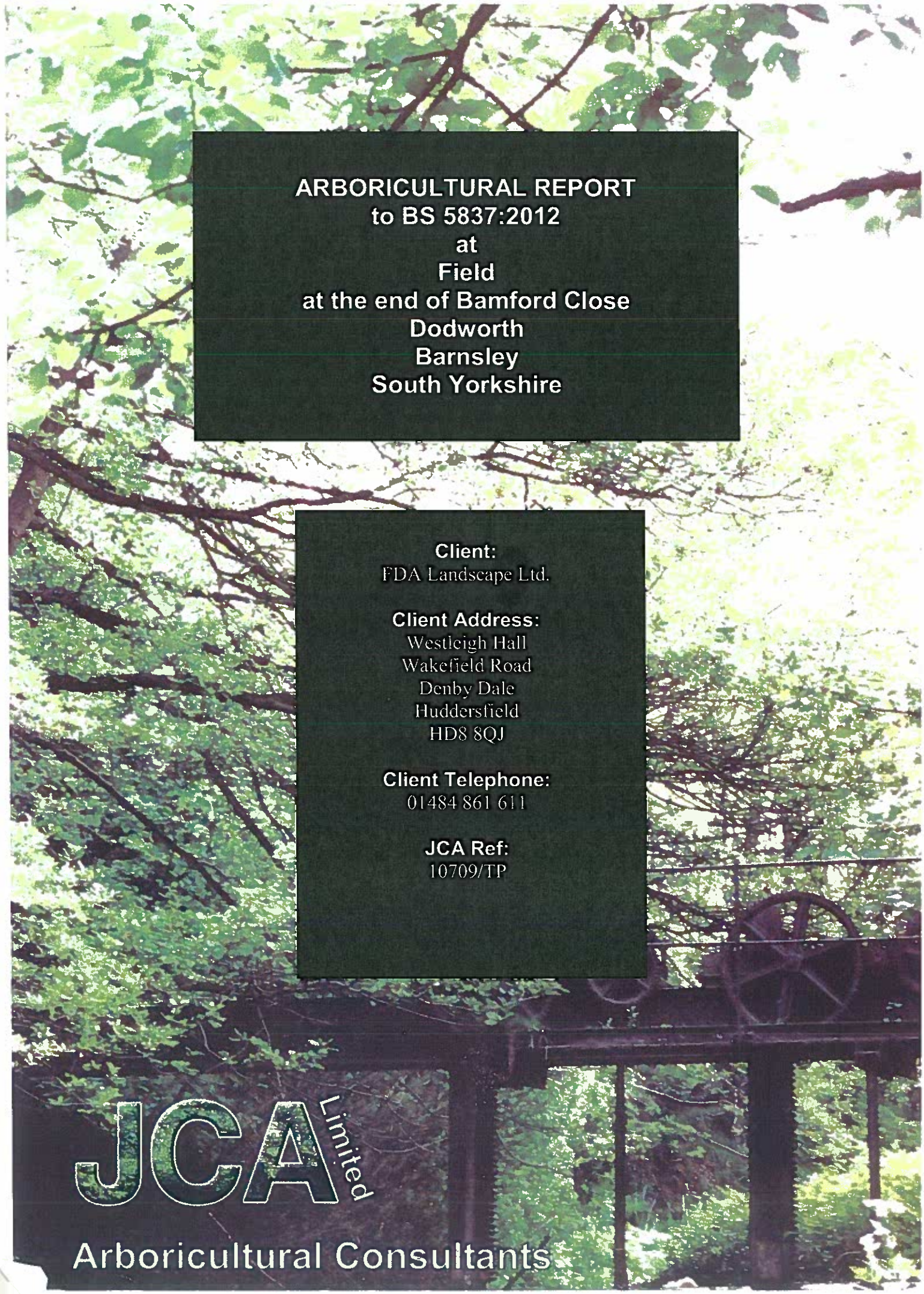


ARBORICULTURAL REPORT
to BS 5837:2012
at
Field
at the end of Bamford Close
Dodworth
Barnsley
South Yorkshire

Client:
FDA Landscape Ltd.

Client Address:
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Denby Dale
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JCA Limited

Arboricultural Consultants

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1. Introduction

1.1 Purpose of the Report

1.1.1 A report is required at the **Field at the end of Bamford Close, Dodworth,** 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 FDA Landscape Ltd, Huddersfield, 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. Dodworth appraisal 6-3-12

1.3 Scope of the Report

1.3.1 This report is compiled in accordance with *BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations.*

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 June 2012.

The survey was conducted by

Toby Parsons *Cert. Arb. (RFS), Tech. Cert. (Arbor.A).*

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

1.4.3 Measurements were obtained using clinometers, specialist tapes or electronic

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distometers. Where this was not possible measurements were estimated.

