Johns Associates
environmental consultants

Cherry Lodge Golf Club

Arboricultural Implications Assessment of
the proposed remodelling and enhancement of Cherry Lodge Golf Club

Prepared For Woodland Environmental Limited

May 2011

Report for

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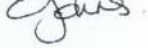

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Document Revisions

No.	Details	Date

Contents

1. Introduction

1.1 Background

Johns Associates Ltd, in association with Alderwood Consulting, was commissioned by Woodland Environmental Ltd to undertake an Arboricultural Implications Assessment (AIA) of a proposal to modernise and improve Cherry Lodge Golf Club. 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 trees. This includes a requirement to record information about trees present within the application area, identify Tree Preservation Orders (if present), confirm issues associated with trees within Conservation Areas (if present) and to identify relevant tree protection measures in accordance with BS 5837:2005 – *Trees in relation to construction*. It is the intention to enhance the abundance and diversity of trees within Cherry Lodge Golf Club in line with good practice, objectives for biodiversity mitigation and enhancement and high quality amenity scheme design.

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 hedgerows.

The habitats present within the wider local area to the south and east of the Site mainly consist of agricultural land (arable or pastoral use) linked by hedgerows, again creating a strong patchwork effect.

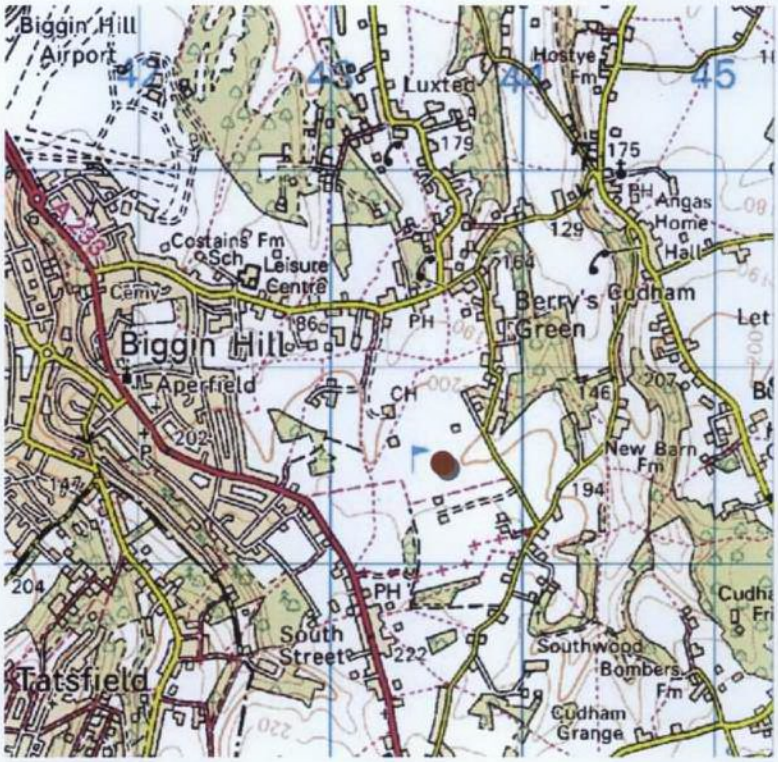

Figure 1.1. Approximate location of Cherry Lodge Golf Club

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, arboricultural and biodiversity requirements. Significant tree planting is proposed within the remodelled course

Figure 1.3 identifies those trees affected by the remodelling proposals (shown in red).

Figure 1.3 Trees affected by the proposals at Cherry Lodge Golf Club

1.3 Study Area Definition

The study area has been established by considering both good practice and the location and nature of the development of the Site. The focus of the study is the area within the Site associated with the development proposals (see Figure 1.3), although the whole Site has been surveyed. The AIA is therefore focussed on this area, although the remainder of Cherry Lodge Golf Club was included in the formal tree survey.

1.4 About this Assessment

This assessment has been prepared by Alderwood Consulting in association with Johns Associates and follows guidelines set out in the British Standard (BS 5837:2005 Trees in relation to construction – Recommendations) for carrying out Arboricultural Implications Assessment in the United Kingdom.

The objectives of this assessment were to inspect the significant trees on and closely adjacent to the land within Cherry Lodge Golf Club associated with the planning application site and to provide advice on the successful retention and incorporation of trees of amenity value within and closely adjacent to the proposals.

