



ARBORICULTURAL REPORT

& Impact Assessment

to BS5837:2012 at:

***Land at
Woodland Drive,
Barnsley
S70 6QS***

Prepared for:
WhiteAgus Partnership

Date: *May 2020*

Reference: AWA3214



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1. Introduction

1.1 Instructions and Brief

- 1.1.1 We have been instructed by White Agus Partnership 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 June 2020.
- 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 Any additional off-site trees that could impact a new development design have been included in the tree survey parameters.
- 1.2.4 The tree positions were plotted on an Ordnance Survey map base-layer using enhanced GPS technology (1-2m accuracy) and laser distance measurer.
- 1.2.5 This report has been prepared by Mr Adam Winson, Chartered Arboriculturist, MSc, BSc (Hons), MICFor, MArborA, Principle and Director of AWA Tree Consultants Ltd.
- 1.2.6 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 Barnsley, South Yorkshire.
- 2.1.2 It comprises a parcel of grassland and former garages.

3. The Trees

3.1 Legal

- 3.1.1 Due to the large potential penalties for illegally carrying out work to protected trees, before authorising any tree works a check should be made with the Local Planning Authority to see if the trees are covered by a Tree Preservation Order or if they are within a Conservation Area. If either applies, then statutory permission is required before any works can take place.
- 3.1.2 When appointing a tree surgeon, only properly qualified and experienced companies should be used, who have adequate Public Liability and Employer's Liability Insurance.
- 3.1.3 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 14 items of woody vegetation, comprised of 10 individual trees and 4 groups of trees or shrubs or hedges.
- 3.2.2 All the surveyed trees are lower value retention category 'C' (explanatory details regarding the retention categories are included at Appendix 3).
- 3.2.3 The tree cover within the site consists of naturally regenerated trees and shrubs along the boundary areas and occasional planted trees in adjacent land. The central area of the site contains nothing of arboricultural significance.
- 3.2.4 Species diversity at the site is fair, with Ash, Blackthorn and Hawthorn shrubs, Cherry, Elder, Laburnum and Rowan. Most of the trees are semi-mature with only occasional early mature trees.

- 3.2.5 None of the trees are noteworthy, although they do provide some screening from the adjacent properties.
- 3.2.6 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 trees may continue to provide landscape and wildlife benefits for some time, their long-term prospects are likely to be limited as a result of Ash dieback.
- 3.2.7 Some trees were covered in dense Ivy or were inaccessible (as detailed in Appendix 4). In such cases measurements were estimated and the condition values are indicative only.
- 3.2.8 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.
- 3.2.9 Some lower value tree, hedge and shrub groups do not have RPAs detailed on tree plans. The detailed extent and spread of these low value groups, in conjunction with the tree schedule, is sufficient to assess the associated potential constraints.
- 3.2.10 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.

4. Arboricultural Impact Assessment

4.1 Proposed New Development

- 4.1.1 It is proposed to build a new residential development with detached garages and associated access 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, 8 trees /shrub groups will require removal as they are situated in the footprint of the structure or their retention and protection throughout the development is not suitable.
- 4.2.2 The trees that require removal T3, T4, G5, T6, T8, T9, G12 and T13.
- 4.2.3 The trees that require removal are all lower value, retention category 'C'.
- 4.2.4 Due to the low value of the trees to be removed the removals will have only a negligible negative arboricultural impact. Suitable replacement planting will mitigate for the required removals.
- 4.2.5 It is advised the group of dense Blackthorn shrubs G12 is heavily cut back to near ground level, or coppiced, and allowed to regrow as a managed hedge. Any gaps that are created by this work should be filled in with suitable shrubs and trees to create a continuous dense screen.
- 4.2.6 The overhanging crowns of the Hawthorn shrubs G14 will require pruning back so as not to cause an obstruction for pedestrians in this area.

4.3 Indirect Impacts

- 4.3.1 The tree Root Protection Area (RPA) detailed on the Tree Plans at Appendix 5 and 6, 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. As such, no significant negative indirect impacts have been identified.
- 4.3.2 New parking is proposed adjacent to T10 and T11. These semi-mature, low value trees have grown in response to existing hard surfaces and boundary features and are unlikely to be significantly impacted by the works.

