TREE CONSULTANTS

ARBORICULTURAL REPORT

& Impact Assessment

to **BS5837:2012** at:

Land at:

Roughbirchworth Lane
Oxspring
Penistone
S36 8YE

Prepared for:
Garry Greetham Associates
Westwood House
18 Carr Lane
Tankersley
Barnsley
S75 3BE

Date: *December 2020*

Reference: *AWA3548*

Institute of Chartered Foresters
Registered Consultant

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1. Introduction

1.1 Instructions and Brief

1.1.1 We have been instructed by Garry Greetham Associates 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 December 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 and data collection was carried out by Mr Tom Readman Cert Arb L3, Level 4 Forestry and Arboriculture, 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 in Oxspring, a village and civil parish in the Metropolitan Borough of Barnsley, in South Yorkshire.

2.1.2 The site comprises an open grass field, that is bordered with a screen of trees to the north and west. The River Don runs along the north of the site, with residential properties on the far side of the river. To the east is a highway, to the south are residential properties, and there is a public park to the west.

2.1.3 The approximate area of the survey is highlighted in the image below (Google Earth, 2018):



3. The Trees

3.1 Legal

3.1.1 An online search has been carried out with Barnsley Metropolitan District Council on 15/12/20 to ascertain whether any trees at the site are located within a Conservation area or are protected by a Tree Preservation Order (TPO). There are three Group Preservation Orders along the northern boundary of the site that may include trees within the site curtilage. There is also a Woodland Preservation Order to the west of the site, which includes some large trees that may be affected by activity on site. These are indicated on the image below (Barnsley Metropolitan District Council, 2020)



3.1.2 Before carrying out any works to protected trees the permission of the local planning authority is required. There are large potential penalties for illegally carrying out work to protected trees. Statutory permission is not required for the removal of deadwood.

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.

3.1.4 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 47 items of woody vegetation, comprised of 45 individual trees and 2 groups of trees or shrubs.

3.2.2 Of the surveyed trees: 2 trees are retention category 'U', 11 trees are retention category 'B', and the remaining 34 trees and groups are retention category 'C' (explanatory details regarding the retention categories are included at Appendix 3).

3.2.3 The significant tree cover within the site consists of woodland and linear groups stretching along, or just beyond, the north and western boundaries, with trees to the west being part of a larger woodland group. Within these groups is a species mix of varying age categories. The majority of the sites trees are naturalised pioneer and typical wet area species.

3.2.4 The central areas of the site contain nothing of arboricultural significance, consisting of unmanaged grass.

3.2.5 Species diversity at the site is fairly poor, being predominantly Sycamore and Alder with occasional Ash, Birch, Hazel, Hawthorn and Willow.

3.2.6 The site's trees had a good age diversity with a mix of semi-mature, early-mature and mature trees.

3.2.7 The sites most significant trees are T1, T8 to T11, T14 and T15, mature Sycamore and Ash trees situated beyond the western boundary of the site. These trees are larger features at the edge of the protected woodland. These trees individually prominent throughout the site, and collectively prominent throughout the surrounding area with a good level of amenity value.

3.2.8 A number of other moderate value trees are situated along the site's northern boundary, along the bank of the River Don. This includes T22, T31, T32 and T43. These trees are comprised of early mature Alder and Sycamores, and typically have more attractive and less suppressed forms, and fewer defects, when compared to other trees along the riverbank.

3.2.9 At the western boundary of the site, situated in or just beyond the boundary wall, are trees T2 to T7. These trees are of reasonable value and contribute to the woodland screening, although have defects typical of self-set trees found at the edge of woodlands, such as tight unions, that may limit their long-term value. Most trees in this group have been crown lifted, leaving prominent stubs. Birch T6 has a large pocket of decay at it's south-eastern aspect due to a large pruning wound, which would make it unsuitable for retention if the site was developed.

3.2.10 In the north-west corner of the site is Alder T17 and Willow T19. Both of these trees have failed, with T17 failing at the base and leaning towards the site and T19 having failed at 5m, with the stem hanging in the crowns of adjacent trees. Both trees require removal to avoid any obstruction to the River Don.

