

**ARBORICULTURAL SURVEY
at
Roundhills
Redbrook Road
Barnsley
South Yorkshire
S75 2RS**

Client:
Building Validation Solutions

Client Address:
Waters Meeting House
1 Waters Meeting Road
Bolton
BL1 8HQ

Client Telephone:
01204 328560

Insured:
Mr and Mrs Jones

JCA Ref:
14533/JC

Client Ref:
0361981

JCA Limited
Arboricultural & Ecological Consultants

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1. Introduction

1.1 Purpose of the Report

- 1.1.1 This arboricultural report is required by my client as part of an investigation into possible subsidence damage at **Roundhills, Redbrook Road, Barnsley, South Yorkshire, S75 2RS.**

1.2 Terms of Reference

- 1.2.1 I am instructed by **Building Validation Solutions**, to visit the site and carry out an arboricultural survey covering all vegetation within likely influencing distance of the subject property.
- 1.2.2 I am to prepare my findings in a detailed report, making specific recommendations as to any arboricultural management required to prevent further damage.

1.3 Scope of the Report

- 1.3.1 In this case the subject property includes the house. Damage has occurred to the north-east corner of the house around a circular bay window and where the stone steps join the property's northern wall.
- 1.3.2 The distance between the trees and shrubs and the buildings is measured from the closest part of the property.
- 1.3.3 A site investigation was carried out by others. I have been supplied with details of this investigation and have included the salient points in this report. I have applied this information to my knowledge of trees and the arboricultural data I gathered on site in prescribing recommendations for action.

2. Survey Conditions and Methods

2.1 Date of Inspection and name of Inspector

- 2.1.1 The site was surveyed during the month of November 2018 by **Jonathan Cocking** F.R.E.S., Tech. Cert. (Arbor.A), PDipArb (RFS) FArborA CBiol MSB. MICFor.

2.2 Data Collection Methods

- 2.2.1 The inspection was carried out at ground level using visual assessment of the tree canopy, stem and rooting area. If a climbed inspection is deemed to be necessary this is detailed in the recommendations. No digging or drilling was carried out on this occasion.
- 2.2.2 The measurements were made using instruments including clinometers for tree *HEIGHT*, stem diameter tapes for *DIAMETER* (measured at 1.5m above ground level, or just above the root flare of a multi-stemmed tree) and tape measures or electronic distometers for *CROWN SPREAD* and *DISTANCE TO PROPERTY*.
- 2.2.3 *AGE* and *LIFE EXPECTANCY* values are estimated based upon our knowledge of trees and the way they grow. No core sampling was carried out on this occasion.
- 2.2.4 The term *INFLUENCING DISTANCE* as used in this report is not derived from the NHBC's 'zones of influence' formula. It is merely an estimation of the potential of a tree or shrub on the subject site after due consideration of many factors including soil characteristics, specimen size, vigour, species, likely water uptake and distance from the damage.
- 2.2.5 '*NHBC WATER DEMAND*' (low, moderate or high) are categories originated by the National House Building Council and relate to the amount of water a tree is expected to use. The concept was designed to be used as an aid to determining the correct foundation depths for new build situations where there are existing trees present. This should not be used merely as a justification for tree removal.

