# ARBORICULTURAL SURVEY
# to BS 5837:2005
# at
# 94 Wood Walk
# Wombwell
# Barnsley
# South Yorkshire
# S73 0NF

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Woodroyd Ltd, Barnsley

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# 1. Introduction

## 1.1 Purpose of the Report

1.1.1 A report is needed at the above location to give detailed, independent, arboricultural advice on the trees present, in the particular context of potential development.

## 1.2 Terms of Reference

1.2.1 I am instructed by James Harte of Woodroyd Ltd to visit the site and prepare my findings in a report.

1.2.2 For this purpose I have been supplied with a topographical survey.

## 1.3 Scope of the Report

1.3.1 This report is compiled in accordance with *BS 5837:2005 Trees in relation to construction.* The specific design of any proposed development is not generally taken into account at this stage.

1.3.2 Preliminary recommendations are given with a view to safety and the long-term management of a sustainable tree cover.

1.3.3 All significant trees within the site boundary with a stem diameter above 75mm are included.

1.3.4 Where applicable smaller trees and significant shrub masses are included.

1.3.5 Where applicable trees outside the site boundary, but close enough to be affected by development, are included.

## 1.4 Survey details

1.4.1 The survey took place during the month of August 2008.

1.4.2 The survey was conducted by Adam Winson BSc (Hons) E Con, ND (Arboriculture).

1.4.3 Inspection was made at ground level. Further investigation, such as climbed inspections or decay detection surveys, may be recommended where appropriate.

1.4.4 Measurements were obtained using clinometers, specialist tapes or electronic distometers. Where this was not possible measurements were estimated.

1.4.5 No digging or drilling was carried out on this occasion.

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# 2. Site Description

## 2.1 Land Use

2.1.1 The site is currently a detached dwelling with a large surrounding residential garden.

## 2.2 Topography

2.2.1 The site is approximately level with a number of localised minor level changes in areas of the garden.

## 2.3 Treescape

2.3.1 The trees on this site have a moderate impact on the local treescape.

2.3.2 Surrounding the site is the residential area of Wood Walk and its adjoining streets, which are flanked to the north and south by extensive areas of woodland. Within the north-west of the site there is a strip of established woodland which forms part of a wider woodland area beyond the site boundaries to the north. Also, the large adjacent field to the north-west has recently undergone planting with the aim of establishing woodland cover.

## 2.4 Amenity Value

2.4.1 The trees on site collectively provide a reasonable amenity to the surrounding area. The mature woodland group to the north-west is the most significant amenity feature, whilst occasional specimens within the site have a high individual amenity value.

## 2.5 Age Class Mix

2.5.1 The trees surveyed ranged in age from young to mature. However the trees were predominantly early-mature and mature.

## 2.6 Species Diversity

2.6.1 There was good mix of species present, with common broadleaved trees such as Beech, Birch and Oak being predominant. Group plantings of ornamental coniferous trees of the Cupressus family were also well represented. Other species being occasional, or even single, specimens.

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# 3. Explanation of Tree Descriptions

## 3.1 Measurements

3.1.1 *HEIGHT* of the tree is measured from the stem base. Where the ground has a significant slope the higher ground is selected.

3.1.2 *CROWN HEIGHT* is an indication of the average height at which the main crown begins.

3.1.3 *STEM DIAMETER* is measured at 1.5 metres above (higher) ground level. Where the tree is multi-stemmed at this point; the diameter is measured close to ground level, just above the root buttress.

3.1.4 *CROWN SPREAD* is measured from the centre of the stem base to the tips of the branches in all four cardinal points.

## 3.2 Evaluations

3.2.1 *AGE CLASS* of the tree is described as young, semi-mature, early-mature, mature, or over-mature.

3.2.2 *PHYSIOLOGICAL CONDITION* is classed as good, fair, poor, or dead. This is an indication of the health of the tree and takes into account vigour, presence of disease and dieback.

3.2.3 *STRUCTURAL CONDITION* is classed as good, fair or poor. This is an indication of the structural integrity of the tree and takes into account significant wounds, decay and quality of branch junctions.

