CHERRY LODGE GOLF CLUB

Golf Course Remodelling: Biodiversity Benefits Analysis

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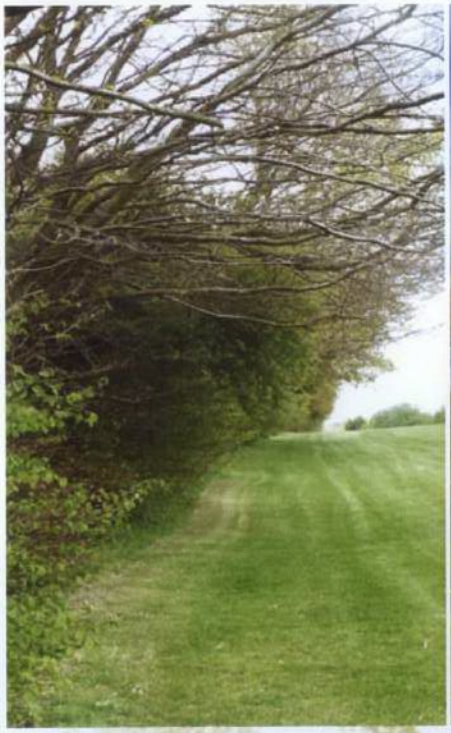
This golf course remodelling project will act as a catalyst for biodiversity restoration, will eliminate poor habitat quality and will create otherwise unlikely opportunities for wildlife.



DOCUMENT PURPOSE

This Biodiversity Benefits Analysis provides a summary of the key ecological design features embodied in the proposals to remodel Cherry Lodge Golf Club.

It demonstrates that the delivery of new and enhanced habitats for biodiversity is at the heart of the remodelling proposals, incorporated into the scheme from the outset.

These proposals have been informed by robust ecological surveys and desk study reviews.

The final proposals will deliver a golf course that is notably enhanced, in terms of habitat diversity and quality, ability to support a greater biodiversity, eradication of current ecological limitations and a management strategy that will nurture these natural assets in the long term.

"Delivering sustainable golf development through informed ecological design"

ABOUT CHERRY LODGE GOLF CLUB

Cherry Lodge Golf Club 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.

The Golf Club 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 Club with Berry Green Road lying adjacent to the southeastern perimeter of the Club.

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 hedgerows.

The habitats present within the wider local area to the south and east of the Golf Club mainly consist of agricultural land (arable or pastoral use) linked by hedgerows, again creating a strong patchwork effect. The agricultural land is scattered with varying sizes of woodland blocks, predominantly semi-natural in origin and frequently ancient.

To the east of the Site lies Biggin Hill: a well-established suburb within the boundaries of Greater London. The land here 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 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.

EXISTING BIODIVERSITY

Detailed ecological surveys and a review of historic data and maps have been completed to produce a robust characterisation of the current ecological baseline and to inform the remodelling design and integration of biodiversity enhancement.

Designated Sites

No statutorily-designated sites are located in proximity to Cherry Lodge Golf Course.

One locally-designated site (Cudham Valley South Site of Metropolitan Importance [SMI]) abuts the south east corner of the golf course at its nearest point. This SMI comprises approximately 330 hectares of ancient woodland, chalk grassland, hedgerows, scrub and secondary woodland. The chalk grassland component of the site is particularly diverse and supports a range of rare and scarce plant species.

Habitats at the Golf Club

Habitats recorded within the golf course include:

•Amenity grassland: the dominant habitat type within the course.

•Species-poor semi-improved grassland: this habitat is present within the long rough. The grassland is dominated by coarse and opportunistic grasses and is rank and tussocky due to an infrequent management regime.

•Tall ruderal vegetation: dominated by species such as nettle and broad-leaved dock and scattered in small patches within the site.

•Species-rich ancient hedgerow: the most important ecological feature within the site, including a mature tree belt and associated bank along the eastern site boundary and a central hedge extending east to west across the site. Dominated by oak, ash and beech with hawthorn, hazel, blackthorn, elder, dogwood, spindle, wild privet, field maple and wild service-tree also recorded. An ancient woodland ground flora is associated with these hedges, including the London rarity toothwort.

