Ecological Management Plan

Ether Hill and Queenswood

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
Survey Ecologist	Claire Gibbs BSc(Hons) MSc MCIEEM	Survey dates 17 & 25 /02/2014 and previously 11/08/2009
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Approved by	Nicky Williamson BSc(Hons) MSc MCIEEM	Date authorised as complete 10/03/2014

The contents of this report were correct at the time of the site visit. The report is provided for the sole use of the named client and is confidential.

Contents

1.0 Introduction

1.1 Surrey Wildlife Trust (SWT) Consultancy has been commissioned by Runnymede Borough Council (RBC) to produce management plans for 6 sites which have been allocated as Suitable Alternative Natural Greenspace Sites (SANGS). This work will draw on previous work undertaken by SWT including Extended Phase 1 surveys, Access Assessments, Ecological Data Searches and specific surveys for certain species groups.

1.2 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 results from these surveys may need to be incorporated into the management plans at a later date.

1.3 This management plan covers Ether Hill and Queenswood. An extended Phase 1 survey, Access Assessment and Data Search of this site was undertaken in 2009. In addition a bat survey and reptile survey will be undertaken on this site in spring / summer 2014.

1.4 This management plan aims to bring together all available information on the site at Ether Hill and Queenswood. Using all the available information, the site has been evaluated and the important features of the site identified. For each feature, an objective is given along with a description of the management required in order to meet that objective. Targets are given where relevant. Detailed prescriptions of work to be undertaken are then given for each feature and summarised in a five year work programme (see 6.0).

2.0 Description of site

2.1 Ether Hill and Queenswood are located to the west of Ottershaw, west of Fox Hills Road adjacent to a recreation ground with a central grid reference of TQ016639. Together they cover approximately 10.8ha. The SANGS known as Ether Hill includes woodland on Ether Hill itself as well as a narrow strip of woodland which follows a footpath to the south of Ether Hill. The SANGS known as Queenswood is a block of woodland south of Ether Hill and west of the footpath. The two sites are immediately adjacent to each other and will be considered as a single site for the purposes of this management plan.

2.2 The underlying geology is Bracklesham Beds with higher ground showing as Pepple Beds. The soil type is Holidays hill, a stagnogley-podzol which is naturally sandy acid over clayey-loamy soil.

2.3 Habitats include broadleaved woodland, mixed woodland and plantation as well as a small derelict pond. See the Phase 1 surveys of the sites (appendix 2) for more details.

2.4 The site provides a network of informal paths with views over Queenswood Golf Course from the top of Ether Hill.

3.0 Evaluation of site

3.1 Woodland

Most of the site is currently covered by either broad-leaved semi-natural, mixed or plantation woodland. Broad-leaved woodland is included within the UK and Surrey Biodiversity Action Plans (BAPs). The presence of large amounts of Scots Pine causing dense shade and Rhododendron, particularly in Queenswood, greatly limit the ground flora and reduce the ecological value of the site, however recent management work has begun to address this. Only 4 ancient woodland indicator species were recorded on the site during the Phase 1 survey in 2009. This is a low number which suggests that the woodland is relatively recent in origin. There are a number of distinctive boundary banks within the site which support mature Beech and Oak specimens. Good amounts of standing and dead wood are present within the woodland.

3.2 Open water

There is a small depression/pond in the west of Ether Hill. This was totally dry during the survey in the summer of 2009, but was present as a medium sized pond during the site visit in February 2014 following unusually large amounts of rain. Local knowledge suggests that the pond frequently dries out in the summer. In addition there is a small pipe from Queenwood Golf Course through which water flows into a ditch on the site flowing towards the Chobham Road. At the time of the site visit in February 2014, the ditch was blocked with leaves and debris and the water was flowing across the footpath.

3.3 Lowland Heathland

Local knowledge and old maps suggest that the site may have been covered by heathland in the past. A map produced in 1789/1790 by Joseph Lindley and William Croftley show this site as part of a large open area including what is now Timber Hill to the south, Queenswood Golf Course, Stanners Hill and Chobham Common. Small amounts of Ling and Bell Heather remain on the site suggesting that it may be possible to regenerate some heathland on parts of the site if some trees were cleared. Heathland is identified as an important habitat in both the UK and Surrey Biodiversity Action Plans.

3.4 Non-native, invasive plants

Rhododendron which is frequent across the site is included on Schedule 9 of The Wildlife and Countryside Act (1981 as amended) which means that it is an offence *"to plant or otherwise cause to grow in the wild".*

Turkey Oak, whilst not included on Schedule 9, is recognised by Plantlife (Thomas, 2010) as posing a potentially critical risk to the UK's biodiversity.

In addition, Sycamore and Cherry Laurel, both recorded on the site are included on the draft Surrey Invasive Species list (Waite, 2013), the latter having a similar impact to Rhododendron.

3.5 Invertebrates

The data search undertaken by the Surrey Biodiversity Information Centre (see appendix 3) revealed that the Holly Blue, *Celastrina argiolus britanna* was recorded on the site in 1995. This butterfly is classified as Nationally Local; species estimated to occur within 101-700 10 kilometre squares of the National Grid system. However Butterfly Conservation class its conservation status as low priority.

Saproxylic invertebrates

An invertebrate assessment (Dodd, 2013) undertaken at the nearby site of Ottershaw Chase found it to be of particular importance for saproxylic invertebrates. Over 20 species directly associated with wood decay (e.g. bracket fungus, moribund branches and peeling bark) were recorded including 7 Nationally Scarce and 1 Red Data Book Species,

In addition, the data search revealed that Stag Beetles, *Lucanus cervus,* a UK Biodiversity Action Plan (BAP) priority species and a nationally notable b species have been recorded in the local area.

Although Ether Hill and Queenswood does not currently support the same quantities and quality of standing and dead wood as Ottershaw Chase, it would be useful to encourage it on this site. This would extend the area of suitable habitat available to the species found at Ottershaw Chase.

3.6 Bats

Bats are likely to forage on the site and to be roosting in the more mature trees. The data search revealed that Pipistrelle Bats had been recorded in the local area. A bat survey will be undertaken in spring/summer 2014. 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. Some species are BAP Priority species and SPIs.

3.7 Reptiles

The site is quite dark and reptiles are unlikely over most of the site. However, as the site was more open in the past, there may be remnant populations of reptiles such as Grass Snakes, *Natrix natrix*, Common Lizards, *Zootoca vivipara*, and Slow Worms, *Anguis fragilis*, present on the edges of the woodland and possibly along the wider paths. The open area surrounding the pond is particularly suitable for reptile species. The data search revealed that grass snakes have been recorded in the local area. 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. All British reptiles are BAP Priority species and SPIs. A reptile survey will be undertaken in spring/summer 2014.

3.8 Breeding birds

Birds will be breeding within the site. 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. Any work affecting trees or scrub should avoid the bird nesting season (March-August).

3.9 Great Crested Newts, *Triturus cristatus*

The data search revealed that Great Crested Newts have been recorded within 1km of the site. Although the pond on site is unlikely to support newts currently due to the frequency of it drying out, there is a low possibility that the species could use the woodland for foraging or hibernation. 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. Great Crested Newts are BAP Priority species and a SPI.

3.10 Position within Living Landscape

The position of Ether Hill and Queenswood 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.

As discussed above, it is thought that the site once formed part of a wider expanse of heathland. The site is less than 2km from the Chobham Common National Nature Reserve (NNR) and Site of Special Scientific Interest (SSSI) which forms part of the Thames Basin Heaths Special Protection Area (SPA) and Thursley, Ash, Pirbright and Chobham Special Area of Conservation (SAC). It is connected to the SPA via Stanners Hill and Queenwood Golf Course, both of which are Sites of Nature Conservation Importance for the heathland and remnant heathland habitats that they support.

The northern half of site lies within an area identified by Surrey Wildlife Trust as the Biodiversity Opportunity Area (BOA); TBH02 BOA – Chobham South Heaths. This indicates that there are particular opportunities for the encouragement of lowland heathland and lowland acid grassland in this area.

In addition, as discussed above, the site lies near to the Ottershaw Chase SANGS which is particularly valuable for saproxylic invertebrates and could help extend the dead wood habitat available to these species.

3.11 Access and recreation

The site is already used by the public for access and recreation although not heavily. There is a network of informal paths through the site and car parking

facilities are present at the nearby Recreation Ground. The SANGS Surveys carried out by Runnymede Borough Council (RBC) in 2012 found that by far the most common use of the site was for dog walking with walking, jogging and cycling also taking place (RBC, 2012).

The site has been selected by Runnymede Borough Council as a SANGS. According to Natural England, the role of a SANGS is to provide alternative green space to divert visitors from visiting the Thames Basin Heaths SPA. It is therefore important that this aspect of the site be encouraged through this management plan.

4.0 Management Plan Features

4.1 Feature 1 - Mixed Broad-leaved, mixed and plantation woodland

Objective
Woodland will continue to be present on the site. The woodland will have a diverse structure with a varied mix of native trees and shrubs of varied ages and a good balance between canopy, shrub and field layers. There will be frequent standing and fallen dead wood. Non-native invasive species will be no more than occasional. Approximately 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. This will allow a variety of species, including birds, bats, invertebrates and reptiles, to thrive within the woodland areas. Historical woodland features such as boundary banks will be maintained and enhanced.

Targets
- Approximately 20% off the woodland canopy will be open at any time by 2018.
- Standing dead wood and log piles will be frequent within the woodland in a variety of conditions (sunny, shaded, damp) by 2018.
- Exotic invasive species will be no more than occasional by 2018 except where valuable for aesthetic reasons such as acting as a screen for dwellings and golf course.
- 10 bird boxes will be erected on the site by 2018
- 3 groups of 3 bat boxes will be erected on the site by 2018 following advice within bat survey.

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 Rhodendron and Cherry Laurel clearance
Rhododendron and Cherry Laurel is frequent within much of the woodland on the site where it has formed dense stands (see photos 1 & 2). These species are aggressive non-native colonisers which regrow vigorously when cut. They produce a

toxic leaf litter and reduces the biodiversity value of a site by preventing natural regeneration of the canopy, understorey and field layer.

Much Rhododendron and Cherry Laurel has been cleared from the site in recent years. The removal of Rhododendron and Cherry Laurel from the woodland areas will continue be a priority. They will be cut with the stumps treated to prevent re-growth. Rhododendron is listed on Schedule 9 the Wildlife and Countryside Act 1981 which means that it is an offence to plant or cause the species to spread in the wild. Care should be taken if moving the species off site for disposal.

Some areas of Rhododendron or Cherry Laurel could be left for aesthetic reasons in appropriate locations such as where it acts as a screen for the dwelling at Ten Acres or Queenwood golf course.

Prescriptions W1-W6: Clear Rhododendron and Cherry Laurel and treat stumps with Glyphosate (twice annually) until stumps have died.
W1 – In the central section of Ether Hill north of the area of mature Scots Pines.
W2 – Small patch near to northern boundary of Ether Hill.
W3 – Area to the east of existing glade / viewpoint in the north of Ether Hill.
W4 – Area along southern boundary of site.
W5 – Area along northern boundary of Queenswood.
W6 – Area in eastern half of Queenswood.

Prescription W7-W11: Treat recently cleared areas of Rhododendron and Cherry laurel with Glyphosate (twice annually) until stumps have died.
W7 – The small patch at the viewpoint in the north of Ether Hill.
W8 – Within the glade in the west of Queenswood.
W9 – Within the scallop off the main path along the south of the site.
W10 – A small patch fairly central within Queenswood.
W11 – A block in the east of Queenswood.

Prescription W12: The Rhododendron in this location will be left in-situ as it forms an attractive archway and frames the view to the area of Scots Pine at the top of the hill (see photo 2). Clearance of some young Silver Birch here will enhance the view further.

4.1.2 Rides and glades

The second priority within the woodland areas will be to create more open space 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. In addition existing glades will be extended and new glades opened up. Priority will be given to creating rides running in an east-west direction as these are in sunlight longer than those in a north-south direction and therefore have the greatest wildlife benefit.

Wherever possible the width of the rides will be equal to or greater than the height of the adjacent canopy as this will allow as much sunlight as possible to reach the ground within these areas.

Where possible, a graded profile of vegetation will be created within the ride with short grass/herbaceous vegetation in the centre (cut annually), a longer herbaceous/shrub layer further out (cut on a 3-5yr rotation) and a shrub/transition zone at the edge of the woodland (cut on an 8-20 yr coppice rotation). A wavy edge to the rides will be created which will maximise the woodland edge, which in turn increases the habitat diversity. In addition by avoiding a long straight corridor the effect of wind funnelling is reduced and warmer sheltered pockets will be created.

Mature trees such as Oak and Beech will not be felled as part of the ride and glade creation. Sweet Chesnut will be coppiced where possible.

Some glade creation has already taken place in the woodland and these will be maintained.

Maintain existing glades

Prescription W13: This is currently an open glade with a few standing trees at the top of Ether Hill. The openness of the woodland here allows pleasant views across the adjacent golf course (see photo 3). This will be kept open by cutting back re-growth at regular intervals.

Prescription W14: This is currently an open glade with a few standing trees in the west of Queenswood (see photo 4). Maintain this glade by periodic cutting of re-growth.

Create new / extend existing glades

Prescription W15: This area within the Scots Pines on Ether Hill currently supports a small patch of Bell Heather and Ling (see photo 5). Rhododendron is also present. A small glade will be created by clearing the Rhododendron as well as the young trees in the surrounding area. Felling a few of the larger Pines to the south will reduce shading and further encourage the Heather.