3.2.11 Along the northern boundary of the site, along the bank of the River Don, are trees T16 to T33, G34, and T35 to T41. Some individual trees along this boundary are of reasonable amenity value and collectively these trees collectively provide a good screening between the site and the residential properties to the north of the river.

3.2.12 In the north-eastern corner of the site, situated at the base of the bridge over the River Don, is Ash T42. This tree has established in an unsuitable location and is not considered suitable for long-term retention.

3.2.13 Some Ash trees on site, and many of the Ash trees in the area show symptoms consistent with 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.

3.2.14 Some trees were found to have defects and require pruning works/felling/other management regardless of any new development, this includes T17 and T19. These trees should be safely felled to ground level (as detailed in Appendix 4).

3.2.15 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.

3.2.16 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.

3.2.17 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.

4. Arboricultural Impact Assessment

4.1 Proposed New Development

4.1.1 It is proposed to build a new residential development with 7 new residential properties, associated access, landscaping and facilities. 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 removal of 5 trees and will be required 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 are required to be removed are T3, T4, T5, T6 and T7.

4.2.3 The trees to be removed are all lower value, retention category 'C'. T3, T4, T5 and T7 are self-set, early-mature Sycamore. Some of these trees are situated in the boundary dry-stone wall, and some have defects that may limit long term prospects. T6 has a large pocket of decay at the base, as a result of a large pruning wound, and is not suitable for retention in a developed context.

4.2.4 The removal of 2 trees is recommended regardless of the development. The trees recommended for removal are T17 and T19.

4.2.5 T17 and T19 have failed, with T17 failing at the base and T19 failing at 5m from ground level. It is recommended both trees are felled to ground level and removed, to reduced to risk of failed trees falling into and obstructing the nearby river.

4.2.6 Due to the low value of the trees to be removed the removals will have only a small negative arboricultural impact. The trees have negligible screening value due to the woodland to the west, which is comprised of much larger and more established trees.

4.2.7 Occasional pruning may be required to trees along the northern boundary to facilitate the erection of garden walls. This will include raising the lower canopy to 2m from ground level and reducing to create 1m clearance from the new walls. Trees that may require pruning include T26, T27, T31, T35, T36, T38, T39 and trees within group G34. Minimal pruning is required to facilitate development and should have negligible long-term impact on the trees, provided work is completed according to British Standard 3998:2010 *Tree Work - Recommendations*.

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.

4.3.2 A new drive is proposed that encroaches into the edge of the RPA of T14 and T15. The construction of hard surfaces within the RPA can have negative impacts on tree roots. However, the encroachment is limited to the edges of the RPA. The trees will still have sufficient rooting area following development so impacts should be minimal.

4.3.3 New garden boundary treatments are proposed within the RPAs of retained trees T14, T26, T27, T31, T33, T35, T36, T38 and T39. Excavation within the RPA has the potential to damage tree roots and impact long-term prospects. This damage can be limited, or negated, through the use of post and beam type foundations as opposed to trench excavations, and careful excavation by hand within the RPA.

4.3.4 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.

4.3.5 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, 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.

5. Signature

I trust this report provides all the required information.

Signed



.....

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

17th December 2020

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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

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 Tom Readman *Cert Arb L3, Level 4 Forestry and Arboriculture, TechArborA*

