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Cherry Lodge Golf Club

Ecological Impact Assessment of the proposed re-modelling
and enhancement of the driving range and golf course



Prepared For Woodland Environmental Ltd

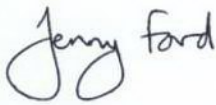
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Document Revisions

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1. Introduction

1.1 Background

Johns Associates Ltd was commissioned by Woodland Environmental Ltd to undertake an Ecological Impact Assessment (EclA) of the proposed remodelling and enhancement of Cherry Lodge Golf Club, Westerham, Kent. These proposals require planning permission, the determination of which will take into consideration how the proposals relate to planning policies issued by national and local Government including those associated with biodiversity¹. In addition, there is a need to take into account the presence or potential presence of species afforded legal protection.

1.2 The Scheme

1.2.1 Location and Access

Cherry Lodge Golf Club (hereafter referred to as the Site) is located approximately two miles to the east of Biggin Hill and approximately five miles to the south of Bromley. The Site is located at approximate Ordnance Survey grid reference TQ 434 587 (see Figure 1.1). The Site comprises an area of land that is currently used as a golf driving range, an 18-hole golf course and includes a clubhouse, members' car park, managed amenity grassland, scattered trees and blocks of plantation woodland. Jail Lane forms the northern boundary of the Site with Berry Green Road lying adjacent to the southeastern perimeter of the Site. The land immediately surrounding Cherry Lodge Golf Club comprises mainly arable and pastoral agricultural land, creating a patchwork effect by the hedgerows lining both agricultural land and woodland. A dominant feature of the local landscape is the frequent blocks of scattered semi-natural woodland of varying sizes, some of ancient origin and strong connectivity provided by frequent ancient hedgerows.

To the east of the Site lies Biggin Hill; a well-established suburb within the boundaries of Greater London, here the land becomes more built-up with residential housing and commercial premises forming the major land use with smaller pockets of open countryside. To the north of the Site, the landscape also becomes more built-up with established suburbs including West Wickham and Orpington dominating the landscape character with fewer areas of scattered woodland and less expanse of open countryside.

Figure 1.2 illustrates this local landscape context.

¹ In this report the terms ecology and ecological are used interchangeably with biodiversity.

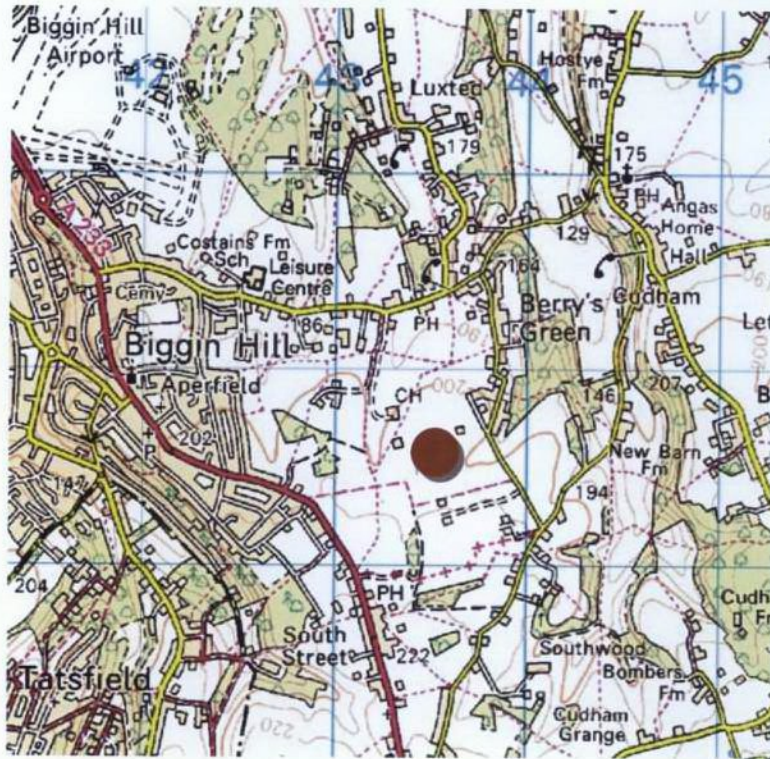


Figure 1.1. Approximate location of Cherry Lodge Golf Club.



Figure 1.2. Landscape and habitat context local to Cherry Lodge Golf Club.

1.2.2 Scheme Description

Our understanding of the proposed scheme is that it will involve the phased redevelopment of the majority of the existing driving range and elements of the golf course through the importation of recycled soil, land-forming, installation of new drainage, planting and subsequent management as an enhanced driving range and golf course. This will involve the removal of some of the existing broadleaved and coniferous trees and shrubs, some areas of the grassland (up to the canopy line of boundary trees and wooded copses) and other features inherent to the golf course.