3.2.4 *LIFE EXPECTANCY* is classed as; less than 10 years (<10), 10-20 years, 20-40 years, or more than 40 years (40+). This is an indication of the number of years before removal of the tree is likely to be required.

## 3.3 Retention Categories

3.3.1 *RETENTION CATEGORY* values for the trees are as follows:

3.3.2 ***A (marked green on the plan) = retention most desirable***
These trees are of high quality and value with a good life expectancy. They may be further sub-divided as follows:

Ai) Particularly good examples; perhaps rare or unusual species, or forming an essential part of arboricultural features e.g. avenues;

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Aii) Groups of trees having a significant landscape impact or with excellent screening properties, or those softening the effect of existing structures;
Aiii) Those having significant conservation or historical value e.g. veteran trees.

3.3.3 ***B (marked in blue on the plan) = retention desirable***
These trees are of moderate quality and value with a significant life expectancy. They may be further sub-divided as follows:

Bi) Trees that might be included in the high category but because of their numbers or slightly impaired condition, are downgraded in favour of the better individuals;
Bii) Groups of trees forming distinct landscape features, thereby attracting a higher collective rating than they might as individuals;
Biii) Trees with clearly identifiable conservation or other cultural benefits.

3.3.4 ***C (marked in grey on the plan) = trees which could be retained***
These trees are of low quality and value, and are in adequate condition to remain until new planting could be established. They may be further sub-divided as follows:

Ci) Trees not qualifying in higher categories;
Cii) Groups of trees which do not form a distinct landscape feature;
Ciii) Trees with very limited conservation or other cultural benefits.

3.3.5 ***R (marked in red on the plan) = trees for removal***
These trees are in such a condition that any existing value would be lost within 10 years. This may be due to any of the following:

i) Failure is likely due to serious, irredeemable, structural defects;
ii) Removal of other category R trees will render them exposed and unstable;
iii) They are in serious, overall decline or are dead;
iv) They are of low quality and suppressing adjacent trees of better quality;
v) Diseases are present which may affect the health of adjacent trees.

These trees should be removed or treated in such a way as to make them safe where they have high ecological value, such as in a woodland setting.

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# 4. Status of the Trees

4.1 A check was made on 6th of August 2008 with: Barnsley Metropolitan Borough Council.

We are informed that there is an Area Tree Preservation Order in force on this site: Area TPO: A1 in TPO 4/1981, and the woodland area to the west and north-west is covered by a woodland TPO: W1= TPO 1/1977.

Before any work is organised, all the necessary steps to get the permission of the Local Planning Authority should be taken.

***No work should be done to any trees until this permission has been granted.***

4.2 Due to the large potential penalties for illegally carrying out work to protected trees, JCA recommend that a further check is carried out prior to any works being undertaken. We are able to arrange this and to organise and supervise professional contractors.

# 5. Tree Descriptions and Recommendations

5.1 Full details of all individual trees surveyed are recorded in the tables at Appendix 1. Please refer also to the attached plan at Appendix 5 and Section 3 above, for a full explanation of the tables and plan.

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# 6. Discussion

## 6.1 Tree Condition & Recommended Works

6.1.1 In total 86 items or groups of vegetation were surveyed.

6.1.2 The tree cover on site can be categorised into several broad groups. The mature woodland area to the west and north-west of the site. Groups of ornamental coniferous planting in the central area of the garden. Mature trees situated along the southern boundary, and trees of variable age and value along the south eastern boundary adjacent to Wood Walk and continuing along the north-eastern boundary.

6.1.3 The mature woodland group to the west and north-west of the site (G49) is a smaller part of the larger adjacent woodland to the north and forms a significant high value feature to the surrounding area. This group is classed as retention category "A" and should be protected throughout any development. Whilst each individual tree within this group was not inspected in detail, relevant trees situated to the edge of the woodland group (T46 to T60) were individually inspected so as to aid in the design of the new development and the implementation of tree protection measures for the whole woodland group.