Tom joined AWA from his previous role as a tree risk surveyor with Harrogate Borough Council, where he undertook tree risk surveys at a range of sites and prescribed suitable works. Tom also has extensive previous experience as a climbing arborist. Tom achieved at Distinction Star, and was recognised as the student of the year, in the Extended Diploma in Forestry and Arboriculture and is now completing a Foundation Degree in Arboriculture, while working at AWA. Tom's work focuses on tree risk surveys and accurate tree data collection for development projects 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 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*
T1	Cherry	*Prunus avium*	Mature	13	1	490	No	3	6	8.5	8	6	No visual defects	Single stemmed, Slight lean south east, Old pruning wounds, Stubs, Tight union, Partially included bark, Minor decay, Multiple stemmed at 2m	Minor deadwood, Snapped /hanging branches, Vehicle damage	Decay in east scaffold limb. Lean corrected	Fair	Fair	20 to 40 yrs	Moderate	**B**	No works required
T2	Sycamore	*Acer pseudoplatanus*	Early-mature	14	1	400	No	2	5.5	7.5	6.5	7	Decay	Single stemmed, Vertical, Stubs, Old pruning wounds, Major cavity, Minor decay, Epicormic growths	Normal	Large epicormic at base removed, leaving large wounds with decay. Strong reaction wood	Good	Fair	>40 yrs	Moderate	**C**	No works required
T3	Sycamore	*Acer pseudoplatanus*	Early-mature	13	2	340, 330	No	2.5	5	4.5	4	4.5	No visual defects	Single stemmed at base, Twin stemmed at 1m, Vertical, Pruning wounds - healing well, Epicormic growths, Tight union, Partially included bark, Cup-like union collecting dirt/water	Overhanging into the site	Situated in boundary wall	Good	Fair	20 to 40 yrs	Moderate	**C**	Removal required to facilitate development

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	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*
T4	Sycamore	*Acer pseudoplatanus*	Early-mature	13	2	420, 270	No	2	6	6.5	5.5	3.5	No visual defects	Twin stemmed at base, Vertical, Stubs, Pruning wounds - healing well, Pruning wounds from crown lifting, Tight union, Partially included bark at 2m in north stem	Overhanging into the site, Minor deadwood	Situated just beyond boundary wall	Good	Fair	20 to 40 yrs	Moderate	C	Removal required to facilitate development
T5	Sycamore	*Acer pseudoplatanus*	Early-mature	14	1	350	No	2	6	6.5	3.5	0.5	No visual defects	Slight lean east into site, Single stemmed, Epicormic growths	Unbalanced, Overhanging into the site	Situated just beyond boundary wall	Fair	Fair	20 to 40 yrs	Moderate	C	Removal required to facilitate development
T6	Birch	*Betula pubescens*	Mature	14	1	370	No	2.5	6	3.5	4.5	3	Exposed roots	Single stemmed, Major cavity, Major decay, at base, Vertical, Stubs, Epicormic growths	Minor deadwood, Overhanging into the site	Large decay pocket on south east aspect of stem. Not suitable in developed context.	Fair	Poor	10 to 20 yrs	Moderate	C	Removal required to facilitate development
T7	Sycamore	*Acer pseudoplatanus*	Early-mature	14	1	380	No	3	8	3.5	2	3	No visual defects	Single stemmed, Slight lean north into site, Tight union at 3m	Unbalanced, Overhanging into the site	Situated just beyond boundary wall	Good	Fair	>40 yrs	Moderate	C	Removal required to facilitate development

	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	Sycamore	*Acer pseudoplatanus*	Mature	21	2	360, 360	Yes	3	5.5	9	5.5	3	Soil erosion, Exposed roots	Twin stemmed at base, Slight lean, Tight union, Partially included bark, Fused stems		Situated bottom of banking. Stems crossing, almost fused up to 3m.	Good	Fair	20 to 40 yrs	Moderate	**B**	No works required
T9	Sycamore	*Acer pseudoplatanus*	Mature	22	1	480	No	3	5.5	2.5	5	4.5	Soil erosion, Exposed roots	Single stemmed, Vertical, Stubs	Normal, Minor deadwood	Situated on banking	Good	Good	>40 yrs	Moderate	**B**	No works required
T10	Sycamore	*Acer pseudoplatanus*	Mature	23	1	780	No	3	7.5	7.5	5	5	Soil erosion, Exposed roots	Single stemmed at base, Twin stemmed at 2m, Multiple stemmed at 3m, Vertical	Minor deadwood, Moderate deadwood	Situated on banking	Good	Good	>40 yrs	Moderate	**B**	No works required
T11	Ash	*Fraxinus excelsior*	Mature	22	3	450, 370, 230	No	5	7	5	8	7	Exposed roots, Soil erosion	Multiple stemmed at base, Vertical, One stem with significant lean west, Stubs, Old pruning wounds	Overhanging adjacent land, Minor deadwood		Good	Fair	20 to 40 yrs	Moderate	**B**	No works required
T12	Sycamore	*Acer pseudoplatanus*	Young	8	1	120	No	2	3.5	2	0.5	2	Soil erosion, Exposed roots	Single stemmed, Slight lean	Unbalanced	Situated on banking. Height estimated	Good	Fair	>40 yrs	Low	**C**	No works required