In addition this report includes the following information in connection with the current planning application:

- a schedule of the relevant trees giving dimension data and an assessment of their condition;
- an assessment of appropriate tree protection measures; and
- an assessment of the remodelling proposals with appropriate suggestions for reducing any impact on amenity.

2. Planning Context

Trees are an interest of acknowledged importance in planning terms and there is a statutory requirement that they be properly considered in determining a planning application. Supporting information submitted for this planning application provides tree information in connection with this element of the Site, in accordance with the recommendations in BS 5837:2005 – *Trees in relation to construction*.

Relevant regional planning guidance includes The London Plan and its policies: 3D.15 Trees and Woodland. Relevant local planning policy is represented by Bromley Unitary Development Plan policy NE7 – Development and Trees.

The Arboricultural Implications Assessment, together with the replanting scheme, is considered to demonstrate the scheme is fully compliant with Policy NE7 of the London Borough of Bromley's Unitary Development Plan.

3. Methodology, Site Visit and Observations

3.1 Collection of Data

Trees within and adjacent to the parts of the golf course affected by the remodelling proposals (the Site) have been assessed as Individuals or Groups. As a general principle the individual trees have individual or specimen merit. Where trees within or closely adjacent to the site are in lines of similar species, or in clusters of planting in a small range of species, these have been referred to as Groups.

A highly experienced arboricultural consultant inspected the significant trees and group of trees[1]. Relevant numbers for groups and individuals are provided in a tree schedule and supporting plan in Appendix A.

For each tree and group information was collected as recommended in BS 5837:2005 – *Trees in relation to construction - Recommendations*. This information was recorded in the tree schedule at Appendix A. Tree positions are as shown on the aerial photo used as the base for drawing JF1 (please refer to Appendix A).

3.2 Subjective Assessment of Trees

The site visit and tree schedule were carried out in line with the recommendations in BS 5837:2005. Trees are categorised on the basis of their suitability for retention on a development site, and brief details of the reasons for each category allocation are provided. There are four categories, which are summarised below:

Category A: Trees of high quality and value;

Category B: Trees of moderate quality and value;

Category C: Trees of low quality and value; and

Category R: Poor trees to be removed.

3.3 The Root Protection Zone and Location of Protective Fencing

BS 5837:2005 gives recommendations for the areas of root protection zones to be equivalent to the area of a circle centred on the tree with a radius of least 12 times the trunk diameter. This distance is given for guidance for each tree in the tree schedule. In practice the siting of the fencing may be different. The implication of the root protection zone is that no significant disturbance should occur within it if the trees are to be successfully retained. The tree protection distances and protection measures have been set out in a schedule in Appendix A. An example of protective measures is presented in Appendix B.

[1] Jonathan Fulcher Dip. Arb. (RFS) F.Arbor.A

3.4 Formal Tree Controls

Specifically in tree terms these are tree preservation orders (TPO) and Conservation Areas (CA). London Borough of Bromley as the Local Planning Authority would make and administer TPOs. From telephone discussions with the London Borough of Bromley on 22nd July 2009 it is understood that there are no TPOs on trees on the site. No trees included in the tree schedule are protected by TPO. The site is not in a Conservation Area. Tree removal on a large scale may require a felling license, but there are exemptions, including work carried out in accordance with a planning permission.

3.5 Consultation

During the course of preparing this AIA the following organisations have been consulted.

- The Tree Team at London Borough of Bromley (telephone discussion to confirm these issues on 22nd July 2009).

3.6 Limitations, Constraints and Assumptions

No limitations or constraints were encountered in terms of being able to access the Site, its habitats or in terms of weather conditions.

4. Arboricultural Implications Assessment

4.1 Trees

Overview: The site is an eighteen-hole golf course in the semi-rural outskirts of Biggin Hill about 300m north east of the A233 and about 1km east of Biggin Hill. The site is very secluded, with a very short boundary with Jail Lane to the north and Berry's Green Road to the east. Otherwise the site is set in countryside with no significant views into the site from public places. Landform is gently rolling, and this landform together with trees limits views into the site, so that the full extent of the golf course cannot be seen from any one vantage point. There are trees throughout the site, predominantly in groups, in lines and in small areas of woodland planting. There are no trees of particular individual amenity significance.