Prescription W16: The existing glade in the west of Queenswood will be extended further east into the woodland by felling or coppicing existing trees and scrub and clearing any Rhododendron.

Prescription W17: Some thinning has already taken place here along with Rhododendron clearance (see prescription W9). This will be opened up further to create a glade. A narrow strip will be extended to link with the glade further north (prescription W14).

Create/enhance rides

Prescription W18: This is currently a very dark pathway leading up the hill, near the northern boundary in Ether Hill (see photo 6). Young trees (mainly Silver Birch and Holly) will be cut back a couple of metres each side of the path to create a more open walkway and an open ride.

Prescription W19: It is proposed to undertake path improvement work here in the north of Ether Hill (see prescription A1). In conjunction with the path improvement work, young Silver Birch and Holly will be cut back to create a ride. This will also help the path to dry out.

Prescription W20: This is the location of a historical boundary bank within the woodland (see photo 7). Opening up the woodland here either side of the bank will link other existing or proposed rides and allow the boundary bank to become visible where it is currently overgrown. Mature trees on the bank will be left in situ.

Prescription W21: The footpath along the northern boundary of Queenswood will be opened up by cutting back young Birch and Rhododendron. A strip of woodland will be maintained between the widened footpath and the glade (W14/16).

Prescription W22: The south western path will be widened by clearing trees and scrub, while maintaining screen along boundary with Queenwood Golf Course. This will encourage the existing heather here and help to re-define the broad pathway.

Prescription W23: This is the location of a historical boundary bank within the woodland in Queenswood which supports some relatively mature trees (see photo 8). Opening up the woodland here to the west of the bank will link other proposed rides and allow the boundary bank to be enhanced as a feature. Mature trees on the bank will be left in situ.

Prescription W24: A new footpath will be created here (see prescription A3). Clearing trees and scrub along the route of this path will encourage use of the path as well as creating a ride.

4.1.3 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 boost woody growth, whilst ensuring light penetrates the woodland floor for the field layer to flourish. It also provides a structural diversity to increase the niches for different flora and fauna. It is important to thin in small coups from a practicable point of view as well as retaining areas of mature woodland for continuity. It will be important that the Rhododendron is also controlled in these areas as otherwise the tree thinning will just encourage the growth of this invasive species.

Thinning will prioritise the younger trees and non-native species such as Turkey Oak and Sycamore will be removed preferentially where present.

Thinning has already taken place in areas across the site, by removing young Sweet Chestnut, Silver Birch and Sycamore often in conjunction with Rhododendron and Cherry Laurel clearance.

Prescriptions W25-W27: Silver Birch is quite dense within the woodland in these areas in the east of Ether Hill (see photo 9). A programme of 20-30% thinning of

young and sub-mature trees (Mainly Silver Birch) as well as Holly where necessary, will be undertaken.

Prescription W28: Silver Birch is quite dense within this woodland in the north of Ether Hill (see photo 1). In conjunction with Rhododendron clearance (see prescription W3) a programme of 20-30% thinning of young and sub-mature trees will be undertaken.

Prescription 29: A programme of 20-30% thinning of young and sub-mature trees will be undertaken in conjunction with Rhododendron clearance (see prescription W6) in this area in the east of Queenswood.

Prescription 30: This area which has already been thinned will be monitored and re-growth cut where necessary.

4.1.4 Haloing

There are a number of mature trees on the site which could be encouraged by haloing. This involves removing any scrub or trees surrounding the tree to the extent of its canopy. This will encourage the open growth of the tree and improve the health of the tree by removing competition for nutrients.

It is very important when considering haloing a mature tree to consider the potential impact on bats. Opening up the canopy around a roost can slightly change the environmental conditions and make a roost unfavourable for bats. The removal of sheltering trees adjacent to a roost can also make any roosting bats more vulnerable to predation and this could cause them to abandon the roost (Natural England and Forestry Commission, 2013).

A bat survey is to be undertaken on the site in the summer of 2014. It is recommended that no haloing of mature trees takes place until advice has been received from a bat expert.

Prescription W31 & W32: Following advice from bat expert, halo selected mature trees across the site (shown as red dots on Figure 1). Photo 10 shows an example of a tree to be haloed.

4.1.5 Dead wood

When felling trees, some of the resulting brash (finer branches) and trunks will be used to create log or habitat piles in a variety of different situations i.e. shady, sunny and damp. This will create habitat for a range of invertebrates, reptiles and amphibians. The brash will be tied into tight bundles and then stacked so as to be to be more valuable for invertebrates 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. Taking into account health and safety considerations, standing dead wood will be left in situ wherever possible. Photo 11 shows an example of standing dead wood on the site with a woodpecker hole which has come down in the recent winds.

Prescription W33: Create log/habitat piles from timber and brash resulting from management works.

4.1.6 Bird and bat enhancement

Most of the trees within this site are relatively young and lack features often exhibited by mature trees such as holes and peeling bark. Therefore a variety of bird and bat boxes will be erected on trees to simulate these features. Bat boxes will be installed at least 4 or 5m above the ground facing in different directions to provide a range of conditions. Ideally they will be sheltered from strong winds.

Prescription W34: Erect a variety of bird and bat boxes.

4.1.4 Non-intervention

In some areas of the woodland it is proposed to have minimal input within the next 5 years. This will be reviewed in 5 years time when the management plan is updated.

Prescription W35: The area of tall Scots Pines at the top of Ether Hill has a cathedral like aesthetic quality and will be left as it is for its visual impact (see photo 12). There are a number of branches which have fallen in recent winds and these will be left in situ. The only work in this area will be to clear a small glade (see prescription W15) and to erect a number of bird and bat boxes.

Prescription W36: Other than the clearance of a small area of Rhododendron (prescription W2), this area of woodland will be left as it is as a screen from the golf course.

Prescription W37: This area of woodland will be left as it is as a screen from the golf course.

Prescription W38: The woodland in this section in the south west of Queenswood supports dense young Scots Pine with limited biodiversity value. Ideally the entire area would be clear felled in order to re-create heathland in this area. However as described under the lowland heathland feature below, this is not viewed as viable at this time. Therefore these areas will be left as non-intervention – other areas within this block will be cleared to create additional rides and glades.

4.2 Feature 2 – Open Water

Objective

The pond will be re-instated and maintained on the site. The pond will not be shaded by more than 50% of the area so that enough sunlight reaches the water surface to allow vegetation to flourish. There will be a good balance between floating, emergent and marginal vegetation. No exotic invasive species will be present within the pond. Invertebrates such as dragonflies will flourish and this will indicate the general health of the waterbody. The ditch in the south of the site will remain free flowing to prevent water flowing across the footpath.

Targets

- One permanent waterbody present on site by 2018.
- No exotic invasive species present within pond.

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 small depression/pond in the west of Ether Hill. This was totally dry during the survey in the summer of 2009, but was present as a medium sized pond during the site visit in February 2014 following unusually large amounts of rain. Trees surrounding this depression will be coppiced and surrounding scrub cleared. The area of the depression will be then be excavated to re-instate the pond. Installing a bench and an information board here will encourage visitors to linger in this area. The ditch in the south of the site will be cleared of debris to ensure that it remains free flowing and water does not flow across the footpath in wet conditions.

Prescription OW1: Rhododendron, scrub and young trees will be cleared back around site of pond (see photo 13). The depression will be excavated to re-instate pond. Beware of breaking any existing clay liner.

Prescription OW2: The ditch running from the Golf Course towards the Chobham Road will be cleared of debris and excavated if necessary to maintain flow.

4.3 Feature 3 – Lowland Heathland

Objective

Woodland will remain the most prominent feature on the site. However, the creation of glades and rides within the woodland and an open area around the pond will encourage heathland vegetation which will complement the surrounding area. These areas will encourage a range of heathland plants, invertebrates and reptiles. Thought will be given as to the feasibility of creating a larger area of heathland on the site.

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.

Although there is currently no lowland heathland habitat present on the site, past land use and the presence of Ling and Bell Heather on the site indicate that it should be possible to re-create heathland in certain areas.

Heathland restoration on this site would involve the felling of a significant number of trees, followed by the scraping away of the rich, top layer of soil. This would require getting heavy machinery onto the site and conversations between the Surrey Heathland Project and Runnymede Borough Council have suggested that this work

may not be a worthwhile use of resources on this site at this time. This will be reviewed again when the management plan is updated in 5 years time.

In the meantime, the work described above for the woodland and open water features including the clearance of scrub from the site of the old pond, the creation and rides and glades within the woodland areas and the widening of the southern path will help to encourage heathland vegetation on the site.

4.4 Feature 4 - Access and recreation

Objective
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 and include a viewpoint over the surrounding area. Parking facilities will be readily available and information will be provided about the site and routes available, so visitors can get the most from their visit.

Targets
- The site allows a circular walk of 2.3-2.5km (as recommended by Natural England)
- At least 3 benches to be installed by 2018
- At least 3 Information boards to be installed by 2018
- Leaflet to be produced and distributed by 2016

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 access report undertaken in 2009 suggested that although the site currently provides approximately 3km of pathways, is not heavily used by local people. This was indicated by the informality and lack of definition to access points to Ether Hill. Management will be taken to encourage the use of the site.

Much of the site, particularly at Queenswood is currently very dark and enclosed which is not welcoming to visitors. The management discussed above including the removal of Rhododendron and the opening up of existing paths will make the site feel more safe and welcoming to visitors.

In the past tree screening has limited views from the site. Recent felling and scrub clearance at the top of Ether Hill has created a view across the golf course. This will be maintained (see prescriptions 7 and 13).

Pathways will be improved where necessary, using natural materials where possible, to ensure that the majority remain useable in all but the very worst of the weather. The existing path which circles round the hill in an anti-clockwise direction

from the children's play area will be encouraged as a main path which will lead to the view point discussed above.

Prescription A1: The path here tends to get very muddy. To address this the path will be improved as detailed in the Ottershaw Woods – Footpath Improvements Specification (Runnymede Borough Council, 2014).

Prescription A2: The footpath will be improved between the Rhododendron here as detailed in the Ottershaw Woods – Footpath Improvements Specification (Runnymede Borough Council, 2014). It is hoped that this will encourage users to use this path rather than an existing route which crosses mature tree roots which has been used to avoid muddy conditions. Clearing back the Rhododendron here will also help the path to dry out.

Prescription A3: A new footpath will be created in the east of Queenswood.

Prescription A4: A timber ladder board will be installed to enable the path to cross the bank.

The installation of a benches and information boards will encourage users to linger in certain areas of the site and enhance the visitor experience. Information boards will provide; a history of the site, information about wildlife to be found on the site, a map of the site showing paths and features of interest and event and other information e.g. guided walks. Visually sensitive waymarking will be installed to guide people around the main routes of the site. This will include the main route onto Ether Hill from the recreation ground car parks. Information and signposting will alert site users to the nearby SANGs sites, Ottershaw Chase, Timber Hill and Chaworth Copse so that visitors can combine use of these sites for longer walks. In addition a leaflet will be produced which will be distributed to local households and displayed next to the information boards.

Prescription A5: Install benches;

- at view point,
- at site of re-instated pond.
- at corner on western boundary looking across at mature Scots Pine trees.

Prescription A6: Install information boards;

- at view point,
- at site of newly reinstated pond,
- within both recreation ground car parks.

Prescription A7: Install visually sensitive waymarking on main routes.

Prescription A8: Produce and distribute a leaflet including information on the site and network of footpaths (in combination with other nearby SANGS sites).

4.5 Feature 5 - Monitor and Review

Objective
Monitoring will take place to ensure the objectives within this plan are achieved. The plan will be reviewed periodically to ensure it is realistic and incorporates all relevant information. It will be reviewed in its entirety in 2018.

Management rationale
Relevant information will be incorporated into the plan as it becomes available.

Prescription M1: The recommendations from the 2014 bat and reptile surveys will be incorporated into the management plan where necessary.

Progress towards achieving the actions within this management plan will be reviewed annually. The action plan will be amended as necessary to ensure that it remains realistic.

Prescription M2: The work programme will be reviewed annually.

It is recommended that the Phase 1 survey is repeated in 2018. The results of this survey will be used to help assess whether the objectives of the management plan have been met.

Prescription M3: A phase 1 survey will be repeated on the site in 2018. It will be useful to measure the following aspects:

- The percentage of open space within the woodland,
- The presence and abundance of invasive non-native species,
- The abundance of standing and fallen dead wood,
- The frequency of Heather on the site.

Following the results of the Phase 1 survey undertaken in 2018, the entire management plan will be reviewed and ideally a new plan developed for the next 5 years.

Prescription M4: Review the management plan in it's entirely in 2018 and develop a plan for the next 5 years.

5.0 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.

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.

As discussed in section 4.1.4, the haloing of mature trees could 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 haloing of mature 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. Great Crested Newts have been recorded within 1km of the site. The pond on site has been dry for many years until the unusually wet conditions in 2014 and therefore the likelihood of it supporting a population of Great Crested Newts is low. It would be good practice to carry out any management work on the pond during the winter months when any newts are likely to be away from the pond.

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.

Any thinning or felling operations greater than $5m^3$ will require a felling licence from the Forestry Commission.

6.0 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.

