



# **ARBORICULTURAL REPORT & Impact Assessment to BS5837:2012 at:**

*Land at  
**Bolsover Street,  
Hucknall,  
Nottinghamshire  
NG15 7TY***

Prepared for:  
**Rayner Davies Architects,**  
*2 St Peter's Gate,  
Nottingham,  
NG1 2JG*

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Reference: *AWA2501*



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## 1. Introduction

### 1.1 Instructions and Brief

- 1.1.1 We are instructed by Jamie Brown of Rayner Davies Architects to visit the site and prepare our findings in a report.
- 1.1.2 The report is required in accordance with *BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations*, to provide detailed, independent, arboricultural advice on the trees present, in the context of potential development.

### 1.2 Survey Details

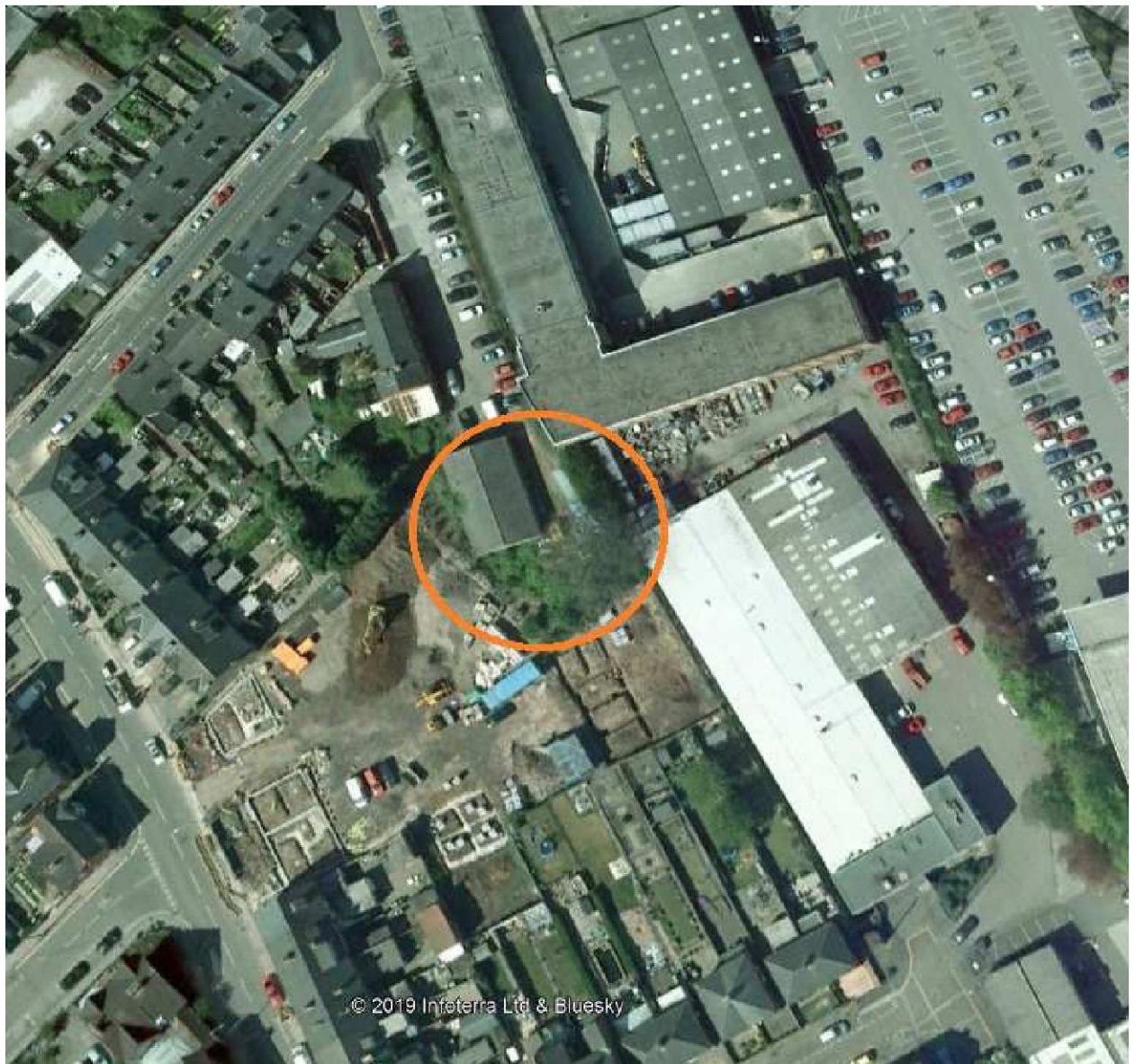
- 1.2.1 The survey took place during January 2019.
- 1.2.2 The trees were surveyed visually from the ground using “Visual Tree Assessment” techniques and in accordance with the guiding principles of British Standard 5837:2012.
- 1.2.3 We have been provided with a topographical survey with tree positions plotted. Where surveyed trees were not included on the topographical survey the tree positions were plotted using enhanced GPS technology (1-2m accuracy) and laser distance measurer.
- 1.2.4 This report has been prepared by Mr Adam Winson, Chartered Arboriculturist, MSc, BSc (Hons), MICFor, MArborA, Principle and Director of AWA Tree Consultants Ltd. The tree survey data collection was carried out by Mr Patrick Rowntree, Arboricultural Technician, Cert Arb L3, TechArborA, Arboriculturist at AWA Tree Consultants Ltd.
- 1.2.5 Full qualifications and experience are included within **Appendix 1**. Explanatory details regarding the survey methodology are included within **Appendix 2**. A full explanation of the tree data can be found at **Appendix 3**. Full details of all the trees surveyed are found in **Appendix 4**. For tree locations refer to the Tree Constraints Plan at **Appendix 5** and for detail of the impacts of the new development refer to the Tree Impacts Plan at **Appendix 6**.



