ARBORICULTURAL REPORT
to BS 5837:2005
at
Thirstin Road
Honley
Huddersfield
West Yorkshire

Client:
Architecture + Design Partnership LLP

Client Address:
82 Huddersfield Road
Holmfirth
Huddersfield
HD9 3AZ

Client Contact:
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JCA Ref:
10061/AJB

Contents

1. Introduction

1.1 Purpose of the Report

1.1.1 A report is required at **Thirstin Road, Honley, Huddersfield, West Yorkshire,** to provide detailed, independent, arboricultural advice on the trees present, in the context of potential development.

1.2 Terms of Reference

1.2.1 I am instructed by Architecture + Design Partnership LLP 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, Drawing No. S7448.

1.3 Scope of the Report

1.3.1 This report is compiled in accordance with *BS 5837:2005 Trees in relation to construction.*

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

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

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

1.3.5 The specific design of any proposed development is not generally taken into account at this stage.

1.4 Survey Details

1.4.1 The survey took place during the month of March 2011.

1.4.2 The survey was conducted by Andrew Bussey.

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.

2. Site Description

2.1 Land Use and Topography

2.1.1 The site is currently an area of waste ground that is immediately surrounded to the south and west by a steep banking, which rises up towards a footpath. Just beyond this footpath there is a woodland.

2.2 Treescape

2.2.1 To the south and east of the site there is a residential area that contains occasional garden trees and street trees.

2.2.2 To the north and west of the site there are woodlands of good quality. Beyond the woodlands are rural areas.

2.2.3 The trees surveyed have a significant impact on the local treescape.

2.3 Visual Amenity Value

2.3.1 The trees surveyed collectively provide an excellent visual amenity to the surrounding area.

2.4 Age Class Mix

2.4.1 The trees surveyed ranged in age from young to over-mature.

2.5 Species Diversity

2.5.1 Species surveyed include Oak, Silver Birch, Ash, Elm, Beech and Sycamore. The predominant species was Oak.

2.5.2 Other ornamental species were noted on adjacent land within the confines of a private garden, these were presumed to be Norway Spruce and Ash.

3. Status of the Trees

3.1 A check was made on 16th March 2011 with: ***Kirklees Metropolitan Council.***

3.2 We are informed that the entire site lies within Conservation Area CA/4, as such; all the surveyed trees are afforded a degree of protection by this Conservation Area.

3.3 in addition to the Conservation Area, the trees along the southern and western boundaries are subject to a specific tree preservation order, TPO 18/78 woodland number W5.

3.4 At the northern end of the site, some of the trees are subject to TPO HO1/49 woodland number W2.

3.5 Across the road from the site is a group of trees located between Thirstin Road and Dyson's Hill, these trees are protected by TPO 18/78 area A6.

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

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

4. Tree Descriptions and Recommendations

4.1 Full details of all individual trees surveyed are recorded in the tables at **Appendix 1**. A full explanation of the tables can be found at **Appendix 2**. Please refer also to the Tree Constraints Plan at **Appendix 6** for tree locations.

5. Discussion

5.1 Tree Condition & Recommended Works

5.1.1 The tree survey revealed a total 6 items of vegetation (1 woodland, 2 groups and 3 individual trees). Of these, the woodland was identified as retention category 'A', 1 individual tree and the 1 group were identified as retention category 'B', 1 individual tree and 1 group were identified as retention category 'C' and 1 individual tree was identified as retention category 'R'.

5.1.2 **T3** was identified as retention category 'R'. This tree requires removal for arboricultural reasons regardless of any on site development, as detailed at **Appendix 1**. This tree should be removed as a matter of **moderate priority**.

5.1.3 It is advised that the trees within **W1**, which overhang the public footpath, should be remedially pruned (crown cleaned) to remove deadwood and hung up branches.

5.1.4 In addition to the deadwood and hanging branches, many of the trees within **W1** (including **T2** and **T4**) were noted to have structural or physiological defects, as detailed at **Appendix 1**. Although the trees were considered to be in an acceptable condition at the time of the inspection, the defects observed could potentially lead to the early demise of the trees or render them unsafe in the future. As such, it is recommended that **W1**, **T2** and **T4** be monitored (re-inspected and re-assessed) on an annual basis to assess if their condition is still acceptable.

5.1.5 Where a full detailed inspection of trees was inhibited by restricted access or by the presence of Ivy, as detailed at **Appendix 1**, it is advised that these trees be re-inspected for any possible defects when the Ivy has been removed or when access has been made available.

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

5.2 Potential Arboricultural Implications & Design Advice

5.2.1 The details of the proposed development are not known at present. However, the following comments can be made about the site in terms of its tree cover in relation to a potential development.