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	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*
T13	Sycamore	*Acer pseudoplatanus*	Young	8	1	120	No	2	2.5	2	0.5	1.5	Soil erosion, Exposed roots	Single stemmed, Slight lean, Epicormic growths	Low vigour	Situated on banking. Height estimated	Fair	Fair	20 to 40 yrs	Low	**C**	No works required
T14	Sycamore	*Acer pseudoplatanus*	Mature	23	3	460, 370, 340	No	3	7.5	6	7	6	Soil erosion, Exposed roots	Multiple stemmed at base, Vertical, Stubs	Minor deadwood, Moderate deadwood	Situated on banking	Good	Good	>40 yrs	Moderate	**B**	No works required
T15	Sycamore	*Acer pseudoplatanus*	Mature	20	4	570, 500, 310, 260	No	4	7	8	7.5	8.5	Soil erosion, Exposed roots	Multiple stemmed at base, Vertical, Stubs, Old pruning wounds, Pruning wounds from crown lifting, Tight union, Partially included bark in northern stem	Minor deadwood	Top of small wall, which appears to cover watercourse leading to River Don. Very boggy under wall.	Good	Fair	>40 yrs	Moderate	**B**	No works required
T16	Alder	*Alnus glutinosa*	Early-mature	18	2	270, 250	No	1	8	4.5	4	0.5	Exposed roots, Soil erosion, Waterlogged	Twin stemmed at base, Vertical, Epicormic growths	Normal	Situated on riverbank. T17 leaning in crown	Fair	Fair	20 to 40 yrs	Moderate	**C**	No works required
T17	Alder	*Alnus glutinosa*	Mature	18	3	300, 200, 200	Yes	1.5	0.5	9	2.5	0.5	Decay, Waterlogged, Exposed roots, Soil erosion	Multiple stemmed at base, Significant lean towards site, Epicormic growths	Minor deadwood	Situated on riverbank. Failed at base, leaning in T16	Fair	Poor	<10 yrs	Low	**U**	Removal required regardless of development