The remodelled driving range and golf course will be landscaped and planted to create an enhanced playing experience, with significantly better drainage and to complement the local landscape and biodiversity requirements. The proposals include significant enhancement provision for biodiversity, including new hedgerows, calcareous grassland, pond and orchard habitat.

Appendix A contains a number of drawings illustrating the proposed development.

1.3 Study Area Definition

The study area has been established by considering both good practice² and the location and nature of the development of the Site. The focus of the study is the Site itself and adjacent areas that will also be subject to indirect effects associated with the development. Field surveys are therefore focussed in these areas. However to take account of potentially sensitive ecological receptors in the wider area, a desk study was undertaken within an area extending 2km from the Site in all directions incorporating the Site.

1.4 About this Assessment

This assessment has been prepared by Johns Associates Ltd and follows guidelines produced by the Institute of Ecology and Environmental Management (IEEM)³ for carrying out Ecological Impact Assessments in the United Kingdom.

² Institute of Environmental Assessment (1995). *Guidelines for Baseline Ecological Assessment*. E and F.N. Spon

³ Institute of Ecology and Environmental Management (2006) *Guidelines for Ecological Impact Assessment in the United Kingdom* (version 7 July 2006). <http://www.ieem.org.uk/ecia/index.html>

2. Context

2.1 Technical Context

There is the potential for any proposed development to affect both habitats and species of flora and fauna if not designed to take account of the surrounding ecological receptors. For the Cherry Lodge development proposals this could occur either directly, for example through loss of native scrub and associated nesting habitat for birds, and/or indirectly, for example through modification in prey availability to foraging bats caused by the introduction of artificial white security lighting during the construction phase.

The potential for development to result in adverse impacts to biodiversity has resulted in a range of national and international legislation that affords protection to some particular species and habitats in the UK. The key requirements of this legislation as it relates to planning are set out in ODPM Circular 06/2005: Biodiversity and Geological Conservation: Statutory Obligations and their Impact within the Planning System. Key requirements of this legislation that apply to the Site are as follows:

- Section 40(1) of the Natural Environment and Rural Communities (NERC) (2006) Act places a direct statutory duty to conserve biodiversity on all public authorities. Planning authorities therefore have a legal duty to take action to protect and enhance Biodiversity Action Plan habitat and species populations when determining planning applications; and
- Legally protected species in England include those covered by the Wildlife and Countryside Act (1981) (as amended) and the Conservation of Habitats and Species Regulations 2010. The presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat. Local authorities should take steps to secure the long-term protection of the species populations concerned with planning conditions and/ or obligations as appropriate.

2.2 Planning Context

There are numerous national, regional and local planning policies associated with flora and fauna (also referred to as biodiversity) that need to be addressed as part of the planning process. The Government has issued its National Planning Policy Statement (PPS 9: Biodiversity and Geological Conservation), which sets out planning policies for the protection of biodiversity and geological conservation through the planning system. PPS 9 dictates that legally protected species and Biodiversity Action Plan species are material considerations in the determination of potential planning applications and that an aim of planning decisions should be to prevent harm to biodiversity. It also identifies an objective to enhance biodiversity through the planning process.

As well as national policy, there is relevant biodiversity policy within the Development Plan at both the Regional and Borough level that offers various levels of protection to biodiversity resources. The London Plan (consolidated with alterations since 2004) provides protection for locally-designated sites and protected and Biodiversity Action

Plan species; and requires adequate mitigation and/ or compensation to be incorporated into development that will result in impacts to these ecological resources (Policy 3D.14). In addition, a series of detailed objectives and targets for biodiversity in the greater London area are set out within the Mayor's Biodiversity Strategy; and Policy 3D.14 requires these to be taken into account within the planning process.

Saved policies within the Bromley Unitary Development Plan (adopted in 2006) include policies NE2, NE3, NE4, NE5, NE8 and NE9 that offer protection to locally-designated sites, protected species, trees and woodlands, hedgerows and other ecological resources considered to be of biodiversity value.

In addition, the planning process takes into account material set out in the United Kingdom Biodiversity Action Plan (UK BAP) as well as relevant local Biodiversity Action Plans, in this case the London Biodiversity Action Plan and the Bromley Biodiversity Action Plan.

3. Assessment Approach

3.1 Desktop Study

Johns Associates undertook a desk-based assessment of the historic information relating to biodiversity at the Site and of land in its vicinity, in accordance with guidelines produced by the Institute of Environmental Assessment (IEA, 1995) and the Institute of Ecology and Environmental Assessment (IEEM, 2006).

