

**TOWN AND COUNTRY  
PLANNING ACT 1990**

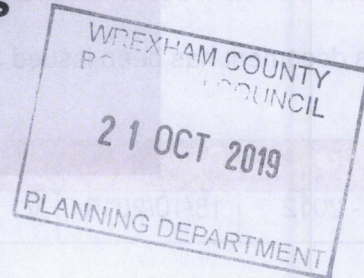
P2019/0792

**Land at Eaton Drive, Wrexham.**

**BS5837 Tree Survey &  
Arboricultural Impact**

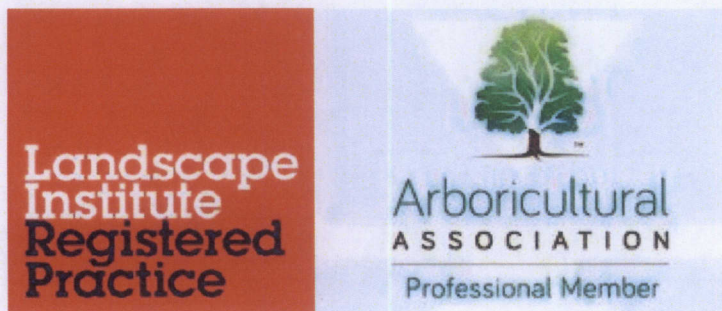
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**DATED: 18<sup>th</sup> October 2019**

**Version 1**

**Design Construction Management**

## Tree Report In Support of a Planning Application

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Tree Survey Plan

### DOCUMENT HISTORY

#### **BS5837: 2012 Trees in relation to design, demolition and construction. Recommendations**

This document has been issued and amended as follows:

Version	Date	Description	Created by	Verified by	Approved by
1.0 - 2012	18/10/2019	V1	PEJ	PEJ	D2

## **1.00 INTRODUCTION**

**1.01** My name is Peter Jackson. I am presently the Director of Design Construction Management Services; a Development Consultancy based in Stoke-on-Trent where we specialise solely in planning applications, landscape design, tree surveys, tree related planning applications, appeals and Public Inquiries. Prior to this I was Landscape Officer for Newcastle-under-Lyme Borough Council and Landscape Architect for RPS Landscape and Ecology Consultants in both Chester and Birmingham.

**1.02** I have a Bachelor of Arts Degree (with Honours) in Landscape Design and a Diploma in Landscape Architecture both from Manchester Metropolitan University (formerly Manchester Polytechnic). I became an Associate of the Landscape Institute in 1994 and a registered practice of the Landscape Institute in 2012. I have worked additionally as a consultant for 27 years.

**1.03** I am also a Professional member of the Arboricultural Association.

**1.04** The BS 5837 arboricultural consultancy aims to provide a comprehensive, efficient and cost effective service incorporating all aspects of arboriculture and planning. We provide a consultancy service on all tree related issues involving a planning application for the private sector. We are committed to providing specialist expertise in BS 5837 arboriculture to meet our clients' requirements and where appropriate we will liaise with other professionals to provide structural engineering solutions to obtain planning permission.

**1.05** We provide arboricultural advice to architects, planning consultants, developers and other professions associated with maximising land within a prospective development. Our surveyors are all Professional Members of the Arboricultural Association (M.Arbor.A) and therefore our reports are able to be given as proof of evidence in any appeal or Public Inquiry.

**1.06** We specialise in BS 5837 arboricultural consultancy, rather than conducting any tree surgery work. However we can provide schedules of work and recommend suitably competent and qualified tree surgeons that will carry out any work to a high standard for us.



## **2.00 BACKGROUND**

**2.01** I have been instructed by d2 Architects to comment upon 3 existing individual trees within a proposed development site and to provide a plan of protection if any trees to be retained according to the guidance laid out in BS5837: 2012 - Trees in relation to design, demolition and construction - Recommendations.