6.1.4 The southern boundary of the site contains some large high value trees that should, if possible, be retained and protected throughout any development. In particular T66, T68, T69, T71, and T77 have a high value and would compliment any proposed development.

6.1.5 Within the central area of the garden, to the north and west of the existing residential dwelling, are 2 groups of closely planted conifers (G43 and G65), predominantly consisting of trees of the Cupressus family. Whilst collectively these groups do have some merit as arboricultural features, their amenity value and their long term potential is limited. As such, they have been categorised as retention category "C" and should be considered as expendable if a development required their removal.

6.1.6 The south eastern boundary, adjacent to Wood Walk, contains a number of higher value trees, including T79 to G82 along the southerly section, and T4, T15 and T16, to the northern end of this boundary. These trees, although not as large or mature as many other trees on site, have higher value due to their prominence adjacent to the main street.

6.1.7 In general, the northern section of the Wood Walk boundary consists of a mix of occasional higher value category "B" trees, with lower value semi-mature category "C" trees predominating. As a collective feature, these trees do have reasonable amenity value when viewed from Wood Walk, however, as individual trees many have only limited long term prospects.

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6.1.8 Continuing along the north-eastern boundary the tree cover is a similar mix of lower value category "C" trees and higher value category "B" trees. The significant trees are represented by a number of mature and early-mature Beech trees; T21 and T36 in particular are worthy of individual note due to their impressive size.

6.1.9 Further along the north eastern boundary the tree cover is largely formed by a dense area of Birch and Rhododendron (G39). This is generally scrappy vegetation, much of which is natural regeneration and has limited value.

6.1.10 The tree survey identified a number of trees that are recommended for removal due to defects that render them unsafe or to prevent them becoming dangerous trees in the future, these include, T11, T20, T70 and G76.

6.1.11 Some works are recommended for reasons of public safety and to ensure the long term health of the trees. This work is detailed in Appendix 1.

6.1.12 Inspection of some trees was inhibited by the presence of ivy or by restricted access (as detailed in Appendix 1). These should be inspected for defects once the ivy has been removed or access made available.

6.1.13 Those trees which overhang public footpaths and public highways, as described in Appendix 1, shall require future maintenance in order to maintain clearance heights for vehicular and pedestrian traffic. These heights should be 5.6m above a road and 2.5m above a footpath.

## 6.2 Potential for Development

6.2.1 Whilst unaware of the exact details of the proposed development, it known that it will involve the construction of 5 new residential dwellings and their associated facilities. This will require a new access road into the site from Wood Walk.

6.2.2 The Root Protection Areas (RPAs) marked on the plan at Appendix 5 represent the desired rooting zone which should not be disturbed. The development should be designed in order to avoid the RPAs of trees to be retained.

6.2.3 It has been suggested that the existing driveway into the site is considered unsuitable as the future access point into the developed site, due to inadequate visibility splays onto Wood Walk.

6.2.4 As such, a new access drive into the site will need to be constructed further north along the Wood Walk boundary. In order to provide adequate visibility the new access point will need to enter the site in an area containing existing trees. This will thus require the removal of a number of trees in order to facilitate the new drive.

6.2.5 From assessing the site plan it appears possible to retain all of the higher value (category "B") trees when implementing the new drive. If the drive entered the site between T4 and T15 and traveled in a north westerly direction into the site, keeping to

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the south of the large Beech trees T21 and T36, only lower value category "C" trees would require removal.

6.2.6 The new drive access would require the removal of some or all of T7 to T14 along Wood Walk. Whilst this may have a minor negative visual impact from Wood Walk, it should be noted that all these trees are of low individual value and have only limited long term prospects. Furthermore, the opportunity for replacement planting, with better quality trees, along the boundary to the south-west of this group could mitigate against such losses.

6.2.7 The north eastern corner of the site, where the new drive is proposed, does have local topographical variations, with areas of short steep banking and terraced areas around several trees. Also, the proposed drive may encroach into the RPAs of a number of retained trees. Conventional road or drive construction methods are likely to sever roots and compact soils which will be detrimental to tree health, as such specialist construction techniques sympathetic to tree roots will need to be employed.

