

**ARBORICULTURAL REPORT
to BS 5837:2005
at
Hoyle Mill Road (North Site)
Barnsley
South Yorkshire**

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1. Introduction

1.1 Purpose of the Report

- 1.1.1 A report is required at **Hoyle Mill Road (North Site), Barnsley**, 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 Ref. BAR_SHFD_034_HoyleMill_RvC 01 02 08.dwg. However, only a few trees were indicated on this supplied plan and where necessary the other trees have been added to the plans at **Appendix 6 and Appendix 7** as accurately as possible by using measurements taken on site.

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 the proposed development has been considered within the Arboricultural Implication Assessment in **Section 6** and detailed on the plan at **Appendix 7**.

1.4 Survey Details

- 1.4.1 The survey took place during the month of May 2011.
- 1.4.2 The survey was conducted by Robert Godwin.
- 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

- 2.1.1 The site is currently comprised of new build houses and houses which are under construction. Many roads and finished surfaces have been completed.

2.2 Topography

- 2.2.1 The site is approximately level.

2.3 Treescape

- 2.3.1 Surrounding the site is a residential area containing occasional trees and occasional mature street trees.
- 2.3.2 The trees on this site have a minor impact on the local treescape, with the majority of more significant trees located on adjacent land.

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 early-mature. However, the trees were predominantly semi-mature.

2.6 Species Diversity

- 2.6.1 Species surveyed include Sycamore, Ash, Hawthorn, Elder, Cypress and Goat Willow.

3. Status of the Trees

- 3.1 A check was made on 5th May 2011 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.

5. Discussion

5.1 Tree Condition & Recommended Works

- 5.1.1 The tree survey revealed a total of 17 items of vegetation (7 individual trees and 10 groups of trees). Of these, 7 trees/groups were identified as retention category 'B', 9 trees/groups were identified as retention category 'C' and 1 group was identified as retention category 'R'. Please refer to **Appendix 2** for retention category and definition criteria.
- 5.1.2 One group (**G5**) was identified as retention category 'R'. This group contains several dead trees and requires removal regardless of any on site development. The group is considered to be unsafe and should be removed as soon as it is reasonably practicable.
- 5.1.3 A full detailed inspection of off-site trees was inhibited by restricted access, as detailed at **Appendix 1**. However, sufficient information was able to be gathered to produce this report.
- 5.1.4 General tree health and crown condition should be monitored and trees re-inspected for signs of a decline where recent ground level changes have taken place, as detailed at **Appendix 1**.
- 5.1.5 Those trees which overhang the site from adjacent land, 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.

6. Arboricultural Implications Assessment (AIA)

6.1 Proposed Development

- 6.1.1 The proposed development will consist of the construction of numerous residential properties. Drawing No. SPL 42/01 Rev F has been supplied by the client; this plan can be found at **Appendix 7** and is the basis for which this AIA has been prepared.

6.2 Implications for Existing Trees

- 6.2.1 **T1, T9, T10, G11** (one tree), **G12** (one tree), **G16** (part of) and **T17** shall require removal as they are situated within the footprint of the proposed development.
- 6.2.2 In this instance, the trees recommended for removal in order to facilitate the proposed development are retention category 'B' and retention category 'C' trees. The planting of new semi-mature trees would go some way to mitigating the loss of these trees.
- 6.2.3 It would also be prudent to prune back and crown lift some of **G13, G14** and **G15** (off site trees which overhang the boundary) to avoid conflict with the development proposals.
- 6.2.4 It is proposed to construct boundary fences in the gardens of the properties, some of which will be within the RPAs of retained trees (**T2, T3, T4, G7, G8, G13, G14** and **G15**). As these fences are to be timber frame and post structures, although some minor root loss may occur by erecting these, it is not considered that this will be detrimental to the long term health of the trees. The holes into which the fence posts will be placed must be excavated by hand and it would be beneficial to treat the rooting zones of these trees with Mycorrhizal fungi post construction (please refer to **Section 6.4** for further details).
- 6.2.5 It is proposed to construct hard surfaces (car parking spaces and driveways) within the RPAs of **G8, G11, G12, G13, G14** and **G15**. **If these trees are to be retained**, the minimum dig and no-dig methods of construction must be considered when working within the RPAs. The finished surface must be porous in order to allow air and water to reach the tree roots, whilst at the same time is able to withstand the load applied.
- 6.2.6 The proposed new dwellings (Plot 81 and Plot 44) encroach into the RPAs of some of **G14** and **G15**. The rooting activity at the point where the foundations are to be laid must first be investigated by hand excavation in the presence of an arboricultural consultant. If significant roots are found then the new building will need to be constructed upon pile and beam foundations, or a similar foundation type, instead of the more traditional trench/strip foundation.
- 6.2.7 No trees are protected by a Tree Preservation Order and the site is not located within a Conservation Area.