5.2.2 During development the part of the tree most commonly under threat, and most commonly ignored, is the rooting system. When trees are damaged, particularly the roots, their long-term health and stability can be affected. Most development activity can have an impact on the future condition and safety of a tree, and therefore careful planning and management of tree protection should ensure a continued sustainable tree cover with minimal stress to existing trees.

5.2.3 The majority of trees recommended for retention are situated close to the site boundary. This offers a potential window for development within the centre of the site.

5.2.4 In order to ensure that the retained trees on site are properly protected during the development phase, the tree rooting zones are to be considered. For the purpose of development the rooting zone of the tree is known as the Root Protection Area or RPA. The RPA of each tree or group is marked on the Tree Constraints Plan at **Appendix 6** and represents the rooting zone which, where possible, should remain undisturbed. The protection of retained trees can therefore be achieved by creating a **Construction Exclusion Zone** (**CEZ**) based on the RPAs.

5.2.5 Damage caused by any construction activity such as demolition, soil stripping, and provision of services needs to be considered at the design stage. Care should be taken to avoid damage to tree roots when existing structures such as tarmac surfaces are removed within a RPA.

5.2.6 The laying of access roads, driveways, parking areas or any other hard surfaces planned in proximity to retained trees needs to be considered. There are many solutions available to construct hard surfaces over RPAs without causing damage to trees.

5.2.7 Boundary walls or other light structures can be constructed without damage to roots through the use of piled foundations rather than the more traditional strip foundations.

5.2.8 The location of drainage and utilities within the RPA can be achieved if need be, using special techniques and supervision.

5.2.9 The position of the site compound is a major consideration. It is recommended that this, which typically includes the site office, facilities, toilets, storage of materials and parking, is located away from trees and outside the RPA.

5.2.10 Consideration must be given to movement of both vehicle and pedestrian traffic. If possible traffic should be diverted away from the RPAs. If this is not possible a range of temporary surfaces are available to distribute the weight of traffic and allow the roots to receive moisture and air.

5.2.11 Generally, the alteration of ground levels within the RPA is not acceptable, however, should ground levels need to be lowered in areas adjacent to trees or within the minimum distance recommended, appropriate measures should be taken to minimise the detrimental effects on the trees and their root systems. With regards to raising levels, it is necessary to maintain adequate supplies of moisture and oxygen through the soil to the tree roots. Therefore, no material should be placed within the RPA without arboricultural advice.

6. Conclusions

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

6.2 The trees are protected by a Tree Preservation Order and by virtue of them being in a Conservation Area.

6.3 **T3** has been recommended for removal for arboricultural reasons. This is discussed in **Section 5.1.2** and detailed at **Appendix 1**.

6.4 The trees within **W1** which overhang the public footpath should be remedially pruned (crown cleaned) to remove deadwood and hung up branches. This is discussed in **Section 5.1.3** and detailed at **Appendix 1**.

6.5 **W1, T2** and **T4** should be assessed on an annual basis, to assess if tree condition is still acceptable. This is discussed in **Section 5.1.4** and detailed at **Appendix 1**.

6.6 Care should be taken at the design stage to ensure that the retained trees are protected. The protection of retained trees can be achieved by the creation of a Construction Exclusion Zone based on the Root Protection Area of a tree. The Root Protection Area of each tree or group is marked on the Tree Constraints Plan at **Appendix 6**.

6.7 The proposed development should be accompanied by an Arboricultural Method Statement (AMS) detailing the specific protection measures necessary for each tree. This should specify fencing standards and positions (the creation of the Construction Exclusion Zone), acceptable construction techniques and necessary tree works.

6.8 Upon instruction JCA Ltd are able to provide a comprehensive Arboricultural Method Statement in order to ensure the continued health of trees throughout the proposed development. We are also able to provide tree planting schemes and organise tree works.