Protected and other notable species records, together with UK statutory and non-statutory designated sites of nature conservation value (see Appendix B) were identified within two kilometres (km) of Cherry Lodge Golf Club. Habitats designated as Special Protection Areas (SPA) and Special Areas of Conservation (SAC) under the EU Birds Directive and EU Habitats and Species Directive⁴ respectively, as well as Ramsar Sites, within 5km of Cherry Lodge Golf Club have been reviewed.

The focus for the desk study was established by considering both good practice⁵ and the nature and possible effects from the proposed development (in this case, likely to be localised).

The following sources of information were used to inform the desk study:

- The Multi-Agency Geographical Information System (MAGIC) website was consulted to obtain the location and reference for any statutory⁶ sites of nature conservation importance and areas of designated ancient woodland.
- The NBN Gateway (www.nbn.org.uk) was consulted for information regarding the presence of legally⁷ protected species within the 10km grid square in which the Site is located (TQ 08).
- The United Kingdom Biodiversity Action Plan (UK BAP), the London Biodiversity Action Plan (BAP) and the Bromley BAP were also reviewed.
- Greenspace Information for Greater London (GiGL) was contacted to provide up to date information relating to non-statutory designated sites of nature conservation interest and/or records of species that are afforded legal protection or are otherwise of nature conservation importance⁸ within 2km of the Site boundary, together with additional records of the following (for the same radius):

⁴ Transposed into UK law through the Conservation of Habitats and Species Regulations (2010).

⁵ Institute of Environmental Assessment (1995). *Guidelines for Baseline Ecological Assessment*. E and F.N. Spon

⁶ Natural England notifies sites that are of national importance for nature conservation as Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR). Internationally important sites may also be designated as Special Areas of Conservation (SAC), classified as Special Protection Areas (SPA) or listed as Ramsar sites.

⁷ Many species of animal and plant receive some degree of legal protection. For the purposes of this study, legal protection refers to: species included on Schedules 2 and 4 of the *Conservation of Habitats and Species Regulations (2010)* and Schedules 1, 5 and 8 of the *Wildlife and Countryside Act 1981* (as amended), excluding species that are only protected in relation to their sale (see Section 9[5] and 13[2]) reflecting the fact that the proposed development does not include any proposals relating to the sale of species; and badgers, which are protected under the *Protection of Badgers Act 1992*.

⁸ Including Priority Species listed within the UK BAP, most of which receive a degree of legal protection under Section 40(1) of the Natural Environment and Rural Communities (NERC) (2006) Act.

- Statutory Sites of Special Scientific Interest (SSSI);
- Statutory National Nature Reserves (NNR);
- Statutory Local Nature Reserves (LNR);
- Non-statutory Sites of Importance for Nature Conservation (SINC);
- Records of legally protected and BAP species;
- Records of known bat roosts and bat sightings; and
- Habitats present within the search area (using the Greater London Authority classification system).

3.2 Field Study

Two experienced ecologists from Johns Associates carried out an extended Phase 1 Habitat Survey on the 28th April 2009. The Extended Phase I survey was subsequently repeated on the 9th and 10th February 2011 in order to verify the results of the previous survey and to confirm any changes to habitats during the interim period. The survey identified the habitat types currently present across the Site. The survey followed the standardised system for classifying and mapping British habitats (JNCC, 1990, Handbook for Phase 1 Habitat survey – a technique for environmental audit). The main output of this survey was an annotated map and target notes (see Appendix C) together with descriptions of the recorded habitat types. Classification of habitat types associated with land adjacent to the survey area was made from visual observation in the field and review of aerial photographs (where necessary due to access restrictions).

Based on the findings of the Phase 1 Habitat Survey, the following further surveys were undertaken in 2009:

- Inspection of all trees within and along the perimeter of the Site to record features that may support roosting bats and to classify trees with these features as having low, medium or high potential for these species. This was completed in accordance with procedures described in Bat Conservation Trust (2007) Bat Surveys Good Practice Guidelines.
- Potential great crested newt breeding habitat identification and screening of waterbodies within 500m of the Site perimeter for their suitability for this species following guidance by Oldham *et al.*, (2000);
- A detailed badger survey of the Site and 30m beyond the Site boundary (where access was gained) to confirm the likely presence or absence of badgers. The methodology for undertaking a detailed badger survey followed guidance provided by a number of different sources (English Nature, 2002; Harris *et al.*, 1989; McDonald *et al.*, 1998). The detailed badger survey was repeated during the site visits in February 2011; and
- Evaluation of reptile habitat suitability across the Site using criteria set out in Joint Nature Conservation Committee (1998) Herpetofauna Workers' Manual. Reptile presence/absence survey after Froglife (1999) Advice Sheet 10. Reptile Survey. An Introduction to Planning, Conducting and Interpreting Surveys for Snake and Lizard Conservation. Following this initial habitat assessment, a specific reptile survey was undertaken within the site. The methodology and results of this survey are reported in full within a separate report submitted to accompany the planning application⁹.