Red = High
Amber = Medium
Green = Low

Table 1 - Full Prescription list with priorities

Ref.	Prescription	Year with priority				
		2014	2015	2016	2017	2018
W1	Clear Rhododendron and Cherry Laurel and treat stumps with Glyphosate (twice annually) until stumps have died.					√
W2				√		
W3				√		
W4		√				
W5			√			
W6					√	
W7	Treat recently cleared areas of Rhododendron and Cherry laurel with Glyphosate (twice annually) until stumps have died.	√	√	?	?	?
W8		√	√	?	?	?
W9		√	√	?	?	?
W10		√	√	?	?	?
W11		√	√	?	?	?
W12	Leave Rhododendron in this location in-situ - clear young Silver Birch to enhance the view further.	√				
W13	Keep glade open by cutting back re-growth at regular intervals.		√		√	
W14	Maintain glade by periodic cutting of re-growth.		√		√	
W15	Create a small glade will be by clearing the Rhododendron as well as the young trees in the surrounding area. Felling a few of the larger Pines to the south will reduce shading and further encourage the Heather.	√				
W16	Extend the existing glade further into the woodland by felling or coppicing existing trees and scrub and clearing any Rhododendron		√			
W17	Thin further trees to create a glade. A narrow strip will be extended to link with the glade further north (P14).			√		
W18	Cut back young trees (mainly Silver Birch and Holly) a couple of metres each side of the path to create a more open walkway and an open ride.	√				
W19	In conjunction with the path improvement work, cut back young Silver Birch and Holly to create a ride.	√				
W20	Open up woodland either side of boundary bank to link with other existing/proposed rides. Leave mature trees on bank.					√
W21	Open up along footpath by cutting back young Birch and Rhododendron. Maintain a strip of woodland between the widened footpath and the glade P14/16).		√			
W22	Widen the south western path by clearing trees and scrub, while maintaining screen along boundary with Queenwood Golf Course.	√				

Ref.	Prescription	Year with priority				
		2014	2015	2016	2017	2018
W23	Open up woodland to the west of the bank by felling young trees and clearing scrub in order to link other proposed rides and allow the boundary bank to be enhanced as a feature. Mature trees on the bank will be left in situ.				√	
W24	A new footpath will be created here (see P43). Clear trees and scrub along the route of this path to encourage use of the path as well as creating a ride.	√				
W25	Undertake a programme of 20-30% thinning of young and sub-mature trees (mainly Silver Birch) as well as Holly where necessary.			√		
W26					√	
W27						√
W28	In conjunction with Rhododendron clearance (see P3), undertake a programme of 20-30% thinning of young and sub-mature trees.			√		
W29	Undertake a programme of 20-30% thinning of young and sub-mature trees in conjunction with Rhododendron clearance (P6).				√	
W30	Monitor already thinned area and cut re-growth where necessary.			√		√
W31	Halo selected mature trees across the site (following advice from bat expert).	√				
W32		√				
W33	Create log/habitat piles from timber and brash resulting from management works.	√	√	√	√	√
W34	Erect a variety of bird and bat boxes.	√				
W35	Leave Scots Pines at the top of Ether Hill for visual impact. Leave fallen branches in situ. The only work in this area will be to clear a small glade (see P15) and to erect a number of bird and bat boxes.	N/A	N/A	N/A	N/A	N/A
W36	Other than the clearance of a small area of Rhododendron (P2), this area of woodland will be left as it is as a screen from the golf course.	N/A	N/A	N/A	N/A	N/A
W37	Leave this area of woodland as a screen from the golf course.	N/A	N/A	N/A	N/A	N/A
W38	These areas will be left as non-intervention – other areas within this block will be cleared to create additional rides and glades.	N/A	N/A	N/A	N/A	N/A
OW1	Clear back Rhododendron, scrub and young trees around site of pond. Excavate the depression to re-instate pond. Beware of breaking any existing clay liner.		√			
OW2	Clear the ditch running from the Golf Course towards the Chobham Road of debris and excavate if necessary to maintain flow.	√				
A1	Improve path as detailed in the Ottershaw Woods – Footpath Improvements Specification.	√				
A2	Improve path as detailed in the Ottershaw Woods – Footpath Improvements Specification.	√				
A3	Create new footpath in the east of Queenswood.	√				
A4	Install timber ladder board to enable the path to cross the bank.	√				
A5	Install benches; • at view point, • at site of re-instated pond. • At corner on western boundary looking across at mature Scots Pine trees.	√				
A6	Install information boards; • at view point,	√				

Ref.	Prescription	Year with priority				
		2014	2015	2016	2017	2018
	• at site of newly reinstated pond, • within both recreation ground car parks.					
A7	Install visually sensitive waymarking on main routes.	√				
A8	Produce and distribute a leaflet including information on the site and network of footpaths (in combination with other nearby SANGS sites).	√				
M1	Incorporate the recommendations from the 2014 bat and reptile surveys into the management plan where necessary.	√				
M2	Review work programme annually.	√	√	√	√	√
M3	Repeat phase 1 survey of site measuring the following aspects: - % of open space within the woodland, - Presence / abundance of invasive non-native species, - Abundance of standing and fallen dead wood, - Frequency of Heather on the site.					√
M4	Review the management plan in its entirely and develop a plan for the next 5 years.					√

7.0 References

- Natural England, 2007, *Guidelines for the creation of Suitable Accessible Natural Green Space.*

- Natural England, Forestry Commission, 2013, *Guidance on Managing Woodlands with bats in England,* October 2013.

- Runnymede Borough Council, 2012 *Suitable Alternative Natural Greenspace Surveys.*

- Runnymede Borough Council, 2014 *Ottershaw Woods – Footpath Improvements Specification.*

- Surrey Wildlife Trust, 2013, *Runnymede SANGs – Ottershaw Chase & Hare Hill - Preliminary Invertebrate Assessment.*

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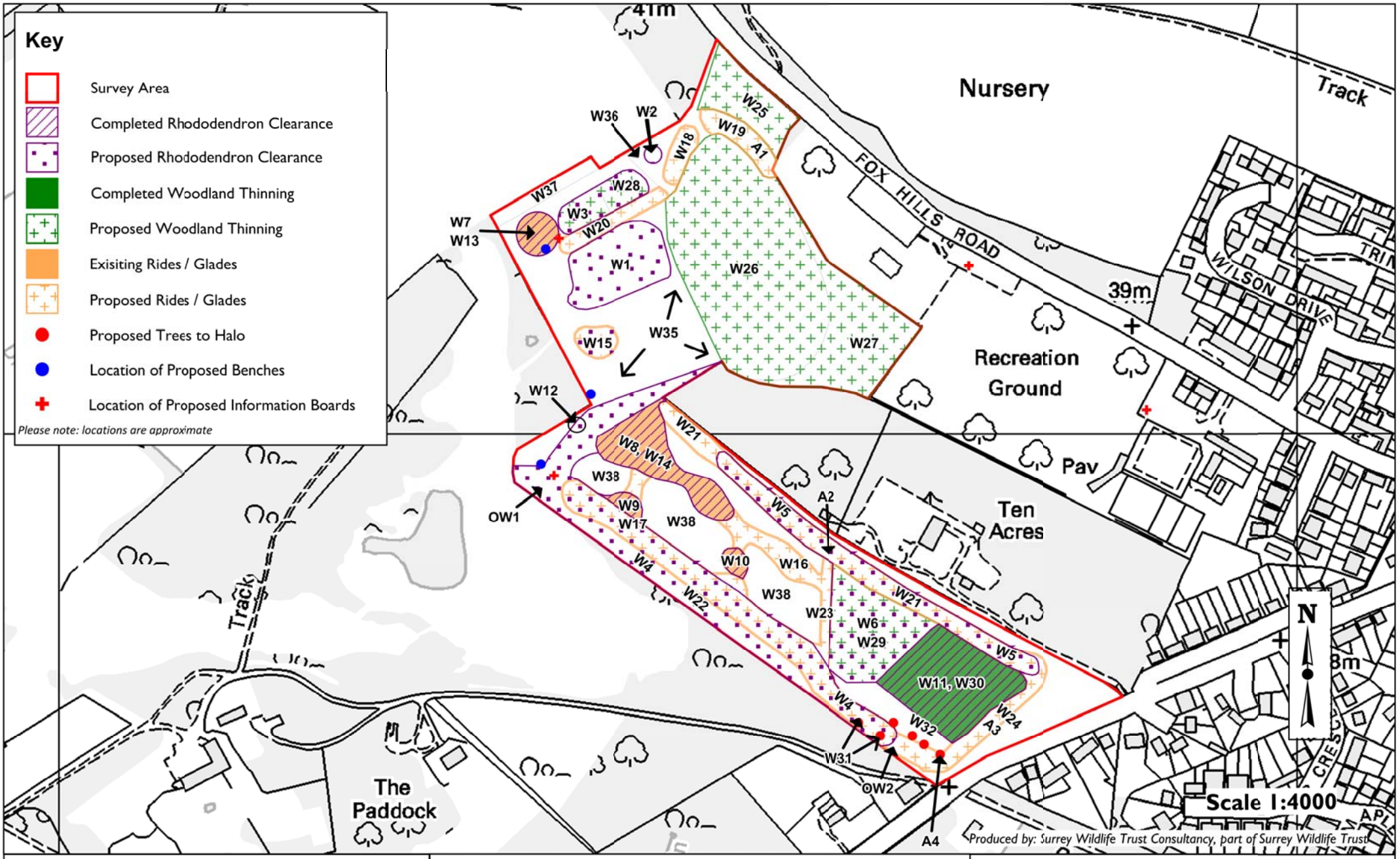

Figure 1
Ether Hill & Queenswood
Management Prescriptions

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Appendix 1 - Photographs

Photo 1 – Rhododendron

Photo 2 – Archway of Rhododendron (W12)

Photo 3 – View over Queenswood Golf Course (W13)

Photo 4 – Open glade (W14)

Photo 5 – Bell Heather and Ling (W15)

Photo 6 – dark pathway leading up hill (W18)

Photo 7 – Boundary bank (W20)

Photo 8 – Boundary bank (W23)

Photo 9 – Woodland to be thinned (W25-27)

Photo 10 – Tree to be haloed (W32)

Photo 11 – Example of standing dead wood

Photo 12 – Pines on top of Ether Hill (W35)

Photo 13 – Pond (OW1)

Appendix 2 – Extract from Phase 1 Surveys of Runnymede SANGS Sites (Gibbs, 2009).

Phase 1 surveys of Runnymede SANGS sites

Written by Claire Gibbs MSc BSc (hons) MIEEM
August 2009

Surrey Wildlife Trust, School Lane, Pirbright, Woking, Surrey GU24 0JN

1. Introduction

1.1 Surrey Wildlife Trust (SWT) Consultancy has been commissioned by Runnymede Borough Council to undertake phase 1 habitat surveys of 7 Suitable Accessible Natural Green Space (SANGS) sites within Runnymede. Figure 1 shows the location of the survey sites.

1.2 The aim of the survey is to inform an access assessment on the sites. It is hoped that the access assessments and phase 1 surveys will help inform the production of management plans for the sites.

1.3 Background ecological data searches were conducted for the sites by the Surrey Biological Records Centre in order to highlight any notable or protected species in the area of the sites.

1.4 The site visits were conducted by Claire Gibbs MSc BSc (Hons) MIEEM of SWT Consultancy between the dates of 13th July and 11th August 2009.

1.5 The timing of the survey whilst appropriate for a basic phase 1 survey, is not the optimal time for botanical survey of woodlands. In order to record the most species within woodland habitats it is recommended that a spring time survey is carried out. Therefore this survey may not have picked up all the species present on the woodland sites.

2. Methodology

2.1 Phase 1 habitat survey is a standardised system for classifying and mapping semi-natural vegetation and wildlife habitats in Great Britain. Vegetation is mapped in terms of standard habitat types as defined in the JNCC Handbook for Phase 1 Habitat Survey (1990). This methodology was extended to include an assessment of the suitability of the habitats recorded to support protected species.

2.2 Where the abundances of species are mentioned, these are based on the DAFOR scale and usually refer to the specific section of the site under discussion in the site notes. The DAFOR scale is a way of describing the abundance of a species using the following key:-

(**L**ocally) **D**ominant **A**bundant **F**requent **O**ccasional **R**are

Please note that plants described as "*rare*" means that they were not found often over this site or location and does not necessarily indicate a county or national rarity.

2.3 Throughout the descriptions, plants are referred to by their English names. For reference the full species list at the end of each report section offers both English and Latin names.

7. Ether Hill and Queenswood

Date of survey: 11th August 2009

7.1 Site description

Ether Hill and Queenswood are located to the west of Ottershaw, west of Fox Hills Road adjacent to a recreation ground with a central grid reference of TQ 016639. The SANG known as Ether Hill includes woodland on Ether Hill itself as well as a narrow strip of woodland which follows a footpath to the south of Ether Hill. The SANG known as Queenswood is a block of woodland south of Ether Hill and west of the footpath.

The underlying geology is Bracklesham Beds with higher ground showing as Pepple Beds. The soil type is Holidays hill, a stagnogley-podzol which is naturally sandy acid over clayey-loamy soil. Habitats include broadleaved woodland, mixed woodland and plantation as well as a small area of damp grassland.

7.2 Target notes (description of habitats) - Queenswood

1) This is an area of semi-natural broadleaved woodland. Pedunculate oak, sweet chestnut and beech make up the canopy. Scots pine is present but rare. Silver birch is frequent and forms a sub canopy, along with occasional downy birch, sycamore, holly and rowan. Rhododendron is frequent throughout forming dense stands in places. On the ground bramble is abundant with locally frequent bracken. Pendulous sedge and soft rush are locally frequent in the wetter areas. Other occasional species particularly along the paths include herb bennet, male fern, enchanter's nightshade and wood dock. A bank marks the northern boundary of this section on which grows mature pedunculate oak and beech.