Appendices

Tree Ref.	Age Species *Latin Name*	Height (m)	Crown Height (m)	Diameter (cm)	Crown Spread N W E S	Observations	Recommendations	Physiological Condition	Structural Condition	Amenity Value	Life Expectancy (yrs)	Retention Category
W 1	Young to Over-Mature *Mixed*	Est. to 20	0+	Est. to 100 at base	See Plan	A good quality woodland group located on a banking, beyond a public footpath in an elevated position above the development area. Species noted are Oak, Silver Birch, Beech, Ash, Sycamore and Elm. Deadwood and hung up branches were observed over the footpath and bark scars, cavities and defects were noted throughout. Not fully surveyed due to steep terrain.	Remove the deadwood and hung up branches from over the footpath. Monitor (re-survey and re-assess) annually.	GOOD	GOOD	HIGH	40+	A
T 2	Early-Mature Silver Birch *Betula pendula*	14	5	Est. to 30	Est. 8 Est. 4.5 Est. 1 Est. 0	Twin-stemmed at ground level with an unbalanced crown, which overhangs the footpath. No evidence of significant pruning. Major bark scars and decay cavities noted throughout.	Monitor (re-survey and re-assess) annually.	FAIR	POOR	LOW	10-20	C
T 3	Early-Mature Silver Birch *Betula pendula*	6	2	Est. 30	Est. 9 Est. 2 Est. 2 Est. 0	Overhanging the footpath. This tree has snapped out from the main stem at 2.5m and is currently hung up in the crown of an adjacent tree.	Remove (moderate priority).	DEAD	DEAD	LOW	0	R
T 4	Mature Oak *Quercus robur*	18	3	Est. 56	Est. 6 Est. 3 Est. 9 Est. 6	Twin-stemmed at 0.5m with an unbalanced crown. No evidence of significant pruning. A co-dominant stem has a large vertical scar with decay -possible due to a past lightening strike.	Monitor (re-survey and re-assess) annually.	GOOD	FAIR	MOD	20-40	B
G 5	Semi-Mature to Early-Mature Sycamore *Acer pseudoplatanus*	To 19	0+	Est. to 50	See Plan	Five trees located between the road and the stream. Their crowns overhang the road. All of reasonable form. Limited inspection due to Ivy and restricted access.	Crown lift to provide clearance for pedestrian and vehicular traffic. Remove the Ivy and re-inspect if access is obtained.	GOOD	GOOD	LOW	20-40	B
G 6	Semi-Mature *Mixed*	To 15	0+	Est. to 20	See Plan	A group of ornamental trees (presumed to be mainly Norway Spruce and Ash), which are located in a private garden. All of reasonable form with no major visible defects evident. Limited inspection due to restricted access.	Re-inspect if access is obtained.	GOOD	GOOD	LOW	20-40	C

Appendix 2: Explanation of Tree Descriptions

A2.1 Measurements

A2.1.1 *HEIGHT* of the tree is measured from the stem base in metres. Where the ground has a significant slope the higher ground is selected.

A2.1.2 *CROWN HEIGHT* is an indication of the average height at which the crown begins.

A2.1.3 *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.

A2.1.4 *CROWN SPREAD* is measured from the centre of the stem base to the tips of the branches in all four cardinal points.

A2.2 Evaluations

A2.2.1 *AGE CLASS* of the tree is described as young, semi-mature, early-mature, mature, or over-mature.

A2.2.2 *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.

A2.2.3 *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.

A2.2.4 *LIFE EXPECTANCY* is classed as; less than 10 years, 10-20 years, 20-40 years, or more than 40 years. This is an indication of the number of years before removal of the tree is likely to be required.

A2.3 Retention Categories

A2.3.1 ***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:

A1) Particularly good examples; perhaps rare or unusual species, or forming an essential part of arboricultural features e.g. avenues.

A2) Groups of trees having a significant landscape impact or with excellent screening properties, or those softening the effect of existing structures.

A3) Those having significant conservation or historical value e.g. veteran trees.

A2.3.2 ***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:

B1) 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.

B2) Groups of trees forming distinct landscape features, thereby attracting a higher collective rating than they might as individuals.

B3) Trees with clearly identifiable conservation or other cultural benefits.

A2.3.3 ***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:

C1) Trees not qualifying in higher categories.

C2) Groups of trees which do not form a distinct landscape feature.

C3) Trees with very limited conservation or other cultural benefits.

A2.3.4 ***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:

1) Failure is likely due to serious, irredeemable, structural defects.
2) Removal of other category R trees will render them exposed and unstable.
3) They are in serious, overall decline or are dead.
4) They are of low quality and suppressing adjacent trees of better quality.
5) 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.

Appendix 3: General Guidelines

A3.1 All work must be to BS 3998: 2010 - '*Recommendations for tree work'*.

A3.2 Staff carrying out the work must be qualified, experienced and ideally be Arboricultural Association approved contractors. They should be covered by adequate public liability insurance.

A3.3 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.

A3.4 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.

A3.5 No liability can be accepted by JCA Limited in respect of the trees unless the recommendations of this report are carried out under the supervision of JCA and within JCA's timescale.

A3.6 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.

Appendix 4: 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.

RPA Root Protection Area – The theoretical rooting area of a tree as defined in BS5837: 2005 *Trees in relation to construction*.

Topping Topping is a form of pruning that removes terminal growth leaving a 'stub' cut end. Topping causes serious health problems to a tree.

Appendix 5: Author Qualifications

Principal Consultant and Managing Director

Jonathan Cocking *F.R.E.S., Tech. Cert. (Arbor.A), PDipArb (RFS) FArborA CBiol MSB. MICFor*. Jonathan is a Registered Consultant and Fellow of the Arboricultural Association and sits on its Professional Committee. He has 31 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, a Chartered Arboriculturalist and an Expert Witness with much experience of litigation work.

