

BS5837:2012 Tree Survey

Arbtech Consulting Ltd.

Client: Kimberley Performing Arts Limited
 Project: Land off Enderby Road, Scunthorpe DN17 2JL
 Survey Date: 04/02/2025
 Surveyor: Tom Baron



Unit 3 Well House Barns
 Chester
 Cheshire
 CH4 0DH
 Phone: 01244661170
 Mobile: N/A

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m ²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC	
		No	Ø (mm)	Spread (m)	Clear (m)							
Estimated Measurements												
G01 Various <i>See comments for details</i>	7	1	160	N	2	0	SM	A: 11.6 R: 1.92	Good	C: Good S: Good B: Good	C.2 10+ yrs	
				E	2	0				Linear group of scattered, low quality trees and shrubs along edge of hardstanding; species including birch, Norway maple, willow and oak, with a dense understorey of rose, buddleja and bramble; damaging old fence in places; dimensions recorded are the largest within the group.		
				S	2	0						
				W	2	0						
Estimated Measurements												
G02 Various <i>See comments for details</i>	10	1	150	N	2.5	0	SM	A: 10.2 R: 1.8	Good	C: Good S: Good B: Good	C.2 10+ yrs	
				E	2.5	0				Linear group adjacent to building to east; species including birch, sea buckthorn, Norway maple and buddleja; dimensions recorded are the largest within the group.		
				S	2.5	0						
				W	2.5	0						
Estimated Measurements												
T01 Norway Maple <i>Acer platanoides</i>	13	1	600	N	6	2	EM	A: 162.9 R: 7.2	Good	C: Good S: Good B: Good	B.1 20+ yrs	
				E	6	2				Limited access - not assessed in detail.		
				S	6	2						
				W	6	2						
Estimated Measurements												
T02 Norway Maple <i>Acer platanoides</i>	5	1	150	N	2.5	2	SM	A: 10.2 R: 1.8	Good	C: Good S: Good B: Good	C.1 10+ yrs	
				E	2.5	2				Close to palisade fence on east side.		
				S	2.5	2						
				W	2.5	1.5						
Age Classifications:	N	Newly planted	EM	Early Mature	Condition:		C	Crown	Stems:		Ø	Diameter
	Y	Young	M	Mature			S	Stem			(Eq)	Equivalent stem diameter using BS5837:2012 definition
	SM	Semi-mature	OM	Over Mature			B	Basal area	ERC:			Estimated Remaining Contribution

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m ²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC		
		No	Ø (mm)	Spread (m)	Clear (m)								
T03										Estimated Measurements			
Butterfly Bush <i>Buddleja davidii</i>	4	10	126 (Eq)	N	3.5	0	SM	A: 7.2 R: 1.51	Good	C: Good S: Fair B: Fair	Dense stems from base.	C.1 10+ yrs	
				E	3.5	0							
				S	3.5	0							
				W	3.5	0							
T04													
Silver Birch <i>Betula pendula</i>	6	1	110	N	2.5	1	SM	A: 5.5 R: 1.32	Good	C: Fair S: Good B: Good	Stem and crown bias to north due to suppression; heras panels abutting stem.	C.1 10+ yrs	
				E	2	2							
				S	1	2							
				W	1	2							
T05													
Silver Birch <i>Betula pendula</i>	7	3	192 (Eq)	N	3	0.5	SM	A: 16.7 R: 2.3	Good	C: Good S: Good B: Good	Trifurcated at base; low ground clearance.	C.1 10+ yrs	
				E	2.5	0.5							
				S	2.5	0.5							
				W	2.5	0.5							
T06													
Silver Birch <i>Betula pendula</i>	7	1	170	N	2.5	0.5	SM	A: 13.1 R: 2.04	Good	C: Good S: Good B: Good	Displacing hard surfacing due to stem growth at base.	C.1 10+ yrs	
				E	2	0.5							
				S	2	0.5							
				W	2	0.5							
T07													
Robinia <i>Robinia pseudoacacia</i>	14	1	520	N	3	2	EM	A: 122.3 R: 6.23	Good	C: Good S: Ivy B: Fair	Hardstanding within rooting area; dense ivy to stem and lower crown; crown touching building on south side.	B.1 20+ yrs	
				E	3	2							
				S	4.5	2							
				W	3	2							
T08													
London Plane <i>Platanus x hispanica</i>	14	1	620	N	6	2.5	EM	A: 173.9 R: 7.44	Good	C: Good S: Good B: Fair	Hardstanding within rooting area; crown touching building on south side.	B.1 20+ yrs	
				E	6	3							
				S	4	5							
				W	5	3							
Age Classifications:	N	Newly planted	EM	Early Mature				Condition:	C	Crown	Stems:	Ø	Diameter
	Y	Young	M	Mature					S	Stem		(Eq)	Equivalent stem diameter using BS5837:2012 definition
	SM	Semi-mature	OM	Over Mature					B	Basal area	ERC:		Estimated Remaining Contribution