3. Ground Investigation, Soil & Root Analysis

3.1 Introduction

- 3.1.1 Trees influence soil conditions, and in some soil types root activity can create a soil moisture deficit (S.M.D.), which means that the amount of water being used by the tree and by natural evaporation has exceeded the amount of water falling naturally through precipitation. This deficit can lead to soil shrinkage which in turn can cause a building to move particularly if its foundations are shallow. The result is *SUBSIDENCE*.
- 3.1.2 The soil's *PLASTICITY INDEX*, *PLASTIC LIMIT*, *MOISTURE CONTENT* and the likely water uptake of the tree/trees in question are key factors in determining whether shrinkage has occurred.
- 3.1.3 On shrinkable soils, damage to buildings can also occur as a result of tree removal. In such cases re-hydration of the soil causes an upwards movement of the ground known as *HEAVE*. Trees should not, therefore, be removed without due consideration of likely effects.
- 3.1.4 Microscopic examination of tree root anatomy generally enables the *GENUS* of roots recovered during the ground investigation to be established. However, it rarely identifies individuals to *SPECIES* level.
- 3.1.5 Certain species, for instance Willows and Poplars, are indistinguishable by these methods and identification can only be made at *FAMILY* level.
- 3.1.6 The diameter of the root and the direction in which it was growing can be an indication of its significance. In addition, the depth at which it was found is critical.
- 3.1.7 To establish whether the root is alive, iodine is used to test for starch which is stored in some cells of living tree roots but is broken down by micro-organisms upon the death of a root in the soil.
- 3.1.8 Investigations at the subject site into the foundation depths, soil and root types are being carried out by others. We do not have the results of these investigations at this time. Our recommendations in this report are, therefore, based on assumption that the soils are of moderate or high shrinkability.

4. Tree Descriptions & Recommendations

- 4.1 Please refer to the site plan at **Appendix 1** for all the relevant arboricultural features.
- 4.2 To aid comparison with any root analysis details, the family to which each species belongs is given in brackets after the full name.
- 4.3 Technical terms are explained in the attached glossary.

TREE 1 (T1)

English Oak (*Quercus robur*) *Fagaceae*

Age Class	Height (m)	Stem Diameter at 1.5m (cm)	Spread (m)	Condition	Distance to property (m)	Future growth potential (yrs)
Early Mature	16	50	7	Good	12.6	20-40

This tree is located to the front right of the property, within a wooded area that is sloping away from the house. It is single stemmed, vertical with a balanced crown and moderate vigour. This tree has not been pruned and has no visible major defects.

This species is classed as having a high water demand in accordance with NHBC. This species can be linked to the root identification but the tree is not situated within influencing distance of the subject property and is therefore not considered a subsidence risk.

Recommendation: *No action is required.*

TREE 2 (T2)

English Oak (*Quercus robur*) Fagaceae

Age Class	Height (m)	Stem Diameter at 1.5m (cm)	Spread (m)	Condition	Distance to property (m)	Future growth potential (yrs)
Mature	15	52	10	Good	7.2	40+

This tree is located at the bottom of an embankment to the front of the house, adjacent to the damaged area of the property along its northern wall. It is single stemmed and vertical and showed no signs of any past pruning or any visible major defects. It had a balanced crown and showed signs of high vigour.

This species is classed as having a high water demand in accordance with NHBC.

This species can be linked to the root identification, is situated within influencing distance of the subject property (9m from the northern damaged wall and 11m from the damaged bay window) and is therefore considered to be the likely cause of the current damage at the property.

Recommendation: *Fell to the ground and treat stump to prevent re-growth.*

TREE 3 (T3)

Silver Birch (*Betula pendula*) Betulaceae

Age Class	Height (m)	Stem Diameter at 1.5m (cm)	Spread (m)	Condition	Distance to property (m)	Future growth potential (yrs)
Semi Mature	10	15	See Plan	Poor	9.7	<10

This tree is located to the front of the property, down an embankment.

It is single stemmed and vertical with a balanced crown with no evidence of past pruning. No major visible defects were found but minor deadwood was noted and had low vigour. This species is classed as having a low water demand in accordance with NHBC.

This species cannot be linked to the root identification, and as the tree is not situated within influencing distance of the subject property, it is not considered a subsidence risk.

Recommendation: *No action is required.*

TREE 4 (T4)

Silver Birch (*Betula pendula*) Betulaceae

Age Class	Height (m)	Stem Diameter at 1.5m (cm)	Spread (m)	Condition	Distance to property (m)	Future growth potential (yrs)
Over Mature	7	50	See Plan	Poor	14.4	<10

This tree is located to the front of the property, adjacent to the bay window at the bottom of an embankment that is sloping away from the property).

It is single stemmed and has suffered recent major damage in that the tree has collapsed along its main stem. It showed no signs of growth and is suspected to be dead with low vigour

This species is classed as having a low water demand in accordance with NHBC.

This tree is not situated within influencing distance of the subject property and is not considered a subsidence risk but requires removal nonetheless.