2) North of the bank, the woodland is very different. The canopy is much younger than in the south and is thought to be natural regeneration on clear felled woodland. Thin etiolated trees are closely packed forming dark and oppressive woodland. Much of the area is dominated by Scot's pine with silver birch frequent and dominant in places particularly near the edges of the woodland. There is also occasional downy birch, sweet chestnut, rowan and beech. Rhododendron is again frequent and locally dominant. Ground flora is sparse due to lack of light, but bracken and bramble are frequent in places. Along the path in the north it is slightly more open and ling becomes frequent in places. Common bent and soft rush are occasional. Bell heather is occasional along the southern bank.

7.3 Target notes (description of habitats) – Ether Hill

1) The strip of land in the south of this SANGs site runs along a footpath to the south west of Queenswood (which itself is a separate SANGs site). It runs from Ether Hill to the A319 main road. It is a well used path with woodland either side. Woodland banks run either side of this strip with some mature trees present particularly to the south. These include Sweet chestnut, pedunculate oak, beech and Scot's pine.

   In the north the path runs through mixed woodland. Birch is frequent with occasional Scot's pine, pedunculate oak and sweet chestnut. Rhododendron is locally abundant below, particularly on the edge of the golf course. Bracken is frequent with occasional purple moor-grass. On the northern bank bell heather is occasional.

   Further south the path runs through semi-natural woodland where pedunculate oak, beech and sweet chestnut form the canopy with birch in an understory. Rhododendron again is a feature of the shrub layer with bracken and bramble also frequent. In the more open areas, creeping bent and soft rush are locally frequent.

2) This is an open glade in the western corner of the site north of target note 1. There is a small depression which used to be a pond, however this is now totally dry and has become invaded by purple moor-grass. A couple of grey willow trees are present adjacent to the site of the old pond. To the south and west of this is an open glade dominated by purple moor-grass. Ling is also occasional at the edges. Scrub around the edges of this area includes silver and downy birch, gorse, rhododendron and bramble. There are also 3 Scots pine within the glade as well as occasional seedlings of birch, grey willow, pine, sweet chestnut and pedunculate oak which may cause the glade to be lost if not managed. A survey in 2000 found ling and bell heather to be more frequent in this area than it is today.

3) This area is dominated by tall Scot's pine and little else. Silver birch is occasional at the edges. The ground is mostly bare except for occasional bracken. A bank runs along the western edge.

4) To the east, birch also becomes frequent in the canopy along with the pine.

5) North of the pine plantation is mixed woodland with Scot's pine, sweet chestnut and pedunculate oak in the canopy and silver and downy birch in the sub-canopy. Rhododendron is frequent in the shrub layer with bracken on the ground.

6) The woodland in this section consists of dense young silver birch with occasional sweet chestnut and rowan. Rhododendron is frequent below with abundant bracken and bramble on the ground.

7) Broadleaved semi natural woodland covers the east of Ether Hill. Pedunculate oak dominates the canopy with occasional sweet chestnut. Silver birch forms a sub-canopy. Holly is frequent in the shrub layer with occasional elder, hazel and rowan the latter of which is most frequent in the north. In places the trees are so dense and holly so dominant that there is little ground flora. In other areas bramble and bracken are frequent. Other species in the ground flora include honeysuckle, nettle and ivy as a climber and creeper.

7.4 Ecological value of site / possible ecological constraints

Ether Hill and Queenswood were surveyed by Surrey Wildlife Trust in 2000 as part of a project to identify Sites of Nature Conservation Importance (SNCIs) in Surrey. At that time it was felt that the sites were not of sufficient ecological value to warrant selection as an SNCI. The presence of large amounts of Scot's pine causing dense shade and rhododendron particularly in Queenswood greatly limit the ground flora and reduce the conservation value of the site. Nevertheless as a good sized area of natural habitat, the site does have local ecological value.

Local knowledge and old maps suggest that the site may have been heathland in the past. Small amounts of ling and bell heather remain on the site suggesting that it may be possible to regenerate some heathland on parts of the site if some of the trees were cleared. Heathland is identified as an important habitat in both the UK and Surrey Biodiversity Action Plans.

Rare and/or protected species
The data search for this site revealed that the following species of note has been recorded on the site;

- Holly blue, *Celastrina argiolus britanna*

This butterfly is classified as Local and was recorded on the site in 1995. Any management which increases the light within the woodland is likely to benefit this species.

No specific species surveys were undertaken, however the following rare or protected species were found to have a high potential of being 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. The data search revealed that pipistrelle bats had been recorded in the local area. 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.

- Breeding 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. Birds will be breeding within the site. Any work affecting trees or scrub should avoid the bird nesting season (March-August).

- 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. The site is quite dark and reptiles are unlikely over most of the site. However, as the site was more open in the past, there may be remnant populations of reptiles such as grass snakes, *Natrix natrix*, common lizards, *Zootoca vivipara*, and slow worms, *Anguis fragilis*, present on the edges of the woodland and possibly along the wider paths. The open area at target note 2 at Ether Hill is particularly suitable for reptile species. The data search revealed that grass snakes have been recorded in the local area. If any major work were to take place in any of these areas, it is advised that they are surveyed for reptiles and that appropriate mitigation be undertaken to avoid harming these species.

- Stag beetle, *Lucanus cervus.*

The data search revealed that stag beetles have been recorded in the local area. They could also potentially be present within this site as the habitat is suitable. The stag beetle is a UK Biodiversity Action Plan (BAP) priority species and a nationally notable b 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.

Great Crested Newts, *Triturus cristatus*

The data search revealed that great crested newts have been recorded within 1km of the site. Although there are currently no water bodies on the site itself, there is a low possibility that the species could use the woodland for foraging or hibernation. 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. Depending on what work is to be undertaken on the site, precautions may need to be taken to prevent harming this species or its habitat.

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

7.5 Queenswood Species List

Abundance uses the DAFOR system;

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

[Please note that plants ranked are '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**
Ilex aquifolium	Holly	O
Fagus sylvatica	Beech	O
Quercus robur	Pedunculate Oak	F
Rubus fruticosus agg.	Bramble	F
Carex pendula	Pendulus Sedge	O
Sorbus aucuparia	Rowan	O
Castanea sativa	Sweet Chestnut	F
Geum urbanum	Herb Bennet	O
Rhododendron ponticum	Rhododendron	F
Carpinus betulus	Hornbeam	R
Pteridium aquilinum	Bracken	LF
Salix caprea	Goat Willow	R
Circaea lutetiana	Enchanter's-nightshade	O
Lonicera periclymenum	Honeysuckle	O
Juncus effusus	Soft Rush	O
Dryopteris dilatata	Broad Buckler-fern	R
Hedera helix	Ivy	R
Salix cinerea	Grey Willow	R
Carex remota	Remote Sedge	R
Chamerion angustifolium	Rosebay Willowherb	R
Betula pubescens	Downy Birch	O
Betula pendula	Silver Birch	F
Quercus cerris	Turkey Oak	R
Pinus sylvestris	Scots Pine	LA
Calluna vulgaris	Ling	LF

7.6 Ether Hill Species List

Abundance uses the DAFOR system;
(**L**ocally) **D**ominant, **A**bundant, **F**requent, **O**ccasional, **R**are
[Please note that plants ranked are '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
Acer pseudoplatanus	Sycamore	O
Agrostis capillaris	Common Bent	R
Agrostis stolonifera	Creeping Bent	O
Betula pendula	Silver Birch	F
Betula pubescens	Downy Birch	O
Calluna vulgaris	Heather	R
Carex pendula	Pendulus Sedge	R
Carex pilulifera	Pill Sedge	R
Carex remota	Remote Sedge	R
Castanea sativa	Sweet Chestnut	F
Circaea lutetiana	Enchanter's-nightshade	O
Corylus avellana	Hazel	O
Deschampsia flexuosa	Wavy Hair-grass	O
Dryopteris filix-mas agg	Male Fern	R
Epilobium montanum	Broad-leaved Willowherb	O
Fagus sylvatica	Beech	O
Fraxinus excelsior	Ash	R
Geranium robertianum	Herb-Robert	R
Geum urbanum	Herb Bennet	O
Hedera helix	Ivy	O
Ilex aquifolium	Holly	LF
Juncus effusus	Soft Rush	O
Lonicera periclymenum	Honeysuckle	R
Molinia caerulea	Purple Moor-grass	LA
Pinus sylvestris	Scots Pine	LD
Pteridium aquilinum	Bracken	F
Quercus cerris	Turkey Oak	R
Quercus robur	Pedunculate Oak	F
Rhododendron ponticum	Rhododendron	F
Rubus fruticosus agg.	Bramble	F
Salix cinerea	Grey Willow	R
Sambucus nigra	Elder	O
Sorbus aucuparia	Rowan	O
Taxus baccata	Yew	R
Trifolium repens	White Clover	R
Tsuga heterophylla	Western Hemlock	R
Ulex europaeus	Gorse	R
Urtica dioica	Common Nettle	LF
Calluna vulgaris	Ling	O

