



# **ARBORICULTURAL REPORT**

## **& Impact Assessment**

### **to BS 5837:2012 at:**

***Leapings House,  
Leapings Lane,  
Thurlstone,  
Sheffield  
S36 9QP***

Prepared for:  
***Jefferson Sheard Architects***

Date: *November 2023*

Reference: *AWA5707*



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# 1. Introduction

## 1.1 Instructions and Brief

- 1.1.1 We have been instructed by Jefferson Sheard 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

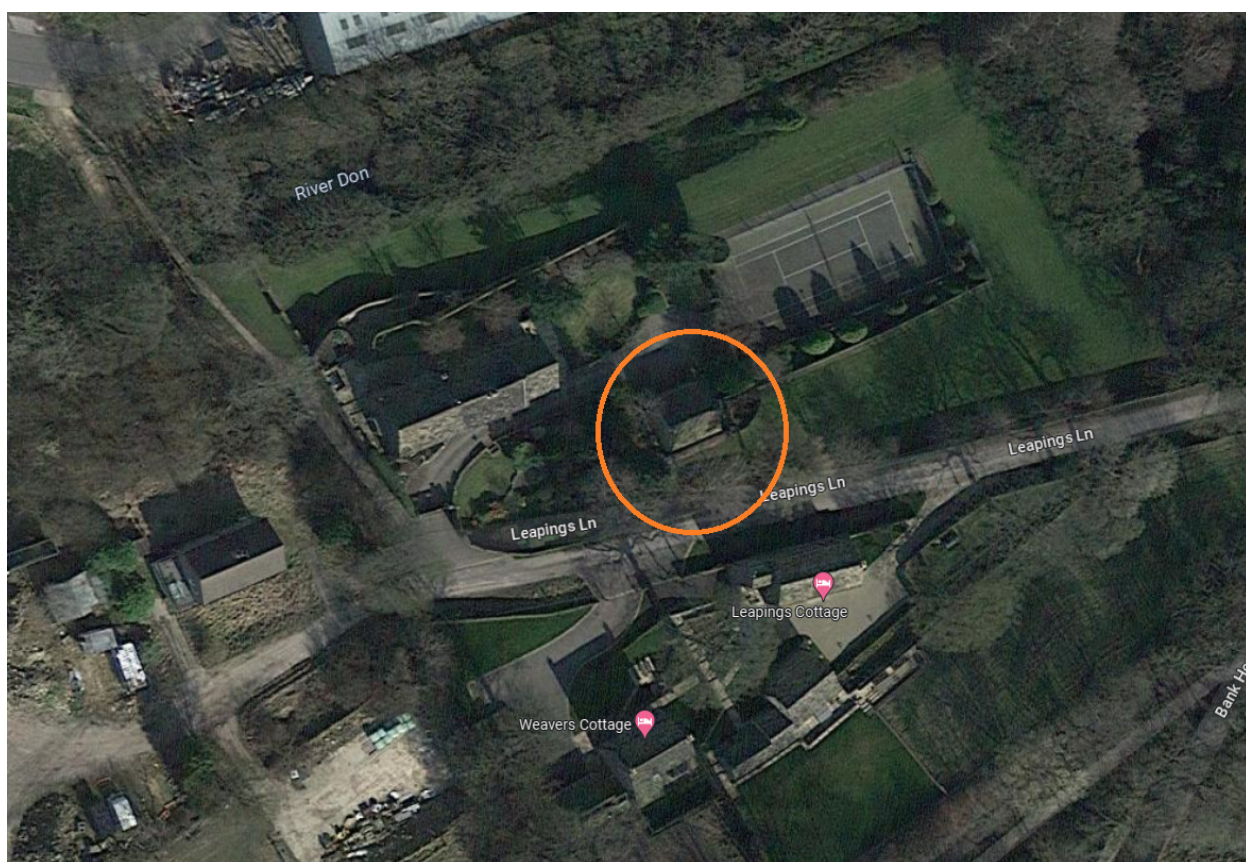
- 1.2.1 The survey took place during October 2023
- 1.2.2 The trees were surveyed visually from the ground using “Visual Tree Assessment” techniques and in accordance with the guiding principles of British Standard 5837:2012.
- 1.2.3 Any additional off-site trees that could impact a new development design 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 Adam Winson, Chartered Arboriculturist, MSc, BSc (Hons), MICFor, MArborA, Principal and Director of AWA Tree Consultants Ltd.
- 1.2.6 The tree survey data collection was carried out by Sophie Beckerman, BA (Hons), Level 4 Diploma Arboriculture, Arboriculturalist at AWA Tree Consultants
- 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 please 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 on Leapings Lane in Thurlstone, Sheffield, South Yorkshire and comprises a single storey garage with a tarmacked driveway to the north. To the northeast is a tennis court and the rest of the surrounding area is landscaping with shrubs and trees.