**2.02** Vegetation adjacent to the site will be in a Construction Exclusion Zone, and estimated measurements have been taken from the trees closest to the area of proposed development to form a cell that complies with the British Standard. Works to the trees may be specified, but this report does not confirm that Wrexham Borough Council has given any form of consent to undertake any works. No works should be undertaken to any trees on or adjacent to the site until the contractor has confirmed that full planning permission has been granted and the relevant conditions relating to retained trees, tree works, tree protection measures and levels have been discharged.

**2.03** The area contains a number of mature trees in an urban location and as the trees have formed a natural association each individual tree is not debated on an individual basis. The purpose of this report is only to examine in detail the effect of a proposed future development of the land on the existing vegetation during the construction of the proposed development.

**2.04** BS5837: 2012 gives recommendations and guidance on the principles to be applied to achieve a satisfactory juxtaposition of trees, including shrubs, hedges and hedgerows, with proposed structures. It follows, in sequence, the stages of planning and implementing the provisions, which are essential to allow development to be integrated with trees.

**2.05** The standard recognises that there can be problems with development close to existing trees which are to be retained, and of planting trees close to existing and new structures. The standard sets out to assist Local Planning Authorities (LPAs) to form balanced judgements. Where proposed 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 on the means of incorporating new trees into the developed landscape.

**2.06** Trees are a material consideration in the UK planning system and the British Standard is intended to provide consistency in decision-making with regard to existing and proposed trees in the context of design, demolition and construction. The standard therefore asks the local planning authority to consider the application in light of the following information.

Stage of process	Minimum detail	Additional information
Pre-application	Tree survey	Tree retention/removal plan (draft)
Planning application	Tree survey (in the absence of pre-application discussions) Tree retention/removal plan (finalized) Retained trees and RPAs shown on proposed layout Strategic hard and soft landscape design, including species and location of new tree planting Arboricultural Impact Assessment	Existing and proposed finished levels Tree Protection Plan Arboricultural method statement – heads of terms Details for all special engineering within the RPA and other relevant construction details
Reserved matters/ planning conditions	Alignment of utility apparatus (including drainage), where outside the RPA or where installed using a trenchless method Dimensioned tree protection plan Arboricultural method statement – Detailed Schedule of works to retained trees, e.g. access facilitation pruning Detailed hard and soft landscape design	Arboricultural site monitoring schedule Tree and landscape management plan Post-construction remedial works Landscape maintenance schedule

### **3.00 TERMS OF REFERENCE & INSTRUCTIONS**

**3.01** An application has been submitted to Wrexham Borough Council for a residential development. I am instructed to provide information on tree condition and make recommendations for good arboricultural practice for the suitability of the trees to be retained within and adjacent to a proposed residential redevelopment of the site.

**3.02** The study will identify, evaluate and possibly mitigate the extent of direct or indirect impacts on existing trees that may arise as a result of the implementation of the site layout proposal.

**3.03** The production of this arboricultural survey and report will comply with the following specification as set out in BS5837 2012 as follows: -

- a) sequential reference number (to be recorded on the tree survey plan);
- b) species listed by common name, with a key provided to scientific names;
- c) height;
- d) stem diameter
- e) branch spread, taken as a minimum at the four cardinal points, to derive an accurate representation of the crown (to be plotted on the tree survey plan);
- f) existing height above ground level of:
  - 1) first significant branch and direction of growth (e.g. 2.4-N);
  - 2) canopy,to inform on ground clearance, crown/stem ratio and shading;
- g) life stage (e.g. young, semi-mature, early mature, mature, over-mature);
- h) general observations, particularly of structural and/or physiological condition (e.g. the presence of any decay and physical defect), and/or preliminary management recommendations;
- i) estimated remaining contribution, in years (<10, 10+, 20+, 40+);
- j) category U or A to C grading to be recorded on the tree survey plan.

**3.04** The trees referred to in this report are living entities and are therefore subject to natural processes. They will also be subject to changes in their natural environment caused by human activities and weather conditions. Therefore we cannot wholly guarantee the safety of the trees commented upon beyond what can reasonably be assessed from the

procedure used. Trees have not been aerially inspected. We recommend regular inspections and advise on the frequency and type of inspection. We would recommend that re inspections be carried out within one year or within specific stipulated timescales indicated in the survey.