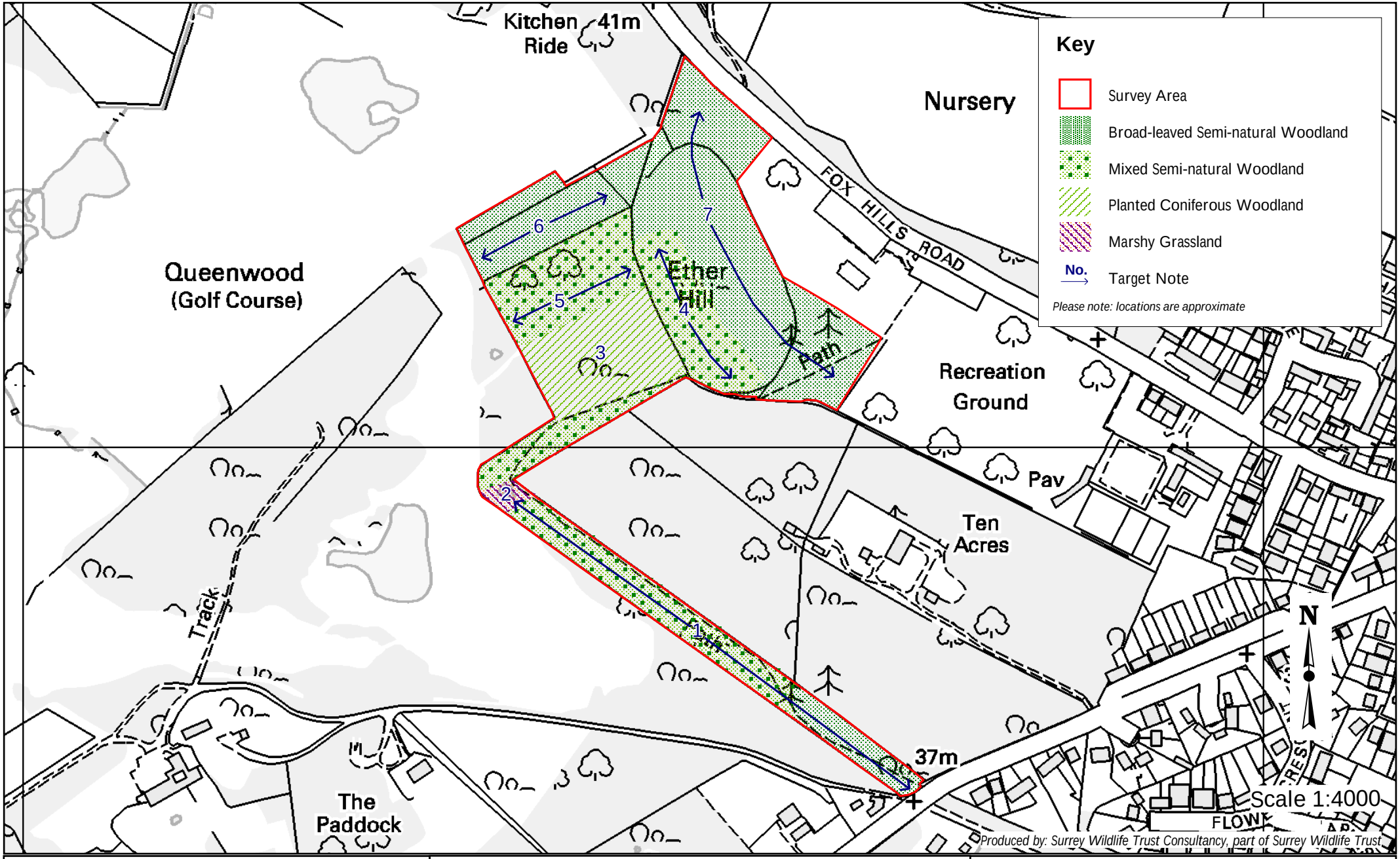

Figure 8
Ether Hill
Phase 1 Survey Results

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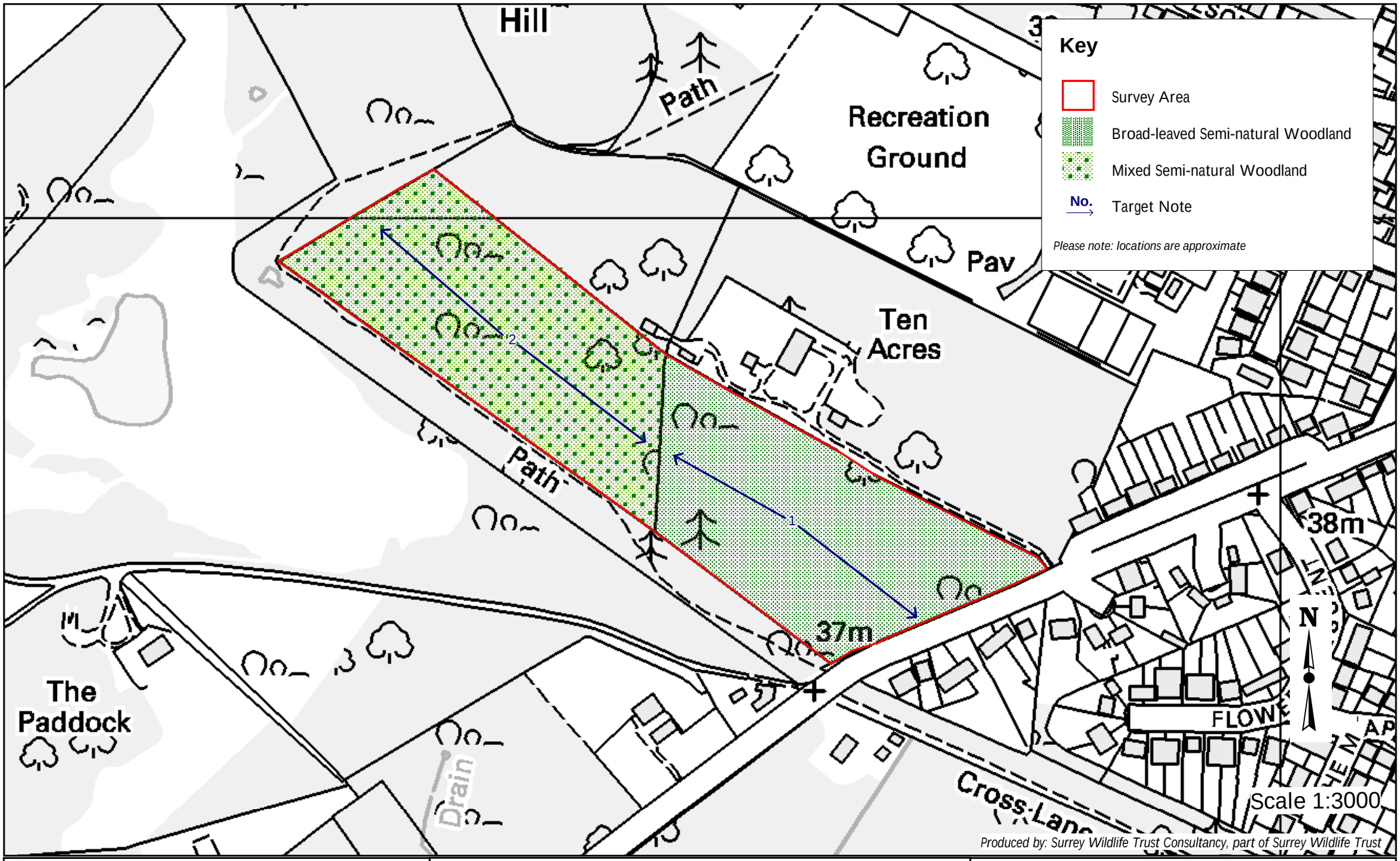

Figure 7
Queenswood
Phase 1 Survey Results

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Appendix 3 – Extract from Access Surveys of Runnymede SANGS Sites (Anckorn, 2009).

Access Surveys of Runnymede SANGS Sites

Ken Anckorn BSc (Hons) DipMus DipEnv
September 2009

Surrey Wildlife Trust, School Lane, Pirbright, Woking, Surrey GU24 0JN

Runnymede Borough Council
Proposed
Suitable Accessible Natural Green Space (SANGS) Sites.

Public Access Assessment

1. Introduction

Runnymede Borough Council have commissioned Surrey Wildlife Trust (SWT) Consultancy to undertake an assessment of its proposed SANGS sites by walkover survey of each site, to assess them for their ability to satisfy Natural England's public access criteria for such sites. The purpose of a SANGS site is to attract public to use these sites for dog walking and quiet recreation instead of using the Thames Basin Heaths Special Protected Areas (SPA) for such purposes, thus reducing human pressure on the SPA resulting from housing development within 5km of the SPA.

The location of the seven sites assessed is shown in Figure 1. These assessments have taken into account the ecological information contained in the Phase 1 Surveys, also conducted by SWT Consultancy August 2009, to identify important ecological features, influence pathway selection and ensure that management works recommended by this assessment do not have a detrimental effect on any ecologically sensitive habitats. Each site was assessed on its current condition and general accessibility with regard to vegetation type and density in addition to visitor facilities including, car parks, pathways, signage, 'furniture' (bins, benches) and general accessibility.

Note that as some of the seven sites are adjacent to each other these have been considered as one SANGS site for the purposes of this report, these being Timber Hill and Chaworth Copse also Hare Hill and Queenwood.

Following the site survey visits, recommendations have been made regarding alterations designed to make each site better fitted to fulfil its function as a SANGS, while still retaining and where possible enhancing its biodiversity value.

2. Methodology

Each site was visited by the surveyor and a thorough walk-over survey conducted. The routes of the existing main pathways were noted, together with other existing visitor facilities. The location of each major habitat type was noted and any significant ecological feature taken into account. Any particularly sensitive ecological areas were carefully identified.

Man made features on the site, reflecting the local social history of the site was also considered, to be incorporated where relevant into the recommendations for improving public access and enjoyment of the site. Where possible key features on each site were selected to be used as focus points for visitor interest, to emphasise each site's unique qualities and add to its attractiveness as an alternative recreation space to the SPA

Lengths of pathways were measured to give an approximate figure for the distance a visitor could cover when using the paths on site. Where the sites are smaller than recommended, suggestions are made to indicate how adjacent sites can be regarded as one SANGS to provide the length of footpaths required by SANGS criteria.

2.1 Species Survey Work

When preparing detailed plans for the SANGS sites, including future Management Plans, full protected species information must be available in order that legally protected and important species are not adversely affected by any SANGS works. As the sites are mostly woodland, surveys for bats and badgers will be most important but there may also be the need for dormouse, reptile and amphibian survey work.

Data searches have been made to aid ascertaining the presence of other important species, so that any SANGS work such as path improvements and vegetation thinning avoids sensitive areas, the findings of these are given in the Phase 1 survey report SWT Consultancy 2009.

2.2 SANGS Requirements

All the sites are of sufficient interest due to their topography and current vegetation to satisfy SANGS criteria. Most have sufficient length of path to provide adequate SANGS walking routes but six of the seven sites, St Ann's Hill being the exception, are closely linked by footpaths and can be walked in-combination to provide longer distances.

The maps (Figures 2 – 6) provided give an indication of the main paths on the sites and the length of walks available.

The paths selected for SANGS use should only be confirmed after protected and important species survey information is available for each site

2.3 Information

In addition to information panels, notice boards and way markers on site; a suite of SANGS leaflets should be provided to help visitors find their way around sites and to act as advertisement. These leaflets should be available both as hard copy at off-site information points and downloadable from a website.

7.0 Ether Hill and Queenswood

7.1 Description

These two woodland sites should be considered as a single SANGS site as they are jointly supplied by car parking facilities at the Recreation Ground at Ottershaw.

Queenswood, part of the former Queenswood Estate consists of two compartments of densely planted woodland, separated by a ditch and bank, a remnant of the enclosures of the 19th century.

The most interesting feature of Ether Hill is the undulating nature of the top of the hill, a result of previous generations exploiting the sand and gravel deposits which make up the hill, to repair local roads and pathways. Indeed the main pathway from the east side of the site, off Chobham Road (A319), is an old trackway preserved through the enclosure acts of the 19th century to allow local access to the important gravel deposits on Ether Hill.
The hill may also have been the site of a gallows!

Ether Hill, with its easy access off the Ottershaw Recreation Ground is the better used of the two sites, by local residents but the informality and lack of definition to access points to the hill, indicate that it is not heavily used by local people. Two large car parks with a combined capacity for 96 car spaces, dog waste bins, litter bins and public lavatories, provide adequate facilities for a significant increase in the current level of visitors.

The Recreation Grounds currently provide the following facilities:

- Children's Play Ground;
- A basketball/netball court;
- Benches;
- Litter and dog waste bins;
- Public lavatories; and
- Sports pitches.

The proposed SANGS sites provide a network of informal paths through mixed woodland with limited views and biodiversity interest.

7.2 Current Facilities

1. Car Parks

There are two surfaced car parks on the Recreation Ground below Ether Hill. The one nearest Ether Hill has 44 car parking spaces and the other 52 spaces, both have dog waste bins and litter bins. The recreation ground has a children's play area, a basketball/netball court, a number of benches around the edge and public lavatories near the bowling club.

2. Pathways

Both sites are well supplied by a network of informal paths running through the sites. There is a public bridleway which runs from the top of Ether Hill and follows the south-west boundary of the SANGS until it reaches Chobham Road. The Section of this path, where it follows the south-west side of Queenswood SANGS is wide and marked by boundary banks on each side. This path is the remnant of a public track which allowed local people to extract sand and gravel from Ether Hill for general use around the area, particularly for the upkeep of local roads.

3. Furniture

There are no bins or benches on either of the two SANGS sites. The bridle way is waymarked and there are one or two other footpath signs on the boundary of the sites.

4. Special Features

Ether Hill in itself is a feature of the local landscape and the highest point in Ottershaw. Unfortunately views are almost non-existent due to tree screening. The top of the hill has an interesting appearance due to its uneven contours, a remnant of sand and gravel extraction works. The gravel found on the surface here is rounded by the action of water, indicating that at one time it was on the bed of some waterbody!

The woodland on top of the hill is largely tall Scots pine, giving it a cathedral like quality.

The woodland around the sides of the hill is more deciduous with, in places an understory of holly and rhododendron/laurel.

Queenswood is densely planted with trees and access is only available on a limited number of paths.

There are the remains of a pond in the western corner of the site, once a more significant feature, where locals once skated in the winter, but is now little more than a marshy area.

The path up the hill to the pond is broad and would be more imposing if it was not badly overgrown by scrub and young trees.

7.3 Recommendations

Although Ether Hill is probably reasonably well used by locals, due to the good car parking facilities close by, its enclosed feel and unobtrusive access will probably deter a lot of users. The provision of benches around the Recreation Ground and the children's play area will also be a competitive draw.
The SANGS must be made more 'user- friendly' if they are to attract more walkers. The following elements should be considered to improve access.

a) Car Parking

The existing car parks should provide more than enough spaces for the SANGS. Currently no information is provided in the car parks to tell visitors where the SANGS sites are, how they can be accessed and what there is to see.

b) Improving Site Interest

The major elements to improving site interest are:

- Reinstating the pond;
- Creating a view point from the top of Ether Hill;
- Improving the pathways by route improvement; and
- Removing any serious path obstacles and opening up areas of dense vegetation to allow more light onto the paths and improve site biodiversity with more ground flora attracting a greater variety of animal life.

A pond would provide another focal point for the site and a destination for walks. Benches and an information board would be a welcome attraction but a section of the pond should be maintained access free to allow wildlife to flourish.
A viewpoint at the top of the hill, together with an easier approach via a more gradually sloped path, should attract more users.
Paths should be more open and obvious to appeal to a broader spectrum of users. Clearance work can improve biodiversity, provided ecological survey data is used to avoid damaging more important habitat, protected and important species.
There is a remnant of heathland on the top of Ether Hill on the western side. Serious thought should be given to removing trees from this area, scraping away the top, rich humus layer and allowing heathland to return.

c) Visitor Access

At the time of survey, all paths were dry and easily walked. Without removing the informal nature of the paths, improvements should be carried out to ensure that paths remain useable in all but the very worst of weather. Visitors must have the idea that this is an 'all-weather' site.
The topography of this site makes it less useable by disabled visitors.
Signposting of the main route onto Ether Hill from the Recreation Ground car parks is required. The path which circles round the hill in an anti-clockwise direction from the children's play area should be made into the main path. It should circle round the hill on the shallowest of gradients possible until it reaches the top at a new view point, which should be supplied with benches and an information board. Benches could also be supplied on the route up and it may be possible to open a view over the golf course.
The broad path up to the pond from Chobham Road should be redefined by removal of scrub but it will probably be necessary to maintain a screen with the golf course boundary. A bench on this path would also be welcomed.
Other paths should be opened up by judicious thinning to allow more light in, particularly the paths through Queenswood. The tree planting in Queenswood requires thinning.
There are a sufficient number of paths already in existence to fulfil SANG criteria. It may be advisable to close some of the narrow paths which descend directly from the top of Ether Hill to the Recreation Ground.

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 notice boards should provide:

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

Information should also be supplied at view points and the restored pond.

e) Habitat Improvements

Many of the paths are overgrown and shaded, particularly in Queenswood. Opening up of pathways and the creation of glades will improve habitat diversity and make the paths more accessible. Selective thinning of young trees, trimming back of holly and bramble thickets and the removal of cherry laurel and rhododendron will also help open up the site, in locations which are not ecologically sensitive. It may however be necessary to maintain some level of screening between the SANGS and neighbouring dwellings and the golf course.
A restored pond would add a new dimension to the site, provided that part of it can be protected for wildlife.