AWA TREE CONSULTANTS

	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*
T18	Willow	*Salix fragilis*	Mature	22	2	500, 340	No	1	8	6.5	5	6	Soil erosion, Exposed roots, Waterlogged	Single stemmed at base, Twin stemmed at 1m, Vertical, Stubs, Old pruning wounds	Snapped /hanging branches	Situated by riverbank. 2nd stem snapped out at 4m, which now hosts decay fungi	Fair	Fair	20 to 40 yrs	Moderate	**C**	No works required
T19	Willow	*Salix fragilis*	Early-mature	5	1	370	No	1	3	0.5	0.5	2.5	Soil erosion, Exposed roots, Waterlogged	Single stemmed, Major decay, Snapped stem, Epicormic growths	Snapped /hanging branches, Minor deadwood, Major deadwood, Moderate deadwood	Situated by riverbank. Stem snapped at 5m, and now resting in T20 and T21	Poor	Poor	<10 yrs	Low	**U**	Removal required regardless of development
T20	Alder	*Alnus glutinosa*	Semi-mature	10	1	250	No	1	5	3.5	0.5	0.5	Soil erosion, Exposed roots, Waterlogged	Single stemmed, Epicormic growths, Old pruning wounds, Stubs, Minor cavity, Minor decay south east aspect, Slight lean east	Slightly unbalanced	Situated by riverbank. Failed stem from T19 resting in crown	Fair	Fair	20 to 40 yrs	Low	**C**	No works required
T21	Sycamore	*Acer pseudoplatanus*	Semi-mature	11	1	290	No	3	4	4.5	6	1.5	Soil erosion, Exposed roots, Waterlogged	Single stemmed, Slight lean east, Epicormic growths, Old pruning wounds	Minor deadwood, Snapped /hanging branches,Bark damage in crown	Situated by riverbank. Failed stem from T19 resting in crown. Minor branch snapout	Fair	Good	20 to 40 yrs	Low	**C**	No works 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*
T22	Alder	*Alnus glutinosa*	Early-mature	14	4	380, 330, 320, 240	No	1	5	4.5	5.5	5	Soil erosion, Exposed roots, Waterlogged	Multiple stemmed at base, Vertical, Epicormic growths, Old pruning wounds, Stubs, Cup-like union collecting dirt/water	Minor deadwood	Situated by riverbank. Dense epicormic prevented detailed inspection	Good	Good	20 to 40 yrs	Moderate	**B**	No works required
T23	Alder	*Alnus glutinosa*	Mature	13	1	600	Yes	2	5	5.5	5.5	4	Exposed roots, Soil erosion, Waterlogged	Single stemmed at base, Twin stemmed at 2m, Vertical, Tight union, Partially included bark, Epicormic growths, Major cavity, Major decay	Minor deadwood, Minor dieback	Situated by riverbank. Decay column at southern aspect, from ground level to 2.5m Strong reaction to decay at eastern aspect, less reaction to west. Short tree for age to compensate for decay	Fair	Fair	10 to 20 yrs	Moderate	**C**	No works required
T24	Sycamore	*Acer pseudoplatanus*	Early-mature	15	1	350	Yes	2	5	4.5	5	5	Soil erosion, Exposed roots, Waterlogged	Single stemmed, Slight lean east corrected in crown	Normal	Situated by riverbank	Good	Good	>40 yrs	Moderate	**C**	No works required
T25	Ash	*Fraxinus excelsior*	Young	7	1	70	Yes	2	1.5	1.5	1.5	1.5	Exposed roots, Soil erosion	Single stemmed	Minor dieback	Situated riverbank. Ash dieback disease identified	Fair	Good	10 to 20 yrs	Low	**C**	No works required