Recommendation: *Fell due to tree condition.*

TREE 5 (T5)

English Oak (*Quercus robur*) Fagaceae

Age Class	Height (m)	Stem Diameter at 1.5m (cm)	Spread (m)	Condition	Distance to property (m)	Future growth potential (yrs)
Early Mature	13	45	See plan	Good	12.5	40+

This tree is located to the north-east of the property, located within an embankment that is sloping away from the property.

The tree is growing at least 6m lower than the house. This species is classed as having a high water demand in accordance with NHBC.

This species can linked to the root identification but the tree is not situated within influencing distance of the subject property and is not considered a subsidence risk.

Recommendation: *No action is required.*

TREE 6 (T6)

Sycamore (*Acer pseudoplatanus*) Sapindaceae

Age Class	Height (m)	Stem Diameter at 1.5m (cm)	Spread (m)	Condition	Distance to property (m)	Future growth potential (yrs)
Early Mature	16	55#	See Plan	Good	17+	40+

This tree is located to the northeast of the property, located within an embankment that is sloping away from the property.

It is single stemmed and vertical with a balanced crown. Some minor deadwood was noted and no major defects were visible. The lower stem was ivy clad.

This species is classed as having a moderate water demand in accordance with NHBC.

This species cannot be linked to the root identification, and the tree is not situated within influencing distance of the subject property and is therefore not considered a subsidence risk.

Recommendation: *No action is required.*

5. Conclusions

- 5.1 Having made a detailed survey of the site and assuming the presence of shrinkable soil (subject to confirmation), I am satisfied that in this case subsidence damage has occurred as a result of drying shrinkage caused by vegetation within influencing distance of the property.
- 5.2 I consider the vegetation identified as **T2** to be the likely cause of the damage observed at the subject property. I have therefore recommended that **T2** be removed and its stump treated to prevent re-growth.
- 5.3 Although not related to the subsidence damage, **T4** requires removal due to its poor condition.
- 5.4 I have summarised all my tree specific recommendations in **Section 6** and made general recommendations in **Section 7**. The effect of these recommendations should be to prevent further damage by reducing the moisture uptake close to the problem areas.

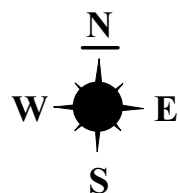
6. Summary of Tree Specific Recommendations

Item	Species	Recommended Action	Planning Restriction
T1	English Oak	No action is required.	Yes
T2	English Oak	Fell to the ground and treat the stump to prevent re-growth.	Yes
T3	Silver Birch	No action is required.	Yes
T4	Silver Birch	Fell to the ground due to condition.	Yes
T5	English Oak	No action is required.	Yes
T6	Sycamore	No action is required.	Yes
Total estimated time to execute the above works		2 days	
Notes on the above estimate			
6.1	JCA Ltd does not carry out tree work but we are experienced in the estimation of time involved in a job.		
6.2	We have based this estimation of time involved in carrying out the recommended works on a three person team with all the required equipment.		
6.3	Actual quotations given by contractors will additionally reflect travel costs and regional price variations.		
6.4	Clients are welcome to contact JCA Ltd to discuss a likely budget for these works.		