**3.05** No assessment has been made of soil conditions and the impact of soil conditions on tree cover/built environment. No assessment has been made for underground services, proposed or existing, unless otherwise stated. The contents of this report are valid for one year. This period of validity maybe reduced in case of any change in conditions to, or in proximity to, the trees.

**3.06** This report is for the sole use of the client and refers only to those trees referred to within; use by any other person(s) in attempting to use the contents for any other purpose renders the report invalid for that purpose. The report has been written in accordance with BS5837, which is designed to allow planning officers to agree the juxtaposition of new development to existing trees. It should not however be used to design proposed foundations, as trees outside of the scope of a planning application (commonly up to 15 metres from the site boundary), may influence foundation design, depending on species, up to 30 metres from the site. These trees are often in third party ownership and will not be included in this report.



## **4.00 DEFINITIONS**

### **4.01 Trees unsuitable for retention**

#### *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 a 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

Trees in this category will be shown Dark Red on the Tree Survey Plan.

### **4.02 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 dominant 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)

Trees in this category will be shown Light Green on the Tree Survey Plan.

#### *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 remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for 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

Trees in this category will be shown Mid Blue on the Tree Survey Plan.

#### *Category C*

Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm

- 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 benefits
- Trees with no material conservation or other cultural value

Trees in this category will be shown Grey on the Tree Survey Plan.

#### **4.03 Life stage**

Y – Young; Newly planted or early established tree less than 150mm

SM – Semi Mature; tree in first third of life expectancy

EM – Early mature; tree in second third of life expectancy

M – Mature; tree in final third of life expectancy

OM – Over Mature; tree in decline

#### **4.04 Physiological condition**

##### *Good*

- Those trees marked 'Good' can generally be classed as having good overall structural and physiological condition. Most usually specimens are in good/excellent condition. They generally have few and less significant arboricultural defects than those trees classed as 'B' or 'C'. Usually contribute significantly to the local or site amenity.

##### *Fair*

- Those trees marked 'Fair' can generally be classed as having reasonable structural and physiological condition. They may contain smaller areas of included bark within either major or minor fork junctions. They may be subject to single or multiple fungal invasions, bacterial or virus. In the case of fungal invasion or bacteria the Latin name of the species has been stated. They may be subject to minor crown dieback, unusually pale or smaller foliage or have been subjected to outside influences such as restriction of rooting spread, vandalism or mechanical damage, but should be viewed as in generally fair overall condition.

##### *Poor*

- Those trees marked 'Poor' can generally be classed as having poor overall structural or physiological condition. They may contain large areas of included bark either within major for junctions. They may be subject to single or multiple

fungal invasions, bacteria or virus. In the case of fungal invasion or bacteria the Latin name has been stated. They may contain splits or cracks throughout the branching structure. They may be subject to significant crown dieback or exhibit unusually pale or small foliage. They may be subject to outside influences such as restriction of rooting spread, vandalism or mechanical damage and costly to retain.

#### *Dead*

- Those trees marked 'Dead' have no visible foliage, brown cell structure under young bark.


#### **4.05 Use of categorisation**


The purpose of the tree categorisation method which has been applied by the surveyor, is to identify the quality and value of the existing tree stock, allowing informed decisions to be made concerning which trees should be removed or retained should development occur.


For a tree to qualify under any given category it should fall within the scope of the category's definition (U, A, B, C) and, for a tree in categories A – C, it should qualify under one or more of the three subcategories.

In the categories A, B, C, which together deal with trees that should be a material consideration in the development process, the subcategories are intended to reflect arboricultural, landscape and cultural values respectively. Category U trees are those which would be lost in the short term for reasons connected with their physiological or structural condition. For this reason, they should not be a consideration in the planning process.

