



BS5837:2012

**Trees in relation to design, demolition and construction –
Recommendations**

Tree Survey



The Blue Coat School,
Egerton Street,
Oldham,
Greater Manchester,
OL1 3SQ.

6 July 2021

Author: George Pickering BSc (Hons), TechArborA.

Introduction

Arbtech Consulting Limited (Arbtech) received written instruction in June 2021 from The Blue Coat School to attend The Blue Coat School, Egerton Street, Oldham, Greater Manchester, OL1 3SQ; grid reference: SD 92957 05477 (site) to undertake an arboricultural survey a to BS5837:2012 guidance to assess trees, hedges and major shrub groups growing on and within influencing distance of the site and to produce a Schedule of trees and Tree Constraints Plan.

I am George Pickering, an arboricultural surveyor at Arbtech Consulting Ltd. I undertook the tree survey 30th June 2021 and subsequently have produced this summary of my findings.

I hold a BSc (Hons) in Arboriculture. I am a Technician Member of the Arboricultural Association.

The advice below and appended is underwritten by our Professional Indemnity insurance for the business practice of Arboricultural Consultancy in the sum of one million Pounds Sterling in each and every claim.

Table 1: Documents referred to.

Document	Reference No.
Survey base drawing	HM - 4957
British Standard 5837:2012	-
Tree Survey Schedule	Arbtech TS 01
Tree Constraints Plan	Arbtech TCP 01

Tree Survey

Survey: An arboricultural survey to BS5837 of all trees within impacting distance of the site was undertaken by George Pickering on 30th June 2021.

During the survey I categorised the trees using “Table 1 – Cascade chart for tree quality assessment” of the BS5837:2012 (see Appendix 1).

A total of 5 individual trees and 8 groups were surveyed. Details for each of the trees surveyed are provided in the Schedule of Trees (see Appendix 2).

Table 2: Documents upon which this tree survey has been based.

Document	Originator	Reference Number	Title
Topographical Survey	MACE	HM - 4957	The Blue Coat School

Limitations: the survey was made at ground level using visual observation only. Detailed examinations, such as climbing inspections and decay detection equipment were not employed, though may form part of the survey's management recommendations. Measurements were taken using specialist tapes, laser and GPS devices. Where this was not possible, measurements are estimated.

Scope: Pre-development tree surveys make arboricultural management recommendations based exclusively upon the individual tree or group of trees condition relative to their present context (*i.e. not in relation to the proposed development*).

Legal Status: No statutory protection check has been performed. BS5837 does not draw any distinction between trees subject to statutory protection, such as a Tree Preservation Order ("TPO"), and those trees without. This is principally because a detailed planning consent overrides any TPO protection. Consequently, we do not seek to offer any comparison between or infer any difference in the quality or importance of TPO trees and other trees.

* For more information on the surveyed trees please see Arbtech Consulting Ltd, Tree Survey Schedule (Appendix 1), Tree Survey Report and Tree Constraints Plan.

Site description

The site comprises the grounds of an existing school with trees predominantly planted as part of the site landscaping. One group is located outside the boundary adjacent to the site.

Figure 1: OS Map (Bing Maps)