2.1.2 The approximate area of the survey is highlighted in the (2023 Google Earth) image below:



## 3. The Trees

### 3.1 Legal

- 3.1.1 The following advice is for guidance purposes only. Some trees are protected by legislation, and it is essential that the legal status of trees is established prior to carrying out works to them. Unauthorised work to protected trees could lead to prosecution, resulting in enforcement action such as fines or a criminal record. Tree Preservation Orders, Conservation Areas, Planning Conditions, Felling Licences or Restrictive Covenants legally protect many trees in the UK.
- 3.1.2 An online search was undertaken with Barnsley Metropolitan Borough Council on the 29<sup>th</sup> of November 2023 to check whether any trees at the site are protected by a Tree Preservation Order or are located within a Conservation Area. As of this date no trees at the site are protected by a Tree Preservation Order or are within a Conservation Area.
- 3.1.3 Due to the large potential penalties for illegally carrying out work to protected trees, before authorising any tree works a further check should be made with the Local Planning Authority to confirm if any trees are covered by a Tree Preservation Order or are within a Conservation Area. If either applies, then statutory permission is required before any works can take place (unless such work is approved as part of full planning permission).
- 3.1.4 The Multi-Agency Geographical Information for the Countryside (MAGIC) website was used to search for areas of ancient woodlands listed on the Ancient Woodland (DEFRA 2021), and a check for catalogued Ancient and Veteran trees using the woodland trust ancient tree inventory (ATI) (Woodland Trust 2021).
- 3.1.5 It was confirmed that there are no designated ancient woodlands or veteran or ancient trees within the survey area.
- 3.1.6 Trees provide a wide range of habitats for many species, some of which are legally protected such as bats, nesting birds, badgers and dormice. It is essential that appropriate care is taken to ensure that this legislation is not contravened.
- 3.1.7 When appointing a tree surgeon, only properly qualified and experienced companies should be used, who have adequate Public Liability and Employer's Liability Insurance.
- 3.1.8 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 within the survey area.
- 3.2.2 Of the surveyed trees: 3 trees are retention category 'B', and 7 trees are retention category 'C'. (explanatory details regarding the retention categories are included at Appendix 3).
- 3.2.3 Full details of the surveyed trees are provided in the attached tree data schedule at Appendix 4. General comments are provided below:
- 3.2.4 The tree cover within the site consists of ornamental plantings in the landscaped area around the existing building. These include some larger specimens to the rear of the building next to the roadside.
- 3.2.5 Species diversity at the site is relatively good and includes Birch, Norway Maple, Beech, Larch, Cypress, Monkey Puzzle and a White Fir.
- 3.2.6 Most of the trees are semi-mature with only occasional early mature to mature trees and 1 young tree.
- 3.2.7 The site's most significant trees are T5, a Larch; T7 a Beech; and T9 a White Fir. They are prominent throughout the site and from the lane behind. These all have good long-term prospects and provide a high level of amenity value.
- 3.2.8 The remaining trees, while providing some interest and screening from the building, are otherwise of low amenity value and should not pose any significant constraint on the development potential of the site.
- 3.2.9 Some trees were inaccessible (as detailed in Appendix 4). In such cases measurements were estimated and the condition values are indicative only.
- 3.2.10 The tree Root Protection Area (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.
- 3.2.11 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.

### 3.3 Photographs



Photo 1: T1 from west



Photo 2: T5, T6 and T7 from northeast



Photo 3: T7 from west



Photo 4: T5 and T7 from east - western crowns extending over roof



Photo 4: T10 from south



Photo 4: T9 from east

## 4. Arboricultural Impact Assessment

### 4.1 Proposed New Development

4.1.1 It is proposed to re-build the existing detached garage with a larger one with accommodation above. 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, 4 trees will require removal to facilitate the development as they are situated in the footprint of the development or their retention and protection throughout the development is not suitable.