⁹ Johns Associates 2011. Reptile Survey Report. A report prepared for Woodland Environmental Ltd.

3.3 Valued Ecological Receptors

A key consideration in scoping and subsequently assessing the effects of any development on flora and fauna is to define the habitats and species that need to be considered. In identifying these 'receptors', it is important to recognise that a development can affect habitats and species directly (e.g. the land-take required) and indirectly, (e.g. through noise generation or lighting). In line with current best practice, the approach that has been adopted in this assessment is to identify 'Valued Ecological Receptors', 'Other Ecological Receptors' and separately, to consider legally protected species. This approach is widely considered to be current best practice in terms of undertaking an ecological impact assessment. Full details of this approach are given in the guidance document produced by IEEM¹⁰.

Valued Ecological Receptors

Valued Ecological Receptors are species and habitats that are valued in some way and that could be significantly affected by the proposed development. Other Valued Ecological Receptors may occur on or in the vicinity of the Site of the proposed development but do not need to be considered in detail because there is no potential for them to be affected significantly.

The value of habitats and species is assessed with reference to:

- Their importance in terms of 'biodiversity conservation' value;
- Any social benefits that species and habitats deliver (e.g. relating to enjoyment of local areas by the public); and
- Any economic benefits that they provide.

In terms of this assessment, habitats and species have been valued using the following scale: International/ UK/ National (i.e. England)/ Regional/ Greater London/ Borough/ Parish/ Site Value Only. A species population identified as being of **Greater London** or greater importance in biodiversity conservation terms is considered to be a Valued Ecological Receptor. **Therefore if a species population is identified as being of borough value or less, no significant effect can occur.** The exception to this is if it has been identified as having high social or economic value.

For habitats, the approach that has been adopted is that a habitat of **borough** or greater importance is considered to be a Valued Ecological Receptor. **No significant effect can therefore occur to habitats of lower than borough value unless it has economic or social value** (e.g. an open space that is used extensively for informal recreation by local people, where the area's wildlife is an important contribution to this value).

This assessment methodology has been adopted by Johns Associates for a wide range of Environmental and Ecological Impact Assessments.

Other Ecological Receptors

This relates to all other notable habitats and species that are associated with the survey area. As these are not classified as Valued Ecological Receptors, in accordance with the methodology used in this assessment no significant effect can occur to them.

¹⁰ Institute of Ecology and Environmental Management (2006) *Guidelines for Ecological Impact Assessment in the United Kingdom* (version 7 July 2006). <http://www.ieem.org.uk/ecia/index.html>

Legal Protection of Species

There is also a need to identify all legally protected species that could be affected by the proposed development in order that measures (i.e. avoidance or mitigation) can be taken to ensure that offences under the relevant legislation are not committed. Such measures must be acceptable to Natural England. Unless the legally protected species has also been identified as a Valued Ecological Receptor, any identified effect arising from the proposed development cannot be deemed significant due the legal requirement for mitigation and potentially licensing. Without such measures the development proposal/activity would be unlawful.

3.4 Scoping of Potential Effects Without Mitigation

It is necessary to consider likely activities and associated potential environmental changes at the Site during both construction and operation on identified Valued Ecological Receptors, Other Ecological Receptors and legally protected species in the absence of any mitigation. This then identifies the areas in which mitigation is required and the most suitable proposals to be taken forward and incorporated into the golf course design, construction and management.

3.5 Management and Mitigation Incorporated into the Development

Identification and inclusion of mitigation is an integral part of the overall design strategy to reduce potentially significant adverse effects to an acceptable level. Mitigation can be considered as a hierarchy. Avoidance of potential adverse effects is the optimum strategy, followed by a reduction of adverse effects and then remediation of any remaining residual effects. Where a predicted adverse effect cannot be acceptably mitigated, then there may be an opportunity for related environmental measures to be implemented to compensate for these residual adverse effects.

In addition, biodiversity enhancements have been identified and incorporated into the planning application. These deliver clear ecological gain through the development proposals in accordance with PPS9. Such measures are separate from those associated with the predicted effects of the scheme (i.e. mitigation).

Management measures have also been identified that are required to maintain the efficacy of the mitigation and enhancement measures, together with monitoring of these elements.

Section 5 of this assessment defines the mitigation and management proposals that have been adopted in order to avoid significant effects. Proposals to enhance habitat areas and their management are also presented. These proposals form an integral part of the planning application.