Amenity: The site is a golf course set in countryside. It is bounded by public roads only for a very short length of the short north boundary and for a short section at the southern end of the east boundary. Other boundaries abut countryside in the form of meadows or arable fields. A Public Right of Way crosses the golf course from east to west in the northern part of the course and along the southern boundary. The landform of the site and its environs significantly limits public views. In general the site is secluded and private. From any public views into the site the trees all appear as general landscape elements, with no trees outstanding by size, form or species. From within the site e.g. for users of the golf course and those using the Public Right of Way, the general impression is of many trees in groups with occasional larger individuals; but with no single tree being significantly outstanding.

Effects on trees: The amenity value of trees has been one of the important influences on the location and orientation of greens, fairways and tees and the redesign of the golf course. The potential impact of the proposal is set out below with appropriate protective measures.

Individual trees: There is only one tree identified as an individual and this is T8a, a good beech, part of the Group G8 but large enough to suggest inclusion as an individual. However, its location close to G8 and its distance from public views reduce its public amenity to a low level, and any management for G8 will also be reasonable for this tree.

Groups of trees: These are generally areas of planting within the site, often separating the fairways and greens. The ages of these trees suggests that most such Groups were planted within the last 40 years, although there are occasional Groups with larger older trees e.g. G6, G9. These planted Groups are generally of two or three main species, with occasional and infrequent fourth and fifth species. Trees on the outside edges of Groups have had lower branches removed to give crown heights above the ground of about 3m. Otherwise there is no indication of regular management pruning or thinning of stems. Groups are generally of trees uniform in

size, but individuals in some groups may be variable in form, some upright with good central leaders, some with no central leader but with broad spreading crowns. In amenity terms no Groups are particularly outstanding. In general the Groups have little amenity value and the Groups with younger smaller trees are reasonably easy to replace.

Woodland Planting: Groups G15 and G20 have the character of woodland planting. These Groups contain a variety of species in a variety of conditions, and the sizes suggest that the planting dates from the early 1980s. There is no evidence of woodland or other significant management. These woodland Groups will not be significantly affected by the proposals.

4.2 Remodelling and Enhancement Proposals

Installation of haul roads: The haul roads are temporary internal routes to allow access within the Site for plant to manage, handle and move soil.
The haul roads will form a small network, generally located to provide maximum access with minimum disturbance. In any places where the haul roads may be close to the protection zones of trees to be retained the specification for temporary protective fencing will be the higher BS 5837 specification i.e. a braced driven scaffold pole framework supporting weldmesh panels. Propriety temporary track-way designed to spread load and avoid compaction, installed to the manufacturer's specification, may be used where access passes close to tree Groups.

Storage and handling of materials: There is ample room within the Site for the storage and handling of materials, the Site offices and construction parking, all outside the protection zones for trees to be retained.

Site compound: There is ample space within the Site for the site compound, outside of the protection zones for trees to be retained.

Land remodelling: All levels changes, either by importing soil or by excavation will be outside the protection zones of trees to be retained. There will be no storing of soil or movement of soil management plant within the protection zones of trees to be retained. There will be no significant adverse effects on trees from this aspect of the proposals.

Drainage: The redevelopment is an opportunity to improve ground conditions and the management of surface and ground water. Drainage will be installed where appropriate, in the form of perforated or porous pipes. There are no direct installation works within the protection zones for trees to be retained and no significant risk of adverse effects from the physical process of drain installation. The longer-term effects will be to manage surface and ground water drainage more effectively to prevent saturation and water-logging. Both of these would potentially be a problem for trees, just as they are for the management of the tees, fairways and greens. Provided that there is no significant rise in water table levels, the management of water into drains and water courses is likely to have no significant adverse effects on trees and may be beneficial in those areas where water-logging may previously have been a problem.

Tree removal: Generally, groups of trees within the site may be moved or removed in conjunction with the remodelling and landscaping. These groups are generally of low amenity value, and can be replaced in the new layout.

Landscape planting: The proposals are in effect a wholesale landscape scheme, and there will be extensive and comprehensive tree planting proposals as an integral part of this. These are submitted separately, and will more than compensate for any temporary adverse effects on the number and quality of trees currently on the site.