4.2.2 The trees that require removal to facilitate the development are T2, T3, T4 and T10.

4.2.3 The trees to be removed are all lower value, retention category 'C'. T2 is a semi-mature Birch, T3 is a semi mature Lawson Cypress and T10 is a semi-mature Norway Maple. These have moderate amenity value as part of the ornamental planting surrounding the garage, but none of them are of significant size or prominence. T4 is a young Monkey Puzzle tree, recently planted and easily replaced. Due to the low value of the trees to be removed the removals will have only a negligible negative arboricultural impact.

4.2.4 Retained trees T5 and T7 require pruning works to facilitate the development. T5 requires pruning back from the roof by approximately 2m and T7 by approximately 3m to provide adequate clearance for the new development. The trees will readily tolerate the required pruning works with little negative impact.

### 4.3 Indirect Impacts

4.3.1 The tree Root Protection Area (RPA) detailed on the Tree Plans at Appendices 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.

4.3.2 The proposed new garage encroaches into the northern edge of the RPAs of retained trees T5 and T7, however, the encroachment into the RPAs is minor and there is an existing retaining wall situated between the retained trees and the proposed new garage which has likely limited root extension of the retained trees into the area of the proposed new garage. As such,

T5 and T7 should remain largely unimpacted by the proposed works, provided care is taken during construction.

- 4.3.3 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.
- 4.5.2 An associated Arboricultural Method Statement, detailing protective fencing specifications and construction methods close to the retained trees has been provided (Ref: AWA5707AMS).

## 5. Signature

I trust this report provides all the required information.

Signed



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

**29<sup>th</sup> November 2023**

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Chartered Foresters  
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# 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

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

Adam is the company Director and Principal 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 he has original research published by the UK Forestry Commission. His work ranges from individual expert tree inspections to managing trees on major 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. Adam also regularly undertakes locum Tree Officer work for several Local Planning Authorities.

### **James Brown, BSc (Hons) Arboriculture, MArborA, PTI (Lantra), QTRA Registered**

James is a highly experienced and qualified Arboricultural Consultant. He has a BSc (Hons) in Arboriculture, attaining first class honours, as well as being awarded the Institute of Chartered Foresters student award. He is a Professional Member of the Arboricultural Association, an Associate of the Institute of Chartered Foresters, and he is working towards becoming a Chartered Arboriculturist. James joined AWA in 2016, he has many years' experience as an Arboricultural Consultant, he previously worked in Europe's largest container tree nursery and he has experience of local authority Tree Officer work.

### **James Godfrey, BA (Hons), FdSc Arboriculture and Tree Management, TechArborA, PTI (Lantra), QTRA Registered**

James has had extensive arboricultural experience working as an arborist within the public and private sector. While working at AWA, James completed his FdSc in Arboriculture and Tree Management, graduating with a distinction and was also awarded for achieving the highest overall mark in his year. James has used his arboricultural knowledge to inform and carry out accurate tree surveys and produce detailed reports that aim to balance appropriate tree retention with the requirements of landowners.

### **Joe Thomas, MSci Biology, Award L4 Arboriculture, TechArborA, QTRA Registered**

Joe achieved a first class degree in Biology with an integrated Masters (MSci) from the University of Sheffield. Additionally, he has a Level 4 Award in Arboriculture. Joe joined AWA after an Urban Forestry role with the Sheffield and Rotherham Wildlife Trust and Sheffield City Council, where he gained a variety of experience in different aspects of the arboriculture sector.

### **James Boyle, HND Level 5 Arboriculture and Urban Forestry, QTRA Registered**

Jim joined AWA after having worked within the tree care profession for several years, alongside studying at college and university. During this time he gained a wealth of experience and achieved a variety of practical qualifications within the tree care industry. Jim has studied Arboriculture and Urban Forestry at Merrist Wood College in Surrey, Plumpton College in Sussex and University of Highlands and Islands in the Scottish Highlands, where he achieved a distinction in the Higher National Diploma Level 5.

### **Lucy Garbutt, MSc Animal Behaviour, BSc (Hons) Biology, CIEEM membership**

Lucy graduated with a masters degree in Animal Behaviour from the UK's highest rated university, St Andrews of Scotland, immediately following the completion of her BSc degree in Biology from Lancaster University. Lucy has experience in botany and plant science and moved into arboriculture after previous experience of protected species and botanical surveys with a large environmental consulting company.

### **Sophie Beckerman, BA (Hons), Dip Arboriculture Level 4, TechArborA**

Sophie has more than 10 years' experience as an arborist, working for a variety of private companies as well as undertaking tree management with Sheffield City Council Ranger Service and The Wildlife Trust. Her expertise in arboriculture is demonstrated in the practical NPTC qualifications gained, and her excellent knowledge is reflected in the L4 diploma in Arboriculture, which she completed while working. Her roles as a climbing arborist and team leader included estimating for jobs and project management, supervising tree contracting teams - ensuring that work is carried out safely and efficiently and that health and safety standards are adhered to, and risk assessments are carried out.

