TREE CONSULTANTS

ARBORICULTURAL REPORT

& Impact Assessment

To **BS5837:2012** at:

4 Belridge Close
Barnsley
South Yorkshire
S75 1HZ

Prepared for:
White Agus Partnership
8 Morston Business Park
Whaley Road
Barugh Green
Barnsley
S75 1HQ

Date: *February 2017*

Reference: *AWA1784*

Institute of Chartered Foresters
Registered Consultant

Office: 0114 272 1124 Mobile: 0776 631 0880 Email: info@awatrees.com Website: awatrees.com
Union Forge, 27 Mowbray Street, Sheffield, S3 8EN. AWA Tree Consultants Limited. Company No. 8520123. Registered in England & Wales.

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 4
3.1 Legal 4
3.2 Tree Survey Results 5
4. Arboricultural Impact Assessment 6
4.1 Proposed New Development 6
4.2 Direct Impacts 6
4.3 Indirect Impacts 6
4.4 Protection of the Retained Trees 7
5. Signature 8
Appendix 1: Authors Qualifications & Experience 10
Appendix 2: Survey Methodology and Limitations of Report 11
Appendix 3: Explanation of Tree Descriptions 12
Appendix 4: Tree Data 13
Appendix 5: Tree Constraints Plan 14
Appendix 6: Tree Impacts Plan 15

1. Introduction

1.1 Instructions and Brief

1.1.1 We are instructed by Thomas Agus, of White Agus Partnership, Barnsley, 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 February 2017.

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 author's 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 in the north west of the town of Barnsley.

2.1.2 The site is a residential property with a large garden area. Immediately to the north of the property is a small woodland, known as Day House Wood.

3. The Trees

3.1 Legal

3.1.1 It is understood trees at and adjacent to the property are protected by virtue of a Tree Preservation Order. Due to the large potential penalties for illegally carrying out work to protected trees, before authorising any tree works, written statutory permission is required from the Local Planning Authority 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 10 individual trees. Of which, 9 of the surveyed trees are retention category 'B' and the remaining 1 tree is retention category 'C' (explanatory details regarding the retention categories are included within Appendix 3).

3.2.2 The significant tree cover is situated just beyond the northern boundary of the property, within the small woodland of Day House Wood. This woodland group is of high arboricultural and conservation value. It generally consists of Oak and Sycamore, spaced at around 4 x 4m, with Hawthorn and Elder shrub cover. While the individual trees within the wood did not appear to contain any particularly mature or large specimens, the woodland group as a whole is greater than the sum of its parts.

3.2.3 Less significant trees and shrubs, in relation to the proposed development, have been identified on the attached Tree Constraints Plan at appendix 5, with details of the species, height and root protection areas. These trees were assessed as being insignificant or remote from the new development area and unlikely to be impacted.

3.2.4 The most significant trees, in relation to the proposed development, are T1, T2 and T3, which are situated between 0.8m and 2.5m from the boundary fence of the property. Limited access prevented a full detailed inspection; however, the trees appeared in good health with no major visible defects. The trees T1 and T2 have crowns that overhanging into the property, by around 4.5m; however, historic crown lifting has resulted in a relatively high canopy that overhangs into the site, with only occasional new growth on the lower stem that extends out from near the old pruning wounds. It is understood that an application has been made with the Local Authority to remove this smaller overhanging growth, which will result in the overhanging crown being clear to around 5m in height.

3.2.5 The front of the property has two large Sycamore trees, T9 and T10, situated on a raised planting bed. Collectively these trees form a prominent feature on the street and have very good visual amenity.

3.2.6 The tree Root Protection Area (RPA) detailed on the Tree Constraints Plan at Appendix 5, is 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 we were unable to put a tape measure around the adjacent tree stems we used a laser measurer to measure the horizontal distance of the stem, to inform the Root Protection Area.

4. Arboricultural Impact Assessment

4.1 Proposed New Development

4.1.1 It is proposed to build a new single story extension to the north of the existing property. 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, no trees will require removal to facilitate the new development.