- 4.3.3 The design of the new development has considered the trees crown position in relation to the development. Some shade from trees may be beneficial. In particular, deciduous trees give shade in summer but allow access to sunlight in winter. However, the design proposals avoid excessive shading, and give adequate provision for future tree growth.
- 4.3.4 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, suitable new tree planting has the potential to mitigate for the required tree removals and, in the longer term, 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. The protective fencing for this site should be located to protect the RPAs of the retained trees as detailed on the attached Tree Impacts Plan at Appendix 6.
- 4.5.2 The final fencing position should be agreed on by the LPA before the commencement of any site works. The protective fencing will be appropriate to the degree and proximity of likely construction works. In this instance, it is suggested (if acceptable by the LPA) an adequate level of protection for the trees could be provided by 'Heras' type fencing, of welded mesh panels on rubber or concrete feet.
- 4.5.3 The area enclosed by the fencing is referred to as the Construction Exclusion Zone (CEZ); this area should be considered a restricted area. No pedestrians, vehicles, storage of materials, equipment or machinery should be allowed within the CEZ. The site manager must ensure that all personnel are aware of the restrictions that apply to the fenced-off area.
- 4.5.4 If required by the Local Planning Authority, an associated Arboricultural Method Statement with Tree Protection Plan, can be provided. This will detail how the trees will be protected during the development phase, indicating the precise location of protective barriers to be erected to form a CEZ around the retained trees.

5. Signature

I trust this report provides all the required information.

Signed



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

22nd June 2020

**AWA Tree Consultants Limited
Union Forge
27 Mowbray Street
Sheffield
S3 8EN**

www.awatrees.com



Institute of
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, PTI (Lantra)*

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, PTI (Lantra)*

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, PTI (Lantra)*

Patrick is a trained arborist with 5 years of experience in both the private and commercial sectors and is a technician member of the Arboricultural Association. Having travelled the world, both working as an arborist and playing professional rugby, Patrick was awarded a Distinction in the Extended Diploma in Forestry & Arboriculture and is qualified in Professional Tree Inspection. Patrick now uses his work and education experience at AWA, focusing on accurate tree data collection for tree surveys for development projects and assisting the team in the preparation of tree reports and tree plans to BS 5837:2012.

Mr Drew Leeper *Cert Arb L3, TechArborA*

Drew has over 10 years' experience within the arboricultural sector and was awarded Distinction in the Extended Diploma in Forestry & Arboriculture. From working abroad in Canada as a climbing arborist and returning home to running his own tree care firm. Drew has also been fortunate enough to gain valuable experience working at the Royal Botanical Gardens of Kew. He now uses his work and education experience at AWA, focusing on accurate tree data collection for tree surveys for development projects and assisting the team in the preparation of tree reports and tree plans 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 in 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.

	Tree Species			Measurements				Crown (m)				Tree Condition								Value		Management
Tree ID	Common Name	Latin Name	Maturity	Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
T1	Cherry	Prunus avium	Semi-mature	5	1	250	Yes	1.5	2	2	3	3	No visual defects. Limited access around base	Ivy covered	Normal	Sever ivy if retained	Fair	Fair	20 to 40 yrs	Low	C	No works required. Advised to sever and remove ivy.
T2	Laburnum	Laburnum anagyroides	Semi-mature	6	1	250	Yes	2	2.5				Limited access around base	Multiple stemmed. at 1m	Normal	Possibly adjacent	Good	Fair	20 to 40 yrs	Low	C	No works required.
T3	Rowan	Sorbus aucuparia	Semi-mature	5	1	200	Yes	2	1	2	2	1	No visual defects. Limited access around base	Single stemmed. Vertical. Multiple stemmed. at 1m	Small / sparse		Fair	Fair	20 to 40 yrs	Low	C	Remove to facilitate development
T4	Cherry	Prunus avium	Semi-mature	7	1	180	Yes	2.5	2	2	1.5	1.5	No visual defects	Single stemmed. Ivy covered	Small / sparse	Ivy prevented detailed inspection	Fair	Fair	10 to 20 yrs	Low	C	Remove to facilitate development
G5	Hawthorn	Crataegus monogyna	Semi-mature	4	1	100	Yes	0	2	2	2	2	No visual defects. Limited access around base	Multiple stemmed. Slight lean	Normal	Unmanaged boundary shrubs	Good	Good	20 to 40 yrs	Low	C	Remove to facilitate development
T6	Cherry	Prunus avium	Semi-mature	9	4	140, 200, 250, 120	Yes	2	3	4	4.5	2.5	No visual defects. Limited access around base	Multiple stemmed. at base	25% dead / absent. Minor deadwood		Fair	Fair	10 to 20 yrs	Low	C	Remove to facilitate development
G7	Hawthorn	Crataegus monogyna	Semi-mature	2	1	100	Yes	0	2	2	2	2	No visual defects. Limited access around base	Single stemmed. Multiple stemmed	Normal. Old pruning wounds	Managed hedge beyond fence	Good	Good	20 to 40 yrs	Low	C	No action required