•Small remnant areas of semi-natural broad-leaved woodland, dominated by mature beech and oak, with impoverished shrub and ground flora layers.

•Blocks of even-aged and dense broad-leaved and mixed broad-leaved and coniferous plantation woodland planted approximately 20 years ago.

•Large numbers of scattered trees planted within the golf course site, including a wide range of native and ornamental species.

•Small areas of scattered and dense native scrub, largely dominated by bramble.

•An ornamental pond.

Species

•The following species were recorded during ecological survey work:

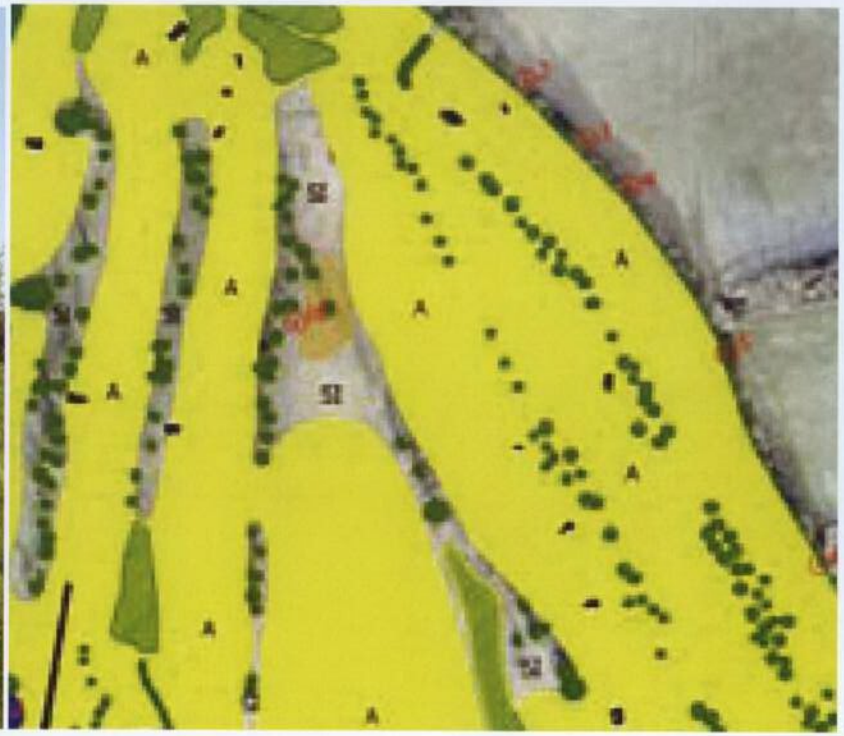
•A small population of grass snake (associated with the south eastern corner of the site).

•A range of common songbirds, including species such as blackbird, blue tit, great tit, wren, robin, greenfinch and chaffinch.

•A badger sett adjacent to the eastern site boundary.

•Mature trees with potential to support roosting bats (all to be retained).

Detailed ecological surveys and a review of historical records and maps have formed the blueprint for designing biodiversity into the heart of the remodelling proposals



KEY HABITAT FACTS

- Amenity grassland: 356,156 m2
- Species poor semi-improved grassland: 36,000 m2
- Semi-natural and plantation woodland: 37,700 m2
- Species rich hedgerow: 3,805 m length
- Dense and scattered scrub: 1,600 m2
- Introduced shrubs: 350 m2
- Tall ruderal vegetation: 3900 m2
- Bare ground: 14,900 m2
- Pond: 710 m2

"The current golf course contains some valuable habitats but is not living up to its full potential"

HABITAT CREATION & ENHANCEMENT PROPOSALS

The overall aim of the biodiversity aspect of the remodelling project is to encourage the conservation and enhancement of the wider Cherry Lodge Golf Course through restoration of existing habitats, creation of new biodiversity-rich habitats and management of all these habitats in the long-term across the site to ensure they deliver biodiversity benefit.

Objectives associated with each habitat type and species population have subsequently been derived based on a combination of the overall priorities that have been identified for conservation action by the Biodiversity Action Plan framework and the type/ characteristics of the habitat present within the site/course area.