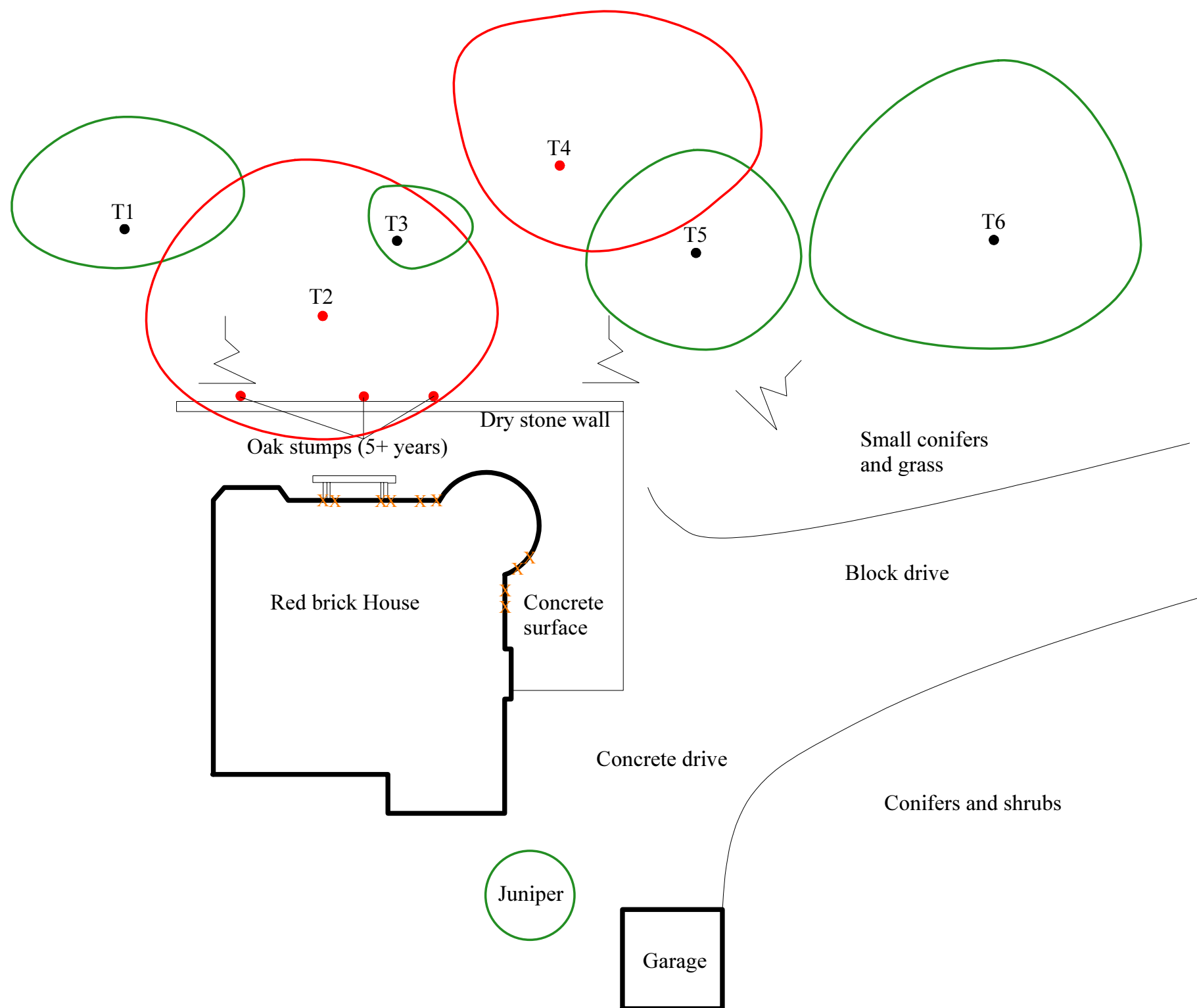
7. General Recommendations and Observations

- 7.1 This report is based upon a visual inspection. JCA Ltd 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.
- 7.2 All work recommended in this report must be carried out to BS 3998: 2010 - '*Recommendations for Tree Work*'.
- 7.3 All the work as specified in this report should be carried out by qualified, experienced and skilled arboricultural contractors covered by adequate *public liability and employers liability insurance*. 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.
- 7.4 The influence of trees on the soil and on buildings may change as they grow, as climate varies or as other changes occur in the local environment. It is therefore advisable to have trees inspected by JCA Ltd annually.
- 7.5 The property and the damage should be monitored by the project engineer on a regular basis after the recommended tree works are complete.
- 7.6 If, after the works have been carried out, there is little improvement, this may mean that the situation cannot be rectified by arboricultural means alone. If this point is reached the situation must be reassessed in conjunction with other experts.
- 7.7 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.
- 7.8 That the project engineer considers the possibility of heave.