4.2.2 Pruning work will be required to implement the new development design. The trees T1, T2 and T3 will require the smaller overhanging branches (of less than 5cm diameter) to be cut back, to crown lift the trees up to around 5m from ground level. It is understood that an application has been made with the Local Authority to remove this smaller overhanging growth. The trees will readily tolerate this work and it will not have a negative impact on the visual amenity provided by the trees.

4.3 Indirect Impacts

4.3.1 The tree Root Protection Area (RPA) detailed on the Tree Constraints Plan at Appendix 5, is 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 The proposed new extension is situated within the southern section of the RPA of trees T1 and T2, and is close to the edge of the RPA of T3. As such, the footings for the proposed extension could be potentially damaging to the tree roots. However, the encroachment into the trees RPA should not significantly adversely impact on the health or future condition of the trees, provided care is taken during the construction to avoid root damage, including the use of pile and beam type footings. If the foundations for the base of the extension are built upon mini-pile and beam type foundations this will minimise any root damage to the retained trees.

4.3.3 The rooting activity at the point where the piles are proposed should be first investigated by hand excavation. Consultations should also be undertaken with a structural engineer to ensure that this method of construction is viable and to assess the minimum diameter piles that would suffice for the structure.

4.3.4 While the new extension will be situated under the crown of the trees T1 and T2, the direct shade cast by the trees will not be excessive and the extension will be in keeping with the existing dwellings character, adjacent to the woodland group. The single-story design of the new extension will give adequate provision for future tree growth.

4.3.5 The buildability of the proposed 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 Protection of the Retained Trees

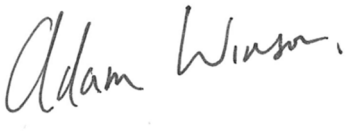
4.4.1 The retained trees will require protection by fencing in accordance with BS 5837: 2012, during the development phase.

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.*

14th February 2017

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: Arboricultural Impacts Plan

Appendix 1: Authors Qualifications & Experience

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

Adam is the company Director and Principle Consultant. He has a mix of the highest level academic qualifications and relevant work experience. Having worked within the tree care profession for over 20 years, and being awarded an MSc in Arboriculture and Urban Forestry, with distinction and the ICF top student award. Adam is a Chartered Arboriculturist and a Registered Consultant with the Institute of Chartered Foresters, 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, from planning appeal hearings up to Crown Court.

Mr Guy Baxter *FdSc (Arb). ND Arb. TechArborA*

Guy joined AWA Tree Consultants at the start of 2015, after seven years work experience within the tree care profession. He has a Foundation Degree in Arboriculture and is in the final stages of a BSc (Hons) Degree in Arboriculture and Urban Forestry. He is a Technician Member of the Arboricultural Association and an Associate of the Institute of Chartered Foresters, working towards becoming a Chartered Arboriculturist. His work focuses on tree risk assessments and undertaking BS5837:2012 tree surveys for development projects; this involves tree inspections, the preparation of Tree Reports, Arboricultural Impact Assessments and Tree Protection Schemes to BS 5837:2012.

Mr James Brown *BSc (Hons) Arboriculture. TechArborA*

James recently joined AWA after seven years work experience, including working in Europe's largest tree nursery and Local Authority tree officer work, while a Horticultural Apprentice for Tameside Metropolitan Borough Council. James has a BSc (Hons) in Arboriculture, attaining first class honours, as well as being awarded the Institute of Chartered Forester's Student award. His main work consists of tree surveys for development projects, involving tree inspections, the preparation of Tree Reports, Arboricultural Impact Assessments and Tree Protection Schemes 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 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.

