may have to be deployed, to discourage people and dogs from entering.

The sett should be monitored and the surrounding areas surveyed every 6 months.

A very old 2 hole badger sett was found some 390m along the southern edge of the site at TQ03148 63472, this has clearly not been used for many years, and does not need any protection.

## Appendix 8      Survey data from 1995 & 1996

<i>Agaricus silvicola</i>	Wood Mushroom
<i>Amanita muscaria</i>	Fly Agaric
<i>Amanita rubescens</i>	The Blusher
<i>Bjerkandera adusta</i>	a basidiomycete fungus
<i>Boletus cisalpina</i>	Red-cracking Bolete
<i>Boletus piperatus</i>	Peppery Bolete
<i>Calocera cornea</i>	a basidiomycete fungus
<i>Chlorociboria aeruginascens</i>	an ascomycete fungus
<i>Clitocybe flaccida</i>	a basidiomycete fungus
<i>Collybia butyracea</i>	Butter Cap
<i>Collybia dryophila</i>	Russet Shank
<i>Collybia fusipes</i>	Spindle Shank
<i>Collybia peronata</i>	Wood Woolly-foot
<i>Coniophora puteana</i>	Cellar Fungus
<i>Coprinus micaceus</i>	Glistening Ink-cap
<i>Crepidotus variabilis</i>	an agaric
<i>Daedaleopsis confragosa</i>	a basidiomycete fungus
<i>Hebeloma crustuliniforme</i>	Poison Pie
<i>Hebeloma mesophaeum</i>	an agaric
<i>Hypholoma fasciculare</i>	Sulphur Tuft
<i>Hypomyces chrysospermus</i>	an ascomycete fungus
<i>Hypoxylon multifforme</i>	an ascomycete fungus
<i>Inocybe geophylla</i>	an agaric
<i>Laccaria laccata</i>	Deceiver
<i>Lepiota cristata</i>	Stinking Parasol
<i>Lepista nuda</i>	Wood Blewit
<i>Lepista sordida</i>	a basidiomycete fungus
<i>Lycoperdon perlatum</i>	Puffball
<i>Lycoperdon pyriforme</i>	Stump Puffball
<i>Macrolepiota rhacodes</i>	Shaggy Parasol
<i>Mycena galericulata</i>	Bonnet Mycena
<i>Mycena galopus</i>	a basidiomycete fungus
<i>Mycena pura</i>	a basidiomycete fungus
<i>Mycena sp.</i>	a basidiomycete fungus
<i>Mycena vitilis</i>	a basidiomycete fungus
<i>Nectria cinnabarina</i>	Coral-spot Fungus
<i>Paxillus involutus</i>	Brown Roll-rim
<i>Peniophora quercina</i>	a basidiomycete fungus
<i>Phlebia merismoides</i>	a basidiomycete fungus
<i>Piptoporus betulinus</i>	Birch Polypore
<i>Pleurotus ostreatus</i>	Oyster Mushroom
<i>Pluteus atricapillus</i>	Fawn Pluteus
<i>Pseudotrametes gibbosa</i>	a basidiomycete fungus
<i>Rickenella fibula</i>	a basidiomycete fungus