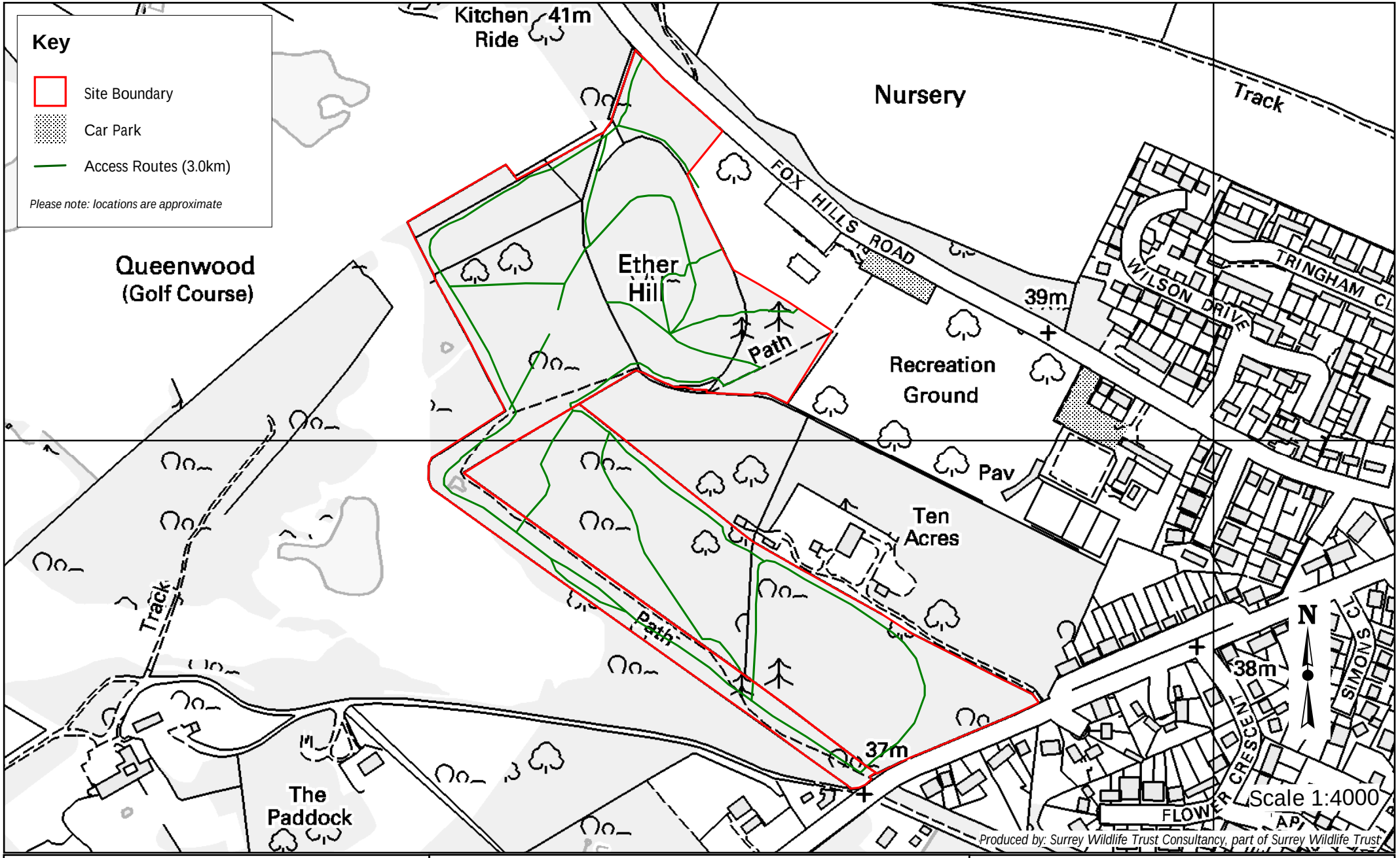
Heathland restoration would add biodiversity value as this is a Surrey Biodiversity Action Plan priority habitat.
Bat and bird boxes should be erected on suitable trees.
Old ditch and bank lines should be redefined and mature trees and standing dead wood protected. Log piles and habitat piles should also be created from any clearance works.

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 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.

7.4 Conclusion

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



Queenswood and Ether Hill
Access Routes and Car Parks

SURREY wildlife TRUST

Appendix 4 - Background Ecological Data Search (Surrey Biological Records Centre, 2009).

Background Ecological Data Search; Area Around Ether Hill and Queenswood, Ottershaw, Surrey

Runnymede Borough Suitable Alternative Natural Greenspace Site Assessment

Produced by
Alistair Kirk
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Surrey Biological Records Centre
September 2009

for
Surrey Wildlife Trust Consultancy

Surrey Wildlife Trust, School Lane, Pirbright Woking, Surrey, GU24 0JN

Contents

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 between Fox Hills Road and Cobham Road (Ether Hill and Queenwood, approximate site centre Ordnance Survey grid reference TQ015639). 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 [1,2] or international [3,4,5] 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) [6]. 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
TQ0063	Great Crested Newt	*Triturus cristatus*	5	EC Annex IIa, IVa; Bern App II	1999	Other Record
	Palmate Newt	*Triturus helveticus*	5 (Sale only)	Bern App III	2002	Other Record
	Pipistrelle	*Pipistrellus pipistrellus*	5	EC Annex IVa; Bern App III	2001	Other Record
	Badger	*Meles meles*	Protection of Badgers Act	Bern App III	2001	SWT Survey
TQ0163	Stag Beetle	*Lucanus cervus*	5 (Sale only)	Bern III. EC IIa.	1998	Other Record
	Great Crested Newt	*Triturus cristatus*	5	EC Annex IIa, IVa; Bern App II	1999	Other Record
	Palmate Newt	*Triturus helveticus*	5 (Sale only)	Bern App III	1999	Other Record
	Grass Snake	*Natrix natrix*	5 (Killing, injuring, sale only)	Bern App III	1994	Other Record
	Sparrowhawk	*Accipiter nisus*		Bern App II	1994	Other Record
	Kestrel	*Falco tinnunculus*		Bern App II	1994	Other Record
	Tawny Owl	*Strix aluco*		Bern App II	1994	Other Record
	Green Woodpecker	*Picus viridis*		Bern App II	1994	Other Record
	Great Spotted Woodpecker	*Dendrocopos major*		Bern App II	1994	Other Record
	Wren	*Troglodytes troglodytes*		Bern App II	1994	Other Record
	Dunnock	*Prunella modularis*		Bern App II	1994	Other Record
	Robin	*Erithacus rubecula*		Bern App II	1994	Other Record
	Blackcap	*Sylvia atricapilla*		Bern App II	1994	Other Record
	Chiffchaff	*Phylloscopus collybita*		Bern App II	1994	Other Record
	Willow Warbler	*Phylloscopus trochilus*		Bern App II	1994	Other Record
	Goldcrest	*Regulus regulus*		Bern App II	1994	Other Record
	Long-tailed Tit	*Aegithalos caudatus*		Bern App II	1994	Other Record
	Coal Tit	*Parus ater*		Bern App II	1994	Other Record
	Blue Tit	*Parus caeruleus*		Bern App II	1994	Other Record
	Great Tit	*Parus major*		Bern App II	1994	Other Record
	Nuthatch	*Sitta europaea*		Bern App II	1994	Other Record
	Greenfinch	*Carduelis chloris*		Bern App II	1994	Other Record
	Siskin	*Carduelis spinus*		Bern App II	1994	Other Record
	Hedgehog	*Erinaceus europaeus*		Bern App III	1996	Other Record
TQ0164	Little Grebe	*Tachybaptus ruficollis*		Bern App II	2003	SWT Survey
	Sparrowhawk	*Accipiter nisus*		Bern App II	2003	SWT Survey
	Kestrel	*Falco tinnunculus*		Bern App II	2003	SWT Survey

	Little Ringed Plover	*Charadrius dubius*	1 Part 1	Bern App II	2003	SWT Survey
	Green Woodpecker	*Picus viridis*		Bern App II	2003	SWT Survey
	Great Spotted Woodpecker	*Dendrocopos major*		Bern App II	2003	SWT Survey
	House Martin	*Delichon urbica*		Bern App II	2003	SWT Survey
	Grey Wagtail	*Motacilla cinerea*		Bern App II	2003	SWT Survey
	Pied Wagtail	*Motacilla alba yarrellii*		Bern App II	2003	SWT Survey
	Wren	*Troglodytes troglodytes*		Bern App II	2003	SWT Survey
	Dunnock	*Prunella modularis*		Bern App II	2003	SWT Survey
	Robin	*Erithacus rubecula*		Bern App II	2003	SWT Survey
	Whitethroat	*Sylvia communis*		Bern App II	2003	SWT Survey
	Garden Warbler	*Sylvia borin*		Bern App II	2003	SWT Survey
	Blackcap	*Sylvia atricapilla*		Bern App II	2003	SWT Survey
	Chiffchaff	*Phylloscopus collybita*		Bern App II	2003	SWT Survey
	Willow Warbler	*Phylloscopus trochilus*		Bern App II	2003	SWT Survey
	Goldcrest	*Regulus regulus*		Bern App II	2003	SWT Survey
	Long-tailed Tit	*Aegithalos caudatus*		Bern App II	2003	SWT Survey
	Blue Tit	*Parus caeruleus*		Bern App II	2003	SWT Survey
	Great Tit	*Parus major*		Bern App II	2003	SWT Survey
	Nuthatch	*Sitta europaea*		Bern App II	2003	SWT Survey
	Short-toed Treecreeper	*Certhia brachydactyla*		Bern App II	2003	SWT Survey
	Greenfinch	*Carduelis chloris*		Bern App II	2003	SWT Survey
	Goldfinch	*Carduelis carduelis*		Bern App II	2003	SWT Survey
	Roe Deer	*Capreolus capreolus*		Bern App III	2003	SWT Survey
TQ0263	Butcher's-broom	*Ruscus aculeatus*		EC Annex Vb	1995	Other Record
	Stag Beetle	*Lucanus cervus*	5 (Sale only)	Bern III. EC IIa.	1998	Other Record
	Sparrowhawk	*Accipiter nisus*		Bern App II	1993	Other Record
	Kestrel	*Falco tinnunculus*		Bern App II	1993	Other Record
	Tawny Owl	*Strix aluco*		Bern App II	1993	Other Record
	Green Woodpecker	*Picus viridis*		Bern App II	1993	Other Record
	Great Spotted Woodpecker	*Dendrocopos major*		Bern App II	1993	Other Record
	Lesser Spotted Woodpecker	*Dendrocopos minor*		Bern App II	1993	Other Record
	Wren	*Troglodytes troglodytes*		Bern App II	1993	Other Record

	Dunnock	*Prunella modularis*		Bern App II	1993	Other Record
	Robin	*Erithacus rubecula*		Bern App II	1993	Other Record
	Fieldfare	*Turdus pilaris*	1 Part 1		1993	Other Record
	Redwing	*Turdus iliacus*	1 Part 1		1993	Other Record
	Garden Warbler	*Sylvia borin*		Bern App II	1993	Other Record
	Blackcap	*Sylvia atricapilla*		Bern App II	1993	Other Record
	Wood Warbler	*Phylloscopus sibilatrix*		Bern App II	1993	Other Record
	Chiffchaff	*Phylloscopus collybita*		Bern App II	1993	Other Record
	Willow Warbler	*Phylloscopus trochilus*		Bern App II	1993	Other Record
	Goldcrest	*Regulus regulus*		Bern App II	1993	Other Record
	Spotted Flycatcher	*Muscicapa striata*		Bern App II	1993	Other Record
	Long-tailed Tit	*Aegithalos caudatus*		Bern App II	1993	Other Record
	Marsh Tit	*Parus palustris*		Bern App II	1993	Other Record
	Willow Tit	*Parus montanus*		Bern App II	1993	Other Record
	Coal Tit	*Parus ater*		Bern App II	1993	Other Record
	Blue Tit	*Parus caeruleus*		Bern App II	1993	Other Record
	Great Tit	*Parus major*		Bern App II	1993	Other Record
	Nuthatch	*Sitta europaea*		Bern App II	1993	Other Record
	Treecreeper	*Certhia familiaris*	1 Part 1	Bern App II	1993	Other Record
	Brambling	*Fringilla montifringilla*	1 Part 1		1993	Other Record
	Greenfinch	*Carduelis chloris*		Bern App II	1993	Other Record
	Goldfinch	*Carduelis carduelis*		Bern App II	1993	Other Record
	Siskin	*Carduelis spinus*		Bern App II	1993	Other Record
	Redpoll	*Carduelis flammea*		Bern App II	1993	Other Record
	Hedgehog	*Erinaceus europaeus*		Bern App III	1996	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
TQ0063	Small Red Damselfly	*Ceriagrion tenellum*	Notable/Nb [7]	22 tetrads, Confirmed, Mainly on western heaths [8]	2003	SWT Survey
	Ruddy Darter	*Sympetrum sanguineum*	Notable/Nb	58 tetrads, Confirmed; Increasing	2003	SWT Survey
	Roesel's Bush Cricket	*Metrioptera roeselii*	Notable/Nb	Has recently become widespread and quite common, spreading from the north-east [9]	2003	SWT Survey
	Long-winged Conehead	*Conocephalus discolor*	Notable/Na [10]	First recorded 1990 but now widespread and abundant	2003	SWT Survey
	Dusky Cockroach	*Ectobius lapponicus*	Notable/Nb	Widespread and common in the west, absent from the east	2003	SWT Survey
	a wood boring beetle	*Dorcatoma flavicornis*	Notable/Nb	Rare. In red-rotten oak [11]	2003	SWT Survey
	a weevil	*Curculio rubidus*	Notable/Nb	Rare on birch.	2003	SWT Survey
	a cranefly	*Nephrotoma crocata*	RDB3 [12]		2003	SWT Survey
	a fly	*Megamerina dolium*	Notable/Nb		2003	SWT Survey
	a social wasp	*Dolichovespula media*	Notable/Na		2003	SWT Survey
	a solitary bee	*Lasioglossum pauxillum*	Notable/Na	Common [13]	2003	SWT Survey
	a jumping spider	*Marpissa muscosa*	Notable/Nb		2003	SWT Survey
TQ0163	Downy Emerald	*Cordulia aenea*	Notable/Nb	94 tetrads, Confirmed and Widespread	1994	Atlas
	Ruddy Darter	*Sympetrum sanguineum*	Notable/Nb	58 tetrads, Confirmed; Increasing	2003	SWT Survey
	Long-winged Conehead	*Conocephalus discolor*	Notable/Na	First recorded 1990 but now widespread and abundant	2003	SWT Survey
	Stag Beetle	*Lucanus cervus*	Notable/Nb	Local	1998	Other Record
	Brown Ant	*Lasius brunneus*	Notable/Na	Local in woodland and parkland [14]	1994	Other Record