Tree relocation: The younger smaller trees from Groups to be removed may be relocated elsewhere within the site. Trees with trunk diameters of up to 30cm and in some cases larger may be successfully relocated using appropriate machinery and techniques.

5. Protection Measures

5.1 Temporary Tree Protection Fencing

Trees in Groups to be retained will be protected with temporary protective fencing. This would normally be erected at the BS 5837:2005 distances for each group of trees to be retained, as given in the last column of the tree schedule. Depending on the Local Planning Authority's requirements it may be to BS 1772 Parts 1 & 4 i.e. chestnut pale fencing of 1.2m – 1.4m attached to driven posts at 3m centres; or it may be to the BS 5837:2005 recommendations i.e. preformed galvanised steel mesh panels ('Heras' or similar) facings on a driven braced scaffold pole framework. It will be erected prior to any development related activity and retained until development is completed. It may be moved or removed only with notice to and consent from the Council.

5.2 Effects on Existing Trees Post-development

For the majority of retained trees the proposals are a sufficient distance from them that there will be no significant risk of long-term adverse effects from the proposals.

5.3 Effects on New Trees Post-development

The new landscape planting will be installed in accordance with current industry best practice, and managed thereafter. The remodelling is an opportunity to fit the planting more appropriately to the site in terms of landform and species range, so that new tree groups will enhance the site. With management plans, these trees will develop to complement the existing retained trees and to fit well within the landscape of the surrounding area.

6. Summary and Conclusion

6.1 Summary of Control During Development

In order to minimise any adverse effects on the retained trees identified, it is advised that:

- Tree surgery including tree removals and pruning is carried out prior to the erection of protective fencing and before the commencement of development
- Boundary fencing is retained and protective fencing is installed at appropriate locations before commencement of development and is retained until the completion of development
- Fencing may be moved only with the consent of the Council
- There will be no fires within 10m of the canopy of any retained tree, and no storage or mixing of harmful materials e.g. DERV fuel, concrete within 10m of the trunk of any retained tree

6.2 Summary of the Impact on Local Amenity

This layout retains the significant groups of trees on and adjacent to the site, with scope for proper provisions for their protection during development, and their subsequent management, where they lie within the site. If adequate precautions to protect the retained trees are implemented as recommended in this report, the overall impact of the proposal on local amenity will be low and limited to the short term only.

6.3 Conclusion

The tree information presented in the schedule and in this report is sufficient for the Council to carry out their own checks, although the implications report steps through the issues with reasonable objectivity. The relevant information is presented and is fit for the purpose of assessing the implications of the proposed development for trees to be retained. From this assessment it is clear that the tree protection measures generally fall in the mainstream of such precautions e.g. fencing; that the post development issues have been properly addressed; and that there are no supportable tree-related reasons for refusing planning permission. Further details can be provided subsequent to the granting of planning permission, by way of appropriate pre- and post-commencement conditions.

Appendix A.

APPENDIX 1
Tree Schedule and Explanatory Notes

Tree No	Species	Height (m)	Trunk Diameter (cm)	Crown spread (m)		Crown height above ground	Age class	Physiological condition	Structural condition and notes	BS 5837 cat	Root protection area (m)
G1	Birch	<6	<20	<2	<2	>1.0	Young	Good	Good	C	2.5
	Sycamore, oak		<15	<2	<2			Fair	Fair	C	
G2	Birch, goat willow	<10	<40	<6	<6	>0.5	Mature/ Maturing	Good	Fair – willow with multiple stems with frequent cavities and decay	C	5.0
				<6	<6						
G3	Cherry	<6	<20	<3	<3	>1.0	Young	Good	Fair	B	2.5
				<3	<3						
	Sycamore, oak	<11	<65	<8	<8		Maturing	Good	Good – linear group on boundary	A	8.0
				<8	<8						
G4	Beech	<9	<40	<5	<5	0.0	Young	Good	Good – multiple stems	A	5.0
				<5	<5						
G5	Cypress	<11	M<40	<3	<3	0.0	Maturing	Good	Good	A	5.0
				<3	<3						
G6	Oak	<12	<70	<8	<8	>1.0	Maturing	Good	Good	A	8.5
				<8	<8						
G7	Beech	<10	<40	<5	<5	>1.0	Young	Good	Fair – multiple stems	B	5.0
				<5	<5						
G8	Oak	<15	<60	<7	<7	>1.0	Maturing	Good – dead wood	Fair – minor cavities and one trunk with extensive cavity	A	7.5
				<7	<7						
	Hawthorn	<6	<25	<3	<3	1.5	Maturing	Good	Good	B	3.0
				<3	<3						
T8a	Beech	15	3<85	12	12	0.5	Maturing	Good	Good – three trunks from ground level	A	10.5
				12	12						