## 2. The Site

### 2.1 Location and Description

- 2.1.1 The site is located in the town of Hucknall in the Ashfield district, approximately 7 miles north of Nottingham city centre.
- 2.1.2 The site comprises a disused yard associated with a joinery workshop, which is largely overcome with dense bramble and ivy.
- 2.1.3 The approximate area of the survey is highlighted in the (2007) image below:



## 3. The Trees

### 3.1 Legal

- 3.1.1 We are informed the tree at the site is protected by a Tree Preservation Order (TPO).
- 3.1.2 Due to the large potential penalties for illegally carrying out work to protected trees, before authorising any tree works statutory permission is required from the Local Planning Authority before any works can take place.
- 3.1.3 When appointing a tree surgeon, only properly qualified and experienced companies should be used, who have adequate Public Liability and Employer's Liability Insurance. All tree work should be carried out according to British Standard 3998:2010 *Tree Work - Recommendations*.

### 3.2 Tree Survey Results

- 3.2.1 The tree survey revealed 1 individual, retention category 'B' Ash tree (explanatory details regarding the retention categories are included within Appendix 3).
- 3.2.2 Dense ivy that covers much of the site, and this has established on the stem of the tree, despite having been previously severed. This prevented a full detailed inspection of the stem.
- 3.2.3 A moderate sized wound to the south of the stem was visible. Though there is some evidence of minor decay, the tree has managed the wound well, and appears structurally sound in this area.
- 3.2.4 The tree has been previously crown reduced. All cuts have been made to appropriate growth points, and most have healed well. The reduction is heavier to the east, likely in response to the recent developments on that side, beyond the site boundary. The crown appears to be in good vigour.
- 3.2.5 The tree Root Protection Area (RPA) detailed on the Tree Constraints Plan at Appendix 5, has been used as a layout design tool, to inform on the area around a tree where the protection of the roots and soil structure is treated as a priority.



- 3.2.6 The RPA for each tree has been plotted as a polygon centred on the base of the stem. Due to the presence of roads, structures, topography (and past tree management) the RPA is likely to be a simplified representation of the tree roots actual morphology and disposition. However, detailed modifications to the shape of the RPA would largely be based on conjecture and so have been avoided.
- 3.2.7 Many Ash trees in the wider region are being impacted by *Chalara* or Ash dieback disease. Once a tree is infected, the disease is usually fatal, either directly or indirectly. While the identified Ash tree did not show symptoms of the disease and so may continue to provide landscape and wildlife benefits for some time, the long-term prospects may be more limited as a result of Ash dieback.

## 4. Arboricultural Impact Assessment

### 4.1 Proposed New Development

- 4.1.1 It is proposed to build multiple new residential dwellings with associated landscaping, parking and facilities.
- 4.1.2 The development proposals have been provided by my client and inform this arboricultural impact assessment and the Tree Impacts Plan at Appendix 6.

### 4.2 Direct Impacts

- 4.2.1 From assessing the new development proposals, the tree will not require removal. However, the plans will necessitate a light crown reduction to the tree (as detailed in appendix 4).
- 4.2.2 Due to the previous crown pruning and the nature of the works, the pruning will not significant impact the value or condition of the tree.

### 4.3 Indirect Impacts

- 4.3.1 The tree Root Protection Area (RPA) detailed on the Tree Constraints Plan at Appendix 5, has been used as a layout design tool, to inform on the area around a tree where the protection of the roots and soil structure is treated as a priority.