3.6 Assessment of Likely Effects

3.6.1 Assessment Methodology

As previously stated, the approach adopted by Johns Associates is based on the Guidelines for Ecological Impact Assessment in the UK, produced by the Institute of Ecology and Environmental Management (IEEM – www.ieem.org.uk). There are, however, no formal guidelines for the assessment of specific development effects. Instead, professional judgement is employed which draws on the best currently

available ecological knowledge and professional experience gained from a wide range of Impact Assessment work.

3.6.2 Significance and Magnitude Evaluation Methodology

The assessment focuses on potential effects on Valued Ecological Receptors and, as described in Section 3.2, a significant effect can only occur if a species population is considered to be of Greater London or greater importance in biodiversity conservation terms or if a habitat is considered to be of borough or greater importance. Effects can be either positive or negative.

Significant Negative Effects

A significant negative effect occurs if the existing conservation status of a Valued Ecological Receptor is compromised by the final design of the development. A significant negative effect is also considered to have occurred if the favourable condition of a defined site or ecosystem has been affected. For an effect to occur there must be a change in the baseline conditions of the ecosystem moving it towards or away from the conditions, which are considered to be favourable. The decision as to whether the conservation status of a Valued Ecological Receptor has been compromised will be made using professional judgement based on detailed predictions about how valued receptors would be affected. This will be informed by knowledge of detailed ecological processes.

Significant Positive Effects

A significant positive effect occurs if the proposed development activities cause:

- a non-valued ecological receptor to become valued; or
- the nature conservation value of an already valued receptor to increase from one level on the scale to a higher level (e.g. borough to Greater London).

3.7 Limitations, Constraints and Assumptions

No limitations or constraints were encountered in terms of being able to access the Site or its habitats or in terms of weather conditions. Although the inspections of the trees to identify potential roosts was carried out in a suboptimal time (i.e. carried out when foliage may obscure some features), good views of the trees were obtained. Furthermore, no direct or notable indirect effects to these trees are proposed as a result of the scheme. Consequently, no further bat surveys were considered to be necessary.

Froglife (Advice Sheet 9) advises that reptiles are generally active from March to October, but that the most profitable months for surveying are April, May and September. The presence/absence surveys were mainly carried out in July. To compensate for this, a substantially greater number of reptile refugia were used on the site than is typically recommended by Froglife. Other aspects of the survey (i.e. timing and weather) were in accordance with the guidelines.

It has been assumed that the development proposals are as described in this document and that all proposed mitigation, enhancement and management measures will be implemented in full.

4. Baseline Conditions

4.1 Desk Study

Owing to the size of the data set obtained, only relevant information gained through the detailed desk study is given in Section 4.1 of this document. The location of designated sites within the vicinity of Cherry Lodge golf course is shown in Appendix B.

4.1.1 Statutorily Designated Sites of Nature Conservation Importance

European/ International

The desk study identified no European or Internationally designated sites within 5 km of Cherry Lodge Golf Club.

National

One site within two km of Cherry Lodge Golf Course is notified as a Site of Special Scientific Interest (SSSI). Downe Bank and High Elms SSSI is located at Ordnance Survey grid reference TQ 438 610 and covers approximately 86 hectares. The site, located to the northeast of Cherry Lodge Golf Club, comprises an area of woodland and chalk grassland. High Elms is a large, formerly private estate of mostly beech woodland. Much of the original ancient ground flora remains including locally uncommon species such as green hellebore (*Helleborus viridis*), bird's-nest orchid (*Neottia nidus-avis*), spurge-laurel (*Daphne laureola*) and yellow bird's-nest (*Monotropa hypopitys*).

Local

No locally designated statutory sites were identified within 2 km of the Site.

4.1.2 Non-Statutory Sites of Nature Conservation Importance

The detailed desk study identified seven non-statutorily designated sites within a 2 km radius. These are listed in Table 4.1 below and are illustrated in Appendix B. Two of these locally-designated sites are located within 100 m of the perimeter of Cherry Lodge Golf Club; these sites are described in further detail below.

Table 4.1. Locally-designated sites located within 2km of Cherry Lodge Golf Course.