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Tree No	Species	Height (m)	Trunk Diameter (cm)	Crown spread (m)		Crown height above ground	Age class	Physiological condition	Structural condition and notes	BS 5837 cat	Root protection area (m)
G9	Oak, beech, hawthorn	<15	<80	<7	<7	>1.5	Maturing	Good – dead wood	Most good – oak occasionally poor with old damage, one-sided, beech with multiple stems and minor cavities	A	10.0
				<7	<7						
G10	Cherry, alder, rowan, hawthorn, oak, ash, willow, larch	<8	<25	<2	<2	>0.5	Young	Good	Fair – unthinned woodland planting	C	3.0
				<2	<2						
G11	Birch, sycamore, beech, oak, cypress	<7	<20	<2	<2	>0.5	Young	Good	Fair – unthinned woodland planting	C	2.5
				<2	<2						
G11A	Birch, sycamore, beech, oak, cypress	<7	<20	<2	<2	>0.5	Young	Good	Fair – unthinned woodland planting	C	2.5
				<2	<2						
	Willow	<10	<45	<5	<5	>5.0	Maturing	Fair	Fair	C	5.5
				<5	<5						
G12	White poplar	<11	<35	<5	<5	>1.0	Young	Good	Variable – most one-sided, some with damaged tops	C	4.5
				<5	<5						
G13	Beech, ash, oak, birch, hawthorn, hazel, blackthorn	<4.5	<40	<2	<2	0.0	Maturing	Good	Poor – managed as hedge by toping at 4m, under power line	C	5.0
				<2	<2						
G14	Beech, oak	<14	<50	<6	<6	>1.0	Maturing	Good	Good – beech in linear group with multiple stems, possibly old hedge	A	6.0
				<6	<6						

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Tree No	Species	Height (m)	Trunk Diameter (cm)	Crown spread (m)		Crown height above ground	Age class	Physiological condition	Structural condition and notes	BS 5837 cat	Root protection area (m)
G15	Hazel, oak, beech, sycamore, birch, ash, alder, poplar	<6	<25	<3	<3	0.0	Young	Varies – poplar dying, squirrel damage on sycamore	Fair – unthinned woodland planting	C	3.0
				<3	<3						
G16	Oak, beech, hawthorn	<15	<70	<8	<8	>1.5	Maturing	Good	Good	A	8.5
				<8	<8						
G17	Cypress, larch, spruce	<10	<40	<2	<2	>1.0	Young	Good	Good – cypress multi-stemmed	B	5.0
				<2	<2						
G18	Oak	<15	<60	<8	<8	>0.5	Maturing	Good	Good – linear group with hazel and hawthorn understorey	A	7.5
				<8	<8						
G19	Birch, beech, Scots pine	<14	<50	<5	<5	>1.0	Maturing	Good	Good	A	6.0
				<5	<5						
G20	Field maple, hornbeam, birch, cherry, whitebeam, lime	<10	<25	<3	<3	0.0	Young	Good	Variable – unthinned woodland planting	C	3.0
				<3	<3						
G21	Oak, birch, beech	<14	<65	<8	<8	1.0	Maturing	Good	Good – Linear group with understorey of hazel and hawthorn	A	8.0
				<8	<8						
G22	Cypress	<12	M<35	<3	<3	0.0	Maturing	Good	Good – hedge character	B	4.5
				<3	<3						
G23	Field maple, laurel	<9	<40	<4	<4	>2.0	Maturing	Good	Good	B	5.0
				<4	<4						