Target habitats are as follows:

Broad-leaved woodland

Dead wood

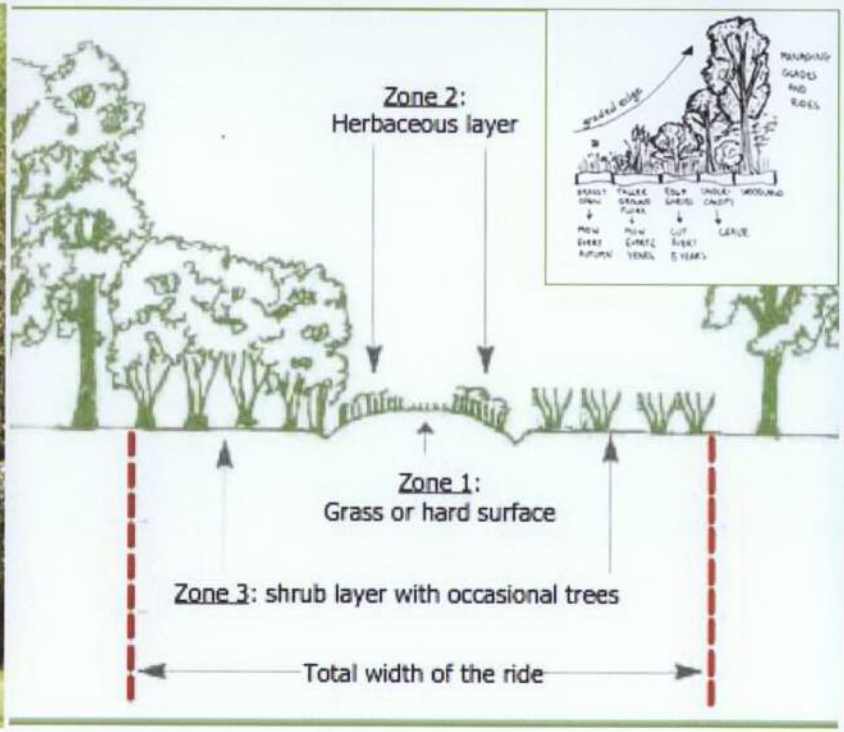
Orchard

Hedgerows

Species rich calcareous grassland

Pond

Broad-leaved woodland



KEY FACTS

Broad-leaved semi-natural woodland features as a Priority Habitat for the UK, London and Bromley BAPs. Key aims of the Bromley Habitat Action Plan for woodland are as follows:

"To encourage the conservation and sympathetic management of the Borough's woodlands";

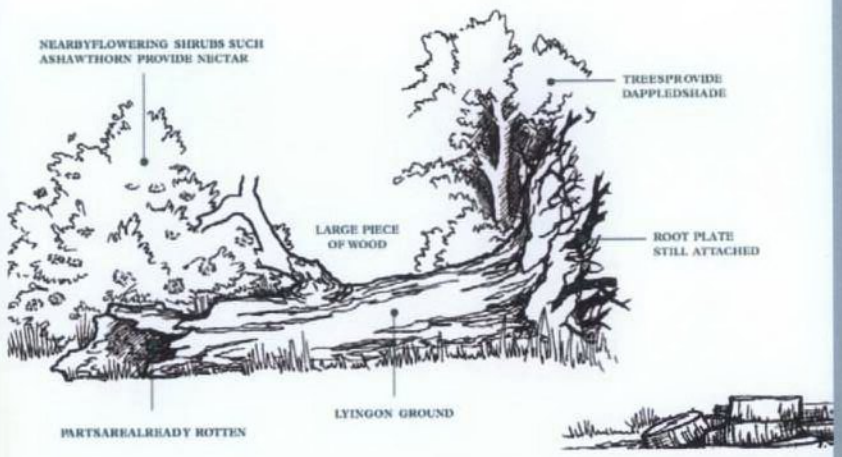
"To encourage the planting of trees and the establishment of new woodlands in appropriate locations".

The approach for woodland habitat at Cherry Lodge Golf Club will be to deliver management of existing woodland and plantation and creation of new woodland habitat.

