arbtech

Arboricultural Survey to BS5837:2012

Read Construction

Ysgol I.D. Hooson
Rhosllanerchrugog
Wrexham
LL14 2DS

18 December 2024

Shaun Rowe BSc (Hons) MArborA

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This report has been released electronically and the appendices have been included at the end of this report. Plans are included as A0, A1, A2 or A3 as appropriate.

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1. Introduction

Arbtech Consulting Limited (Arbtech) received written instruction on 5th December 2024 from Read Construction to attend Ysgol I.D. Hooson, Rhosllanerchrugog, Wrexham, LL14 2DS; grid reference, SJ 28763 46080 (site) to undertake an arboricultural survey 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, Tree Constraints Plan, Arboricultural Impact Assessment, Arboricultural Method Statement and Tree Protection Plan.

I am Shaun Rowe, an arboricultural consultant at Arbtech Consulting Ltd. I undertook the tree survey on 12th December 2024 and subsequently have produced this summary of my findings.

I hold a BSc Honours degree in Arboriculture and Urban Forestry and a BTEC Level 3 Arboriculture and have professional experience in arboriculture spanning 3 years. I hold the industry standard LANTRA Professional Tree Inspection accreditation and also hold a professional membership with 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	PMS24188
LPA pre-app comments	N/A
British Standard 5837:2012	“BS5837”
Tree Survey Schedule	Arbtech TS 01
Tree Constraints Plan	Arbtech TCP 01

2. Survey

Survey: An arboricultural survey to BS5837 of all trees on and within impacting distance of the site was undertaken by Shaun Rowe on 12th December 2024.

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 42No. individual trees and 15No. groups of trees were surveyed. Details for each of the trees surveyed are provided in the Schedule of Trees (see Appendix 2).

Multiple small trees and shrubs occupy the site, none of which meet the minimum diameter requirements to be considered for this survey.

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

Document	Originator	Reference Number	Title
Survey base drawing	PM Surveys UK	PMS24188	Topographical Survey

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 includes a primary school with facilitating parking area to the north and large area of open space to the south. The eastern site boundary is bordered by an informal public path with residential properties beyond. Residential properties are located further past the southern site boundary with large open spaces to the west and north of the site.



Figure 1: OS Map (Bing Maps)



Figure 2: Aerial Image of site with blue line denoting area surveyed (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 m^2.

Construction Exclusion Zone (also termed Tree Protection Zone)

A construction exclusion or tree protection zone is an area based on the RPA (in m^2), 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.

This report does not constitute a tree safety survey, nor does it fulfil the stewards/landowners Duty of Care in relation to tree risk.

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,



Shaun Rowe BSc (Hons) MArborA

Consultant Arboriculturist

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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)				
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.	▪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

Appendix 2: Schedule of Trees

BS5837:2012 Tree Survey

Arbtech Consulting Ltd.
Chester Road
Chester
Cheshire
CH4 0DH
Phone: 01244661170
Mobile: N/A

Client: Read Construction
Project: Ysgol I.D. Hooson, Rhosllanerchrugog, Wrexham, LL14 2DS
Survey Date: 12/12/2024
Surveyor: Shaun Rowe

Tree and Tag No / Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations / Survey Comment	Cat ERC
G01										Estimated Measurements	
Various	6	1	300	N 4	2	SM	A: 40.7	Good	C: Good		B.2
See comments for details				E 4	2		R: 3.59		S: Good	Group of off site trees located adjacent to site boundary fence line. Stem diameter is a maximum estimate. Species include field maple and hawthorn.	20+ yrs
				S 4	2				B: Good		
				W 4	2						
G02										Estimated Measurements	
Various	8	1	250	N 3.5	2	SM	A: 28.3	Good	C: Good		B.2
See comments for details				E 3.5	2		R: 3		S: Good	Group of off site trees located adjacent to site boundary fence line. Stem diameter is a maximum estimate. Species include field maple, common oak and hawthorn.	20+ yrs
				S 3.5	2				B: Good		
				W 3.5	2						
G03										Estimated Measurements	
Various	8	1	250	N 3.5	2	SM	A: 28.3	Good	C: Good		B.2
See comments for details				E 3.5	2		R: 3		S: Good	Group of off site trees located adjacent to site boundary fence line. Stem diameter is a maximum estimate. Species include field maple, common oak and hawthorn.	20+ yrs
				S 3.5	2				B: Good		
				W 3.5	2						
G04										Estimated Measurements	
Various	6	1	150	N 2	0	SM	A: 10.2	Good	C: Good		C.2
See comments for details				E 2	0		R: 1.8		S: Good	Group location plotted indicatively to GPS, aerial imagery and site features. Multiple off site area of shrubbery with few semi mature alder and ash within. Stem diameter is a maximum estimate.	10+ yrs
				S 2	0				B: Good		
				W 2	0						