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Tree No	Species	Height (m)	Trunk Diameter (cm)	Crown spread (m)		Crown height above ground	Age class	Physiological condition	Structural condition and notes	BS 5837 cat	Root protection area (m)
G24	Cypress	<12	M<35	<3	<3	0.0	Maturing	Good	Good	B	4.5
				<3	<3						
G25	Birch, cypress, beech	<10	<50	<6	<6	>1.0	Maturing	Good	Good	A	6.0
				<6	<6						
G26	Birch, cypress, beech	<10	<50	<6	<6	>1.0	Maturing	Good	Good	A	6.0
				<6	<6						
G27	Cherry, oak, red oak	<10	<35	<5	<5	>1.5	Young	Good	Good – cherry variable with multiple stems	B	4.5
				<5	<5						
G28	Ash, birch, cherry, oak, field maple	<8	<20	<3	<3	>0.5	Young	Good	Good	C	2.5
				<3	<3						
G29	Cypress	<11	<40	<2	<2	0.0	Maturing	Good	Good	B	5.0
				<2	<2						
G30	Beech, whitebeam, ash, rowan	<10	<50	<5	<5	>1.0	Maturing	Good	Good – whitebeam fair to poor with poor crown form, leaning	A	6.0
				<5	<5						
G31	Cypress	<11	M	2	2	>1.5	Maturing	Good	Good – multiple stems	B	6.0
				2	2						
G32	Cypress, spruce, beech	<9	<35	<4	<4	0.5	Maturing	Good	Good	B	4.5
				<4	<4						
G33	Field maple, hornbeam, beech, cherry, oak, rowan, sycamore, Norway maple	<8	<25	<3	<3	0.0	Young	Good	Good	B	3.0
				<3	<3						

APPENDIX 1
Tree Schedule and Explanatory Notes

Abbreviations:

G	: Group
m	: Metre
>	: Greater than
<	: Less than

Botanical tree names:

Alder	: *Alnus glutinosa*
Ash	: *Fraxinus excelsior*
Beech	: *Fagus sylvatica*
Birch	: *Betula pendula*
Blackthorn	: *Prunus spinosa*
Cherry	: *Prunus* sp
Cypress	: *Cupressus* sp
Field maple	: *Acer campestre*
Goat willow	: *Salix caprea*
Hawthorn	: *Crataegus monogyna*
Hazel	: *Corylus avellana*
Hornbeam	: *Carpinus betulus*
Larch	: *Larix decidua*
Laurel	: *Prunus laurocerasus*
Lime	: *Tilia* sp
Norway maple	: *Acer platanoides*
Norway spruce	: *Picea abies*
Oak	: *Quercus robur*
Red oak	: *Quercus rubra*
Rowan	: *Sorbus aucuparia*
Scots pine	: *Pinus sylvestris*
Sycamore	: *Acer pseudoplatanus*
Whitebeam	: *Sorbus aria*
White poplar	: *Populus alba*
White willow	: *Salix alba*

Explanatory Notes

- **Reference numbers:** The majority of trees have been included in Groups, being trees with similar characteristics or in a similar geographical location. Groups have a 'G' prefix with sequential numbers and their locations are indicated on the site plan. The only tree identified individually has been given a sequential number with a 'T' prefix and an 'a' suffix.
- **Species:** I based the species identification on my visual observations.
- **Height:** Height is estimated to the nearest metre.
- **Trunk diameter:** For Groups the largest trunk has been estimated or measured and is given in this column. Other trunks may be smaller. Trunk diameter for accessible trees has been measured with a diameter tape and recorded in centimetres. Inaccessible trunk diameters are estimates,

indicated with '?'. Trees with multiple trunks have their largest trunk diameter given.

- **Crown spread:** Crown spread for site boundary trees is estimated in the direction of the proposed development. Crown spread for trees within the site is estimated at the four cardinal compass points. For the Groups, the crown spread represents the extent of the crown of the edge trees, treating each Group effectively as one large tree for this purpose. The distances given as appropriate correspond to crown spreads to the four cardinal compass points as shown in the grid below:

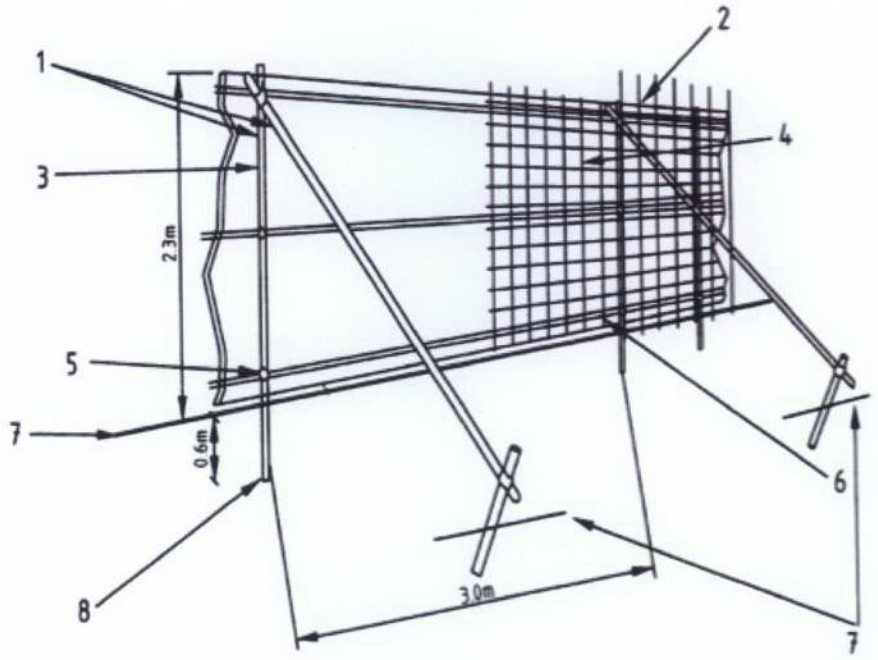
N	E
W	S

- **Crown height above ground:** The height of the crown clearance above the ground over the site is estimated to the nearest 0.5m.
- **Age class:** Tree maturity has been assessed as mature (last one third of life expectancy), maturing (one third to two thirds life expectancy) and young (less than one third life expectancy) to correspond to the classes given in BS 5837:2005. There are no over mature or veteran trees included in the schedule.
- **Physiological condition:** This is an indication of the health and physiological condition of the tree, using at least the four categories in BS 5837:2005 (good, fair, poor, dead); and see the attached report.
- **Structural condition:** This is an indication of the structural condition of the tree, e.g. collapsing, the presence of physical defects; and see the attached report.
- **BS 5837 category:** Generally as advised in BS 5837:2005, as a starting point for assessment. This grading is based on the estimated remaining contribution in years i.e. A - more than 40; B – 20-40; C – 10-20; R – less than 10; and see the attached report.
- **Root protection area:** This is as advised in BS 5837:2005, which relates to trees and construction. It is given as guidance here for those trees and groups that may be retained. The area of root protection should be equivalent to the area of a circle centred on the tree with a radius of least 12 times the trunk diameter. This column gives the radius of such a circle; the distance may not be the same as the distance for protective fencing; and see the attached report.

Location of Groups of Trees (e.g. G9) and an Individual Tree (e.g. T8a) at Cherry Lodge Golf Club

Appendix B.

Specification for tree protective fencing



1 Standard scaffold poles
2 Uprights to be driven into the ground
3 Panels secured to uprights with wire ties and where necessary standard scaffold clamps
4 Weldmesh wired to the uprights and horizontals
5 Standard clamps
6 Wire twisted and secured on inside face of fencing to avoid easy dismantling
7 Ground level
8 Approx. 0.6 m driven into the ground

Purpose: Fencing will be installed to protect trees during the development process. Fencing should:

- Prevent pedestrian access into the protected area
- Prevent vehicular access, including site plant, into the protected area
- Prevent the storage of any materials associated with development e.g. top soil, building materials, fuel within the protected area
- Be installed in a fashion that makes it difficult to move easily
- Be installed in a fashion that allows it to remain effective for the life of the development
- Be installed in the positions agreed with the Local Planning Authority and shown on the fencing plan

Specification: Fencing should satisfy the above criteria. A typical construction is indicated in BS 5837:2005 and illustrated above. The fencing on this site will be to the standard recommended in BS 5837:2005 i.e. a scaffold framework comprising a vertical and horizontal framework, well braced to resist impacts, with vertical tubes spaced at a maximum interval of 3m. On this, weldmesh panels should be securely fixed with wires or scaffold clamps.

Location: The location of the fencing is shown on the annotated site layout plan JF1 by a dashed black line. The fencing will be erected with arboricultural supervision prior to any demolition or development activity and retained in the positions shown until the completion of development or as required for landscaping and path installation. The position of the fencing shall be altered only with agreement from the Local Planning Authority.