



ARBORICULTURAL REPORT

& Impact Assessment

to **BS5837:2012** at:

***43 Wigfield Drive,
Worsbrough,
Barnsley
S70 5JE***

Prepared for:
S75 Design Ltd
*61 Ben Bank Road,
Silkstone Common,
Barnsley,
South Yorkshire
S75 4PG*

Date: May 2020

Reference: AWA3166

Contents

1. Introduction	3
1.1 Instructions and Brief.....	3
1.2 Survey Details.....	3
2. The Site	4
2.1 Location and Description	4
3. The Trees	5
3.1 Legal	5
3.2 Tree Survey Results	5
4. Arboricultural Impact Assessment.....	7
4.1 Proposed New Development.....	7
4.2 Indirect Impacts.....	7
4.3 Suitable Mitigation	8
4.4 Protection of the Retained Trees	8
5. Signature	9
Appendix 1: Authors Qualifications & Experience	11
Appendix 2: Survey Methodology and Limitations of Report	12
Appendix 3: Explanation of Tree Descriptions.....	13
Appendix 4: Tree Data	14
Appendix 5: Tree Constraints Plan	15
Appendix 6: Tree Impacts Plan.....	16

1. Introduction

1.1 Instructions and Brief

- 1.1.1 We are instructed by Chris Race of S75 Design Ltd 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 April 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 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.
- 1.2.5 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 The tree survey data collection was carried out by Mr Patrick Rowntree, PTI (Lantra), Cert Arb L3, TechArborA, Arboriculturist at AWA Tree Consultants Ltd.
- 1.2.7 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 south of Barnsley in the Worsbrough area approximately two miles from the town centre.
- 2.1.2 The site comprises a residential property and associated gardens, outbuilding and driveway.
- 2.1.3 The approximate area of the survey is highlighted in the (2019) image below:



3. The Trees

3.1 Legal

- 3.1.1 An online check made with Barnsley Metropolitan Borough Council on 03/05/2020 indicates that no trees within the surveyed area are protected by virtue of a Tree Preservation Order, nor are they situated within a Conservation Area. However, due to the large potential penalties for illegally carrying out work to protected trees, before authorising any tree works an additional check should be made with the Local Planning Authority to see if either applies. If so, 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. 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 12 items of woody vegetation, comprised of 9 individual trees and 3 groups of trees or hedges.
- 3.2.2 Of the surveyed trees: 1 tree is retention category 'U', 1 tree is retention category 'B', and the remaining 10 trees and groups are retention category 'C' (explanatory details regarding the retention categories are included within Appendix 3).
- 3.2.3 The significant tree cover within the site consists of individual amenity plantings situated along the site boundaries and in adjacent properties. All of the trees within the site are semi-mature.
- 3.2.4 The central areas of the site contain little of arboricultural significance, generally consisting of the residential dwelling and turfed areas.
- 3.2.5 The site's most significant tree is the large semi-mature Oak along the northern boundary, T2. This tree is much better established than others within the site, and provides good amenity value. Only minor defects were noted and the tree has good long-term prospects.

- 3.2.6 Situated to the north east of the site is Cherry T5. This standing dead tree has been suppressed by the larger adjacent tree and surrounding undergrowth, and should be removed regardless of future development proposals.
- 3.2.7 To the east of the surveyed area are a number of low-value, semi-mature trees situated in the adjacent properties (T7 to T12). Individually, these trees provide little amenity value, and some have limited long-term prospects (T10 and T11).
- 3.2.8 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.
- 3.2.9 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.
- 3.2.10 Some lower value tree, hedge and shrub groups do not have RPAs detailed on tree plans. The detailed extent and spread of the low value groups, in conjunction with the tree schedule, is sufficient to assess the associated potential constraints.
- 3.2.11 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 an extension to the existing shed located to the east of the site. 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 Indirect Impacts

- 4.2.1 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. As such, no significant negative indirect impacts have been identified.
- 4.2.2 Potentially damaging activities are proposed in the vicinity of retained trees. The new development encroaches close to and into the edge of the RPA of T10, T11 and T12. Construction within the RPA, can have negative impacts on tree roots. However, the encroachment is minor, and the detailed RPA for these trees is likely to be a slightly exaggerated representation of the trees actual rooting area. As such, it is unlikely that significant roots will be within these areas and the retained tree should remain largely unaffected by the works, provided care is taken during construction.
- 4.2.3 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.
- 4.2.4 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.

4.3 Suitable Mitigation

- 4.3.1 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.

4.4 Protection of the Retained Trees

- 4.4.1 The retained trees will require protection by fencing in accordance with BS 5837: 2012, during the development phase.
- 4.4.2 If required by the Local Planning Authority, an associated Arboricultural Method Statement, detailing protective fencing specifications and construction methods close to the retained trees can be provided.

5. Signature

I trust this report provides all the required information.

Signed

.....

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

3rd May 2020

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

www.awatrees.com

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, MA ArborA, 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, MA ArborA, 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), MA ArborA, 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.