Site Name	Designation	Grid Reference	Area (Ha)	Approx. distance from Site (km)	Significant Barriers between designated site and development area
West Kent Golf Course and Down House	Site of Metropolitan Importance	TQ 424 610	134.89	0.30	Road
Cudham Valley South	Site of Metropolitan Importance	TQ 446 582	334.66	0.01	-
DowneBank and Cudham Valley North	Site of Metropolitan Importance	TQ 441 609	56.42	0.74	Road
Biggin Hill South and Painter's Wood	Site of Borough Importance Grade I	TQ 428 574	23.41	0.70	Road
Pimlico Wood	Site of Borough Importance Grade II	TQ 566 587	3.77	0.14	-
Withins Wood	Site of Borough Importance Grade II	TQ 435 578	5.45	0.08	-
Jugg Hill	Site of Borough Importance Grade II	TQ 417 595	5.04	1.48	Housing, road

Cudham Valley South Site of Metropolitan Importance (SMI) is located at Ordnance Survey grid reference TQ 446 582 to the south and east of Cherry Lodge Golf Club. This SMI comprises approximately 330 hectares of ancient woodland, chalk grassland, hedgerows, scrub and secondary woodland. Cudham Firth, one of the largest blocks of woodland within the site is one of London's most botanically diverse woods: its ground flora includes fly orchid (*Ophrys insectifera*), broad-leaved helleborine (*Epipactis helleborine*) and twayblade (*Listera ovata*). The chalk grassland component of the site is particularly diverse and contains the nationally scarce chalk eyebright (*Euphrasia pseudokernerii*) and the London rarity autumn gentian (*Gentiana amarella*). Diverse, species-rich hedgerows intersect the site and include many plants associated with ancient woodlands including London rarities such as toothwort (*Lathraea squamaria*).

Withins Wood Site of Borough Importance Grade II is located to the south of Cherry Lodge Golf Club and comprises approximately five hectares of several small blocks of ancient woodland linked in parts by species-rich hedgerows. Located at Ordnance Survey grid reference TQ 435 578, the woodland blocks are typically composed of beech (*Fagus sylvatica*), oak (*Quercus* sp.) and birch (*Betula pendula*), with smaller amounts of other species, including whitebeam (*Sorbus aria*), rowan (*Sorbus aucuparia*) and hawthorn (*Crataegus monogyna*). Abundant bluebells (*Hyacinthoides non-scripta*) dominate the ground flora.

4.1.3 Records of Legally Protected, Notable and BAP Species

A large number of records of legally protected, notable and BAP species were provided by GiGL and obtained from the NBN website. Species records occurring within 1km of Cherry Lodge Golf Club in the last 10 years are given in Table 4.2 below.

Table 4.2: Records of legally protected, notable and BAP species within 1km of the Site from the last 10 years.

Latin Name	Common Name	Protected Status	Distance of Record from Site (m)	Bearing	Date of Record
<i>Ophrys insectifera</i>	Fly orchid	BAP Priority London	959	NE	2002
		BAP Priority National	959	NE	2004
			999	NE	2005
<i>Polygala amarella</i>	Dwarf milkwort	BAP Priority London	959	NW	2001
<i>Valerianella dentata</i>	Narrow-fruited cornsalad	BAP Priority London	959	NE	2004
<i>Melanthiaprocellata</i>	Pretty chalk carpet	BAP Priority London	791	NE	2006
		BAP Priority National			
<i>Ennomos fuscantaria</i>	Dusky thorn	BAP Priority London	791	NE	2006
		BAP Priority National			
<i>Rana temporaria</i>	Common frog	Schedule 5 WCA 1981	780	N	2005
			786	N	2000
<i>Turdus iliacus</i>	Redwing	Schedule 1 WCA 1981	604	N	2007
<i>Sturnus vulgaris</i>	Common starling	BAP Priority London	604	N	2007
		BAP Priority National			
<i>Pyrrhuloxia pyrrhula</i>	Common bullfinch	BAP Priority London	786	N	2006
		BAP Priority National	874	E	2007
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	BAP Priority London	780	N	2005
		Schedule 5 WCA 1981			
		Conservation of Habitats and Species Regulations 2010			

There are no known bat roosts recorded within 1km of the Site, although they are likely to exist within trees, buildings and other built structures.

4.1.4 Habitats

A review of the Bromley BAP and the habitats recorded during the extended Phase 1 habitat survey has indicated that the following BAP priority habitats exist within the Site:

- Woodland;
- Hedgerows; and
- Grassland (chalk, neutral and acid).

4.2 Field Survey

4.2.1 Flora

A total of 15 Phase 1 habitat types were identified during the field survey. These are described in turn and illustrated below. Appendix C contains the Phase 1 Habitat Survey map and associated Target Notes.