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

Stems: Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

ERC: Estimated Remaining Contribution

Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
G05										Estimated Measurements	
Various *See comments for details*	10	1	350	N 4 E 4 S 4 W 4	2 2 2 2	M	A: 55.4 R: 4.19	Good	C: Good S: Good B: Good	Group of off site trees located adjacent to site boundary fence line. Stem diameter is a maximum estimate. Species include field maple, goat willow, holly, elder and hawthorn. Dense ivy and brambles throughout.	**B.2** 20+ yrs
G06										Estimated Measurements	
Various *See comments for details*	4	1	150	N 1 E 1 S 1 W 1	1 1 1 1	SM	A: 10.2 R: 1.8	Good	C: Good S: Good B: Good	Group location plotted indicatively to GPS and site features. Stem diameter is a maximum estimate. Species include hazel, apple and dogwood.	**C.2** 10+ yrs
G07										Estimated Measurements	
Various *See comments for details*	4	1	150	N 1 E 1 S 1 W 1	1 1 1 1	SM	A: 10.2 R: 1.8	Good	C: Good S: Good B: Good	Group location plotted indicatively to GPS and site features. Stem diameter is a maximum estimate. Species include field maple and hazel.	**C.2** 10+ yrs
G08										Estimated Measurements	
Various *See comments for details*	6	1	250	N 2 E 2 S 2 W 2	0 0 0 0	SM	A: 28.3 R: 3	Good	C: Good S: Good B: Good	Group location plotted indicatively to GPS, aerial imagery and site features. Multiple off site area of shrubbery with few semi mature alder, common oak, silver birch and ash within. Stem diameter is a maximum estimate.	**C.2** 10+ yrs
G09										Estimated Measurements	
Various *See comments for details*	6	1	150	N 2 E 2 S 2 W 2	0 0 0 0	SM	A: 10.2 R: 1.8	Good	C: Good S: Good B: Good	Group location plotted indicatively to GPS, aerial imagery and site features. Broken off site group including hawthorn, alder and beech. No access, within fenced off area. Ownership unknown. Stem diameter is a maximum estimate.	**C.2** 10+ yrs
G10										Estimated Measurements	
Willow *Salix sp.*	5	1	150	N 4 E 4 S 4 W 4	0.5 0.5 0.5 0.5	SM	A: 10.2 R: 1.8	Good	C: Good S: Good B: Good	Group location plotted indicatively to GPS and site features. Stem diameter is a maximum estimate.	**C.2** 10+ yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