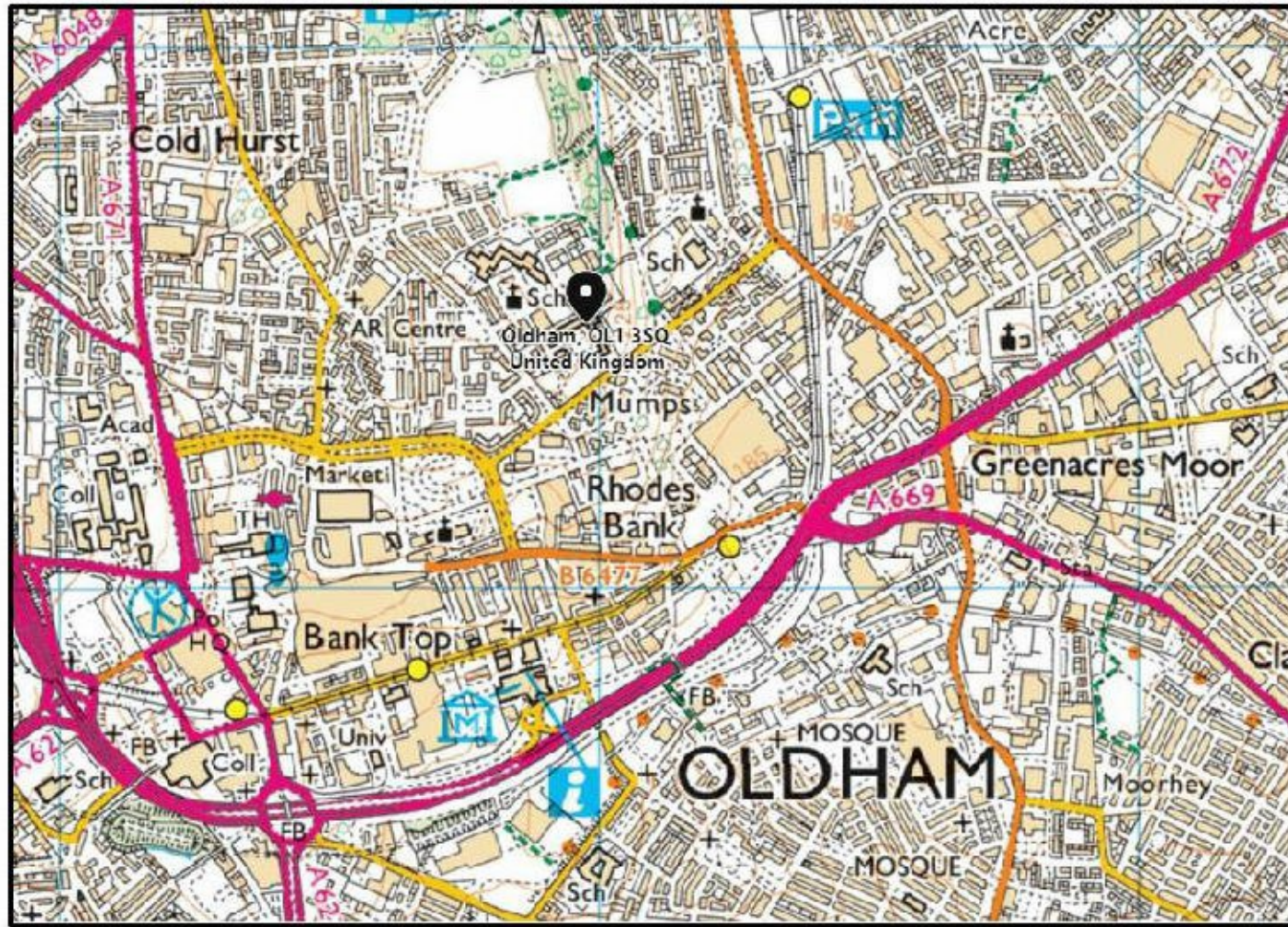


Figure 2: Aerial Image of site (Google Maps)



It is likely that arboricultural impacts can be addressed with arboricultural methodology or minor amendments to the proposal.

BS5837:2012 Scope

This standard recognises that there can be problems for development close to existing trees which are to be retained, and of planting trees close to existing structures. This standard sets out to assist those concerned with trees in relation to construction to form balanced judgements. It does not set out to put arguments for or against development, or for the removal or retention of trees. Where development, including demolition, is to occur, the standard provides guidance on how to decide which trees are appropriate for retention, on the means of protecting these trees during development, including demolition and construction work, and on the means of incorporating trees into the developed landscape.

Methodology

The methodology used to assess the trees was the British Standard 5837:2012 'Trees in Relation to Construction' tree survey method. The aim of the survey is to establish which trees are moderate and good quality; suitable for retention and justifying protection. And, which trees are low or poor quality; either undesirable or unsuitable to retain and protect.

The tree survey includes all trees included in the land survey red line boundary plan, as well as any that may have been missed, and it should categorize trees or groups of trees, including woodlands for their quality and value within the existing context, in a transparent, understandable and systematic way. Where the arboriculturist has deemed it appropriate, the trees have been tagged with small metal or plastic tags, placed as high as is convenient on the stem of each tree.