## Appendix 2: Survey Methodology and Limitations

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 BS 5837:2012 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.

**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.

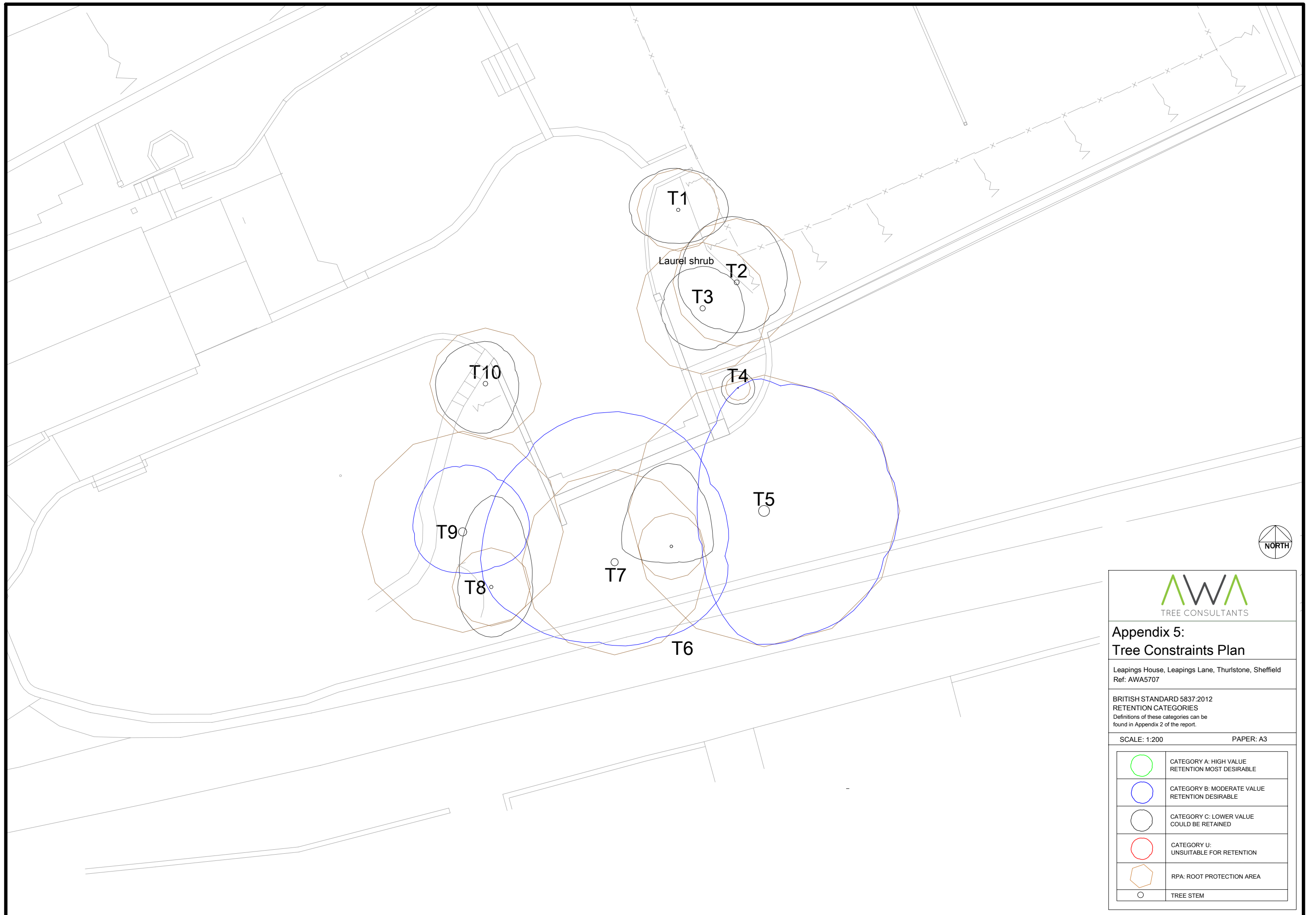
**B (marked in blue on Appendix 5) = retention desirable.** These trees are of good quality and value with a significant life expectancy.

**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 unsuitable for retention.** These trees are in such a condition that any existing value would be lost within 10 years.