Long-term management of existing semi-natural woodland blocks within the site is proposed with the key aims of management being to enhance the structure and diversity of this habitat.

"The proposals will deliver the creation of 16,620 m2 of new woodland and management of all of this key habitat"

Dead wood



KEY FACTS

Dead wood is a natural component of broad-leaved semi-natural woodland, and this habitat supports a diverse range of bryophytes, lichens, fungi, invertebrates, bats and birds. The possible implications of dead wood for public safety have led to an enthusiasm for clearance. The need to retain and manage dead wood habitat is recognised in the Bromley Habitat Action Plan for Woodland (Action 15):

"Ensure deadwood is adequately represented in woodland management plans (ongoing for dead/dying trees and non-standing deadwood, with special consideration given to creating stag beetle loggeries and bat roosts."

The proposals at Cherry Lodge GC will deliver sensitive management of standing and fallen dead wood to maximise the biodiversity value of this habitat. This includes provision of new areas of dead wood and a dead wood strategy.

"The proposals will create new areas of dead wood and will implement a dead wood strategy across the site"

Orchard

KEY FACTS

Orchards are dispersed throughout the lowlands of England, however several counties support concentrations of this habitat, including Kent. One of the key targets of the UK Traditional Orchard HAP is to:

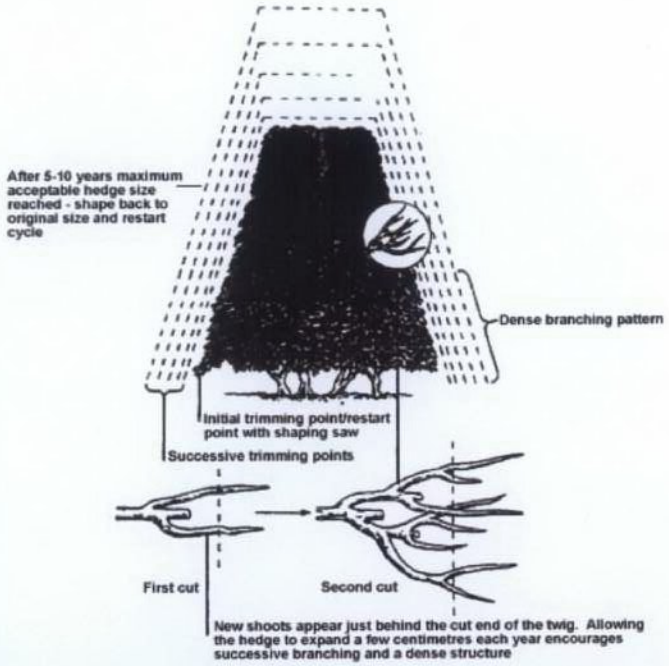
"Increase the extent of Traditional Orchards across the UK – a minimum of current area (ha) expanded by 50%."

As the site supports a number of old fruit trees, particularly old cherry trees, but also old apple and pear trees, creation of a new orchard area within the restored site is considered appropriate to contribute towards this target.

The orchard area will be planted with local varieties of apple, plum, pear and cherry. In addition, buds from fruit trees on the site will be grafted onto suitable rootstock and then planted into the orchard to ensure these varieties are retained within the site.

"The proposals will deliver the creation of 3,200 m2 of new orchard and management of all of this key habitat"

Hedgerows



"The proposals will create 1,610m of new species rich native hedgerow and management of all of this key habitat"

KEY FACTS

Native hedgerows feature as a Priority Habitat for the UK, London and Bromley BAPs. Key aims of the Bromley Habitat Action Plan for woodland are as follows:

"To protect and enhance existing hedgerows

To plant new hedgerows, especially where they can provide important links."

Ancient and species-rich hedgerows are a distinctive local feature e.g. hedgerows within the Cudham Valley South Site of Metropolitan Importance immediately to the east of the golf course have been described as:

"perhaps the finest network of hedgerows in London with a high diversity of both woody and herbaceous species."

The Cherry Lodge GC proposals will deliver successful management of existing native hedgerows and the creation of new species-rich native hedges.