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 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.

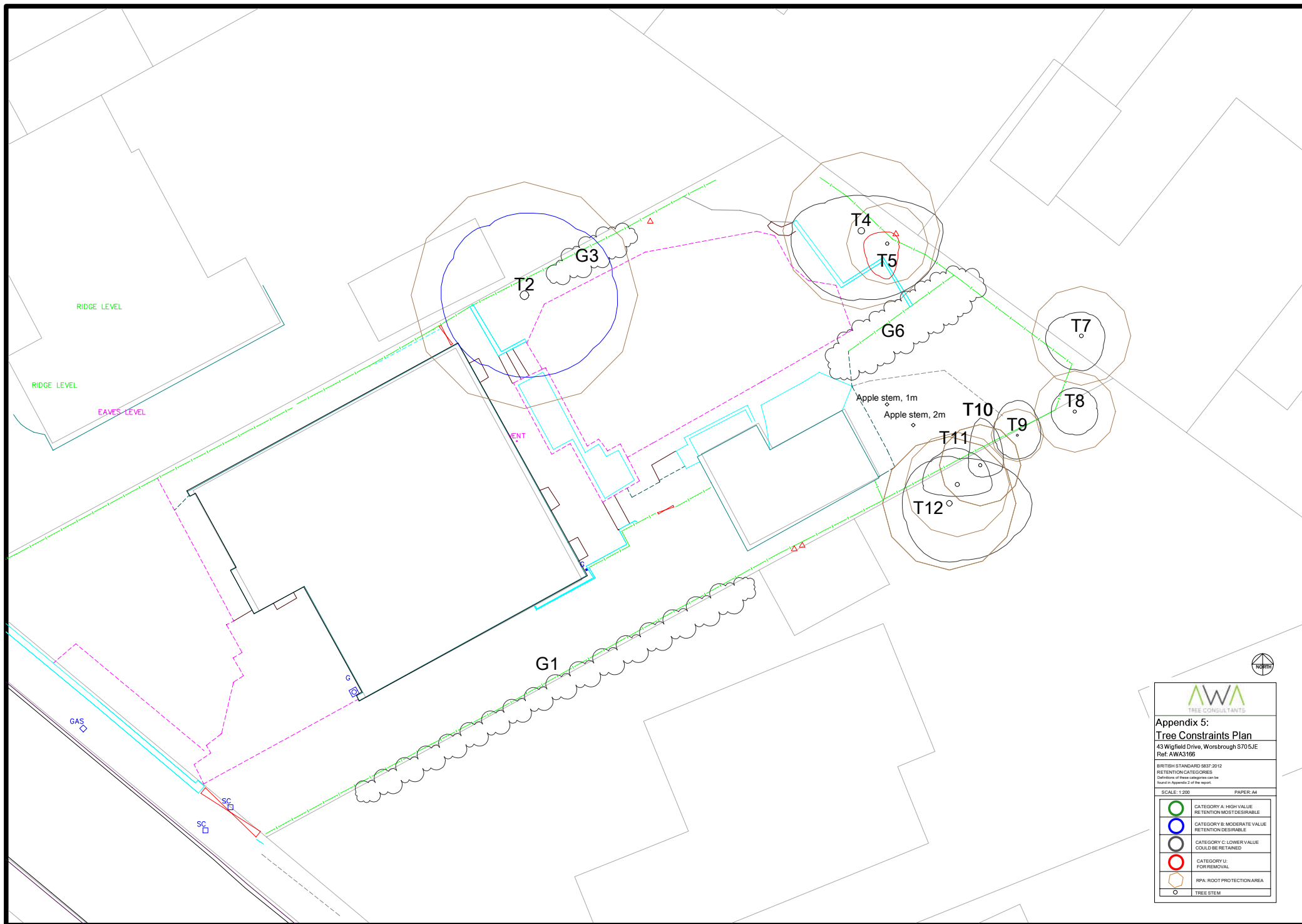
U (marked in red on Appendix 5) = trees for removal. These trees are in such a condition that any existing value would be lost within 10 years.

Appendix 4: Tree Data

	Tree Species			Measurements				Crown (m)				Tree Condition								Value		Management
Tree ID	Common Name	Latin Name	Maturity	Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
G1	Leyland Cypress	X Cupressocyparis leylandii	Semi-mature	3.5	10+	90 avg	Yes	1	See plan				No visual defects, Limited access around base	Single & Multiple stemmed, Vertical, Stubs, Old pruning wounds	Old pruning wounds	Partially managed boundary hedgerow situated in adjacent property.	Fair	Good	>40 yrs	Low	C	No works required.
T2	Oak	Quercus robur	Semi-mature	11	1	390	No	3	3.5	4	3.5	3.5	No visual defects	Twin stemmed at 1.5m, Vertical, Stubs, Old pruning wounds, Epicormic growths, Tight union	Normal, Minor deadwood	Recently crown raised, leaving multiple stubs.	Fair	Good	>40 yrs	Moderate	B	No works required.
G3	Holly	Ilex aquifolium	Semi-mature	4	3	90 70 90	No	0.5	See plan				No visual defects	Multiple stemmed, Vertical, Stubs, Epicormic growths	Normal	Two trees forming single canopy.	Fair	Fair	>40 yrs	Low	C	No works required.
T4	Cherry	Prunus avium	Semi-mature	4.5	1	270	No	2.5	1.5	3.5	3	3	No visual defects	Multiple stemmed at 1.5m, Slight lean, Stubs, Old pruning wounds, Epicormic growths, Bark damage, Tight union, Partially included bark	Minor deadwood	Southern co-dominant stem girdled by wire at 2m. High proportion of minor deadwood.	Fair	Fair	>40 yrs	Moderate	C	No works required.