Tree ID	Tree Species		Maturity	Measurements				Crown (m)				Tree Condition				Physiological	Structural	Life Expectancy	Value		Management	
	Common Name	Latin Name		Height (m)	Stems	Stem Diameter (mm)	Estimated	Crown height	N	E	S	W	Roots	Stem	Crown				Comments	Amenity		Category
T1	Birch	<i>Betulus pendula</i>	Semi-mature	10	1	200	No	3	2.5	3	2	3	No visual defects	Single stemmed. Vertical. Epicormic growths. Old pruning wounds	Small/ sparse. Minor deadwood	On raised bed overhanging tennis court to northeast. Low vigour with epicormic growth on stem and sparse crown. Previously crown reduced. Moderate amenity as one of a pair either side of the gate	Poor	Fair	10 to 20 yrs	Moderate	C	No works required
T2	Birch	<i>Betulus pendula</i>	Semi-mature	10	1	310	No	3	4	3	3	3.5	No visual defects	Single stemmed. Vertical. Old pruning wounds. Minor cavities	Old pruning wounds. Minor deadwood	Previously crown reduced. Overhanging tennis court to north	Good	Good	20 to 40 yrs	Moderate	C	Removal required to facilitate development
T3	Lawson Cypress	<i>Cupressus lawsoniana</i>	Semi-mature	11	1	320	Yes	0	2.5	2.5	2.5	2.5	Limited access around base	Single stemmed. Vertical	Normal	Limited access prevented detailed of base and stem	Good	Good	20 to 40 yrs	Moderate	C	Removal required to facilitate development
T4	Monkey Puzzle Tree	<i>Araucaria araucana</i>	Young	3.5	1	60	Yes	0.5	1	1	1	1	No visual defects	Single stemmed. Vertical	Normal	Young tree planted within walled area	Good	Good	>40 yrs	Low	C	Removal required to facilitate development
T5	Larch	<i>Larix decidua</i>	Mature	19	1	660	No	1	8	8	8	4	No visual defects	Single stemmed. Slight lean. Old pruning wounds. Stubs	Minor deadwood. Slightly unbalanced	Slight lean to east. Overhanging road to south with low branch approx 5m. Low drooping branch in north western crown nearly touching ground and 2m from existing wall	Good	Good	>40 yrs	High	B	Pruning works required to facilitate development - Prune from roof by 2m

Tree ID	Tree Species		Maturity	Measurements				Crown (m)				Tree Condition				Value		Management				
	Common Name	Latin Name		Height (m)	Stems	Stem Diameter (mm)	Estimated	Crown height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
T6	Norway Maple	<i>Acer platanoides</i>	Semi-mature	11	2	80, 140	No	1.5	5	2.5	1	3	No visual defects	Twin stemmed at 1m. Old pruning wounds. Minor cavities	Normal	Crown has lean to north. Suppressed by Beech to southwest	Good	Good	>40 yrs	Low	C	No works required
T7	Beech	<i>Fagus sylvatica</i>	Early-mature	18	1	450	No	0.5	9	7	5	8	No visual defects	Single stemmed. Vertical. Old pruning wounds. Tight union. Partially included bark. Minor cavities	Old pruning wounds. Minor deadwood. Stubs	Low branches in northern crown in contact with existing retaining wall. Low branches over road approx 4m	Good	Good	>40 yrs	Moderate	B	Pruning works required to facilitate development - Prune from roof by 3m
T8	Whitebeam	<i>Sorbus aria</i>	Semi-mature	10	1	190	No	4	5.5	2.5	3	2	Exposed roots. Soil heave. Root damage/ loss	Single stemmed. Slight lean. Tight union. Old pruning wounds	Minor deadwood	Exposed roots and signs of heave likely historic. Stem curved close to base. Suppressed by Oak to west	Good	Fair	20 to 40 yrs	Low	C	No works required
T9	White Fir	<i>Abies concolor</i>	Early-mature	19	1	500	No	0	4	4	2.5	3	Exposed roots. Girdled roots	Single stemmed. Vertical. Old pruning wounds. Stubs	Minor deadwood	Branches in northeastern crown in contact with ground and 1.5m from existing wall	Good	Good	>40 yrs	High	B	No works required
T10	Norway Maple	<i>Acer platanoides</i>	Semi-mature	8	1	270	No	2.5	2.5	2	3	3	No visual defects	Single stemmed. Vertical. Old pruning wounds. Tight union. Partially included bark. Bark damage	Minor deadwood. Old pruning wounds. Stubs	Previously cut back from building and crown reduced. Steps immediately to west, retaining wall 0.5m to northeast	Good	Good	20 to 40 yrs	Moderate	C	Removal required to facilitate development