**5.00 INDIVIDUAL ARBORICULTURAL SURVEY SHEETS**

Tree/Group Reference	No. on Plan	Species	Height in m	Branch Spread in m	Lowest significant first branch in m	Stem diameter at 1.5m in mm	Age Class	Physiological and Structural Condition and Comments	Preliminary Management Recommendations	Estimated remaining contribution Years	Retention Key	Protective fence distance in m from stem
5.1	T1	Fastigate Cherry	12	N=4 E=4 S=4 W=4	2	400	OM	<ul style="list-style-type: none"> <li>Poor overall condition</li> <li>Low amenity value</li> </ul>	<ul style="list-style-type: none"> <li>Fell to allow development</li> </ul>	10-20	C	N/A
												
<p><b>Additional Comments</b></p> <ul style="list-style-type: none"> <li>This tree is in poor condition and will need to be removed to allow the development.</li> <li>This tree does not merit retention due to the fact that it does not attain categorization of class A or B.</li> <li>Category C trees will usually not be retained where they would impose a significant constraint on development;</li> <li>This tree will not form a constraint to the site as it is intended that it will be removed prior to the commencement of development.</li> </ul>												

Tree/Group Reference	No. on Plan	Species	Height in m	Branch Spread in m	Lowest significant first branch in m	Stem diameter at 1.5m in mm	Age Class	Physiological and Structural Condition and Comments	Preliminary Management Recommendations	Estimated remaining contribution Years	Retention Key	Protective fence distance in m from stem
5.2	T2	Fastigate Cherry	12	N=4 E=4 S=4 W=4	2	400	OM	<ul style="list-style-type: none"> <li>Poor overall condition</li> <li>Low amenity value</li> </ul>	<ul style="list-style-type: none"> <li>Fell to allow development</li> </ul>	10-20	C	N/A
 <p><b>Additional Comments</b></p> <ul style="list-style-type: none"> <li>This tree is in poor condition and will need to be removed to allow the development.</li> <li>This tree does not merit retention due to the fact that it does not attain categorization of class A or B.</li> <li>Category C trees will usually not be retained where they would impose a significant constraint on development;</li> <li>This tree will not form a constraint to the site as it is intended that it will be removed prior to the commencement of development.</li> </ul>												

Tree/Group Reference No. on Plan	Species	Height in m	Branch Spread in m	Lowest significant first branch in m	Stem diameter at 1.5m in mm	Age Class	Physiological and Structural Condition and Comments	Preliminary Management Recommendations	Estimated remaining contribution Years	Retention Key	Protective fence distance in m from stem
5.3	T3	12	N=6 E=6 S=6 W=6	2	600	M	<ul style="list-style-type: none"> <li>Poor overall condition</li> <li>Low amenity value</li> <li>Stem damage</li> </ul>	<ul style="list-style-type: none"> <li>Fell to allow development</li> </ul>	10-20	C	N/A
 <p><b>Additional Comments</b></p> <ul style="list-style-type: none"> <li>This tree is in poor condition and will need to be removed to allow the development.</li> <li>This tree does not merit retention due to the fact that it does not attain categorization of class A or B.</li> <li>Category C trees will usually not be retained where they would impose a significant constraint on development;</li> <li>This tree will not form a constraint to the site as it is intended that it will be removed prior to the commencement of development.</li> </ul>											

# Tree Survey Plan

BS5837 \ Land at Eaton Drive Wrexham

Tree ID	Species	DBH (cm)	Height (m)	Health	Notes
1	Ash	15	5	U	
2	S				
3	E				
4	H				
5	U				
6	U				
7	U				
8	U				
9	U				
10	U				
11	U				
12	U				
13	U				
14	U				
15	U				
16	U				
17	U				
18	U				
19	U				
20	U				
21	U				
22	U				
23	U				
24	U				
25	U				
26	U				
27	U				
28	U				
29	U				
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31	U				
32	U				
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39	U				
40	U				
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92	U				
93	U				
94	U				
95	U				
96	U				
97	U				
98	U				
99	U				
100	U				



**ESL GROUP**

**ASH ROAD SOUTH,  
WREXHAM**

**GROUND INVESTIGATION REPORT**

**Contract: 42370**

**Date: October 2019**

Ian Farmer Associates (1998) Limited  
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EST GROUP

ASH ROAD SOUTH  
WEXHAM

GROUNDWATER MONITORING REPORT

Contact: 41370

Date: October 2019

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