TQ0164	Box	*Buxus sempervirens*	Nationally Lower Risk – Near Threatened [15]	Rare, 20 tetrads "native on steep slopes on chalk… off the chalk it is always planted" [16], 1987; 14 ten kilometre squares [17]	2003	SWT Survey
	White-legged Damselfly	*Platycnemis pennipes*	Notable/Nb	76 tetrads, Confirmed; strong widespread colonies	2003	SWT Survey
	Small Red Damselfly	*Ceriagrion tenellum*	Notable/Nb	22 tetrads, Confirmed, Mainly on western heaths	2003	SWT Survey
	Hairy Dragonfly	*Brachytron pratense*	Notable/Nb	29 tetrads, Confirmed, Local	2003	SWT Survey
	Downy Emerald	*Cordulia aenea*	Notable/Nb	94 tetrads, Confirmed and Widespread	2003	SWT Survey
	Ruddy Darter	*Sympetrum sanguineum*	Notable/Nb	58 tetrads, Confirmed; Increasing	2003	SWT Survey
	Silver-studded Blue	*Plebejus argus*	Notable/Nb	Restricted but Common [18], 2000; 37 tetrads, Regional Conservation Status; High [19]	2003	SWT Survey
	Brown Ant	*Lasius brunneus*	Notable/Na	Local in woodland and parkland	2003	SWT Survey
TQ0263	a bolete	*Boletinus cavipes*	Endangered [20]		1996	Other Record
	Large-leaved Lime	*Tilia platyphyllos*	Nationally Scarce [21]	Alien, Rare, probably always planted, 1987; Rare, 13 ten kilometre squares, "associated with steep slopes on calcareous rocks and this, combined with historical records for the area… have led to the suggestion that it may be native at the base of the chalk river cliff at Box Hill. There are several other records from the scarp slope of the Downs and it is tempting to suggest that these too may represent native sites. It is widely planted elsewhere and there are now many examples of natural regeneration."	1996	Other Record
	Box	*Buxus sempervirens*	Nationally Lower Risk – Near Threatened	Rare, 20 tetrads "native on steep slopes on chalk… off the chalk it is always planted", 1987; 14 ten kilometre squares	1995	Other Record
	Summer Snowflake	*Leucojum aestivum*	Nationally Scarce	Established Alien, 8 ten kilometre squares	1994	Other Record
	Stag Beetle	*Lucanus cervus*	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 [22]. 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
TQ0063	Migrant Hawker	*Aeshna mixta*	Local	152 tetrads, Confirmed, Widespread	2003	SWT Survey
	Black-tailed Skimmer	*Orthetrum cancellatum*	Local	117 tetrads, Confirmed, Widespread	2003	SWT Survey
	Bishop's Mitre	*Aelia acuminata*	Local	125 tetrads, Common in north and west [23]	2003	SWT Survey
	a ground bug	*Peritrechus nubilus*	Local		2003	SWT Survey
	a plantbug or grassbug	*Miridius quadrivirgatus*	Local		2003	SWT Survey
	Green Tiger Beetle	*Cicindela campestris*	Local	Local on heaths, scattered in woodlands and disturbed ground.	2003	SWT Survey
	a ground beetle	*Notiophilus substriatus*	Local	Frequent in open dry country including gardens.	2003	SWT Survey
	a marsh beetle	*Scirtes hemisphaericus*	Local	Local. Weedy pond margins, larvae in flooded moss and debris.	2003	SWT Survey
	Orange Ladybird	*Tytthaspis sedecimpunctata*	Local	333 tetrads, Almost ubiquitous [24]	2003	SWT Survey
	a thick-legged flower beetle	*Oedemera lurida*	Local	Widespread and locally abundant in grasslands and rides.	2003	SWT Survey
	a leaf beetle	*Donacia marginata*	Local	Local on Bur-reed *Sparganium. Most records come from plants of branched bur-reed growing in still or slow-flowing water*.	2003	SWT Survey
	a leaf beetle	*Donacia semicuprea*	Local	Local on Reed sweet grass, mainly beside still water.	2003	SWT Survey
	a leaf beetle	*Donacia versicolorea*	Local	Very local on leaves of broadleaved pondweed (and bog pondweed). The adults can be elusive but the nibble holes in the floating leaves are distinctive.	2003	SWT Survey
	a leaf beetle	*Donacia vulgaris*	Local	Local on Bur-reed and Reedmace. Adults occur from May to August with most records from June.	2003	SWT Survey
	a seed weevil	*Trichapion simile*	Local	Local, but common on the heaths on *Betula*.	2003	SWT Survey
	a seed weevil	*Ischnopterapion modestum*	Local	Local on large bird's-foot trefoil *Lotus pedunculatus* in damp meadows and marshlands.	2003	SWT Survey
	a weevil	*Strophosoma capitatum*	Local	Local on a variety of trees and bushes, especially in heathy habitats.	2003	SWT Survey

	a weevil	*Sitona cambricus*	Local	Local in damp grassland and wetlands on large bird's-foot trefoil *Lotus pedunculatus.*	2003	SWT Survey
	a weevil	*Cionus alauda*	Local	Widespread on figworts *Scrophularia nodosa* and *S. auriculata*. Also on mulleins including *V. blattaria.*	2003	SWT Survey
	a weevil	*Rhynchaenus avellanae*	Local	Local on hazel and oak.	2003	SWT Survey
	Essex Skipper	*Thymelicus lineola*	Local	Widespread and Common, 2000; 321 tetrads	2003	SWT Survey
	Grayling	*Hipparchia semele*	Local	Local but Fairly Common, 2000; 48 tetrads, Regional Conservation Priority; Medium	2003	SWT Survey
	Burnet Companion	*Euclidea glyphica*	Local	Widespread and Common [25]	2003	SWT Survey
	a cranefly	*Pedicia (Crunobia) littoralis*	Local		2003	SWT Survey
	a horse fly	*Haematopota crassicornis*	Local		2003	SWT Survey
	a hoverfly	*Orthonevra nobilis*	Local	Local [26]	2003	SWT Survey
	a hoverfly	*Eristalinus sepulchralis*	Local	Common	2003	SWT Survey
	a fly	*Conops ceriaeformis*	Local		2003	SWT Survey
	a gall fly	*Sphenella marginata*	Local		2003	SWT Survey
	a snail-killing fly	*Sepedon sphegea*	Local		2003	SWT Survey
	a sawfly	*Selandria sixii*	Local		2003	SWT Survey
	a sawfly	*Tenthredo scrophulariae*	Local		2003	SWT Survey
	a rubytail wasp	*Elampus panzeri*	Local		2003	SWT Survey
	Black Headed Velvet Ant	*Myrmosa atra*	Local		2003	SWT Survey
	an ant	*Myrmica sabuleti*	Local	Local in dry sunny sites	2003	SWT Survey
	a spider-hunting wasp	*Priocnemis parvula*	Local		2003	SWT Survey
	a solitary wasp	*Astata boops*	Local		2003	SWT Survey
	a solitary wasp	*Entomognathus brevis*	Local		2003	SWT Survey
	a solitary bee	*Andrena fucata*	Local		2003	SWT Survey
	a solitary bee	*Lasioglossum punctatissimum*	Local		2003	SWT Survey
TQ0064	Black-tailed Skimmer	*Orthetrum cancellatum*	Local	117 tetrads, Confirmed, Widespread	2003	SWT Survey
	Orange Ladybird	*Tytthaspis sedecimpunctata*	Local	333 tetrads, Almost ubiquitous	2003	SWT Survey
TQ0163	Black Darter	*Sympetrum danae*	Local	Confirmed, Local mainly in the west	1994	Atlas
	a seed beetle	*Bruchidius villosus*	Local	Local	2003	SWT Survey
	Iris Flea Beetle	*Aphthona nonstriata*	Local	Widespread	2003	SWT Survey
	a seed weevil	*Exapion fuscirostre*	Local	Local	2003	SWT Survey
	a seed weevil	*Ischnopterapion modestum*	Local	Local	2003	SWT Survey
	a fungus gnat	*Mycomya fimbriata*	Local		2003	SWT Survey

TQ0164	Banded Demoiselle	*Calopteryx splendens*	Local	169 tetrads, Confirmed, Widespread	2004	SWT Survey
	Migrant Hawker	*Aeshna mixta*	Local	152 tetrads, Confirmed, Widespread	2003	SWT Survey
	Black-tailed Skimmer	*Orthetrum cancellatum*	Local	117 tetrads, Confirmed, Widespread	2003	SWT Survey
	Slender Ground Hopper	*Tetrix subulata*	Local	Widespread but Local	2003	SWT Survey
	a shield bug	*Aelia acuminata*	Local	125 tetrads, Common in north and west	2003	SWT Survey
	a plantbug or grassbug	*Miridius quadrivirgatus*	Local		2003	SWT Survey
	a leafhopper	*Idiocerus rutilans*	Local		2003	SWT Survey
	Orange Ladybird	*Tytthaspis sedecimpunctata*	Local	333 tetrads, Almost Ubiquitous	2003	SWT Survey
	a longhorn beetle	*Leiopus nebulosus*	Local	Local	2003	SWT Survey
	a weevil	*Cionus alauda*	Local	Widespread	2003	SWT Survey
	a weevil	*Cleopus pulchellus*	Local	Local	2003	SWT Survey
	a weevil	*Dorytomus melanophthalmus*	Local	Rare?	2003	SWT Survey
	a weevil	*Dorytomus rufatus*	Local	Local	2003	SWT Survey
	a weevil	*Rhinoncus bruchoides*	Local	Local	2003	SWT Survey
	Essex Skipper	*Thymelicus lineola*	Local	Widespread and Common, 2000; 321 tetrads	2003	SWT Survey
	Holly Blue	*Celastrina argiolus britanna*	Local	Widespread and Fairly Common, 2000; 431 tetrads	1995	Other Record
	Grayling	*Hipparchia semele*	Local	Local but Fairly Common, 2000; 48 tetrads, Regional Conservation Priority; Medium	2003	SWT Survey
	a dolichopodid fly	*Scellus notatus*	Local		2003	SWT Survey
	a sawfly	*Pristiphora fulvipes*	Local		2003	SWT Survey
	a solitary wasp	*Gorytes tumidus*	Local		2003	SWT Survey
TQ0263	Green Hairstreak	*Callophrys rubi*	Local	Restricted but Fairly Common, 2000; 74 tetrads	1993	Other Record
	Holly Blue	*Celastrina argiolus britanna*	Local	Widespread and Fairly Common, 2000; 431 tetrads	1993	Other Record
	Purple Hairstreak	*Quercusia quercus*	Local	Widespread and Common, 2000; 319 tetrads	1993	Other Record
	White Admiral	*Ladoga camilla*	Local	Fairly Widespread and Fairly Common, 2000; 102 tetrads	1993	Other Record
	Silver-washed Fritillary	*Argynnis paphia*	Local	Restricted but Fairly Common, 2000; 133 tetrads, Regional Conservation Priority; Medium	1993	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 [27] have also been recorded from sites falling within the 500 metre search area.