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m ²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC	
		No	Ø (mm)	Spread (m)	Clear (m)							
T09												
Robinia <i>Robinia pseudoacacia</i>	7	1	300	N	3.5	3.5	SM	A: 40.7 R: 3.59	Good	C: Good S: Good B: Good	Located within lawn area; pruned in past with minor wound occlusion; close to fence. 20+ yrs	B.1
T10												
Swedish Whitebeam <i>Sorbus intermedia</i>	6	1	420	N	3.5	3	EM	A: 79.8 R: 5.03	Good	C: Good S: Good B: Good	Located within lawn area; pruned in past with minor wound occlusion. 20+ yrs	B.1
T11												
Swedish Whitebeam <i>Sorbus intermedia</i>	6	1	340	N	3	2.5	EM	A: 52.3 R: 4.08	Good	C: Good S: Good B: Good	Located within lawn area; pruned in past with minor wound occlusion. 20+ yrs	B.1
Age Classifications: N Newly planted EM Early Mature Condition: C Crown Stems: Ø Diameter Y Young M Mature S Stem (Eq) Equivalent stem diameter using BS5837:2012 definition SM Semi-mature OM Over Mature B Basal area ERC: Estimated Remaining Contribution												

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

Document	Originator	Reference Number	Title
Survey base drawing	North Lincolnshire Council	SCU - 4 - 0888	OS Tile

Limitations: The survey was made at ground level using visual observation only. Detailed examinations, such as climbing inspections and advanced 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 is located to the rear of the Kimberley Performing Arts Centre/Ridings Community Hub off Enderby Road to the south of Scunthorpe. It is an L-shaped area of hardstanding formerly used as a sports area and car park. A mix of natural regeneration and planted trees are located around the peripheries of the site boundary. The site is bounded by grass fields to the north and west, buildings to the northeast and southeast, and residential properties to the south beyond a small strip of open land.



Figure 1: OS Map showing Site location (Bing Maps)



Figure 2: Aerial Image of Site with approximate red line boundary (Google Earth)

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3. 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.

4. 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:

- a) reference number (to be recorded on the tree survey plan);
- b) species (common or scientific names);
- c) height in meters (m);
- d) stem diameter in millimetres (mm) at 1.5m above adjacent ground level or immediately above the root flare for multi-stemmed trees;
- e) branch spread in meters taken at the four cardinal compass points;
- f) height of crown clearance above adjacent ground level in meters (m);
- g) age class (newly planted, young, semi-mature, early mature, mature, over mature);
- h) physiological condition (e.g. good, fair, poor, decline and dead);
- i) structural condition (e.g. good, fair, poor or not visible);
- j) comment about the tree, its location and preliminary management recommendations, including further investigation of suspected defects that require more detailed assessment and potential for wildlife habitat;
- k) The retention category referring to the quality and useful contribution in years; **U** = <10yrs; **A** = >40yrs; **B** = >20yrs; **C** = >10yrs. The retention subcategory referring to the type of amenity; 1 = Arboricultural; 2 = Landscape; 3 = Cultural including conservation (see Appendix 1 Cascade chart for tree quality assessment).

5. 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 (.DWG 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 (AIA)

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 (TPP)

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 (AMS)

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.

6. 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.

7. Appendices

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

- Survey Schedule (.PDF)
- Tree Constraints Plan drawing (.DWG & .PDF)

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

Yours Sincerely,

Tom Baron

Tom Baron

Tom Baron BSc. (Hons) TechArborA

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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)				
<p>Category U</p> <p>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.</p>	<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. <p><i>NOTE Category U trees can have existing or potential conservation value which might be desirable to preserve; see 4.5.7.</i></p>			Dark red
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Trees to be considered for retention				
<p>Category A</p> <p>Trees of high quality with an estimated remaining life expectancy of at least 40 years.</p>	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
<p>Category B</p> <p>Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.</p>	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
<p>Category C</p> <p>Trees of low quality with an estimated remaining expectancy of at least 10 years, or young trees with a stem diameter below 150mm.</p>	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

