

Site Tree Appraisal

8 Meadow Bank, Chorlton-Cum-Hardy, Manchester M21 8FP

“BS 5837 2012: Trees in Relation to Design, Demolition and Construction – Recommendations”



ROWBOTTOM'S TREE SERVICES LTD

INDEPENDENT ARBORICULTURAL CONSULTANCY

Date: 2nd January 2023

Ref: RTS/02012023

Revision: 001

Head Office: Cheddleton Lodge, West Road, Prestwich, Manchester, M25 3FB.

T: 0161 773 2788

E: bill@rowbottoms-tree-services.co.uk

Web: www.rowbottoms.co.uk

Company Reg No: 4862189

VAT No 184 3636 88

8 Meadow Bank, Chorlton-Cum-Hardy, Manchester M21 8FP:

The following is a pre-development survey and appraisal of trees on and adjacent to the above site.

Its primary purpose being to categorize the trees according to BS 5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations, so that the Local Planning Authority may review the existing trees in association with the proposed development.

The report and associated plans have been produced for the sole purpose: - to accompany the above planning submission.

Table of Contents

	Page
1. INTRODUCTION	4
2. SITE SURVEY AND OBSERVATIONS	5
3. APPRAISAL	6
4. CONCLUSIONS	7
5. RECOMMENDATIONS	8
6. BIBLIOGRAPHY	9

Appendices

1. Qualifications and Experience	10
2. Trees and Construction Sites – General Issues	11
3. Tree Data	12
4. Explanatory Notes	13
5. Tree Schedule	14
6. Tree Quality Assessment and Categorization Criterion	16
7. Site Photographs	18

1. Introduction:

1.1 This tree survey has been commissioned by Mrs Naomi Smith.

1.2 I have undertaken this tree survey following the guidance and recommendations of; 'BS 5837: 2012 Trees in Relation to Design, Demolition and Construction-Recommendations'.

1.3 **Instruction:** I am instructed by Material Studio Architects to inspect the significant trees on and adjacent to the site that may be affected by the proposed rear extension and landscape works to the property and to provide an arboricultural report to accompany a planning application. The relevant tree information that has been noted and prepared to accompany the planning application is;

- A schedule of the significant trees on and adjacent to the site, to include basic data and an assessment of their condition, (see appendix 3).
- An appraisal of the impact that the proposed development may have on the trees and as a result, the visual amenity of the locale.
- An initial arboricultural method statement (AMS) setting out basic protective requirements and management needs of the trees, if they are to be retained, and tree works required to facilitate the proposed development.

1.4 **Documents and information provided:** Material Studio Architects provided me with the following documents:

- *Site Location and Block Plan dwg file*
- *Proposed Ground and First Floor Plan LP2216_2_200*
- *Proposed Rear and Side Elevations LP2216_2_301*

1.5 **Qualification and experience:** I have based this report on my site observations and the provided information, and I have come to conclusions in light of my experience. I have experience and qualifications in arboriculture and list the details in appendix 1.

1.6 **Report scope and limitations:** Construction work often exerts undesirable pressures on existing trees, as do changes in their environment following construction (see appendix 2). This report has been prepared to analyse the impact that the proposed development may have to the existing site trees. It further advises on protective requirements and appropriate management needs of the trees, should they be retained on the site. The primary purpose of the report is to provide sufficient tree information to allow the Local Planning Authority to review any tree issues associated with the development proposal.

1.6.1 It should be noted that this report takes no account of indirect structural damage that may arise to buildings as a result of tree induced soil volume changes. Such damage can occur to buildings built on shrinkable clay sub-soils and will be more prevalent during prolonged drought conditions. Also, buildings built on shrinkable soils following tree removal can suffer heave affects as the soil rehydrates. These issues should be addressed during the design of the proposed rear extension (*National House Building Council-NHBC 2011-part 4.2 building near trees*). Also, this report does not take into account damage to drains and underground services that may be due to tree root activity. If damaged, drains can allow roots to penetrate them. If, however, they are in good repair tree roots have little capacity to access them. A drainage expert could give more advice.

2. Site visit and observations:

2.1 Site visit: I carried out an unaccompanied site visit on 2nd January 2023. All my observations were from ground level without detailed investigations and I estimated all dimensions unless otherwise indicated. The weather at the time of inspection was clear and dry with good visibility.