Technical Coordinator

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. A former JCA team leader and Consulting Arboriculturist, Toby was promoted to Technical Coordinator and now oversees all office and on-site activities at JCA and is on hand to offer technical support and advice.

Consulting Staff

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. Andrew has obtained a foundation degree in Arboriculture at the University of Lancashire, is QTRA qualified and is a JCA team leader who manages an office of Consulting Arboriculturists.

Adam Winson *BSc (Hons), ND (Arboriculture) MSc (Arboriculture and Urban Forestry).* Adam is a Professional Associate of the Institute of Chartered Foresters and an Associate Member of the Institute of Ecology and Environmental Management. Prior to joining JCA Adam worked as a tree surgeon. During his BSc in Environmental Conservation he gained the CPRE award for best dissertation. Adam has recently obtained an MSc in Arboriculture and Urban Forestry.

Robert Godwin *BA (Hons) (Landscape Planning), MSc (Arboriculture and Urban Forestry), MArborA.* Robert is a Professional Member of the Arboricultural Association and a Professional Associate of the Institute of Chartered Foresters. He has a degree in Landscape Planning & Management and has several years experience as a Consulting Arboriculturist. Robert has recently obtained an MSc in Arboriculture and Urban Forestry.

Victoria Black *FD (Arboriculture).* Victoria has been with JCA since 2002 building her knowledge of the Arboricultural business. She has recently obtained her foundation 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, is QTRA qualified and is currently studying for his Arboricultural Technicians Certificate.

Toby Parsons *Cert. Arb. (RFS), Tech. Cert. (Arbor.A).* Toby joined JCA after spending 6 years working as a senior climber for various Arboricultural contractors in the East Midlands and the South-West. He has gained the Level 2 Certificate in Arboriculture (RFS), an Arboricultural Technicians Certificate and is QTRA qualified.

David Venables *BSc (Forestry)*. David joined JCA in 2009 having achieved his degree at University of Wales, Bangor. David's work experience prior to joining JCA was as a Management Support Officer for the Forestry Commission at Delamere Nursery, Cheshire, where his responsibilities included carrying out health and safety inspections to ensure all sites and staff met relevant standards, assisting with the supervision of the workforce and the initiation of a GIS system for the nursery.

Raphael Skerratt *BSc (Forestry) FArborA.* Raphael covers the London area for JCA. He ran his own Arboricultural businesses since 1972 and is experienced in tree surveys for development, safety and subsidence purposes, and is an Expert Witness.

Administrative Staff

Sue Guest Administrative Team Leader.
Sally Whitwam Administrative Assistant.
Simeon Haigh *BSc (Hons).* IT Officer.
Catherine Cocking Accounts Manager.
Yasmin Hussain Administrative Assistant.
Liz Bone Trainee Administrative Assistant
Alec Fielden *Cert. Arb. (RFS)*. CAD Technician.

Appendix 6:
Tree Constraints Plan

TITLE:

Thristin Road, Honley, Huddersfield.
JCA Ref: 10061/AJB.

SCALE : 1:500	PAPER SIZE : A2

SURVEYED BY: AJB	DRAWN BY: AJB	APPROVED BY: TT

BRITISH STANDARD 5837:2005: 4.3.1
RETENTION CATEGORIES

Detailed definitions of these catagories are at Appendix 2 of our report. N.B. These categories do not necessarily represent or correspond to recommendations for action made in this report.

	CATEGORY A: 'RETENTION MOST DESIRABLE'
	CATEGORY B: 'RETENTION DESIRABLE'
	CATEGORY C: 'TREE WHICH COULD BE RETAINED'
	CATEGORY R: 'TREE FOR REMOVAL'
	ROOT PROTECTION AREA

- CENTRE OF TREE/SHRUB
- CENTRE OF TREE/SHRUB TO BE REMOVED

JCA Limited

Arboricultural & Forestry Consultants

Root Protection Area: RPA

THE ROOT PROTECTION AREA (RPA) INDICATES THE LIKELY ROOTING ZONE OF A TREE. THE RPA SHOULD IDEALLY REMAIN UNDISTURBED IF A TREE IS TO BE RETAINED.

THE DEVELOPMENT PROPOSALS SHOULD THEREFORE BE DESIGNED TO AVOID THE RPA OF ANY TREE WHICH IS TO BE RETAINED.

IF IT IS NECESSARY FOR THE DEVELOPMENT TO ENCROACH INTO THE RPA OF A TREE WHICH IS TO BE RETAINED THEN SPECIALIST CONSTRUCTION TECHNIQUES AND MATERIALS MUST BE CONSIDERED.

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

.....

Andrew Bussey

22nd March 2011

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

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