Tree ID	Tree Species		Maturity	Measurements				Crown (m)					Tree Condition							Value		Management
	Common Name	Latin Name		Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
T5	Cherry	<i>Prunus sp.</i>	Dead	3	1	140	No	2	0.5	0.5	1.5	1	No visual defects	Single stemmed, Significant lean, Stubs, Old pruning wounds, Bark damage, Minor cavities, Moderate decay, Decay fungi	All dead / absent	Standing dead tree.	Dead	Dead	<10 yrs	Low	U	Remove regardless of future development.
G6	Leyland Cypress	^X <i>Cupressocyparis leylandii</i>	Semi-mature	6.5	10+	110 avg	No	1	See plan				No visual defects	Single stemmed, Vertical, Stubs, Old pruning wounds, Bark damage	Old pruning wounds, Minor deadwood	Linear group of trees forming unmanaged hedgerow. Historically managed at 2m, now overgrown. Northern aspect pruned back - no live growth to 2m.	Fair	Fair	>40 yrs	Low	C	No works required.
T7	Holly	<i>Ilex aquifolium</i>	Semi-mature	5	1	170	Yes	2	1	1	1.5	1.5	No visual defects, Limited access around base	Single stemmed, Vertical, Stubs, Old pruning wounds, Tight union, Partially included bark	Normal, Minor deadwood	Situated in adjacent land. 2m boundary fence preventing detailed inspection and limiting access to base. Adjacent land 0.5m above ground level within site - limiting root spread.	Fair	Fair	>40 yrs	Low	C	No works required.

Tree ID	Tree Species		Maturity	Measurements				Crown (m)					Tree Condition							Value		Management
	Common Name	Latin Name		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	Golden Cypress	<i>Cupressus macrocapa</i> 'Golden Crest'	Semi-mature	7	1	140	No	1.5	1	1	1	1	No visual defects, Limited access around base	Single stemmed, Vertical, Stubs	Normal	Situated on adjacent land. Golden cypress.	Fair	Fair	>40 yrs	Low	C	No works required.
T9	Lawson Cypress/Chamaecyparis	<i>Chamaecyparis lawsoniana</i>	Semi-mature	4.5	1	90	Yes	1	1.5	1	1	1	No visual defects, Limited access around base	Single stemmed, Vertical	Normal	Situated in adjacent land. 2m boundary fence preventing detailed inspection and limiting access to base.	Fair	Fair	>40 yrs	Low	C	No works required.
T10	Sorbus	<i>Sorbus aucuparia</i>	Semi-mature	4	1	140	No	2	2	1	0.5	0.5	No visual defects, Limited access around base	Multiple stemmed at 1.5m, Slight lean, Stubs, Old pruning wounds, Epicormic growths, Tight union	Low vigour, Unbalanced, Minor deadwood	Situated in adjacent land. Suppressed by adjacent birch.	Poor	Fair	20 to 40 yrs	Low	C	No works required.
T11	Holly	<i>Ilex aquifolium</i>	Semi-mature	4.5	1	180	No	2	1.5	1.5	0.5	1.5	No visual defects, Limited access around base	Vertical, Stubs, Epicormic growths, Multiple stemmed at 1.5m	Slightly unbalanced, Minor deadwood	Situated in adjacent land. Suppressed by adjacent Birch.	Fair	Fair	20 to 40 yrs	Low	C	No works required.
T12	Birch	<i>Betula pendula</i>	Semi-mature	8.5	1	230	No	3	2	3.5	2.5	2	No visual defects, Limited access around base	Single stemmed, Slight lean, Stubs, Epicormic growths, Tight union, Minor cavities, Minor decay	Normal, Minor deadwood	Situated in adjacent land.	Fair	Fair	>40 yrs	Moderate	C	No works required.



AWA
TREE CONSULTANTS

**Appendix 5:
Tree Constraints Plan**
43 Wigfield Drive, Worsbrough S705JE
Ref: AWA3166

BRITISH STANDARD BS5837:2012
RETENTION CATEGORIES
Definitions of these categories can be
found in Appendix 2 of this report.

SCALE: 1:200 PAPER: A4

	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