Appendix 2: Schedule of Trees

BS5837:2012 Tree Survey

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Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m ²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC	
		No	Ø (mm)	Spread (m)	Clear (m)							
Estimated Measurements												
G01 Various <i>See comments for details</i>	7	1	160	N	2	0	SM	A: 11.6 R: 1.92	Good	C: Good S: Good B: Good	C.2 10+ yrs	
				E	2	0				Linear group of scattered, low quality trees and shrubs along edge of hardstanding; species including birch, Norway maple, willow and oak, with a dense understorey of rose, buddleja and bramble; damaging old fence in places; dimensions recorded are the largest within the group.		
				S	2	0						
				W	2	0						
Estimated Measurements												
G02 Various <i>See comments for details</i>	10	1	150	N	2.5	0	SM	A: 10.2 R: 1.8	Good	C: Good S: Good B: Good	C.2 10+ yrs	
				E	2.5	0				Linear group adjacent to building to east; species including birch, sea buckthorn, Norway maple and buddleja; dimensions recorded are the largest within the group.		
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Estimated Measurements												
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				E	6	2				Limited access - not assessed in detail.		
				S	6	2						
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Estimated Measurements												
T02 Norway Maple <i>Acer platanoides</i>	5	1	150	N	2.5	2	SM	A: 10.2 R: 1.8	Good	C: Good S: Good B: Good	C.1 10+ yrs	
				E	2.5	2				Close to palisade fence on east side.		
				S	2.5	2						
				W	2.5	1.5						
Age Classifications:	N	Newly planted	EM	Early Mature	Condition:		C	Crown	Stems:		Ø	Diameter
	Y	Young	M	Mature			S	Stem			(Eq)	Equivalent stem diameter using BS5837:2012 definition
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Estimated Measurements													
T03 Butterfly Bush <i>Buddleja davidii</i>	4	10	126 (Eq)	N	3.5	0	SM	A: 7.2 R: 1.51	Good	C: Good S: Fair B: Fair	Dense stems from base. 10+ yrs	C.1	
T04 Silver Birch <i>Betula pendula</i>	6	1	110	N	2.5	1	SM	A: 5.5 R: 1.32	Good	C: Fair S: Good B: Good	Stem and crown bias to north due to suppression; heras panels abutting stem.	10+ yrs	C.1
T05 Silver Birch <i>Betula pendula</i>	7	3	192 (Eq)	N	3	0.5	SM	A: 16.7 R: 2.3	Good	C: Good S: Good B: Good	Trifurcated at base; low ground clearance.	10+ yrs	C.1
T06 Silver Birch <i>Betula pendula</i>	7	1	170	N	2.5	0.5	SM	A: 13.1 R: 2.04	Good	C: Good S: Good B: Good	Displacing hard surfacing due to stem growth at base.	10+ yrs	C.1
Estimated Measurements													
T07 Robinia <i>Robinia pseudoacacia</i>	14	1	520	N	3	2	EM	A: 122.3 R: 6.23	Good	C: Good S: Ivy B: Fair	Hardstanding within rooting area; dense ivy to stem and lower crown; crown touching building on south side.	20+ yrs	B.1
Estimated Measurements													
T08 London Plane <i>Platanus x hispanica</i>	14	1	620	N	6	2.5	EM	A: 173.9 R: 7.44	Good	C: Good S: Good B: Fair	Hardstanding within rooting area; crown touching building on south side.	20+ yrs	B.1
Age Classifications:	N	Newly planted	EM	Early Mature	Condition:			C	Crown	Stems:	Ø	Diameter	
	Y	Young	M	Mature				S	Stem		(Eq)	Equivalent stem diameter using BS5837:2012 definition	
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Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m ²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC	
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T10												
Swedish Whitebeam <i>Sorbus intermedia</i>	6	1	420	N	3.5	3	EM	A: 79.8 R: 5.03	Good	C: Good S: Good B: Good	Located within lawn area; pruned in past with minor wound occlusion.	B.1 20+ yrs
T11												
Swedish Whitebeam <i>Sorbus intermedia</i>	6	1	340	N	3	2.5	EM	A: 52.3 R: 4.08	Good	C: Good S: Good B: Good	Located within lawn area; pruned in past with minor wound occlusion.	B.1 20+ yrs
Age Classifications:	N	Newly planted	EM	Early Mature								
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Condition:	C	Crown										
	S	Stem										
	B	Basal area										
Stems:	Ø	Diameter										
	(Eq)	Equivalent stem diameter using BS5837:2012 definition										
ERC:		Estimated Remaining Contribution										

Appendix 3: Tree Constraints Plan

8. Document Production Record

Document number	Editor	Signature	Position	Issue number	Date
Arbtech TSR 01	Tom Baron	<i>TJ Baron</i>	Senior Consultant	01	10/02/25

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.

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