	Tree Species			Measurements				Crown (m)				Tree Condition								Value		Management
Tree ID	Common Name	Latin Name	Maturity	Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
T8	Ash	Fraxinus excelsior	Semi-mature	6	6	80	Yes	2	3	2	3	2	No visual defects. Limited access around base. Soil compaction	Multiple stemmed. at base	Normal. Small / sparse	Limited long term value. Growing from base of garage	Fair	Fair	10 to 20 yrs	Low	C	Remove to facilitate development.
T9	Elder	Sambucas nigra	Semi-mature	4	6	80	Yes	2	2	3	2	1	No visual defects. Soil compaction	Multiple stemmed. at base	Normal. Slightly unbalanced	Shrubs	Fair	Fair	10 to 20 yrs	Low	C	Remove to facilitate development.
T10	Blackthorn	Prunus spinosa	Semi-mature	4.5	1	150	Yes		2	2	2	2	No visual defects. Limited access around base	Multiple stemmed. at 1m	Normal. Small / sparse	Adjacent tree growing through fence	Fair	Fair	10 to 20 yrs	Low	C	No action required
T11	Ash	Fraxinus excelsior	Semi-mature	7	1	200	Yes	2	3	3	3	3	No visual defects. Limited access around base	Twin stemmed. at 1m	Normal	Adjacent tree	Fair	Fair	10 to 20 yrs	Low	C	No action required
G12	Blackthorn	Prunus spinosa	Semi-mature	4.5	1	80	Yes	0.5	2	2	2	2	No visual defects	Single stemmed. Multiple stemmed	Normal	Dense regeneration. Occasional Elder & Laburnum.	Good	Good	20 to 40 yrs	Low	C	Cut back to coppice and allow to regrow as managed hedge - replant any gaps with new trees / shrubs
T13	Ash	Fraxinus excelsior	Semi-mature	8	1	200	Yes	2.5	2.5	2.5	2.5	2.5	No visual defects. Limited access around base	Single stemmed. Vertical	Normal	In G12 dense shrubs	Good	Good	10 to 20 yrs	Low	C	Remove to facilitate development.
G14	Hawthorn	Crataegus monogyna	Semi-mature	5	1	100	Yes	0.5	2.5	2.5	2.5	2.5	No visual defects. Limited access around base	Single stemmed. Vertical	Normal	Unmanaged hedge, occasional ash.	Good	Good	20 to 40 yrs	Low	C	Crown lift / cut back to near boundary to improve access



Appendix 5:
Tree Constraints Plan
Land at Woodland Drive, Bamsley
Ref: AWA3214

BRITISH STANDARD BS37:2012
RETENTION CATEGORIES
Definitions of these categories can be
found in Appendix 2 of the report.

SCALE: 1:200 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

Ash sapling

Privet
shrub

Cherry 4m

Poplar 14m

T1

T2

T3

T4

G5

T6

G7

Willow 5m

Birch 5m

Red maple 4m

Leylandi 4m

G12

T13

G14

G12

T9

T10

T11

T8

Cypress
hedge 2m

Lilac 3m



Appendix 6:
Tree Impacts Plan

Land at Woodland Drive, Barnsley
Ref: AWA3214

BRITISH STANDARD 5837:2012
SCALE: 1:200 PAPER: A3

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