Species rich calcareous grassland

KEY FACTS

Chalk grassland features as a Priority Habitat for the UK, London and Bromley BAPs. One of the key aims of the Bromley Habitat Action Plan for chalk grassland is as follows:

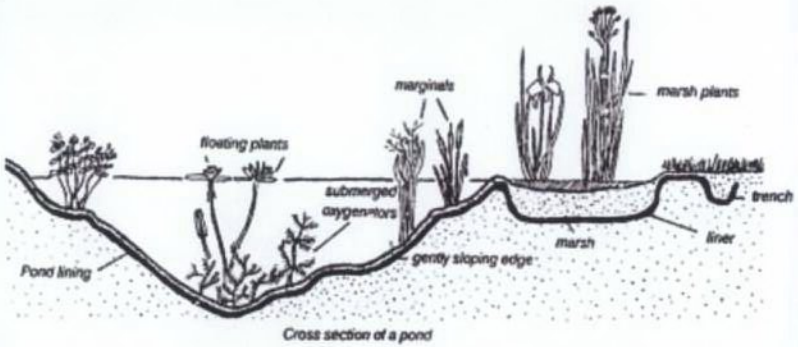
"To increase the extent of species-rich grassland in the Borough, especially where they connect existing areas".

The underlying geology for Cherry Lodge golf course comprises chalk. The site is underlain by calcareous soils. In addition, one of the main designation features for the Cudham Valley South Site of Metropolitan Importance immediately to the east is species-rich chalk grassland.

As such, chalk grassland was considered to be the appropriate target community for creation and restoration within the golf course rough at Cherry Lodge.

"The proposals create areas of new species rich calcareous grassland and will bring into sensitive management 106,500 m2 of grassland"

Pond



Cross section of a pond

KEY FACTS

Wetland habitat is listed as a Priority Habitat within the Bromley BAP and this definition covers ponds, lakes and rivers. In addition, a national Habitat Action Plan has recently been produced for ponds; and pond habitat is covered under the Standing Water HAP within the London Biodiversity Action Plan. Action 10 within the Bromley Wetland HAP requires the following:

"Create ponds on Council-owned or private landholdings, giving particular priority to areas within 1km of other existing ponds."

As such, the development proposals also include the creation of a new pond within the golf course and the long term sensitive management of an existing pond.

"The proposals will create one new pond for biodiversity and the sensitive management of 1,005 m2 of this habitat"

SPECIES SPECIFIC PROPOSALS

In addition to the delivery of habitat restoration, creation and management, the biodiversity proposals include a number of species specific measures, where additional benefit can be gained above and beyond those delivered through the habitat proposals. Key target species or groups are Bats, Birds, Stag beetle and other deadwood invertebrates, and Reptiles.

Bats

Birds

Stag beetle and other deadwood invertebrates

Reptiles

Bats

" The proposals deliver long term management of potential tree roosts, provide new roosts in bat boxes and increase habitat quality and prey availability"

KEY FACTS

10 species of bat occur in Bromley and all are listed as Priority Species within both the Bromley and the London BAPs. Key aims of the Bromley Species Action Plan for bats include:

"Maintain, enhance and where possible increase the number of summer roost sites and winter hibernation sites.

Maintain, enhance and extend suitable habitat for foraging bats.

Improve and increase the network of linear landscape in order to link roost with foraging areas and to link islands of suitable habitat."

An aim of the long-term management for the site is to retain potential tree roosting opportunities for bats in the long-term. However, a number of bat boxes will be installed provide additional roosting options for bats.

In addition, the proposals deliver habitats of importance to bats including continuous treelines and hedgerows, wetlands, woodland and flower rich grassland, all of which will increase prey availability.

Birds

KEY FACTS

The habitat management objectives will result in creation and/ or restoration of a range of habitats considered to offer suitable breeding, foraging and over-wintering opportunities for a number of species of birds.

The creation and maintenance of new areas of flower-rich grassland will result in an increased diversity and abundance of invertebrates thus providing prey for many species of birds.

The restoration and appropriate maintenance of woodland scrub edges will benefit a number of woodland bird species, including BAP species such as dunnock (*Prunella modularis*).

Additional nesting habitat will be created through the provision of 20 small woodland bird boxes, particularly aimed at hole-nesting birds.