Whilst master plan proposals for the development of the site might be available, the trees have been surveyed without taking these into consideration. All detailed design work on site layout should take into consideration the results of the tree survey (and the TCP).

Trees forming groups and areas of woodland (including orchards, wood pasture and historic parkland) are identified and considered as groups where the arboriculturist has determined that this is appropriate, particularly where they contain a variety of species and age classes that could aid long-term management. It is often expedient to assess the quality and value of such groups of trees as a whole, rather than as individuals. However, an assessment of individuals within any group has been undertaken if they are open-grown or if there is a need to differentiate between them.

The quality and value of each tree or group of trees has been recorded by allocating it to one of the four categories; **A**, **B**, **C**, or **U** (highest to lowest quality respectively). The categories are differentiated on the tree survey plan by colour, or by suffixing the category adjacent to the tree identification number on the TCP.

The survey schedule lists all the trees or groups of trees. The following information is also provided:

- I. reference number (to be recorded on the tree survey plan);
- II. species (common or scientific names);
- III. height in meters (m);
- IV. stem diameter in millimeters (mm) at 1.5 m above adjacent ground level or immediately above the root flare for multi-stemmed trees;
- V. branch spread in meters taken at the four cardinal compass points;
- VI. height of crown clearance above adjacent ground level in meters (m);
- VII. age class (Newly planted, Young, Semi-mature, Early mature, Mature, Over mature);
- VIII. physiological condition (e.g. good, fair, poor, decline and dead);
- IX. structural condition (e.g. good, fair, poor and ivy);
- X. preliminary management recommendations, including further investigation of suspected defects that require more detailed assessment and potential for wildlife habitat; and
- XI. The retention category referring to the quality and useful contribution in years; **U** = <10yrs; **A** = >40yrs; **B** = >20yrs; **C** = >10yrs. The retention sub category referring to the type of amenity; 1 = Arboricultural; 2 = Landscape; 3 = Cultural including conservation (see Table 1 Cascade chart for tree quality assessment).

Definitions

Arboriculturist

An arboriculturist (or arboricultural consultant) is a person who has, through relevant education, training and experience, gained recognized qualifications and expertise in the field of trees in relation to construction.

Tree Survey

A tree survey should be undertaken by an arboriculturist and should record information about the trees on a site independently of and prior to any specific design for development. As a subsequent task, and with reference to a design or potential design, the results of the survey should be included in the preparation of a tree constraints plan, which should be used to assist with site layout design.

Tree Constraints Plan

A TCP is plan, typically delivered as an AutoCAD drawing (.file format), prepared by an arboriculturist for the purposes of layout design showing the root protection area and representing the effect that the mature height and spread of retained trees will have on layouts through shade, dominance, etc.

Root Protection Area

An RPA is a layout design tool indicating the area surrounding a tree that contains sufficient rooting volume to ensure the survival of the tree, shown in plan form in m².

Construction Exclusion Zone (also termed Tree Protection Zone)

A construction exclusion or tree protection zone is an area based on the RPA (in m²), identified by an arboriculturist, to be protected during development, including demolition and construction work, by the use of barriers and/or ground protection fit for purpose to ensure the successful long-term retention of a tree.

Arboricultural Impact Assessment

This is a study, undertaken by an arboriculturist, to identify, evaluate and possibly mitigate the extent of direct and indirect impacts on existing trees that may arise as a result of the implementation of any site layout proposal.

Tree Protection Plan

A TPP is plan, typically delivered as an AutoCAD drawing (.dwg file format), prepared by an arboriculturist showing the finalized layout proposals, tree retention and tree and landscape protection measures detailed within the arboricultural method statement, which can be shown graphically.

Arboricultural Method Statement

This is a methodology for the implementation of any aspect of development that has the potential to result in loss of or damage to a tree. The AMS is likely to include details of an on-site tree protection monitoring regime.