2. Site Description

2.1 Land Use

2.1.1 The site consists of a field that is currently over grown with grass.

2.2 Topography

2.2.1 The site is approximately level.

2.3 Treescape

2.3.1 Surrounding the site to the north, east and west are residential areas containing occasional mature garden trees. To the south/south east of the site is a cemetery containing many trees of varying ages.

2.3.2 The trees on this site have a minor impact on the local treescape.

2.4 Visual Amenity Value

2.4.1 The trees on site collectively provide a limited visual amenity to the surrounding area.

2.5 Age Class Mix

2.5.1 The trees surveyed ranged in age from semi-mature to mature.

2.6 Species Diversity

2.6.1 Species surveyed include Ash, Leylandii, Blackthorn, Plum, Holly, Field Maple, Hawthorn, Cotoneaster, Cherry, Elder, Lonicera, Spruce and Willow.

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3. Status of the Trees

3.1 A check was made on 13th June 2012 with: ***Barnsley Metropolitan Borough Council.***

3.2 We are informed that there is no Tree Preservation Order in force and that the site is not within a Conservation Area.

3.3 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.

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.

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5. Discussion

5.1 Tree Condition & Recommended Works

6.1.1 The tree survey revealed a total of 12 items of vegetation (2 individual trees, 7 groups of trees and 3 hedges). Of these, 4 trees/groups were identified as retention category 'B', 7 trees/groups/hedges were identified as retention category 'C' and 1 tree was identified as retention category 'U'. No retention category 'A' trees were identified on this occasion. Please refer to **Appendix 2** for retention category and definition criteria.

6.1.2 **One** tree (**T5**) was identified as retention category 'U'. This tree requires removal for arboricultural reasons as detailed at **Appendix 1**, regardless of any on site development. Its removal is of a moderate priority.

6.1.3 A full detailed inspection of **T7** was inhibited by the presence of dense Ivy, as detailed at **Appendix 1**. It is advised that this tree be re-inspected for any possible defects when the Ivy has been removed.

6.1.4 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.

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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

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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.

5.2.12 The shade that will be cast by the retained trees must also be considered. Where buildings are to be positioned within the shade cast area of trees, these should be designed in order to maximise light levels.

5.2.13 Many development sites contain areas of nature conservation interest. Trees and hedgerows, in particular, provide an important habitat for birds, bats, invertebrates and fungi and appropriate attention needs to be paid to preserving habitats throughout the development process.

5.2.14 Where a landscape planting scheme is proposed, consideration must be made at the planning stage as to where this is to be implemented on site. Such locations should be protected in order to prevent soil compaction and/or contamination and should therefore form part of the Construction Exclusion Zone.

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6. Conclusions

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

6.2 **One Tree (T5)** has been recommended for removal for arboricultural reasons. This is discussed in **Section 5** and detailed at **Appendix 1.**

6.3 **T7** requires a re-inspection once the Ivy that prevented a detailed inspection has been removed. This is summarised in **Section 5** and detailed at **Appendix 1.**

6.4 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.