Appendices



Redbrook Road



Appendix 1: Site Plan

Address: Roundhills, Redbrook Road,
Barnsley, South Yorkshire, S75 2RS.
JCA REF: 14533/JC

SCALE 1:200

PAPER SIZE: A3

SURVEYED BY: JC

DRAWN BY: JC

APPROVED BY: CC



APPROXIMATE CROWN
SHAPE AND SPREAD OF
TREE/SHRUB/GROUP



APPROXIMATE CROWN
SHAPE AND SPREAD OF
TREE/SHRUB/GROUP
TO BE REMOVED



STEM OF TREE/SHRUB



CENTRE OF TREE/SHRUB
TO BE REMOVED



OUTLINE OF SUBJECT PROPERTY



DAMAGE TO PROPERTY



Arboricultural & Forestry Consultants

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 a 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 clusters around a trees base or stem, often as a result of bad pruning or some other stress factor.
Formative pruning	The pruning of a tree to encourage a good growth habit. This will reduce the likelihood of future structural problems.
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 re-growth is then removed every few years.
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 can cause serious health and structural problems to a tree in the longer term.

Appendix 3: Replacement Planting

- A3.1 Where trees are to be removed because they are considered to be contributing to subsidence, it is often desirable (indeed, it may be mandatory) to plant replacements. Often, trees recommended for removal are unsuitable species for the location and replanting with more appropriate species presents fewer risks for the future.
- A3.2 Appropriately sited, trees will mature in a garden setting with minimal risk to property and can provide substantial benefits in terms of amenity, shelter and environmental health.
- A3.3 Consideration must be given to location and species choice in order to avoid future problems. The position of the tree will be dictated by the characteristics of the species. There is a wide range of species available. The table below provides a guide to relatively safe planting distances. The depth of foundations and type of soil may materially alter these distances which are for guidance only and which we are willing to advise on further if required.

SPECIES	SUGGESTED PLANTING DISTANCE FROM PROPERTY IN METRES ✓																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Alder							✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ash																✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Beech										✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cedar										✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
English Oak																				✓	✓	✓	✓	✓	✓
False Acacia											✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Field Maple							✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Hawthorn						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Hazel					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Holly				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Hornbeam							✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Japanese Maple				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Laburnum						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Larch										✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Lime															✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Magnolia				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mountain Ash						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mulberry				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Norway Maple															✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ornamental Cherry					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pear and Apple				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Scots Pine						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Silver Birch				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Whitebeam						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Yew						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Appendix 4: 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. Jonathan has since developed JCA's portfolio of services and its extensive client base. He is a Chartered Biologist, a Chartered Arboriculturalist and an Expert Witness with much experience of litigation work.

Technical Director

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

Consulting Staff: Arboriculture

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) and an Arboricultural Technicians Certificate. Toby is LANTRA certified in Professional Tree Inspection.

Scott Reid *ND (Arboriculture and Forestry).* Scott joined JCA after working with other consultancy companies in the south of England. He specialises in trees in relation to development and holds a National Diploma, various NPTC qualifications and is currently studying for his Level 4 Diploma in Arboriculture.

Andrew Bussey. Andrew joined JCA having spent 12 years working as a tree surgeon 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.

Phil Humeniuk *FdSc (Arboriculture).* Phil joined JCA having spent 3 years working for various tree surgery companies and as a Tree Officer for a Local Authority. He also has several years experience working as a consultant both for JCA and for another consultancy. Phil obtained his foundation degree in Arboriculture at the University of Central Lancashire and has various NPTC's and is LANTRA certified in Professional Tree Inspection.

Emily Wilde *FdSc (Arboriculture).* Emily joined JCA having previously worked for various private tree surgery and consultancy companies over the past 8 years. She initially obtained a ND in Forestry & Arboriculture, followed by a FdSc in Arboriculture at Askham Bryan College, York. Emily has various NPTC certificates and is QTRA qualified.

Mick Eltringham *ND (Forestry).* Mick joined JCA after spending 12 years working in the industry for various private companies in the north and south of England. He has also spent the last five years working as a consultant for two canopy research projects in the Amazon Rainforest, working with Oxford University and the University of Arizona. He has various NPTC Qualifications.