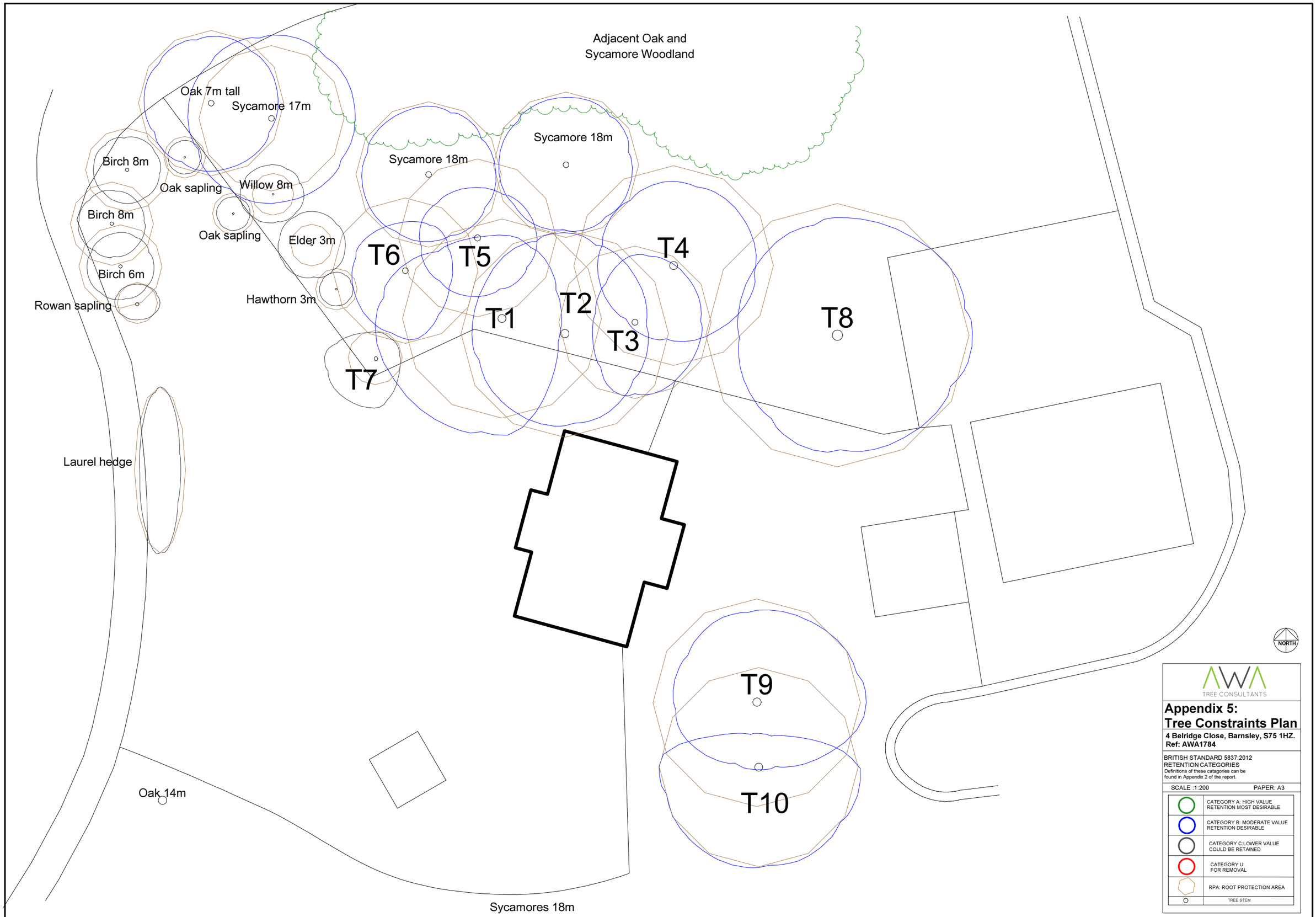
U (marked in red on Appendix 5) = trees for removal. These trees are in such a condition that any existing value would be lost within 10 years.