6.5 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.**

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

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Appendices

Tree Ref.	Age Species *Latin Name*	Height (m)	Crown Height (m)	Height (m) and Direction of the Lowest Branch	Diameter (cm)	Crown Spread N W E S	Observations	Recommendations	Physiological Condition	Structural Condition	Amenity Value	Life Expectancy (yrs)	Retention Category
H 1	Semi-mature Mixed species	To 1.5	0	n/a n/a	10#	See plan	Mixed species hedge forming the rear boundary of the adjacent properties . Species include Leylandii and Rose.Well maintained. No major visible defects.	No action required at present.	GOOD	GOOD	LOW	40+	C
H 2	Early-mature Mixed species	To 3	0	n/a n/a	10#	See plan	Mixed species field boundary hedge. Species include Plum, Blackthorn, Holly and Elder. Uncut over grown section at the eastern end. Occasional gaps noted. Excellent habitat potential.	No action required at present.	GOOD	FAIR	MOD	40+	C
G 3	Semi-mature Ash & Cherry *Fraxinus excelsior & Prunus*	To 8	2	2 E	Ave. 15	See plan	Group of trees situated on adjacent land. Occasional pruning wounds due to crown lifting. No major visible defects.	No action required at present.	GOOD	GOOD	MOD	40+	B
G 4	Semi-mature Ash *Fraxinus excelsior*	To 10	2	2 E	Ave. 20	See plan	Group of Ash trees with a shrub understorey. Situated on adjacent land. Occasional pruning wounds due to crown lifting. No major visible defects.	No action required at present.	GOOD	GOOD	MOD	40+	B
T 5	Mature Ash *Fraxinus excelsior*	15	4	3 E	71	5 / 5 9 / 5	Single stemmed and vertical with an unbalanced crown. Crown overhangs the public footpath/track. Stem completely hollow at base. Cavity at 4m. Dieback in crown. Limited long term future.	Remove.	POOR	POOR	MOD	<10	U
G 6	Semi-mature Ash *Fraxinus excelsior*	To 9	2	n/a n/a	Ave. 15	See plan	Group of Ash trees with a shrub understorey. Situated on adjacent land. No major visible defects.	No action required at present.	GOOD	GOOD	MOD	40+	B
T 7	Mature Field Maple *Acer campestre*	10	3	4 N	Est. 70 over ivy	6.5 / 5 6 / 6	Multi-stemmed at 3m with a balanced crown. Crown overhangs the public footpath/track. Very dense Ivy throughout prevented detailed inspection.	Remove Ivy and re-inspect for defects.	GOOD	FAIR	MOD	40+	B
G 8	Semi-mature Mixed species	To 6	0	n/a n/a	To 10	See plan	Mixed species group Consisting of Hawthorn, Rose, Cotoneaster, and Ash. Occasional sections are trimmed regularly. No major visible defects.	No action required at present.	FAIR	FAIR	MOD	20-40	C
G 9	Semi-mature Lonicera & Hawthorn *Lonicera nitida & Crataegus monogyna*	To 3	0	n/a n/a	To 3	See plan	Unmanaged group of Lonicera and Hawthorn. No major visible defects.	No action required at present.	FAIR	FAIR	LOW	20-40	C
G 10	Semi-mature Cherry *Prunus sp*	3	2	n/a n/a	Est to 12	See plan	2 trees situated in the rear garden of the adjacent property. Both previously reduced. No major visible defects. Limited inspection due to location.	No action required at present.	FAIR	FAIR	LOW	20-40	C

Tree Ref.	Age Species *Latin Name*	Height (m)	Crown Height (m)	Height (m) and Direction of the Lowest Branch	Diameter (cm)	Crown Spread N W E S	Observations	Recommendations	Physiological Condition	Structural Condition	Amenity Value	Life Expectancy (yrs)	Retention Category
H 11	Semi-mature Leylandii *X Cupressocyparis leylandii*	1.5	0	n/a n/a	Est to 5	See plan	Well maintained hedge along the rear boundary of the adjacent property.	No action required at present.	FAIR	FAIR	MOD	20-40	C
G 12	Early-mature Mixed species	To 6	0	n/a n/a	Est to 15	See plan	Mixed species group forming the rear boundaries of the adjacent properties. Species include Ash, Cotoneaster, Leylandii, Willow, Hawthorn and Spruce. No major visible defects. Occasional sections are well trimmed/maintained.	No action required at present.	FAIR	FAIR	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.

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A2.3 Retention Categories

A2.3.1 ***A (marked green on the plan) = trees of high quality; 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) = trees of moderate quality; 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 of low quality but 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 ***U (marked in red on the plan) = unsuitable for retention: 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) The trees are considered to be hazardous.
3). Diseases are present which may affect the health of adjacent trees.
4) They are in serious, overall decline or are already dead.
5) They are of low quality and suppressing adjacent trees of better quality.
6) Removal of other category U trees will render them exposed and unstable.

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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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.

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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.

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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: Arboriculture

Andrew Bagshaw *FdSc (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 *Chartered Arboriculturist, MSc, BSc (Hons), ND, MICFor, AIEEM.* Adam has extensive experience in arboriculture, having worked with trees for over 15 years. In 2010 Adam obtained an MSc in Arboriculture and Urban Forestry (with distinction), also gaining the top student award. Adam has had articles published in industry magazines including original research in a peer reviewed UK Forestry Commission publication in 2012.

Robert Godwin *BA (Hons), 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 *FdSc (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.

Phil Humeniuk *FdSc (Arboriculture), MicFor.* Phil has recently joined JCA having spent 3 years working for various tree surgery companies and as a Tree Officer for a Local Authority. He obtained his foundation degree in Arboriculture at the University of Central Lancashire.

Consulting Staff: Ecology

Christopher Shaw *BSc (Hons).* Chris is our in-house Ecologist, and joined JCA in 2010 after achieving a First Class degree in Biology at the University of Leeds. Prior to joining JCA, Chris has volunteered with a number of organisations including the Yorkshire Wildlife Trust, BTCV and a local Ecological Consultancy. He is currently undertaking a 'Certificate in Ecological Consultancy Course' with Acorn Ecology. Chris is actively involved in building JCA's portfolio of ecological services.

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

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