Stems: Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

ERC: Estimated Remaining Contribution

Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
G11										Estimated Measurements	
Various *See comments for details*	5	1	150	N 1 2 E 1 2 S 1 2 W 1 2		SM	A: 10.2 R: 1.8	Good	C: Good S: Good B: Good	Group location plotted indicatively to GPS and site features. Stem diameter is a maximum estimate.	**C.2** 10+ yrs
G12										Estimated Measurements	
Various *See comments for details*	7	1	250	N 3 1 E 3 1 S 3 1 W 3 1		EM	A: 28.3 R: 3	Good	C: Good S: Good B: Good	Informally planted line of trees. Stem diameter is a maximum estimate. Species include goat willow and common oak.	**B.2** 20+ yrs
G13										Estimated Measurements	
Willow *Salix sp.*	6	1	150	N 1 0 E 1 0 S 1 0 W 1 0		SM	A: 10.2 R: 1.8	Good	C: Good S: Good B: Good	Group surrounding pond forming natural barrier.	**C.2** 10+ yrs
G14										Estimated Measurements	
Various *See comments for details*	5	1	150	N 2 1 E 2 1 S 2 1 W 2 1		SM	A: 10.2 R: 1.8	Good	C: Good S: Good B: Good	Group of trees growing amongst shrubbery under 75 mm diameter. Species include wild cherry and field maple. Stem diameter is a maximum estimate.	**C.2** 10+ yrs
G15										Estimated Measurements	
Various *See comments for details*	6	1	150	N 3 0 E 3 0 S 3 0 W 3 0		SM	A: 10.2 R: 1.8	Good	C: Good S: Good B: Good	Large area of shrub trees mostly under 75 mm diameter. Few semi matures trees within group up to 150 mm diameter. Group location plotted indicatively to GPS and site features. Species include field maple, goat willow and hawthorn. Dense brambles throughout.	**C.2** 10+ yrs
T01											
Common Oak *Quercus robur*	4	1	140	N 2 2 E 2 2 S 2 2 W 2 2		SM	A: 8.9 R: 1.68	Good	C: Good S: Good B: Good		**C.1** 10+ yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

Stems: Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

ERC: Estimated Remaining Contribution

Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
T02											
Common Oak *Quercus robur*	6	1	150	N 2.5 E 2.5 S 2.5 W 2.5	2 2 2 2	SM	A: 10.2 R: 1.8	Good	C: Good S: Good B: Good		**C.1** 10+ yrs
T03										Estimated Measurements	
Field Maple *Acer campestre*	4	4	189 (Eq)	N 2 E 2 S 2 W 2	2 2 2 2	SM	A: 16.1 R: 2.26	Good	C: Good S: Good B: Good	Off site tree growing adjacent to site boundary fence line. Small hawthorn growing at base. Tree location plotted indicatively to GPS and site features.	**C.1** 10+ yrs
T04										Estimated Measurements	
Common Ash *Fraxinus excelsior*	3	1	75	N 0.5 E 0.5 S 0.5 W 0.5	2 2 2 2	SM	A: 2.5 R: 0.89	Decline	C: Fair S: Fair B: Fair	Tree location plotted indicatively to GPS and site features. Directly adjacent to boundary fence. Stem lesions and growth pattern indicative of ash dieback.	**U** <10 yrs
T05											
Field Maple *Acer campestre*	5	1	110	N 1 E 1 S 1 W 1	2 2 2 2	SM	A: 5.5 R: 1.32	Good	C: Good S: Good B: Good		**C.1** 10+ yrs
T06											
Field Maple *Acer campestre*	3.5	1	75	N 0.5 E 0.5 S 0.5 W 0.5	2 2 2 2	SM	A: 2.5 R: 0.89	Good	C: Good S: Good B: Good	Tree location plotted indicatively to GPS and site features.	**C.1** 10+ yrs
T07											
Field Maple *Acer campestre*	5	1	120	N 1.5 E 1.5 S 1.5 W 1.5	2 2 2 2	SM	A: 6.5 R: 1.43	Good	C: Good S: Good B: Good		**C.1** 10+ yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

Stems: Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

ERC: Estimated Remaining Contribution

Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
T08											
Field Maple *Acer campestre*	5	1	130	N 1.5 E 1.5 S 1.5 W 1.5	2 2 2 2	SM	A: 7.6 R: 1.55	Good	C: Good S: Good B: Good		**C.1** 10+ yrs
T09											
Field Maple *Acer campestre*	5	1	110	N 1.5 E 1.5 S 1.5 W 1.5	2 2 2 2	SM	A: 5.5 R: 1.32	Good	C: Good S: Good B: Good		**C.1** 10+ yrs
T10											
Field Maple *Acer campestre*	6	1	150	N 1.5 E 1.5 S 1.5 W 1.5	2 2 2 2	SM	A: 10.2 R: 1.8	Good	C: Good S: Good B: Good		**C.1** 10+ yrs
T11											
Mountain Ash *Sorbus aucuparia*	5	1	140	N 2 E 2 S 2 W 2	2 2 2 2	EM	A: 8.9 R: 1.68	Good	C: Good S: Good B: Good		**C.1** 10+ yrs
T12											
Mountain Ash *Sorbus aucuparia*	5	1	130	N 1.5 E 1.5 S 1.5 W 1.5	2 2 2 2	EM	A: 7.6 R: 1.55	Good	C: Good S: Good B: Good		**C.1** 10+ yrs
T13										Estimated Measurements	
Common Beech *Fagus sylvatica*	4	1	75	N 0.5 E 0.5 S 0.5 W 0.5	0 0 0 0	SM	A: 2.5 R: 0.89	Good	C: Good S: Good B: Good		**C.1** 10+ yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