- 6.2.8 All the retained trees shall require protection by fencing to BS 5837: 2005 during the development phase.

6.3 Protection of Retained Trees

- 6.3.1 The erection of protective fencing, in accordance with BS 5837: 2005, will be the very first job on site following the tree removal and pruning works. The fencing should ideally be positioned to protect the entire **Root Protection Area (RPA)** of the retained trees, in order to create a **Construction Exclusion Zone (CEZ)**.
- 6.3.2 Where it is not possible to protect the entire RPAs by fencing, specialist measures must be taken during the construction phase to avoid ground compaction and minimise root damage, where the RPAs remain unprotected. Such areas are highlighted in blue on the Development Proposals Plan at **Appendix 7**.
- 6.3.3 Routes for pedestrian and site traffic should ideally be located outside, and diverted away from, the RPAs of the retained trees. Where this is not possible temporary protective surfaces should be laid over the exposed RPAs which will distribute the weight of site vehicles, machinery or pedestrians whilst allowing moisture to reach the tree rooting area beneath.
- 6.3.4 Where tree crowns overhang proposed structures, it is possible that some pruning may be required in order to allow sufficient clearance.
- 6.3.5 Where utilities need to be brought onto the site, these should ideally be routed away from the RPAs of the trees. Where this is not possible, methodologies on the installation of underground services without damage to tree roots should be considered. All service providers should be consulted prior to commencement of works with the aim of minimising the number of service runs on the site.
- 6.3.6 The site compound, which typically includes the site office, mess facilities, toilets, storage of materials and parking, must be located away from the trees and outside the RPAs. Care should also be taken to prevent soil contamination with chemical spillages, including petrol, diesel and oils.
- 6.3.7 Any problems of shading caused by trees to the east and south of the site will be minimised as the majority are deciduous, and light penetration will increase in the winter when the sun is lowest. The remaining trees are located to the north and, therefore, interference with direct sunlight is not an issue. It is considered that the trees are a sufficient distance from proposed dwellings to allow sufficient light to reach windows.

6.4 Remedial Measures

- 6.4.1 Part of the proposed development will encroach into the RPAs of trees which are to be retained. It would therefore be prudent to apply *mycorrhiza* fungi to the soils around these trees after the construction phase is complete. *Mycorrhiza* is a fungus that forms a symbiotic relationship with the tree roots. A tree root associated with *mycorrhiza* takes up nutrients more effectively and this will therefore help the trees to produce new roots more effectively, so benefitting their recovery.
- 6.4.2 The site offers scope for landscaping and tree planting. Should new planting be desired, or required, then the areas identified for the new planting should also be protected by fencing during the construction phase to prevent the compaction of the soil.

7. Conclusions

- 7.1 The trees surveyed were generally found to be in good to fair condition.
- 7.2 No trees are protected by a Tree Preservation Order or by virtue of them being in a Conservation Area.
- 7.3 One group of trees have been recommended for removal for arboricultural reasons. These are discussed in **Section 5** and detailed at **Appendix 1**.
- 7.4 The arboricultural implications of the development have been considered and discussed in **Section 6**.
- 7.5 Some trees have been recommended for removal in order to facilitate the proposed development. These are discussed in **Section 6** and detailed on the plan at **Appendix 7**.
- 7.6 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.
- 7.7 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**.
- 7.8 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.