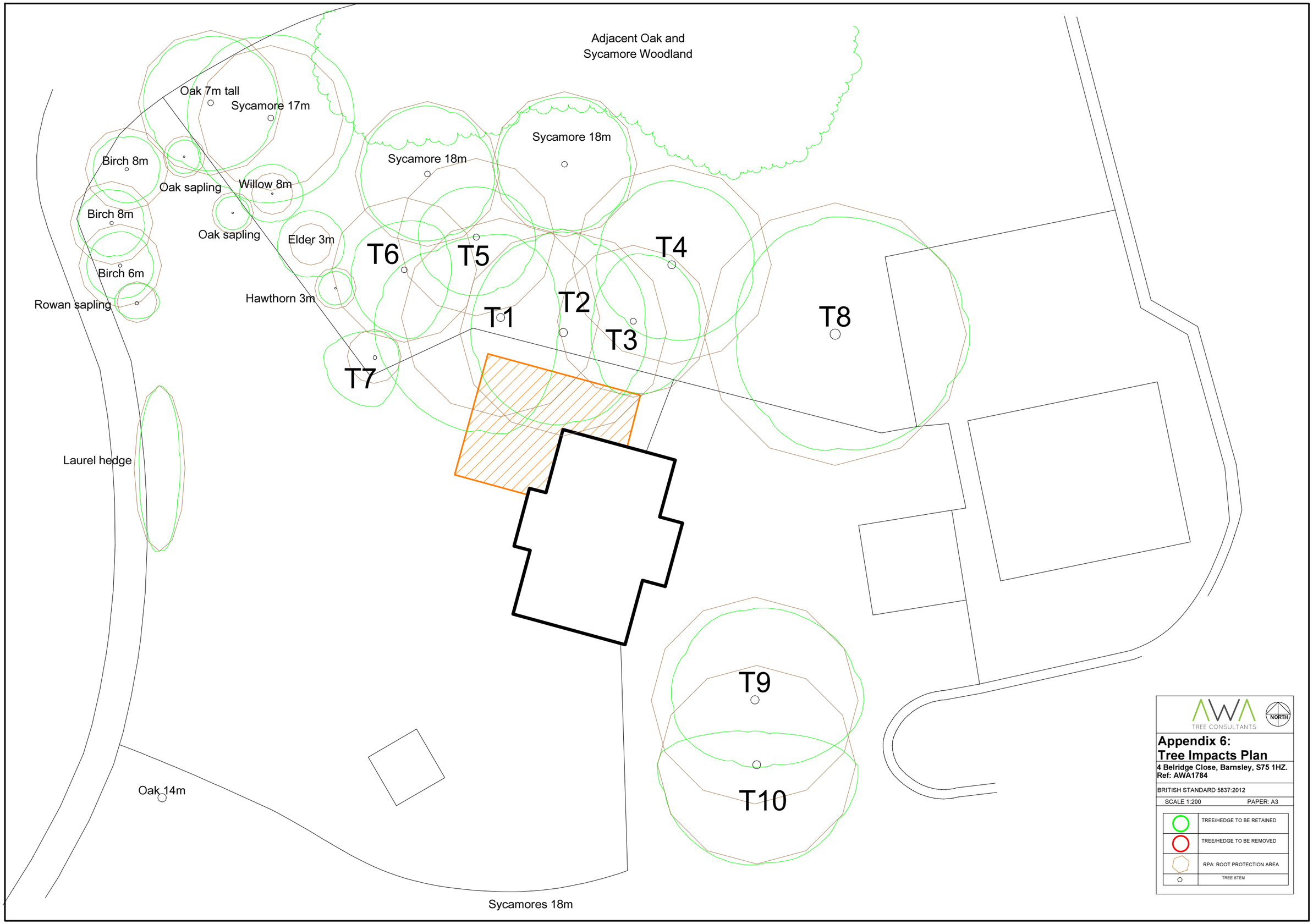
Appendix 4: Tree Data

	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*	*Height of 1st branch*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Physiology*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T1	Oak	*Quercus robur*	Early-mature	18	1	480	Yes	4	4n	5	3.5	7	7.5	No visual defects - limited access around base	Single stemmed; Vertical; Twin stemmed at 3m; Old pruning wounds	Recent growth from old pruning wounds overhanging into site up to 5m, before any significant branches.	Good	Good	>40 yrs	Moderate	**B**	Crown lift southern crown to 5m (removing only small branches <5cm diameter and sucker growth)
T2	Oak	*Quercus robur*	Early-mature	18	1	500	Yes	8	5n	6	5	5.5	5.5	No visual defects - limited access around base	Single stemmed; Vertical; Old pruning wounds	Recent growth from old pruning wounds overhanging into site up to 5m, before any significant branches.	Good	Good	>40 yrs	Moderate	**B**	Crown lift southern crown to 5m (removing only small branches <5cm diameter and sucker growth)
T3	Oak	*Quercus robur*	Early-mature	16	4	190, 100, 100, 280	Yes	4	5e	4	4	4.5	2.5	No visual defects - limited access around base	Multiple stemmed at base	No major visible defects - high crown only slightly overhanging site	Good	Fair	>40 yrs	Moderate	**B**	Crown lift southern crown to 5m (removing only small branches <5cm diameter and sucker growth)
T4	Oak	*Quercus robur*	Early-mature	18	3	300, 280, 250	Yes	5	4e	5	5	4.5	4.5	No visual defects - limited access around base	Multiple stemmed at base; Bark damage; Minor cavities; Minor decay	No major visible defects	Good	Fair	>40 yrs	Moderate	**B**	No works required
T5	Oak	*Quercus robur*	Early-mature	17	1	380	Yes	4	3s	3	3.5	3.5	3.5	No visual defects - limited access around base	Single stemmed; Vertical	Small / sparse; Minor deadwood	Fair	Fair	>40 yrs	Moderate	**B**	No works required

AWA TREE CONSULTANTS