" The proposals deliver long term management of potential nesting habitat and increase habitat quality and food availability"

Stag beetle and dead wood invertebrates

KEY FACTS

Stag beetle is listed as a Priority Species within the Bromley, London and UK BAPs.

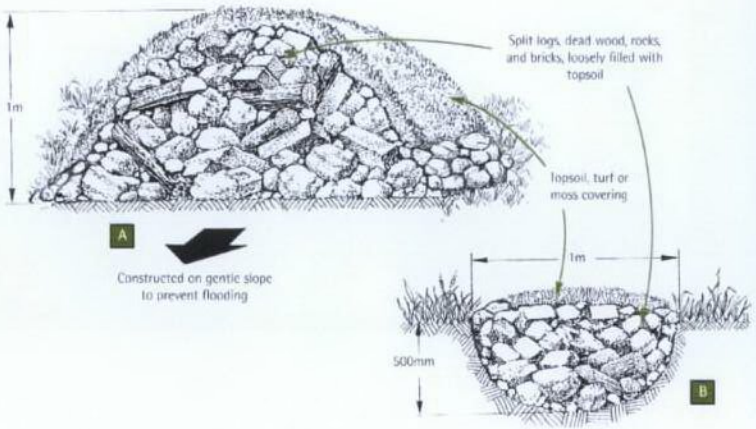
The stag beetle is found in old broad-leaved woodland, parks, pasture woodland and gardens. Stag beetle larvae live in and feed on the decaying wood of a wide variety of broad-leaved trees and shrubs, often in roots and stumps, at or below ground level, and may take up to five years to become fully grown.

A number of habitat management strategies will be implemented by the proposals, which will result in enhanced habitats suitable for a wide range of invertebrates. This includes implementation of a Dead Wood Management Strategy.

Additional habitat for stag beetles and other saproxylic invertebrates will be created through construction of partially buried and stacked loggeries within woodland at the golf course.

" The proposals will create six new dead wood loggeries and seek to conserve fallen and standing dead wood though a management strategy"

Reptiles



KEY FACTS

All species of reptile are listed within the UK and the London BAPs as Priority Species. One of the targets of the London BAP is to:

"Increase the distribution of Reptiles and Amphibians within the Greater London region."

Common species of reptile such as slow worm and common lizard require a varied habitat structure that provides shelter, a range of shady and sunny spots and frost-free areas to spend the winter. Dry, open grasslands in a mosaic with scrub and woodland provide optimal basking opportunities, as well as plenty of cover and food, and are the habitats with which most reptiles are commonly associated.

Extensive habitat creation and management as outlined above will result in optimal habitat for these species of reptile, including species-rich grassland, woodland, ponds and hedgerow. Additional habitat creation within the site for reptiles will comprise creation of a total of six log pile refuges and four hibernacula.

" The proposals deliver high quality reptile habitat, six log pile refuges and four hibernacula, along with sensitive habitat management"

BIODIVERSITY MANAGEMENT PROPOSALS

Woodland and plantation

-To restore and enhance the ecological value of existing broad-leaved plantation and semi-natural woodland through selective coppicing and thinning on rotation to open up glades and rides.

-To maintain glades and rides within the woodland through an appropriate cutting and mowing regime.

-To control invasive laurel and Japanese knotweed within the site.

-To allow development of shrubby edge habitat for all existing and newly created woodland.

-To ensure establishment of woodland through appropriate aftercare.

Dead wood

-To retain fallen and standing deadwood;

-To create new areas of suitable deadwood habitat for invertebrates by sensitive location of timber and creation of new loggeries.

Orchard

-To create new traditional orchard habitat using local varieties of plum, pear, cherry and apple.

-To manage the orchard habitat at low-intensity in the long-term to benefit biodiversity.

Native hedgerows

-To manage the eastern boundary hedgerow as a belt of mature trees with management measures limited to 'gapping up' and removal of non-native species.

-To restore the central hedgerow through coppicing.

-To create new lengths of native species-rich hedgerow along the western and southern golf course boundaries.

-Implement a sensitive management regime for all hedges involving rotational trimming and incremental height increase.