Stems: Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

ERC: Estimated Remaining Contribution

Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
T14										Estimated Measurements	
Common Beech *Fagus sylvatica*	4	1	75	N 0.5 E 0.5 S 0.5 W 0.5	0 0 0 0	SM	A: 2.5 R: 0.89	Good	C: Good S: Good B: Good		**C.1** 10+ yrs
T15										Estimated Measurements	
Common Beech *Fagus sylvatica*	4	1	75	N 1 E 1 S 1 W 1	0 0 0 0	SM	A: 2.5 R: 0.89	Good	C: Good S: Good B: Good		**C.1** 10+ yrs
T16											
Common Hornbeam *Carpinus betulus*	6	1	170	N 2 E 2 S 2 W 2	1 1 1 1	SM	A: 13.1 R: 2.04	Good	C: Good S: Good B: Good		**C.1** 10+ yrs
T17										Estimated Measurements	
Common Hornbeam *Carpinus betulus*	5	2	110 (Eq)	N 0.5 E 0.5 S 0.5 W 0.5	2 2 2 2	SM	A: 5.4 R: 1.31	Good	C: Good S: Good B: Good	No access, dimensions estimated.	**C.1** 10+ yrs
T18											
Common Hornbeam *Carpinus betulus*	7	1	100	N 0.5 E 0.5 S 0.5 W 1	2 2 2 2	SM	A: 4.5 R: 1.19	Good	C: Good S: Good B: Good	Naturally suppressed crown due to adjacent off site group.	**C.1** 10+ yrs
T19											
Common Hornbeam *Carpinus betulus*	5	1	75	N 0 E 0 S 0 W 0.5	2 2 2 2	SM	A: 2.5 R: 0.89	Good	C: Good S: Good B: Good	Naturally suppressed crown due to adjacent off site group.	**C.1** 10+ yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

Stems: Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

ERC: Estimated Remaining Contribution

Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
T20											
Common Hornbeam *Carpinus betulus*	8	1	120	N 0.5 2 E 0 2 S 0.5 2 W 0.5 2		SM	A: 6.5 R: 1.43	Good	C: Good S: Good B: Good	Naturally suppressed crown due to adjacent off site group.	C.1 10+ yrs
T21											
Common Hornbeam *Carpinus betulus*	8	1	130	N 0.5 2 E 0 2 S 1 2 W 1 2		SM	A: 7.6 R: 1.55	Good	C: Good S: Good B: Good	Naturally suppressed crown due to adjacent off site group.	C.1 10+ yrs
T22											
Field Maple *Acer campestre*	4	1	75	N 0.5 1 E 0.5 1 S 0.5 1 W 0.5 1		SM	A: 2.5 R: 0.89	Good	C: Good S: Good B: Good		C.1 10+ yrs
T23											
Field Maple *Acer campestre*	4	1	75	N 0.5 1 E 0.5 1 S 0.5 1 W 0.5 1		SM	A: 2.5 R: 0.89	Good	C: Good S: Good B: Good		C.1 10+ yrs
T24										Estimated Measurements	
Common Ash *Fraxinus excelsior*	3	1	75	N 0.5 2 E 0.5 2 S 0.5 2 W 0.5 2		SM	A: 2.5 R: 0.89	Good	C: Good S: Good B: Good	Tree location plotted indicatively to GPS and site features. Off site tree intertwined with boundary fence.	C.1 10+ yrs
T25										Estimated Measurements	
Wild Cherry *Prunus avium*	5	2	168 (Eq)	N 2 2 E 2 2 S 2 2 W 2 2		SM	A: 12.7 R: 2.01	Good	C: Good S: Good B: Good	Tree location plotted indicatively to GPS and site features. Off site tree intertwined with boundary fence.	C.1 10+ yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