- 4.3.2 Potentially damaging activities are proposed in the vicinity of the retained tree, with the new development encroaching into the RPA. Construction within the RPA can have negative impacts on tree roots. It should also be possible to employ special foundation design such as mini/micro pile and suspended beam or a cantilevered foundation, in order to overcome or minimise any negative impact on the tree roots.
- 4.3.3 New landscaping is also proposed that encroaches into the of the RPA. The construction of hard surfaces within the RPA can have negative impacts on tree roots. However, the potential negative impacts can often be overcome or minimised by employing a 'no-dig' type construction methods with a porous final surface.
- 4.3.4 The design of the new development has considered the trees crown position in relation to the dwellings. Some shade from trees may be beneficial. In particular, deciduous trees give shade in summer but allow access to sunlight in winter. However, in light of the proposed pruning, the design proposals avoid excessive shading, and give adequate provision for future tree growth.
- 4.3.5 The buildability of the proposed development has been assessed in terms of access, adequate working space and provision for the storage of materials, including topsoil, in relation to the trees.

#### **4.4 Suitable Mitigation**

- 4.4.1 The development of the site provides an excellent opportunity to undertake new tree planting throughout the site as part of a soft landscaping scheme. As such in the longer term, it has the potential to improve the sites tree cover.

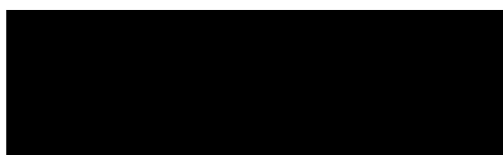
#### **4.5 Protection of the Retained Trees**

- 4.5.1 The retained trees will require protection by fencing in accordance with BS 5837: 2012, during the development phase.
- 4.5.2 An associated Arboricultural Method Statement, detailing protective fencing specifications and construction methods close to the retained tree has been provided.

## 5. Signature

I trust this report provides all the required information.

Signed



.....

**Adam Winson**, *Chartered Arboriculturist, MSc, BSc (Hons), MICFor, ACIEEM.*

**20<sup>th</sup> February 2019**

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Chartered Foresters  
**Registered Consultant**



# Appendices

**Appendix 1: Authors Qualifications and Experience**

**Appendix 2: Survey Methodology and Limitations**

**Appendix 3: Explanation of Tree Descriptions**

**Appendix 4: Tree Data**

**Appendix 5: Tree Constraints Plan**

**Appendix 6: Tree Impacts Plan**

## Appendix 1: Authors Qualifications & Experience

**Mr Adam Winson** *Chartered Arboriculturist, MSc, BSc (Hons), MICFor, MArborA, ACIEEM, QTRA Registered.*

Adam is the company Director and Principle Consultant. He has a mix of the highest level academic qualifications and relevant work experience. He has worked within the tree care profession for over 20 years, and was awarded an MSc in Arboriculture and Urban Forestry, with distinction. Adam is a Chartered Arboriculturist and a Registered Consultant with the Institute of Chartered Foresters, a Professional Member of the Arboricultural Association and has original research published by the UK Forestry Commission. His work ranges from individual expert tree inspections to managing trees on major multimillion pound housing developments and infrastructure projects. His work often involves trees with preservation orders or litigation, and he has appeared as a tree expert, at planning appeal hearings up to the Crown Court.

**Mr James Brown** *BSc (Hons) Arboriculture, MArborA.*

James has a BSc (Hons) in Arboriculture, attaining first class honours, as well as being awarded the Institute of Chartered Forester's Student award. He is a Professional Member of the Arboricultural Association and an Associate of the Institute of Chartered Foresters. James previously worked in Europe's largest tree nursery and has experience of Local Authority tree officer work. His main work consists of tree surveys for development projects and preparing Tree Protection Schemes to BS 5837:2012.

**Mr Dave Farmer** *FdSc (Arb), MArborA, PTI (Lantra).*

Dave has a Foundation Degree in Arboriculture (with Distinction) and is qualified in Professional Tree Inspection. He is a Professional Member of the Arboricultural Association and an Associate of the Institute of Chartered Foresters. Dave has many years of experience within the tree care profession, including lecturing in arboriculture. His work focuses on diagnosing potential tree risk problems, and recommending appropriate treatments and work programmes.

**Dr Felicity Stout** *Ph.D, MA, BA (Hons), Cert Ed (Forestry), TechArborA.*

Felicity has worked in the tree care profession for the last 10 years. She has a Certificate in Higher Education in Forestry, with a focus on Urban Forestry. She has practical arboricultural contractor experience and is a qualified and experienced Social Forestry practitioner. Felicity has a PhD in History, with a particular interest in the history of woodland and tree management and has published in The Arboricultural Journal on this subject.