Charles Cocking *(FdSc Arboriculture).* Charles joined JCA in January 2014 as an Apprentice having previously worked for the company on a part time basis during 2013. Charles obtained his Foundation Degree in Arboriculture at Askham Bryan College, York, and is now part of our qualified Arboricultural consultancy team.

Paul Hodgson *Cert Arb (RFS), FdSc Arb, MArborA.* Paul joined JCA after spending 11 years working in the industry and for various organisations, which included practical tree work, surveying, lecturing at Myerscough College, Arb team leader at Royal Botanic Gardens, Kew, and a number of senior management positions. Paul is a professional member of the Arboricultural Association and a member of the Kew Guild.

Consulting Staff: Ecology

David Bodenham *BSc Ind (Hons) Zoology, MSc Biodiversity and Conservation.* David joined JCA as an addition to the expanding ecology department. An advocate of evidence based conservation, he studied Zoology (Ind) at University and moved onto an MSc in Biodiversity and Conservation where he gained the myriad of skills needed as an ecologist. With over 7 years of experience, David specialises in bat and amphibian ecology.

Jenny Butler *Bsc (Hons) Environmental Science.* Jenny joined JCA's ecology department in 2017, bringing with her a bachelor degree in Environmental Science from Bangor University. Jenny has previously worked as an Environmental Consultant for an Agri- Environment company and as a freelance ecological consultant. Jenny specialises in great crested newt and bat ecology.

Amanda Beck *Cert He in Field Ecology.* Amanda joined JCA's ecology department in 2018, previously working as a freelance Ecological Consultant in North Wales and Liverpool and as a trainee Ecologist in South Wales. Amanda has extensive practical experience in surveying for botanical, amphibians, terrestrial and marine mammals along with invertebrate research work. She has practical experience in habitat management and creation and is a CIEEM student member.

Administrative Staff

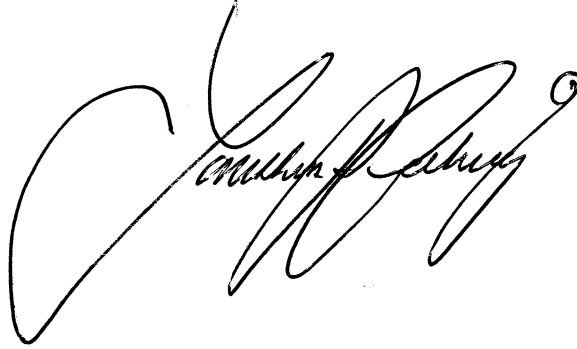
Sue Guest Administrative Team Leader.
Catherine Cocking Accounts Manager.
Lisa Hampson Marketing Manager.

Simeon Haigh *BSc (Hons).* IT Director.
Lorraine Spink Administrative Assistant.

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.

The contents of this report are true to the best of my knowledge and belief.

Signed



.....
28/11/2018

Jonathan Cocking *F.R.E.S., Tech. Cert. (Arbor.A), PDipArb (RFS) FArborA CBiol MSB. MICFor.*

For and on behalf of **JCA Ltd**

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Tree Advice for the Legal Profession

- Subsidence Litigation
- Personal Injury and Accident Investigation
- Expert Witness, Planning Inquiries and Appeals

Veteran Tree Management

- Ancient Woodland Management
- Veteran Tree Management

Tree Health and Pest and Disease Management

- Pest and Disease Surveys
- Tree Health Checks
- Disease Mitigation and Control

ECOLOGICAL SERVICES

Ecological Pre-Planning Services

- Phase 1 Habitat Surveys
- Great Crested Newt eDNA Sampling
- Protected Species: Bat, Wintering and Nesting Bird, Badger, Amphibian, Otter, Water Vole, White-Clawed Crayfish, Dormice and Reptile Surveys.
- Preparation for Environmental Impact Assessment (EIA)
- Invasive Species Surveys
- Code for Sustainable Homes

Ecological Post-Planning Services

- Biodiversity Enhancement Plans
- Protected Species Mitigation
- Ecological Management (Bat and Bird box installation and inspection)

HEAD QUARTERS:

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