	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*	*Height of 1st branch*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Physiology*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T6	Oak	*Quercus robur*	Early-mature	17	1	350	Yes	5	5w	3	2	4	4	No visual defects - limited access around base	Single stemmed; Vertical	Slightly unbalanced crown	Good	Good	>40 yrs	Moderate	**B**	No works required
T7	Willow	*Salix caprea*	Semi-mature	7	1	130	Yes	4	4w	1.5	1.5	3	3	No visual defects - limited access around base	Vertical; Old pruning wounds; Stubs. Minor decay	Small / sparse	Fair	Fair	10 to 20 yrs	Low	**C**	No works required
T8	Maple	*Acer pseudoplatanus*	Mature	17	3	300, 500, 250	Yes	6	5s	7	8	7	6	No visual defects - limited access around base	Multiple stemmed at base	Normal; Overhanging slightly into the site.	Good	Good	>40 yrs	Moderate	**B**	No works required
T9	Maple	*Acer pseudoplatanus*	Mature	16	1	500	No	5	4e	5.5	6.5	4	5	No visual defects. Situated on raised mound	Single-stemmed vertical	No major visible defects	Good	Good	>40 yrs	High	**B**	No works required
T10	Maple	*Acer pseudoplatanus*	Mature	15	1	480	No	3	3e	2	6	6	6	No visual defects. Situated on raised mound	Single stemmed; Minor cavities	Slightly unbalanced	Good	Fair	>40 yrs	Moderate	**B**	No works required


Adjacent Oak and
Sycamore Woodland
Oak 7m tall
Sycamore 17m
Birch 8m
Oak sapling
Willow 8m
Birch 8m
Oak sapling
Elder 3m
Birch 6m
Rowan sapling
Hawthorn 3m
Sycamore 18m
Sycamore 18m
T6
T5
T4
T1
T2
T3
T8
T7
Laurel hedge
T9
T10
Oak 14m
Sycamores 18m
NORTH
AWA
TREE CONSULTANTS
Appendix 5:
Tree Constraints Plan
4 Belridge Close, Barnsley, S75 1HZ.
Ref: AWA1784
BRITISH STANDARD 5837:2012
RETENTION CATEGORIES
Definitions of these catagories 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


Adjacent Oak and
Sycamore Woodland
Oak 7m tall
Sycamore 17m
Birch 8m
Oak sapling
Willow 8m
Birch 8m
Oak sapling
Elder 3m
Birch 6m
Rowan sapling
Hawthorn 3m
Sycamore 18m
Sycamore 18m
T6
T5
T4
T1
T2
T3
T8
T7
Laurel hedge
T9
T10
Oak 14m
Sycamores 18m
AWA
TREE CONSULTANTS
NORTH
Appendix 6:
Tree Impacts Plan
4 Belridge Close, Barnsley, S75 1HZ.
Ref: AWA1784
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