Appendices

Tree Ref.	Age Species Latin Name	Height (m)	Crown Height (m)	Diameter (cm)	Crown Spread			Observations	Recommendations	Physiological Condition	Structural Condition	Amenity Value	Life Expectancy (yrs)	Retention Category
					W	N	E							
T 1	Semi-mature Ash <i>Fraxinus excelsior</i>	6	1	Est. 27 at base	3	3	3	Twin-stemmed at ground level with a balanced crown. The crown overhangs the boundary. Dense understorey at base.	No action required. <i>Remove to facilitate development.</i>	GOOD	FAIR	LOW	40+	C
T 2	Semi-mature Sycamore <i>Acer pseudoplatanus</i>	6	1	15	2	2	3	A poor specimen that has been previously topped. Twin-stemmed at 1m with a slightly unbalanced crown. There has been an increase in ground level adjacent to this tree.	No action required.	FAIR	FAIR	LOW	20-40	C
T 3	Semi-mature Sycamore <i>Acer pseudoplatanus</i>	8	2	24	3	3	3	Single stemmed and vertical with a balanced crown. Multiple pruning wounds due to crown lifting (healing well). There has been an increase in ground level adjacent to this tree.	No action required.	FAIR	FAIR	LOW	20-40	C
T 4	Semi-mature Sycamore <i>Acer pseudoplatanus</i>	8	3	27	3	3	2	Single stemmed and vertical with a balanced crown. Multiple pruning wounds due to crown lifting (healing well). There has been an increase in ground level adjacent to this tree.	No action required.	FAIR	FAIR	LOW	20-40	C
G 5	Early-mature Elder <i>Sambucus nigra</i>	7	3	Each to 25	2	2	2	Four dead trees. Single stemmed and vertical. There has also been an increase in ground level adjacent to these trees.	Remove (for arboricultural reasons).	DEAD	DEAD	DEAD	<10	R
G 6	Semi-mature Sycamore and Ash <i>Acer pseudoplatanus</i> and <i>Fraxinus excelsior</i>	To 10	2	2 x 20	3	3	3	Two previously topped trees - both single stemmed and vertical with balanced crowns. There has been an increase in ground level adjacent to these trees.	No action required.	FAIR	POOR	LOW	10-20	C
G 7	Semi-mature Cypress <i>Cupressus sp.</i>	6	1	Est. each 25	2	2	2	Two trees which are situated on adjacent land. Both single stemmed and vertical with balanced crowns.	No action required.	GOOD	FAIR	LOW	40+	C
G 8	Semi-mature to Early-mature Sycamore and Goat Willow <i>Acer pseudoplatanus</i> and <i>Salix caprea</i>	To 12	2	Est. ave < 30	4	4	4	Four trees which are situated on adjacent land. All are multi-stemmed at ground level with slightly unbalanced crowns. Restricted access prevented a full detailed inspection.	No action required.	FAIR	FAIR	MOD	40+	B
T 9	Semi-mature Sycamore <i>Acer pseudoplatanus</i>	12	3	29	4	4	2	Single stemmed and vertical with a slightly unbalanced crown, which overhangs the car park. Multiple pruning wounds due to crown lifting (healing well).	No action required. <i>Remove to facilitate development.</i>	GOOD	FAIR	MOD	40+	B
T 10	Semi-mature Sycamore <i>Acer pseudoplatanus</i>	11	3	29 at base	4	3	5	Twin-stemmed at 1m with a slightly unbalanced crown, which overhangs the car park. Multiple pruning wounds due to crown lifting (healing well).	No action required. <i>Remove to facilitate development.</i>	FAIR	FAIR	MOD	40+	B