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<i>Russula aeruginea</i>	a russula or milk-cap
<i>Russula atropurpurea</i>	Blackish-purple Russula
<i>Russula cyanoxantha</i>	The Charcoal Burner
<i>Russula sororia</i>	a russula or milk-cap
<i>Stereum hirsutum</i>	a basidiomycete fungus
<i>Trametes versicolor</i>	a basidiomycete fungus
<i>Tubaria autochthona</i>	an agaric
<i>Abax parallelepipedus</i>	a ground beetle
<i>Andricus fecundator</i>	Artichoke Gall
<i>Andricus quercuscalicis</i>	Knopper Gall
<i>Chorthippus brunneus</i>	Common Field Grasshopper
<i>Chorthippus parallelus</i>	Meadow Grasshopper
<i>Coccinella septempunctata</i>	Seven-spot Ladybird
<i>Conocephalus discolor</i>	Long-winged Conehead
<i>Dicranopalpus ramosus</i>	a harvestman
<i>Evarcha arcuata</i>	a jumping spider
<i>Lasius flavus</i>	Yellow Meadow Ant
<i>Lasius niger</i>	Small Black Ant
<i>Lithobius microps</i>	a centipede
<i>Lithobius variegatus</i>	a centipede
<i>Lycaena phlaeas</i>	Small Copper
<i>Metrioptera roeselii</i>	Roesel's Bush Cricket
<i>Oligolophus tridens</i>	a harvestman
<i>Oniscus asellus</i>	a woodlouse
<i>Paroligolophus agrestis</i>	a harvestman
<i>Philoscia muscorum</i>	a woodlouse
<i>Pholidoptera griseoaptera</i>	Dark Bush Cricket
<i>Pieris napi</i>	Green-veined White
<i>Porcellio scaber</i>	a woodlouse
<i>Pterostichus madidus</i>	Black Clock
<i>Subcoccinella vigintiquatuor</i>	24-spot Ladybird
<i>Trichoniscus pusillus</i>	a woodlouse
<i>Accipiter nisus</i>	Sparrowhawk
<i>Aegithalos caudatus</i>	Long-tailed Tit
<i>Anas platyrhynchos</i>	Mallard
<i>Ardea cinerea</i>	Grey Heron
<i>Carduelis carduelis</i>	Goldfinch
<i>Carduelis chloris</i>	Greenfinch
<i>Carduelis flammea</i>	Redpoll
<i>Carduelis spinus</i>	Siskin
<i>Certhia familiaris</i>	Treecreeper
<i>Columba palumbus</i>	Woodpigeon
<i>Corvus corone corone</i>	Carrion crow
<i>Corvus monedula</i>	Jackdaw

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<i>Cuculus canorus</i>	Cuckoo
<i>Dendrocopos major</i>	Great Spotted Woodpecker
<i>Dendrocopos minor</i>	Lesser Spotted Woodpecker
<i>Emberiza citrinella</i>	Yellowhammer
<i>Emberiza schoeniclus</i>	Reed Bunting
<i>Erithacus rubecula</i>	Robin
<i>Falco tinnunculus</i>	Kestrel
<i>Fringilla coelebs</i>	Chaffinch
<i>Garrulus glandarius</i>	Jay
<i>Motacilla alba yarrellii</i>	Pied Wagtail
<i>Parus ater</i>	Coal Tit
<i>Parus caeruleus</i>	Blue Tit
<i>Parus major</i>	Great Tit
<i>Passer domesticus</i>	House Sparrow
<i>Phasianus colchicus</i>	Pheasant
<i>Phylloscopus collybita</i>	Chiffchaff
<i>Phylloscopus trochilus</i>	Willow Warbler
<i>Pica pica</i>	Magpie
<i>Picus viridis</i>	Green Woodpecker
<i>Prunella modularis</i>	Dunnock
<i>Psittacula krameri</i>	Ring-necked Parakeet
<i>Pyrrhula pyrrhula</i>	Bullfinch
<i>Regulus regulus</i>	Goldcrest
<i>Sitta europaea</i>	Nuthatch
<i>Streptopelia decaocto</i>	Collared Dove
<i>Strix aluco</i>	Tawny Owl
<i>Sturnus vulgaris</i>	Starling
<i>Sylvia atricapilla</i>	Blackcap
<i>Troglodytes troglodytes</i>	Wren
<i>Turdus iliacus</i>	Redwing
<i>Turdus merula</i>	Blackbird
<i>Turdus philomelos</i>	Song Thrush
<i>Turdus pilaris</i>	Fieldfare
<i>Turdus viscivorus</i>	Mistle Thrush
<i>Oryctolagus cuniculus</i>	Rabbit
<i>Talpa europaea</i>	Mole
<i>Vulpes vulpes</i>	Fox