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	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*
T26	Alder	*Alnus glutinosa*	Early-mature	15	3	240, 240, 220	No	2	2.5	4.5	4.5	5	Soil erosion, Exposed roots, Waterlogged	Single stemmed at base, Multiple stemmed at 1m, Vertical, Stubs, Old pruning wounds, Epicormic growths, Tight union, Partially included bark	Minor deadwood	Top of riverbank.	Good	Fair	20 to 40 yrs	Moderate	**C**	Prune to clear proposed boundary wall by 2m
T27	Alder	*Alnus glutinosa*	Early-mature	15	2	250	Yes	2	4	4.5	4	3.5	Soil erosion, Exposed roots, Waterlogged	Twin stemmed at base, Vertical, Epicormic growths, Old pruning wounds, Stubs	Normal	Situated by riverbank	Good	Good	20 to 40 yrs	Moderate	**C**	Prune to clear proposed boundary wall by 2m
T28	Alder	*Alnus glutinosa*	Semi-mature	15	1	200	Yes	2.5	2.5	2	4	2.5	Soil erosion, Exposed roots, Waterlogged	Single stemmed, Vertical, Epicormic growths, Old pruning wounds, Stubs	Minor deadwood	Situated by riverbank. Access prevented detailed inspection. Tall, narrow form	Good	Good	20 to 40 yrs	Low	**C**	No works required
T29	Sycamore	*Acer pseudoplatanus*	Early-mature	15	5	250, 200, 200, 200, 200	Yes	1	4.5	4.5	6	4.5	Soil erosion, Exposed roots, Waterlogged	Multiple stemmed at base, Vertical, Old pruning wounds, Stubs, Epicormic growths, Tight union, Partially included bark, Crossing/rubbing stems	Normal	Situated by riverbank. Mutually supporting stem structure	Good	Fair	>40 yrs	Moderate	**C**	No works 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*
T30	Alder	*Alnus glutinosa*	Early-mature	16	7	200 avg	Yes	1.5	5.5	5	6.5	6	Exposed roots, Soil erosion, Waterlogged	Multiple stemmed at base, Vertical, Slight lean, Epicormic growths, Tight union, Partially included bark	Normal	Situated by riverbank. Stems leaning north and east	Good	Fair	20 to 40 yrs	Moderate	**C**	No works required
T31	Sycamore	*Acer pseudoplatanus*	Early-mature	16	2	380, 230	No	3	6	6	7.5	5.5	Soil erosion, Exposed roots, Waterlogged	Single stemmed at base, Twin stemmed at 0.5m, Vertical, Stubs, Old pruning wounds, Epicormic growths	Minor deadwood	Situated by riverbank	Good	Fair	>40 yrs	Moderate	**B**	Prune to clear proposed boundary wall by 2m
T32	Sycamore	*Acer pseudoplatanus*	Early-mature	16	1	390	No	3	5	5.5	5	4.5	Soil erosion, Exposed roots	Single stemmed, Vertical, Old pruning wounds, Epicormic growths, Stubs, Tight union, Partially included bark	Normal	Situated by riverbank	Good	Good	>40 yrs	Moderate	**B**	No works required
T33	Alder	*Alnus glutinosa*	Mature	9	6	300 avg	Yes	1.5	6	7.5	5	6	Soil erosion, Exposed roots, Waterlogged	Multiple stemmed at base, Vertical, Slight lean, Significant lean, Stubs, Tight union, Partially included bark, Epicormic growths, Minor cavities, Minor decay	Minor dieback, Minor deadwood	Occasional young Ash at base. Situated by riverbank. Epicormic prevented detailed inspection. Leaning stems corrected	Good	Fair	20 to 40 yrs	Moderate	**C**	No works required