6.2.8 The introduction of underground services needs to be considered so that damage to tree roots is minimised.

6.2.9 There are a number of high value trees within this site. They will enhance any proposed development and care should be taken at the design stages to ensure that these trees are retained.

6.2.10 In general, the majority of trees recommended for retention are situated close to the site boundary. This offers excellent potential for development within the centre of the site. However, it is likely that the development will require the removal of some lower value retention Category C trees, yet these could be replaced as part of a post development landscaping scheme.

6.2.11 All development work carried out in close proximity to trees should be done so in a manner sympathetic to their needs. Otherwise the condition of the trees may deteriorate in the months and years following the development, leading to a loss of amenity and potentially hazardous trees.

6.2.12 Any proposed development should be accompanied by an Arboricultural Method Statement detailing the specific protection measures necessary for each tree. This should specify fencing standard and positions, acceptable construction techniques, necessary tree works and the potential damage caused by demolition, soil stripping, and provision of services

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# 7. Conclusion

7.1 The trees surveyed were generally found to be in good condition.

7.2 There is a high value woodland group and a number of high value trees within the site, these should be retained and protected throughout any development.

7.3 Lower value category "C" trees could be individually removed without a major adverse impact to the surrounding treescape.

7.4 Some trees have been recommended for removal. These are discussed in Section 6 and detailed in Appendix 1.

7.5 Some works were recommended for reasons of public safety and to ensure the long term health of the trees. These are summarised in Section 6 and detailed in Appendix 1.

7.6 It is recommended JCA provide a comprehensive Method Statement in order to ensure the continued health of trees throughout the proposed development. JCA are also able to provide planting schemes, organise and supervise tree works, and if necessary undertake climbed inspections and decay detection analysis.

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# Appendix 1: Tree Descriptions and Recommendations

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## Appendix 2: Glossary of Terms & Abbreviations

| | |
|---|---|
| **Arboriculture** | The cultivation of trees in order to produce individual specimens of the greatest ornament, for shelter or any primary purpose other than the production of timber. |
| **Canker** | Disease damaged area of a tree, usually caused by fungus or bacteria. |
| **Co-dominant Stem** | A stem which has grown in direct competition to the main stem and which has formed a substantial size influencing the appearance of the tree. |
| **Crown Lift** | The removal of the lowest branches, usually to a given height. It allows more residual light and greater clearance underneath for vehicles etc. |
| **Crown reduce** | The reduction of a tree's height or spread while preserving its natural shape. |
| **Crown thin** | The removal of some of the density of a tree's crown**,** usually 5-25% allowing more light through its canopy and reducing wind resistance. |
| **Deadwood** | Either dead branches, or a procedure involving the removal of dead, dying and diseased branches. |
| **Dieback** | Where branches are beginning to show signs of death usually at the tips in the crown. |
| **Epicormic shoots** | Small branches that grow in uncharacteristic clusters around the base or the stem of a tree, usually as a result of bad pruning or some other stress factor. |
| **Formative pruning** | The trimming of a tree to remove weaknesses and irregularities which may lead to problems. The formative pruning operation is aimed at reducing the potential for future weaknesses or problems within the tree's crown. |
| **Included bark** | Where the bark on two adjoining branches or stems is growing tight together, forming a joint with limited physical strength. |
| **Pollarding** | A method of tree management in which the main trunk of the tree is cut at about 4m, and the resulting branches are then cropped on a regular basis. |
| **Remedial pruning** | The removal of old stubs, deadwood, epicormic growth, rubbing or crossing branches and other unwanted items from the tree's crown. Sometimes referred to as crown cleaning. |
| **Topping** | Topping is a form of pruning that removes terminal growth leaving a 'stub' cut end. Topping causes serious health problems to a tree. |

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# Appendix 3: The Author's Qualifications

### Principal Consultant and Managing Director

**Jonathan Cocking** *FRES PDipArb(RFS) FArborA CBiol MIBiol.* Jonathan is a Registered Consultant and Fellow of the Arboricultural Association and sits on its Professional Committee. He has 28 years experience in the arboricultural profession and served for eight years as Senior Arboriculturist with a large local authority before establishing JCA in 1997. He has since developed JCA's portfolio of services and its extensive client base. Jonathan is a Chartered Biologist and an expert witness with much experience of litigation work.