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
G 11	Semi-mature Sycamore and Ash <i>Acer pseudoplatanus</i> and <i>Fraxinus excelsior</i>	To 9	2	Ave. < 17 at base	See Plan	One Sycamore and one Ash. Both are twin-stemmed at ground level with slightly unbalanced crowns, which overhang the car park.	No action required. <i>Remove one tree to facilitate development.</i>	FAIR	FAIR	LOW	40+	C
G 12	Semi-mature to Early-mature Sycamore <i>Acer pseudoplatanus</i>	To 10	1	Up to. 32 at base	See Plan	Three trees - all multi-stemmed at ground level with balanced crowns. Major bark damage to the dominant tree (healing well).	No action required. <i>Remove one tree to facilitate development.</i>	FAIR	FAIR	LOW	20-40	C
G 13	Semi-mature Ash, Elder and Sycamore <i>Fraxinus excelsior</i> , <i>Sambucus nigra</i> and <i>Acer pseudoplatanus</i>	To 8	1	Est. < 20 at base	See Plan	Four trees which are situated on adjacent land. Both single stemmed and multiple stemmed trees are present within the group.	No action required. <i>Prune back/Crown lift to facilitate development.</i>	GOOD	FAIR	LOW	40+	C
G 14	Semi-mature Sycamore and Goat Willow <i>Acer pseudoplatanus</i> and <i>Salix caprea</i>	To 7	Ave. 2	Est. < 30 at base	5 5 5	Situated on adjacent land and to the rear of new private houses. A linear group including Goat Willow, Sycamore and Hawthorn. Limited access prevented a full detailed inspection.	No action required. <i>Prune back/Crown lift to facilitate development.</i>	FAIR	FAIR	MOD	40+	B
G 15	Semi-mature to Early-mature Mixed <i>Mixed</i>	To 12	Ave. 2	Est. ave 35	See Plan	Situated on adjacent land and to the rear of new private houses. The group includes Ash, Sycamore and Elder. Limited access prevented a full detailed inspection.	No action required. <i>Prune back/Crown lift to facilitate development.</i>	GOOD	FAIR	MOD	40+	B
G 16	Semi-mature to early-mature Mixed <i>Mixed</i>	To 12	1	Est. ave < 30	See Plan	A dense group which includes Sycamore, Hawthorn, Goat Willow and Ash. Limited access (fence) prevented a full detailed inspection.	No action required. <i>Partially remove to facilitate development.</i>	GOOD	FAIR	MOD	40+	B
T 17	Early-mature Sycamore <i>Acer pseudoplatanus</i>	12	3	30	4 5 5 6	Single stemmed and vertical with a balanced crown. Multiple pruning wounds due to crown lifting (healing well).	No action required. <i>Remove to facilitate development.</i>	GOOD	FAIR	MOD	40+	B

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 <i>Trees in relation to construction</i> .
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: Arboriculture

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), 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.

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.

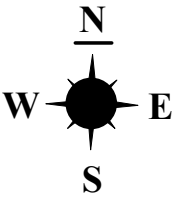
Consulting Staff: Ecology

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
Alec Fielden *Cert. Arb. (RFS).* CAD Technician.



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.

Appendix 6: Tree Constraints Plan

TITLE:
Site at Hoyle Mill Road (North Site), Barnsley.
JCA Ref: 10125/RG

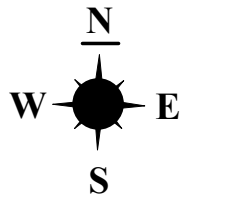
SCALE : 1:500	PAPER SIZE : A2	
SURVEYED BY: RG	DRAWN BY: RG	APPROVED BY: RG

BRITISH STANDARD 5837:2005: 4.3.1
RETENTION CATEGORIES
Detailed definitions of these categories 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

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**Appendix 7:
Development Proposals**

TITLE:
Site at Hoyle Mill Road (North Site), Barnsley.
JCA Ref: 10125/RG

SCALE : 1:500

PAPER SIZE : A2

	TREE TO BE RETAINED
	TREE TO BE REMOVED
	CENTRE OF TREE
	CENTRE OF TREE TO BE REMOVED
	ROOT PROTECTION AREA
	ROOT PROTECTION AREA ENCROACHED BY THE PROPOSED DEVELOPMENT
	PROPOSED DEVELOPMENT

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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

R Godwin

.....
Robert Godwin MSc, BA (Hons), MArborA.

10th May 2011

For and on behalf of *JCA Ltd*

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RGN RM

Photo front cover: Sluice at Bowers Mill

Photo back cover: View from Unit 80

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