Limitations

Trees were inspected from using visual observation from ground level only. Trees were not climbed or inspected below ground level. Inaccessible trees will have best estimates made about the location, physical dimensions and characteristics. Trees have been grouped where BS5837 guides us that it is expedient to do so. Trees have been excluded from the survey if they are found by us to be sufficiently far away from the proposed developable area or if they are outside of the red line boundary plan showing the expectations of our Client for the extent of the survey. BS5837 does not draw any distinction between trees subject to statutory protection, such as a Tree Preservation Order ("TPO"), and those trees without. This is principally because a detailed planning consent overrides any TPO protection. Consequently, we do not seek to offer any comparison between or infer any difference in the quality or importance of TPO trees and other trees.

Appendices

The following documents were released to the Client as appendices to this report:

- Survey Schedule (.pdf)
- Tree Constraints Plan (.pdf)

If you require clarification of information contained herein, please do not hesitate to contact us via 01244 661170.

Yours Sincerely,



George Pickering BSc (Hons), TechArborA
Arboricultural Consultant - 01244 661170

Appendix 1: Table 1 Cascade chart for tree quality assessment

BS5837:2012 Trees in relation to design, demolition and construction – Recommendations

Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories when appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	<ul style="list-style-type: none"> • Trees that have serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality NOTE Category U trees can have existing or potential conservation value which might be desirable to preserve; see 4.5.7.			Dark red
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Trees to be considered for retention				
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominate and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	Light green
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remedial defects, including unsympathetic management and storm damage), such that they are unlikely to be suitable for retention of beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	Mid blue
Category C Trees of low quality with an estimated remaining expectancy of at least 10 years, or young trees with a stem diameter below 150mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape value	Trees with no material conservation or other cultural value	Grey

This content is for educational and informative purpose and has been reproduced with the kind permission of BSI Global

Appendix 2: Schedule of Trees

BS5837:2012 Tree Schedule

DATE
 30/06/2021

CLIENT
 The Blue Coat School

SITE
 The Blue Coat School, Oldham

REFERENCE
 1295-TS-001-A

Tree No.	Common Name	Botanical Name	Height (m)	Stem Dia (mm)	Crown Spread (m)				Height of Crown Clearance (m)	Age Class	Phys Con	Struc Con	Additional notes	Preliminary recommendations	BS5837 Retention Category	RPA (m ²)	RPA Radius (m)
					N	E	S	W									
T1	Wild cherry	<i>Prunus avium</i>	8	340	6	5	5	5	2	E/Mat	Good	Good	Ornamental planting on edge of car park. Ground around base is heavily eroded likely from footfall causing some small compaction to ground.	No works necessary at time of survey.	C1	55	4.20
T2	Silver birch	<i>Betula pendula</i>	13	530	6	5	7	5	3.5	Mat	Good	Good	Large birch tree located within school grounds in a lawn area. Lower north canopy has been pruned away from nearby buildings. Tree has strong future value.	No works necessary at time of survey.	B1	125	6.30
T3	Common ash	<i>Fraxinus excelsior</i>	13	410	5	5	5	5	1.5	E/Mat	Fair	Good	Large ash tree located within grassy courtyard area. Tree showing very early signs of ash dieback within canopy. Due to presence of ash dieback tree is unlikely to be retained long term.	No works necessary at time of survey.	C1	72	4.80
T4	Prunus species	<i>Prunus sp.</i>	12	420	6	5	4	5	1.5	E/Mat	Good	Good	Ornamental planting on lawn area in front of main reception building. Tree has a crowded canopy but has a good shape and strong future value.	No works necessary at time of survey.	B1	82	5.10
T5	Goat willow	<i>Salix caprea</i>	12	420	6	4	5	4	2	Mat	Good	Fair	Off site tree. Boundary fence restricting inspection. Attributes estimated.	No works necessary at time of survey.	C1, 2	82	5.10
G1	Horse chestnut		Min 9 - Max 10	Min 210 - Max 280	See associated plans				2	E/Mat	Good	Good	Group of two horse chestnut trees situated on front lawn of school. Some early signs of HCBC and chestnut leaf miner	No works necessary at time of survey.	B2	See associated plans	
G2	Poplar species		Ave 11	Min 370 - Max 480	See associated plans				2	Mat	Good	Good	Group of ornamental trees on edge of car park. Trees have crowded canopies and some small diameter deadwood associated with canopy.	No works necessary at time of survey.	B2	See associated plans	
G3	Wild cherry		Ave 13	Min 270 - Max 310	See associated plans				2.5	E/Mat	Fair	Fair	Ornament planting signing site boundary. Trees have some mechanical damage to base and surface roots and trees are starting to decline within the canopy.	No works necessary at time of survey.	C2	See associated plans	
G4	Wild cherry		Min 7 - Max 8	Min 190 - Max 200	See associated plans				3	E/Mat	Fair	Fair	Ornamental group at front of site. Trees has some small dieback within canopy and some small diameter deadwood associated with canopy.	No works necessary at time of survey.	C2	See associated plans	
G5	Wild cherry, Small-leaved lime		Min 7 - Max 14	Mix 210 - Max 310	See associated plans				1.5	E/Mat	Good	Good	Small ornamental group at entrance to main reception area. Trees are in good condition with some pruning wounds associated with main stem and canopy.	No works necessary at time of survey.	B2	See associated plans	
G6	Wild cherry, Small-leaved lime		Min 7 - Max 13	Min 310 - Max 380	See associated plans				2	E/Mat	Good	Good	Small ornamental group at entrance to main reception area. Trees are in good condition with some pruning wounds associated with main stem and canopy.	No works necessary at time of survey.	B2	See associated plans	