### Consulting Arboriculturists

**Toby Thwaites** *BSc (Hons) HND (Arboriculture).* Toby joined JCA in 1998 after graduating in Ecology at the University of Huddersfield and has since graduated in Arboriculture at the University of Lancashire. Toby is a JCA team leader and manages an office of consulting arborists.

**Andrew Bagshaw** *FD (Arboriculture).* Andrew joined JCA in 2005 having gained several years experience in tree surgery and landscaping. He is trained in aerial rescue and is JCA's principal first aid person. He is currently working towards a degree in arboriculture at the University of Lancashire.

**Adam Winson** *BSc (Hons) E Con, ND (Arboriculture).* Prior to working at JCA Adam has worked as a tree surgeon for eight years for a range of private companies and Sydney City Council. Adam achieved a national award for best Dissertation on the subject of Urban Greenspace Management at Sheffield Hallam University. Adam is currently working towards an MSc in Arboriculture at the University of Lancashire.

**Robert Godwin** *BA (Hons) Landscape Planning, ISA Certified Arborist.* Robert joined JCA having spent several years as an arboricultural consultant particularly in relation to subsidence. He also has considerable experience in landscape and arboricultural contracting. Robert is currently working towards an MSc in Arboriculture at the University of Lancashire.

### Arboricultural Technicians

**Victoria Black.** Victoria has been with JCA for over 5 years building her knowledge of the arboricultural business. She is currently working towards a degree in arboriculture at the University of Lancashire.

**Andrew Bussey.** Andrew joined JCA having spent 12 years doing tree surgery for various private companies and a local authority. He has various NPTC qualifications and is currently studying for his Arboricultural Technicians Certificate.

**Lee Major.** Lee recently joined JCA having gained his RFS Certificate in Arboriculture. Lee also has two years climbing experience, working for a local tree surgeon. He is currently working towards his degree in arboriculture at the University of Lancashire.

**Edward Jowett**. Edward has achieved his BSc (Hons) Arboriculture at the University of Lancashire. He has had temporary appointments as Tree Officer with local authorities in the Manchester area, joining JCA to further his commercial knowledge and experience.

#### Administrative Staff

**Andrew C Parker,** GM, BA (Hons), PGCE**,** Practice Manager
**Catherine Cocking,** Accounts Manager
**Sue Guest,** Administrative Officer
**Yasmin Hussain,** Administrative Assistant
**Simeon Haigh,** BSc (Hons), IT Officer
**Alec Fielden,** CAD Technician

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# Appendix 4: General Guidelines

A4.1 All work must be to BS 3998:1989 - '*Recommendations for tree work'*.

A4.2 Staff carrying out the work must be qualified, experienced and ideally be Arboricultural Association approved contractors, and should be covered by adequate public liability insurance.

A4.3 This report is based upon a visual inspection. The consultant shall not be responsible for events which happen after this time due to factors which were not apparent at the time, and the acceptance of this report constitutes an agreement with the guidelines and the terms listed in this report.

A4.4 Any defects seen by a contractor or the employer that were not apparent to the consultant must be brought to the consultant's attention immediately.

A4.5 No liability can be accepted by the consultant in respect of the trees unless the recommendations of this report are carried out under his supervision and within his timescale.

A4.6 It is advisable to have trees inspected by an arboricultural consultant regularly. In this instance it is recommended that these inspections are made every year.

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# Appendix 5: Site Plan

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I hope that this report provides all the necessary information, but should any further advice be needed please do not hesitate to contact the author.

Signed

.....

Adam Winson BSc (Hons) E Con, ND (Arboriculture).

22nd August 2008

For and on behalf of ***JCA Ltd***

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