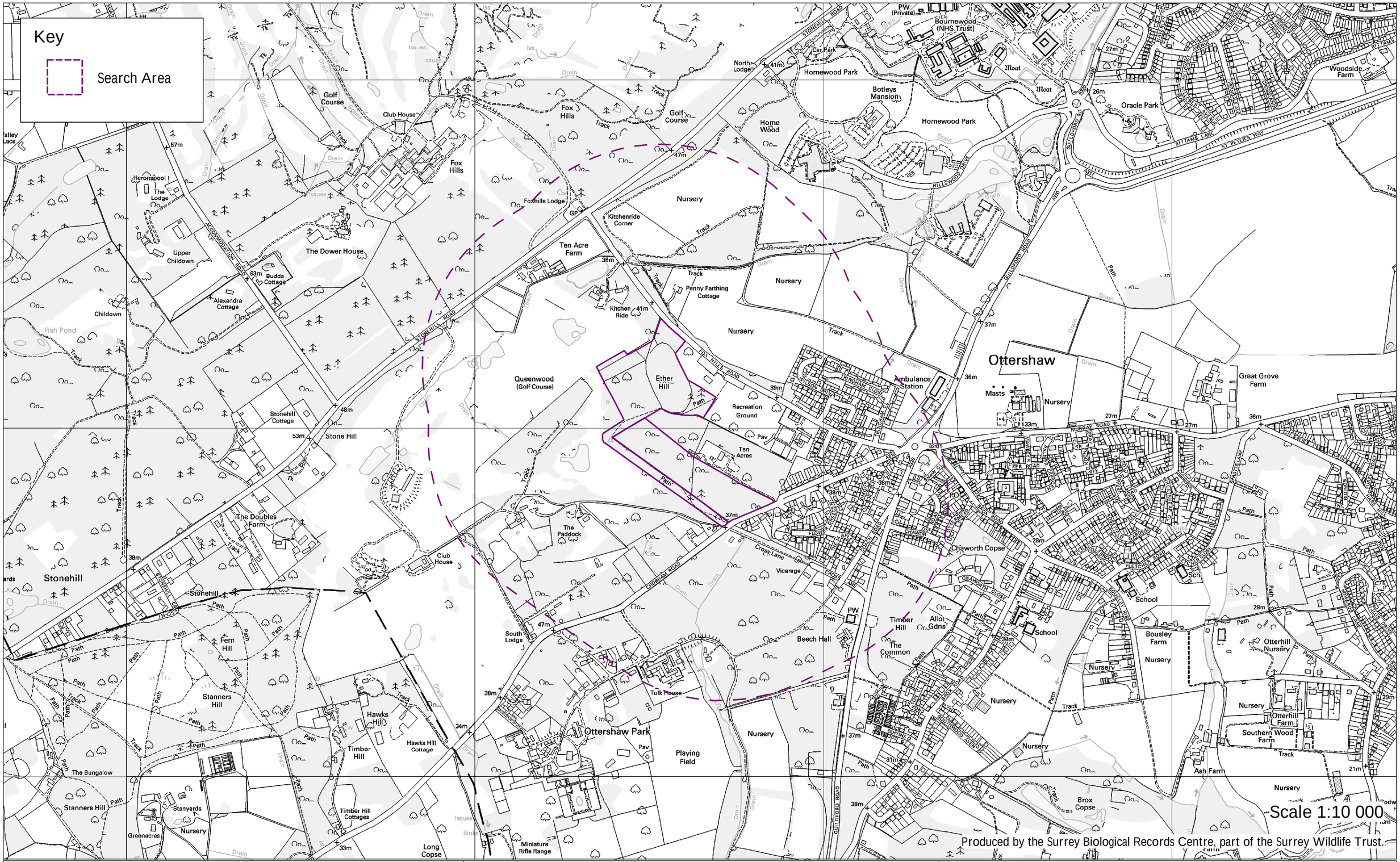
1Km Grid Square	Common Name	Scientific Name	UK Biodiversity Action Plan Status	Date Last Recorded	Source of Record
TQ0063	Great Crested Newt	*Triturus cristatus*	Priority	1999	Other Record
	Palmate Newt	*Triturus helveticus*	Conservation Concern	2002	Other Record
	Mallard	*Anas platyrhynchos*	Conservation Concern	2001	SWT Survey
	Tufted Duck	*Aythya fuligula*	Conservation Concern	2001	SWT Survey
	Pipistrelle	*Pipistrellus pipistrellus*	Priority	2001	Other Record
TQ0163	Stag Beetle	*Lucanus cervus*	Priority	1998	Other Record
	Great Crested Newt	*Triturus cristatus*	Priority	1999	Other Record
	Palmate Newt	*Triturus helveticus*	Conservation Concern	1999	Other Record
	Grass Snake	*Natrix natrix*	Conservation Concern	1994	Other Record
	Sparrowhawk	*Accipiter nisus*	Conservation Concern	1994	Other Record
	Kestrel	*Falco tinnunculus*	Conservation Concern	1994	Other Record
	Woodcock	*Scolopax rusticola*	Conservation Concern	1994	Other Record
	Tawny Owl	*Strix aluco*	Conservation Concern	1994	Other Record
	Green Woodpecker	*Picus viridis*	Conservation Concern	1994	Other Record
	Great Spotted Woodpecker	*Dendrocopos major*	Conservation Concern	1994	Other Record
	Wren	*Troglodytes troglodytes*	Conservation Concern	1994	Other Record
	Dunnock	*Prunella modularis*	Conservation Concern	1994	Other Record
	Blackcap	*Sylvia atricapilla*	Conservation Concern	1994	Other Record
	Chiffchaff	*Phylloscopus collybita*	Conservation Concern	1994	Other Record
	Willow Warbler	*Phylloscopus trochilus*	Conservation Concern	1994	Other Record
	Goldcrest	*Regulus regulus*	Conservation Concern	1994	Other Record
	Coal Tit	*Parus ater*	Conservation Concern	1994	Other Record
	Blue Tit	*Parus caeruleus*	Conservation Concern	1994	Other Record
	Great Tit	*Parus major*	Conservation Concern	1994	Other Record
	Nuthatch	*Sitta europaea*	Conservation Concern	1994	Other Record
	Greenfinch	*Carduelis chloris*	Conservation Concern	1994	Other Record

	Siskin	*Carduelis spinus*	Conservation Concern	1994	Other Record
	Bullfinch	*Pyrrhula pyrrhula*	Priority	1994	Other Record
TQ0164	Box	*Buxus sempervirens*	Conservation Concern	2003	SWT Survey
	Bluebell	*Hyacinthoides non-scripta*	Conservation Concern	2009	SWT Survey
	Silver-studded Blue	*Plebejus argus*	Priority	2003	SWT Survey
	Mute Swan	*Cygnus olor*	Conservation Concern	2003	SWT Survey
	Mallard	*Anas platyrhynchos*	Conservation Concern	2003	SWT Survey
	Tufted Duck	*Aythya fuligula*	Conservation Concern	2003	SWT Survey
	Sparrowhawk	*Accipiter nisus*	Conservation Concern	2003	SWT Survey
	Kestrel	*Falco tinnunculus*	Conservation Concern	2003	SWT Survey
	Little Ringed Plover	*Charadrius dubius*	Conservation Concern	2003	SWT Survey
	Green Woodpecker	*Picus viridis*	Conservation Concern	2003	SWT Survey
	Great Spotted Woodpecker	*Dendrocopos major*	Conservation Concern	2003	SWT Survey
	House Martin	*Delichon urbica*	Conservation Concern	2003	SWT Survey
	Grey Wagtail	*Motacilla cinerea*	Conservation Concern	2003	SWT Survey
	Pied Wagtail	*Motacilla alba yarrellii*	Conservation Concern	2003	SWT Survey
	Wren	*Troglodytes troglodytes*	Conservation Concern	2003	SWT Survey
	Dunnock	*Prunella modularis*	Conservation Concern	2003	SWT Survey
	Song Thrush	*Turdus philomelos*	Priority	2003	SWT Survey
	Whitethroat	*Sylvia communis*	Conservation Concern	2003	SWT Survey
	Garden Warbler	*Sylvia borin*	Conservation Concern	2003	SWT Survey
	Blackcap	*Sylvia atricapilla*	Conservation Concern	2003	SWT Survey
	Chiffchaff	*Phylloscopus collybita*	Conservation Concern	2003	SWT Survey
	Willow Warbler	*Phylloscopus trochilus*	Conservation Concern	2003	SWT Survey
	Goldcrest	*Regulus regulus*	Conservation Concern	2003	SWT Survey
	Blue Tit	*Parus caeruleus*	Conservation Concern	2003	SWT Survey
	Great Tit	*Parus major*	Conservation Concern	2003	SWT Survey
	Nuthatch	*Sitta europaea*	Conservation Concern	2003	SWT Survey
	Short-toed Treecreeper	*Certhia brachydactyla*	Conservation Concern	2003	SWT Survey
	Greenfinch	*Carduelis chloris*	Conservation Concern	2003	SWT Survey
	Goldfinch	*Carduelis carduelis*	Conservation Concern	2003	SWT Survey
	Bullfinch	*Pyrrhula pyrrhula*	Priority	2003	SWT Survey
TQ0263	Box	*Buxus sempervirens*	Conservation Concern	1995	Other Record

	Bluebell	*Hyacinthoides non-scripta*	Conservation Concern	1995	Other Record
	Stag Beetle	*Lucanus cervus*	Priority	1998	Other Record
	Silver-washed Fritillary	*Argynnis paphia*	Conservation Concern	1993	Other Record
	Sparrowhawk	*Accipiter nisus*	Conservation Concern	1993	Other Record
	Kestrel	*Falco tinnunculus*	Conservation Concern	1993	Other Record
	Woodcock	*Scolopax rusticola*	Conservation Concern	1993	Other Record
	Tawny Owl	*Strix aluco*	Conservation Concern	1993	Other Record
	Green Woodpecker	*Picus viridis*	Conservation Concern	1993	Other Record
	Great Spotted Woodpecker	*Dendrocopos major*	Conservation Concern	1993	Other Record
	Lesser Spotted Woodpecker	*Dendrocopos minor*	Conservation Concern	1993	Other Record
	Wren	*Troglodytes troglodytes*	Conservation Concern	1993	Other Record
	Dunnock	*Prunella modularis*	Conservation Concern	1993	Other Record
	Fieldfare	*Turdus pilaris*	Conservation Concern	1993	Other Record
	Song Thrush	*Turdus philomelos*	Priority	1993	Other Record
	Redwing	*Turdus iliacus*	Conservation Concern	1993	Other Record
	Garden Warbler	*Sylvia borin*	Conservation Concern	1993	Other Record
	Blackcap	*Sylvia atricapilla*	Conservation Concern	1993	Other Record
	Wood Warbler	*Phylloscopus sibilatrix*	Conservation Concern	1993	Other Record
	Chiffchaff	*Phylloscopus collybita*	Conservation Concern	1993	Other Record
	Willow Warbler	*Phylloscopus trochilus*	Conservation Concern	1993	Other Record
	Goldcrest	*Regulus regulus*	Conservation Concern	1993	Other Record
	Spotted Flycatcher	*Muscicapa striata*	Priority	1993	Other Record
	Marsh Tit	*Parus palustris*	Conservation Concern	1993	Other Record
	Willow Tit	*Parus montanus*	Conservation Concern	1993	Other Record
	Coal Tit	*Parus ater*	Conservation Concern	1993	Other Record
	Blue Tit	*Parus caeruleus*	Conservation Concern	1993	Other Record
	Great Tit	*Parus major*	Conservation Concern	1993	Other Record
	Nuthatch	*Sitta europaea*	Conservation Concern	1993	Other Record
	Treecreeper	*Certhia familiaris*	Conservation Concern	1993	Other Record
	Brambling	*Fringilla montifringilla*	Conservation Concern	1993	Other Record
	Greenfinch	*Carduelis chloris*	Conservation Concern	1993	Other Record
	Goldfinch	*Carduelis carduelis*	Conservation Concern	1993	Other Record

	Siskin	*Carduelis spinus*	Conservation Concern	1993	Other Record
	Redpoll	*Carduelis flammea*	Conservation Concern	1993	Other Record
	Bullfinch	*Pyrrhula pyrrhula*	Priority	1993	Other Record

Annex A – Site Map



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

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[2] Protection of Badgers Act, 1992
[3] 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.
[4] 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.
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[6] Betts C.J., (2008) *Checklist of Legally Protected British Species; Third Edition*, Christopher Betts Environmental Biology, Worcester.
[7] 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.
[8] Follett, P., (1996); *Dragonflies of Surrey*, Surrey Wildlife Trust, Pirbright.
[9] Baldock, D.W., (1999); *Grasshoppers and Crickets of Surrey*, Surrey Wildlife Trust, Pirbright.
[10] 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.
[11] Denton, Dr J., (2005); *Beetles of Surrey – a checklist*, Surrey Wildlife Trust, Pirbright.
[12] RDB 3 – Rare; Species which exist in only fifteen or fewer 10 Kilometre Squares of the National Grid system. These are Taxa with small populations that are not at present Endangered (RDB 1) or Vulnerable (RDB 2), but are at risk. For more information on criteria see Shirt, D.B., Ed., (1987); *British Red Data Books: 2, Insects*, Joint Nature Conservation Committee, Peterborough or Bratton J.H. *Ed*., (1991); *British Red Data Books: 3, Invertebrates Other Than Insects,* Joint Nature Conservation Committee, Peterborough. This category also includes taxa which are believed to be rare but are too recently discovered or recognised to be certain of placing (designated pRDB 3).
[13] Baldock, D.W., (2008); *Bees of of Surrey*, Surrey Wildlife Trust, Pirbright.
[14] Pontin, J., (2005); *Ants of Surrey*, Surrey Wildlife Trust, Pirbright.

[15] Nationally Lower Risk – Near Threatened; Taxa which do not qualify for Lower Risk (conservation dependant) but which are close to qualifying for Vulnerable. For more information on the criteria used see Wigginton, M.J., (1999); *British Red Data Books: 1 Vascular Plants,* Joint Nature Conservation Committee, Peterborough.

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[18] Collins, G.A., (1995); *Butterflies of Surrey*, Surrey Wildlife Trust, Pirbright.

[19] Jeffcote, G., Enfield, M., Gerrard, B., (2000); *Surrey Butterfly Report*, Butterfly Conservation, Surrey and SW London Branch

[20] RDB 1 – Endangered; Species occupying habitats which are disappearing fast or those occurring in such small populations or in so few sites as to make their extinction likely in the near future. Taken from Ing, B., (1992); A Provisional Red Data List of British Fungi, *The Mycologist, 6*: 124-128. This list was produced using the original IUCN categories and an improved and updated list will replace this shortly.

[21] Nationally Scarce; species estimated to occur within 16-100 10 kilometre squares of the National Grid system. For more information see Stewart, A., Pearman, D.A., & Preston, C.D., (1994); *Scarce Plants in Britain*, Joint Nature Conservation Committee, Peterborough.

[22] 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.

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[27] UK Biodiversity Group (1995), *Biodiversity: The UK Steering Group Report. Volume 2: Action Plans*, HMSO, London.