BS5837:2012 Tree Schedule

DATE 30/06/2021 **CLIENT** The Blue Coat School **SITE** The Blue Coat School, Oldham **REFERENCE** 1295-TS-001-A

Tree No.	Common Name	Botanical Name	Height (m)	Stem Dia (mm)	Crown Spread (m)				Height of Crown Clearance (m)	Age Class	Phys Con	Struc Con	Additional notes	Preliminary recommendations	BS5837 Retention Category	RPA (m ²)	RPA Radius (m)
					N	E	S	W									
G7	Sycamore, Common ash, Rowan		Ave 13	Min 130 - Max 450	See associated plans				1.5	E/Mat	Fair	Good	Mixed scrubby group at edge of site. Area is dense with vegetation. Ash associated with group is showing signs of ash dieback therefore unsuitable for long term retention.	No works necessary at time of survey.	C2	See associated plans	
G8	Sycamore, Common ash, Goat willow, Rowan		Ave 12	Ave 350	See associated plans				2	E/Mat	Good	Fair	Off site boundary group. Boundary fence restricting inspection. Attributes estimated. Ash associated with group unsuitable for long term retention.	No works necessary at time of survey.	C2	See associated plans	

Appendix 3: Tree Constraints Plan



TREE CONSTRAINTS PLAN

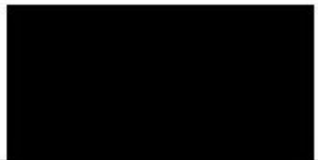
CLIENT
The Blue Coat School

PROJECT
The Blue Coat School, Oldham

KEY:

A Category Tree (High quality / retention value)	C Category Tree (Low quality / retention value)	Canopy Spread
B Category Tree (Moderate quality / retention value)	U Category Tree (No remaining retention value)	Tree Stem
		Root Protection Area

Document Production Record

Document number	Editor	Signature	Position	Issue number	Date
Arbtech TSR 01	George Pickering		Arboricultural Consultant	1	06/07/2021

Limitations

Arbtech Consulting Ltd has prepared this Report for the sole use of the above named Client/Agent in accordance with our terms of business, under which our services were performed. No other warranty, expressed or implied, is made as to the professional advice included in this Report or any other services provided by us. This Report may not be relied upon by any other party without the prior and express written agreement of Arbtech Consulting Ltd. The assessments made assume that the sites and facilities will continue to be used for their current purpose without significant change. The conclusions and recommendations contained in this Report are based upon information provided by others and upon the assumption that all relevant information has been provided by those parties from whom it has been requested. Information obtained from third parties has not been independently verified by Arbtech Consulting Ltd.

Copyright

© This Report is the copyright of Arbtech Consulting Ltd. Any unauthorised reproduction or usage by any person other than the addressee is strictly prohibited.