Amenity grassland

This was the dominant habitat type encountered during the survey and comprised the driving range itself and the majority of the existing grassland associated with the golf course (see Figure 4.1 below). The intensively managed grassland (typically mown to <1cm) was species-poor and contained few grass species with annual meadow grass (*Poa annua*) being the dominant species. Other species noted included Yorkshire fog (*Holcus lanatus*), red fescue (*Festuca rubra*), cock's-foot (*Dactylis glomerata*) and common bent (*Agrostis capillaris*). Herb species recorded within this habitat type included common mouse-ear (*Cerastium fontanum*), creeping buttercup (*Ranunculus repens*), field forget-me-not (*Myosotis arvensis*), white clover (*Trifolium repens*), daisy (*Bellis perennis*), ribwort plantain (*Plantago lanceolata*), greater plantain (*Plantago major*) and common dandelion (*Taraxacum officinale* agg.). Components of this grassland formed areas of 'semi-rough' adjacent to and separating individual golf course fairways. This grassland was longer (e.g. <0.4m) and is likely to be cut twice a year, in accordance with standard greenkeeping practices.



Figure 4.1 Amenity grassland associated with Cherry Lodge Golf Club.

Semi-Improved (poor) grassland

Several areas of grassland within the survey area along the perimeters of the Site and between fairways were managed less intensively than the dominant amenity grassland. The resulting habitat type included vegetation consisting of long swathes of rank tussocky grasses with occasional forb species and a thick fescue thatch (see Figure 4.2). This habitat type occurred predominantly in patches in the northern part of the Site and within the rough grassland along the southern Site perimeter. Species of grass recorded within this habitat type included Yorkshire fog, red fescue, barren brome (*Anisanthasterilis*), creeping bent (*Agrostis stolonifera*), false oat-grass (*Arrhenatherum elatius*) and cock's-foot.

A range of common forb species were recorded, including yarrow (*Achillea millefolium*), creeping thistle (*Cirsium arvense*), creeping buttercup, lesser stitchwort (*Stellaria graminea*), common mouse-ear, tufted vetch (*Vicia cracca*), goat's-beard (*Tragopogon pratense*), ground ivy (*Glechoma hederacea*), greater plantain (*Plantago*

major), ribwort plantain (*Plantagolanceolata*) and cut-leaved crane's bill (*Geranium dissectum*).



Figure 4.2. Species-poor semi-improved grassland associated with Cherry Lodge Golf Club.

Tall Ruderal

This habitat type was present throughout the Site but concentrated in two main patches in the centre of the site and along the northern and southern perimeters of the Site (see Figure 4.3). Tall ruderal vegetation was dominated by common nettle (*Urtica dioica*) and cow parsley (*Athriscussylvestris*). Other frequent species included broad-leaved willowherb (*Epilobium montanum*), common ragwort (*Senecio jacobaea*), broad-leaved dock (*Rumex obtusifolius*) and creeping thistle. Bracken (*Pteridium aquilinum*), teasel (*Dipsacus fullonum*), red dead-nettle (*Lamium purpureum*), white dead-nettle (*Lamium album*), cleavers (*Galium aparine*) and greater mullein (*Verbascum thapsus*) were recorded occasionally.

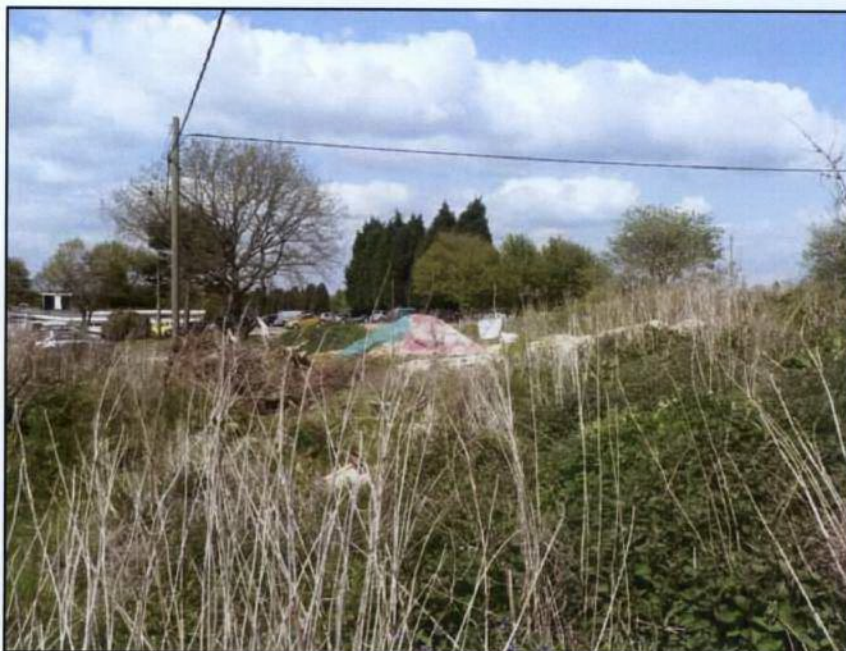


Figure 4.3. Tall ruderal vegetation associated with Cherry Lodge Golf Club.