**Appendix 5:  
Tree Constraints Plan**

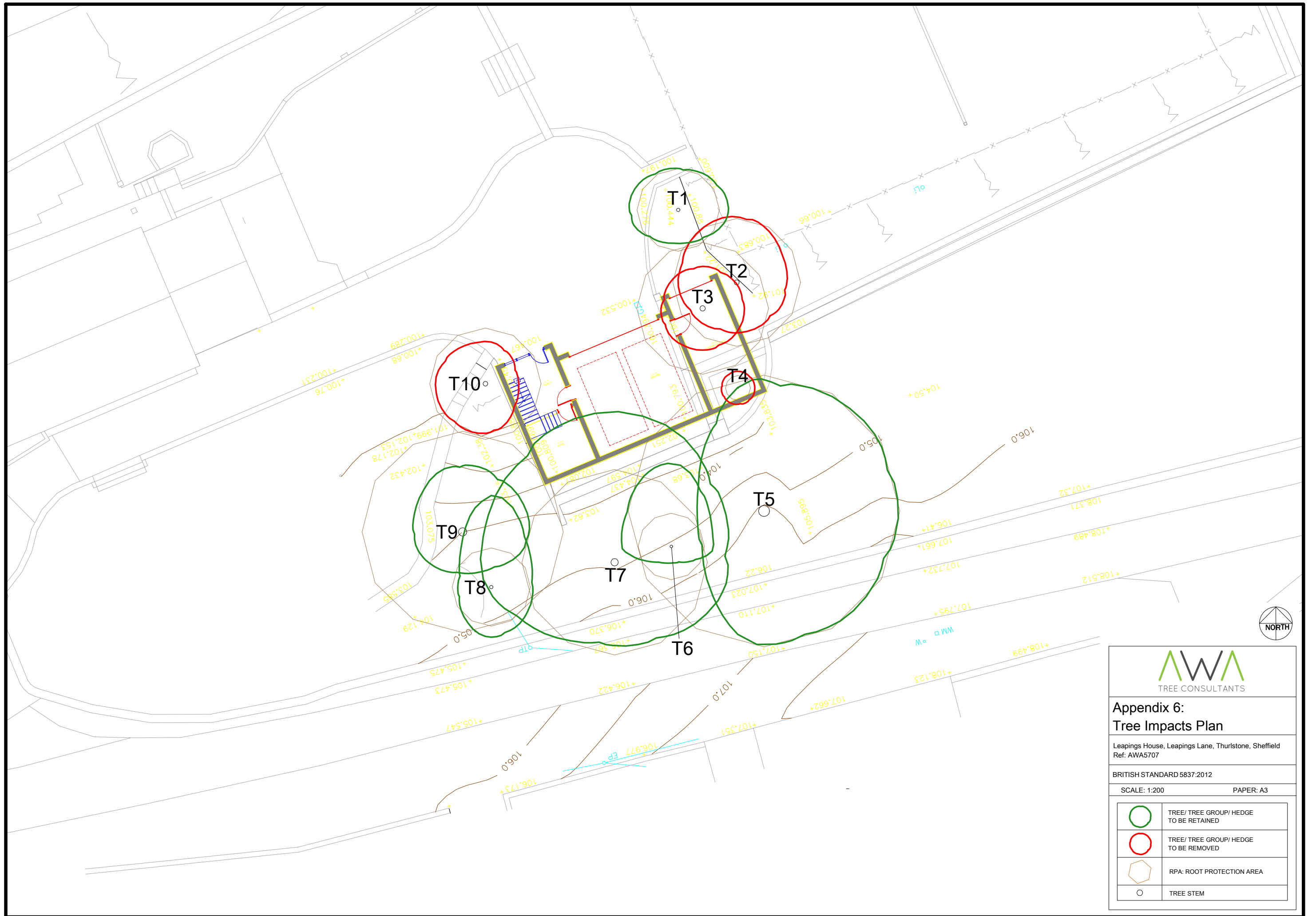
Leapings House, Leapings Lane, Thurlstone, Sheffield  
Ref: AWA5707

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

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



  
 TREE CONSULTANTS

**Appendix 6:  
Tree Impacts Plan**

Leapings House, Leapings Lane, Thurlstone, Sheffield  
Ref: AWA5707

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

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