**Mr Patrick Rowntree.** *Cert Arb L3. TechArborA.*

Patrick is a trained arborist with 5 years of experience in the private and commercial sectors, both in the UK and New Zealand. Formerly a professional rugby player, Patrick was awarded a distinction in the Extended Diploma in Forestry & Arboriculture and is a technician Member of the Arboricultural Association. Patrick now uses his experience at AWA focusing on BS5837:2012 tree surveys for development projects; this involves accurate tree data collection and the preparation of tree reports to BS 5837:2012.

## Appendix 2: Survey Methodology and Limitations of Report

The survey was undertaken in accordance with British Standard 5837:2012 *Trees in relation to design, demolition and construction – Recommendations*. The trees were assessed objectively and without reference to any proposed site layout. The trees were surveyed from the ground using 'Visual Tree Assessment' (VTA) methodology. VTA is appropriate and is endorsed by industry guidance. It is used by arboriculturists to evaluate the structural integrity of a tree, relying on observation of trees biomechanical and physiological features. Measurements are obtained using a diameter tape, clinometer, laser distometer and loggers tape. Where this is not practical measurements are estimated. Tree groups have been identified in instances as defined in BS 5837:2012. Shrubs and insignificant trees may have been omitted from the survey.

This report represents a BS5837 tree survey and should not be accepted as a detailed tree safety inspection report; however, tree related hazards are recorded and commented upon where observed, yet no guarantee can be given as to the absolute safety or otherwise of any individual tree. All recommended tree work must be to BS 3998:2010 - '*Tree Work: Recommendations*'.

The findings and recommendations contained within this report are valid for a period of twelve months from the date of survey. The author 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 these guidelines and terms.



## Appendix 3: Explanation of Tree Descriptions

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

**CROWN HEIGHT** is an indication of the average height at which the crown begins and includes information of the first significant branch and direction of growth.

**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 or else a combined stem diameter is calculated.

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

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

**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.

**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.

**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.

### Retention Categories

**A (marked green on Appendix 5) = retention most desirable.** These trees are of very high quality and value with a good life expectancy.

**B (marked in blue on Appendix 5) = retention desirable.** These trees are of good quality and value with a significant life expectancy.

**C (marked in grey on Appendix 5) = trees which could be retained.** These trees are of low or average quality and value, and are in adequate condition to remain until new planting could be established.

**U (marked in red on Appendix 5) = trees for removal.** These trees are in such a condition that any existing value would be lost within 10 years.

## Appendix 4: Tree Data

Tree Species			Measurements					Crown (m)				Tree Condition							Value		Management	
Tree ID	Common Name	Latin Name	Maturity	Height (m)	Stems	Stem Dia (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
T1	Ash	Fraxinus excelsior	Early-mature	18	1	940	No	4	5.5	5	6	8.5	Dense ivy around base and stem preventing detailed inspection. Ground level changes	Single stemmed, Vertical, Stubs, Old pruning wounds, Epicormic growths, Bark damage, Ivy covered, Moderate cavity, Minor decay	Normal, Old pruning wounds, Minor deadwood, Well developed crown	Historic wound to south of stem from 0.5 - 1.5m with minor decay - has occluded well. Previous crown reduction - eastern crown reduced heavily due to surrounding buildings. Some tertiary limbs resting on roof with potential nuisance issues.	Fair	Fair	>40 yrs	Moderate	B	Sever & remove ivy. Reduce western crown to appropriate growth points by 2.5-3m to create a balanced crown.





**Appendix 5:**  
**Tree Constraints Plan**  
Bolsover Street, Hucknall, Nottingham  
Ref: AWA2501

BRITISH STANDARD 5837:2012  
RETENTION CATEGORIES  
Definition of these categories can be found in Appendix 2 of the report

SCALE 1:500 PAPER: A3

	CATEGORY A: HIGH VALUE RETENTION MOST DESIRABLE
	CATEGORY B: MODERATE VALUE RETENTION DESIRABLE
	CATEGORY C: LOWER VALUE COULD BE RETAINED
	CATEGORY U: FOR REMOVAL
	RPA: ROOT PROTECTION AREA
	TREE STEM







**Appendix 6:**  
**Tree Impacts Plan**

Land at Bolsover Street, Hucknall  
Ref: AWA2501

BRITISH STANDARD 5837:2012

SCALE: 1:500      PAPER: A3

	TREE/HEDGE TO BE RETAINED
	TREE/HEDGE TO BE REMOVED
	RPA: ROOT PROTECTION AREA
	TREE STEM