Stems: Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

ERC: Estimated Remaining Contribution

Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m^2) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
T26											
Field Maple *Acer campestre*	4	2	250 (Eq)	N 1.5 E 2 S 1.5 W 1.5	2 2 2 2	SM	A: 28.3 R: 3	Good	C: Good S: Good B: Good		**C.1** 10+ yrs
T27										Estimated Measurements	
Common Hazel *Corylus avellana*	4	5	168 (Eq)	N 2 E 2 S 2 W 1	1 1 1 1	SM	A: 12.7 R: 2.01	Good	C: Good S: Good B: Good		**C.1** 10+ yrs
T28										Estimated Measurements	
Wild Cherry *Prunus avium*	5	1	150	N 1 E 1 S 1 W 1	2 2 2 2	SM	A: 10.2 R: 1.8	Good	C: Good S: Good B: Good	Off site tree intertwined with boundary fence. Tree location plotted indicatively to GPS and site features.	**C.1** 10+ yrs
T29										Estimated Measurements	
Wild Cherry *Prunus avium*	5	1	150	N 1 E 1 S 0.5 W 1	2 2 2 2	SM	A: 10.2 R: 1.8	Good	C: Good S: Good B: Good	Naturally suppressed crown to south due to off site tree.	**C.1** 10+ yrs
T30										Estimated Measurements	
Wild Cherry *Prunus avium*	5	1	150	N 1 E 1 S 1 W 1	2 2 2 2	SM	A: 10.2 R: 1.8	Good	C: Good S: Good B: Good	Off site tree intertwined with boundary fence. Tree location plotted indicatively to GPS and site features.	**C.1** 10+ yrs
T31										Estimated Measurements	
Willow *Salix sp.*	0	5	168 (Eq)	N 3 E 2 S 3 W 3	0 0 0 0	SM	A: 12.7 R: 2.01	Good	C: Good S: Good B: Good	Tree location plotted indicatively to GPS and site features.	**C.1** 10+ yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

Stems: Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

ERC: Estimated Remaining Contribution

Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
T32											
Common Oak *Quercus robur*	5	1	160	N 3 E 3 S 3 W 3	2 2 2 2	SM	A: 11.6 R: 1.92	Good	C: Good S: Good B: Good		**C.1** 10+ yrs
T33											
Common Oak *Quercus robur*	5	1	120	N 1 E 0.5 S 1 W 1	1 1 1 1	SM	A: 6.5 R: 1.43	Good	C: Good S: Good B: Good		**C.1** 10+ yrs
T34											
Common Oak *Quercus robur*	5	1	120	N 0.5 E 0.5 S 0.5 W 0.5	1 1 1 1	SM	A: 6.5 R: 1.43	Good	C: Good S: Good B: Good		**C.1** 10+ yrs
T35											
Common Alder *Alnus glutinosa*	4	1	150	N 2 E 2 S 2 W 2	1 1 1 1	SM	A: 10.2 R: 1.8	Good	C: Good S: Good B: Good		**C.1** 10+ yrs
T36											
Common Hornbeam *Carpinus betulus*	6	1	120	N 0.5 E 0 S 0.5 W 1	2 2 2 2	SM	A: 6.5 R: 1.43	Good	C: Good S: Good B: Good	Naturally suppressed crown due to adjacent off site group.	**C.1** 10+ yrs
T37											
Common Hornbeam *Carpinus betulus*	6	1	150	N 0.5 E 0 S 0.5 W 1	2 2 2 2	SM	A: 10.2 R: 1.8	Good	C: Good S: Good B: Good	Naturally suppressed crown due to adjacent off site group.	**C.1** 10+ yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