-To maintain a tall grassland buffer zone on both sides of the hedges.

New areas of chalk grassland

-To create and establish successfully species-rich chalk grassland communities within new areas of 'heavy rough'.

Areas of wildflower-rich 'rough' grassland

-To manage all areas of long rough within the site in order to maximise the diversity of the plant community and thereby the value of this habitat for invertebrates.

Ponds

-To create and successfully establish a new pond with varied bank profiles and to maintain ponds within the site with dense native marginal and emergent vegetation.

Bats

To retain existing trees with crevices and rot holes suitable for bats and to create and maintain additional roosting opportunities for a range of bat species.

Birds

-To create and maintain additional nesting opportunities for a range of bird species.

BIODIVERSITY MONITORING

Monitoring will be undertaken on an annual basis to ensure that the new habitats/ enhanced existing habitats are in a state of good condition and have successfully established; and that the habitats/features are attaining the targets set for the different management objectives.

These are defined in full within a project-specific Biodiversity Mitigation and Management Plan (BMMP), produced by Johns Associates (2011).

The results of monitoring will be used to adjust and adapt the management as required and will be incorporated fully into subsequent versions of the BMMP. The 'living' BMMP will be used by the greenkeeping team to inform the long term sensitive management of Cherry Lodge Golf Club.

Monitoring will comprise the following:

Tree planting to be checked at least three times per year by landscape contractors during Years 1 to 3 (following planting) aimed at ensuring successful establishment. These checks to be undertaken at the same time as weeding control measures and replacement of failures.

An annual ecological check/audit to be undertaken to assess the condition of newly created and managed habitats (including species-rich grassland, hedgerows, woodland and ponds).

This annual audit will be undertaken in late May/early June and will assess sward height and density, abundance of target species, and percentage cover of understorey and canopy species.

An appropriately experienced/ licensed ecologist will undertake the maintenance for all bat and bird boxes.

All records obtained from the monitoring will be submitted to the Greenspace Information for Greater London (GiGL).

BIODIVERSITY GAIN SUMMARY

This document provides an overview of the current biodiversity associated with Cherry Lodge Golf Club and sets out a summary of the key biodiversity gain that will be delivered as a direct result of the golf course remodelling proposals.

It could be argued that some biodiversity gain can be simply be achieved through changes to green keeping management. Fundamentally, however, because the remodelled golf course now has biodiversity at its core, including a detailed Biodiversity MItigation and Management Plan, the future golf course management naturally becomes aligned to the enhanced course layout, habitats and biodiversity features.

Rather than applying a piecemeal approach to enhancing the biodiversity at Cherry Lodge Golf Club, the proposals, although only limited to certain parts of the course, will deliver a course wide approach to nature conservation.

In summary the remodelling proposals will enable the following biodiversity gain.

- New native species rich hedgerows and sensitive management of all existing hedgerows.

- New areas of woodland planting and implementation of good woodland management practice across the golf course.

- Creation of a new orchard and sensitive management of this habitat and existing fruit trees.

- Creation and management of extensive areas of wildflower grassland including calcareous grassland, to increase invertebrate diversity and for bats, birds, reptiles and other fauna.

- Creation of a new pond for wildlife and enhancement of the existing pond to enhance its nature conservation value.

- Creation of loggeries and management of standing and fallen deadwood for stag beetle and other invertebrates.

- Creation of reptile log refugia and hibernacula (which will also be of value to common amphibians, lower plants and invertebrates).

- Management of key potential tree roosts, flight lines and foraging habitats for bats and the provision of new bat boxes.

- Management of key nesting and feeding habitat for birds and provision of nest boxes.

- Implementation of a detailed and 'living' Biodiversity Mitigation and Management Plan (BMMP) to include both the construction and long term management of the entire golf course.

- Implementation of a biodiversity monitoring programme to inform the success of the BMMP and to identify areas of improvement or modification.

- Involvement of the greenkeeping team and club members in the future positive stewardship of Cherry Lodge Golf Club for biodiversity.

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Johns Associates
environmental consultants

" The project vision delivers far reaching benefits for biodiversity that are otherwise unlikely to occur"