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	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*
G34	Sycamore	*Acer pseudoplatanus*	Semi-mature	7	3	130, 110, 90	No	1	See Plan				Soil erosion, Exposed roots	Single stemmed at base, Twin stemmed at 0.5m, Vertical, Old pruning wounds, Stubs, Epicormic growths	Minor deadwood	Situated by riverbank. Young linear group of self-set or sucker growth	Good	Good	>40 yrs	Low	C	Prune to clear proposed boundary wall by 2m
T35	Alder	*Alnus glutinosa*	Early-mature	17	7	250 avg	Yes	1	5	4	6	5.5	Soil erosion, Exposed roots, Waterlogged	Multiple stemmed at base, Vertical, Slight lean, Stubs, Old pruning wounds, Epicormic growths, Tight union	Minor deadwood	Situated by riverbank. Epicormic prevented detailed inspection	Good	Fair	20 to 40 yrs	Moderate	C	Prune to clear proposed boundary wall by 2m
T36	Sycamore	*Acer pseudoplatanus*	Mature	16	5	550, 250, 210, 120, 90	Yes	0.5	5.5	6	6	5.5	Soil erosion, Exposed roots, Waterlogged	Multiple stemmed at base, Large stem slight lean east, One stem significant lean east, Old pruning wounds, Stubs, Epicormic growths, Tight union, Partially included bark	Moderate deadwood, Moderate dieback	Situated by riverbank. Largest stem lean corrected. Dieback upper crown	Fair	Fair	20 to 40 yrs	Moderate	C	Prune to clear proposed boundary wall by 2m
T37	Ash	*Fraxinus excelsior*	Semi-mature	9	1	100	Yes	1	2	2	2	2	Soil erosion, Exposed roots, Waterlogged	Single stemmed, Slight lean east (corrected)	Normal	Situated by riverbank	Good	Good	20 to 40 yrs	Low	C	No works 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*
T38	Sycamore	*Acer pseudoplatanus*	Early-mature	11	3	250, 200, 150	Yes	1	4	4	4.5	4.5	Soil erosion, Exposed roots, Waterlogged	Single stemmed at base, Twin stemmed, Multiple stemmed at 2m, Vertical, Epicormic growths, Bark damage main stem and in crown, Tight union, Partially included bark	Normal	Situated by riverbank. Some epicormic around bark damage but no notable loss of vitality	Good	Fair	>40 yrs	Moderate	C	Prune to clear proposed boundary wall by 2m
T39	Alder	*Alnus glutinosa*	Early-mature	14	5	270, 260, 250, 250, 190	No	1	4.5	4.5	4.5	4.5	Soil erosion, Exposed roots, Waterlogged	Multiple stemmed at base, Vertical, Slight lean, Stubs, Tight union, Partially included bark	Minor deadwood at southern aspect, Minor dieback, Overhanging into the site	Situated by riverbank. One juvenile Hawthorn at base. Some stems leaning south and east	Good	Fair	20 to 40 yrs	Moderate	C	Prune to clear proposed boundary wall by 2m
T40	Ash	*Fraxinus excelsior*	Semi-mature	13	1	190	No	1.5	2	2	2.5	2.5	Exposed roots, Soil erosion, Waterlogged	Single stemmed, Vertical, Stubs, Old pruning wounds, Epicormic growths	Minor dieback, Minor deadwood	Situated by riverbank. Mild Ash dieback disease. Situated at base of T39	Fair	Good	20 to 40 yrs	Low	C	No works required
T41	Willow	*Salix chrysocoma*	Semi-mature	7	1	250	No	1	3.5	3.5	3.5	3	Exposed roots, Soil erosion	Single stemmed, Vertical	Minor deadwood	Top of riverbank, set back from water	Good	Good	>40 yrs	Low	C	No works 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*
T42	Ash	*Fraxinus excelsior*	Semi-mature	9	5	200, 150, 150, 100, 100	Yes	2	3.5	2	3.5	3	Soil erosion, Exposed roots	Multiple stemmed at base, Vertical	Normal	No Ash dieback disease detected. By retaining wall for bridge and highway, not suitable for long-term	Good	Fair	20 to 40 yrs	Low	**C**	No works required
T43	Alder	*Alnus glutinosa*	Mature	13	4	360, 280, 260, 240	No	1	5	5	5	6	Exposed roots, Soil erosion	Single stemmed at 0.5m, Multiple stemmed, Vertical, Slight lean, Stubs, Old pruning wounds, Pruning wounds from crown lifting, Tight union, Partially included bark, Epicormic growths	Minor deadwood	Bottom of banking between site and highway	Good	Fair	20 to 40 yrs	Moderate	**B**	No works required
G44	Hazel, Willow	*Corylus sp., Salix sp.*	Semi-mature	5.5	10+	100 avg	Yes	1	See Plan				Soil erosion, Exposed roots	Multiple stemmed at base, Vertical, Slight lean, Tight union, Partially included bark, Crossing/rubbing stems	Normal	Group of Hazel coppice, with one young Willow stem. Situated on banking	Good	Fair	10 to 20 yrs	Low	**C**	No works required
T45	Alder	*Alnus glutinosa*	Semi-mature	9	10+	120 avg	Yes	1	3	2.5	2.5	3.5	Soil erosion, Exposed roots	Multiple stemmed at base, Vertical, Tight union, Partially included bark, Epicormic growths	Overhanging adjacent land	Overhangs public highway. Situated on banking. Juvenile Ash at base	Good	Fair	20 to 40 yrs	Low	**C**	No works required

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	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*
T46	Hawthorn	*Crataegus monogyna*	Semi-mature	4.5	3	80	Yes	0.5	2.5	2.5	2	2.5	Soil erosion, Exposed roots	Single stemmed at base, Multiple stemmed at 1m, Vertical, Tight union, Partially included bark, Crossing/rubbing stems	Normal	Situated on banking. Dense branches and thorns prevented detailed measurements	Good	Fair	>40 yrs	Low	**C**	No works required
T47	Ash	*Fraxinus excelsior*	Semi-mature	6	3	130, 100, 100	No	1.5	2	2	2.5	2	Soil erosion, Exposed roots	Multiple stemmed at base, Vertical, Tight union, Partially included bark	Normal	Situated on banking. No Ash dieback disease detected	Good	Fair	20 to 40 yrs	Low	**C**	No works required



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Appendix 5: Tree Constraints Plan

Land at Roughbirchworth Lane, Oxspring
Ref: AWA3548

BRITISH STANDARD 5837:2012
RETENTION CATEGORIES
Definitions 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



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Appendix 6: Tree Impacts Plan

Land at Roughbirchworth Lane, Oxspring
Ref: AWA3548

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