Stems: Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

ERC: Estimated Remaining Contribution

Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
T38											
Common Hornbeam *Carpinus betulus*	6	1	150	N 0.5 2 E 0 2 S 0.5 2 W 1 2		SM	A: 10.2 R: 1.8	Good	C: Good S: Good B: Good	Naturally suppressed crown due to adjacent off site group.	C.1 10+ yrs
T39											
Goat Willow *Salix caprea*	7	3	539 (Eq)	N 6 3 E 6 3 S 6 3 W 3 3		M	A: 131.3 R: 6.46	Good	C: Good S: Good B: Fair	Tree growing on grass verge adjacent to boundary fence. Base c. 2 m above car park ground level. Included union at base, typical for species.	B.1 20+ yrs
T40											
Common Horse Chestnut *Aesculus hippocastanum*	3	1	90	N 0.5 2 E 0.5 2 S 0.5 2 W 0.5 2		SM	A: 3.7 R: 1.08	Good	C: Good S: Good B: Good		C.1 10+ yrs
T41											
Common Horse Chestnut *Aesculus hippocastanum*	3	1	70	N 0.5 2 E 0.5 2 S 0.5 2 W 0.5 2		SM	A: 2.2 R: 0.83	Good	C: Good S: Good B: Good		C.1 10+ yrs
T42											
Common Horse Chestnut *Aesculus hippocastanum*	3	1	90	N 0.5 2 E 0.5 2 S 0.5 2 W 0.5 2		SM	A: 3.7 R: 1.08	Good	C: Good S: Good B: Good		C.1 10+ yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

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



Tree Categories

Trees are categorised in accordance with the cascade chart in Table 1 of the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'

Category 'U' - Trees in such condition that they cannot realistically be retained as living trees in context of the current land use for longer than 10 years.
Category 'A' - Trees of high quality with an estimated remaining life expectancy of at least 40 years.
Category 'B' - Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
Category '- ' - Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.

Root Protection Area

In order to avoid damage to the roots or rooting environment of retained trees, the Root Protection Areas (RPAs) are plotted around each of the category A, B and trees. This is a minimum area in m² which should be left undisturbed around each retained tree.

The RPA is calculated using the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations.

The calculated RPA is capped to 707m², which is the equivalent to a circle with a radius of 15m. Where there appears to be restrictions to root growth the root protection area is reshaped to more accurately reflect the likely distribution of the roots.

Tree Survey Report

Please refer to Arbtech Consulting Ltd. Tree Survey Report and Tree Schedule for full details on all surveyed trees, hedges, woodlands and groups of trees/shrubs.

All trees were surveyed and categorised in accordance with the guidance as set out in the British Standard BS5837:2012 Tree in relation to design, demolition and construction - Recommendations.

We make the following recommendation to ensure that no conditions relating to arboriculture are attached to any planning consent secured:
Obtain and arboricultural report to include:
a) An arboricultural impact assessment (AIA).
b) An arboricultural method statement (AMS).
c) A tree protection plan (TPP).

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Project:
Ysgol I.D. Hooson,
Rhosllanerchrugog,
Wrexham,
LL14 2DS

Client:
Read Construction

Drawing:
Tree Constraints Plan

Based on:
PMS24188

Drawing No:	Rev:
Arbtech TCP 01	

Date:	Scale:	Drawn:
Dec 2024	1:300 @ A0	SR

Key:

Tree Nos.:	T01	Tree Canopies:		Trunks:	
RPAs:		Category 'U' trees:		Category 'B' trees:	
Category 'B' groups:		Category 'C' trees:		Category 'C' groups:	

All dimensions should be checked on site. No dimensions are to be scaled from this drawing. Please notify us of any discrepancies found. Arbtech Consulting Ltd. cannot be held responsible for inaccuracies in the base drawing in which this plan is based.
This drawing is designed to reflect the principles of the layout or design only, and relates only to the protection of retained trees.
This drawing is not to be read as a definitive part of the engineering or construction designs or method statement. An architect or structural engineer should be contacted over any matters of construction, detailing or specification and for any standards or regulatory requirements relating to proposed structures, hard surfacing or underground services.
This drawing was produced in colour - a monochrome copy should not be relied upon.

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8. Document Production Record

Document number	Editor	Signature	Position	Issue number	Date
Arbtech TSR 01	Shaun Rowe		Consultant Arboriculturist	01	18/12/24

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