Scattered trees: broadleaved

A wide range of broad-leaved trees were recorded throughout the Site during the extended Phase 1 Habitat Survey, many of which were planted within the last 30 years (see Figure 4.4). Species noted within the survey area included crab apple (*Malus sylvestris*), goat willow (*Salix caprea*), silver birch (*Betula pendula*), ash (*Fraxinus excelsior*), maple (*Acer* sp.), aspen (*Populus tremula*), rowan (*Sorbus aucuparia*), alder (*Alnus glutinosa*), grey willow (*Salix cinerea*), whitebeam (*Sorbus aria*), weeping willow (*Salix x babylonica*), horse chestnut (*Aesculus hippocastanum*), sweet chestnut (*Castanea sativa*), sycamore (*Acer pseudoplatanus*) and Lombardy poplar (*Populus nigra 'italica'*).

A number of mature pedunculate oak (*Quercus robur*) and beech (*Fagus sylvestris*) trees were also recorded within the site, with large specimens recorded along the northeastern perimeter. These were markedly of a greater age than the majority of other scattered broad-leaved trees within the survey area. Several mature cherry (*Prunus avium*) trees were also recorded within the site, particularly in the north west adjacent to the access road (see Target Note 11 in Appendix C).



Figure 4.4. Scattered broad-leaved and coniferous trees at Cherry Lodge Golf Club.

Scattered trees: coniferous

Scattered coniferous trees were, like the broad-leaved scattered trees, recorded throughout the Site (see Figure 4.4). Stands of cypress leylandii (*Cupressocyparis leylandii*) were densely planted to form screens around the existing driving range from the golf course. Other species noted included Scots pine (*Pinus sylvestris*), yew (*Taxus baccata*) and larch (*Larix decidua*).

Bare ground

Several areas of bare ground (see Figure 4.5) were recorded within the perimeters of the survey area, consisting mainly of a tarmac car park, access road and footpaths around the golf course of both cobble/pebble and shell substrate. An area of ground surrounded by tall ruderal and ephemeral perennial species was also included in this

habitat classification. This area, located to one side of the car park, was used at the time of the survey to store grass clippings, piles of sand, shells and pebbles and leaf cuttings.



Figure 4.5. Bare ground represented at Cherry Lodge Golf Club.

Scrub: dense/continuous

Dense and scattered scrub were recorded along the boundaries of the survey area (see Figures 4.6 and 4.7). Species recorded in this habitat type included bramble (*Rubus fruticosus* agg.), blackthorn (*Prunus spinosa*), elder (*Sambucus nigra*), hawthorn (*Crataegus monogyna*), holly (*Ilex aquifolium*) and hazel (*Corylus avellana*). The ground flora species recorded beneath this habitat type comprised frequent ivy (*Hedera helix*), common nettle (*Urtica dioica*) and cleavers (*Galium aparine*); and occasional bluebell (*Hyacinthoides non-scripta*) and lesser celandine (*Ranunculus ficaria*).



Figure 4.6. Dense/continuous scrub at Cherry Lodge Golf Club.



Figure 4.7. Scattered scrub at Cherry Lodge Golf Club (background) with semi-improved grassland (foreground).

Introduced shrub

Established and mixed shrubberies fell into this category and were recorded along the entrance of the Clubhouse as recently planted shrubberies (see Figure 4.8). These were planted with mahonia (*Mahonia japonica*), greater periwinkle (*Vinca major*), rhododendron (*Rhododendron ponticum*), cherry laurel (*Prunus laurocerasus*) and buddleia (*Buddleja davidii*). Cherry laurel formed dense areas of vegetation providing effective screening of the driving range from other areas of ground. Several stands of the invasive Japanese knotweed (*Fallopia japonica*) were also noted within the site (see Target Notes 8, 15 and 16 in Appendix C).



Figure 4.8. Introduced shrub at Cherry Lodge Golf Club.

Buildings

Buildings associated with Cherry Lodge Golf Club recorded within the survey area included the clubhouse (see Figure 4.9), green keepers cottage, driving range hut and brick-built shelter.



Figure 4.9 The Clubhouse associated with Cherry Lodge Golf Club.

Standing open water

This habitat type was recorded within the survey area in the form of a small ornamental lake and fountain adjacent to the Clubhouse (Figure 4.10). Yellow flag iris (*Iris pseudocorus*) dominated many of the marginal areas; other species recorded included great willowherb (*Epilobium hirsutum*) and marsh marigold (*Caltha palustris*). The pond was stocked with carp, which were observed rising to the surface to feed.



Figure 4.10. Standing open water at Cherry Lodge Golf Club.