2.2 Brief site description: 8 Meadow Bank is a two-storey semi-detached house in the Chorlton Ville area of Greater Manchester. There is a small garden to the front of the property with off road parking for one vehicle (photo 01). The rear garden is slightly larger and consists of predominantly lawn and paved areas, with shrub and tree growth along the west and north garden boundaries. A single detached garage is located in the south west corner of the rear garden.

2.2.1 Site Aspect and Topography:

- The house front is south east facing.
- The site is broadly level with no significantly raised features.

2.2.2 Preliminary Geological Information:

Soil Texture:	Sandy loam
Soil pH:	Acid
Drainage:	Naturally wet with high water table
Fertility:	Very low
Carbon:	Medium
Drains to:	Shallow Groundwater

(Land Information Systems, 2023)

2.2.3: Tree Protection Status: I have been informed by Mrs Smith that one tree in the rear garden (T2) is protected by a Tree Preservation Order (TPO). The property is in the Chorlton Ville Conservation Area.

2.3 Identification and location of the trees: The locations of the significant trees are illustrated on the Tree Constraints Plan *RTS/02012023/TCP 001* included with this report. All the relevant information on the trees is contained within this report and the provided documents listed in 1.4 above.

2.4 Tree observations: The trees were not climbed; I visually inspected the significant trees from ground level in accordance with visual tree assessment (VTA) techniques and recorded the information on the schedule included at appendix 5. The assessment has been to a level one of the TRAQ assessment criteria.

2.5 Overview of the trees and other vegetation: There are 9 significant trees in the rear garden, together with insignificant general garden shrubs and invasive bamboo.

3 APPRAISAL:

3.1 Relevant references: ‘BS 5837:2012 Trees in Relation to Design, Demolition and Construction-Recommendations’.

3.2 Arboricultural Impact Assessment (AIA): The proposal is to demolish the existing detached garage, construct a single storey extension to the rear elevation of the property, undertake internal renovations and landscape the rear garden. At this stage I have not been made aware of the need to alter or install new underground drains or other utility services.

3.3 No trees will need to be removed to facilitate the proposed extension to the rear of the house and there will be no foundation overlap into a tree root protection area (RPA). Demolition of the detached garage and landscaping of the rear garden, however, will require removal of all the trees in the rear garden.

3.4 All the trees in the rear garden are relatively small and of poor to only fair quality, many being covered with ivy climber and most having been topped (photo 02). Also, given its location (butted up to the existing boundary fence and behind the garage), it is somewhat surprising that the sycamore T2 is purported to have TPO status (photo 03). Its long-term visual amenity in this location is anticipated to be limited, irrespective of the proposed garden landscaping. There is also a need to thoroughly dig out all the roots of the invasive bamboo plants. Given that one bamboo is close to sycamore T2, removing it will undoubtedly damage the tree roots (photo 04).

3.5 Leyland Cypress tree (T1) belongs to the neighbouring property. I was informed by Mrs Smith that, a couple of years ago under Conservation Area Legislation, the Local Authority expressed no objection to its removal. If that is the case and the notification consent is still valid, I would recommend that the tree owner proceeds with the tree removal. If too long a time has lapsed and the consent is no longer in date, I would recommend that re-notification of an intention to remove it be sent. For the purposes of this planning project, however, simply pruning back the foliage that overhangs the rear garden of 8 Meadow Bank will suffice, as is noted in the Recommendations, section 5 of the report. The proposed landscaping works within the RPA of T1 is not expected to damage the under lying tree roots.

Proposed Tree Removal

Category	Total	Tree Tag / Number
Cat A		
Cat B		
Cat C	8	T2, T3, T4, T5, T6, T7, T8 & T9
Cat U		

4 CONCLUSIONS:

- 4.1** Although the proposal is to remove all the trees in the rear garden to facilitate the landscape works, such clear felling is not expected to negatively impact the visual amenity of the area. Only trees: T1, T2 and T3 are slightly visible from the public street and then only from a limited vantage point (photo 01). The longevity of these three trees in this location is also expected to be limited due to their high growth potential and small garden space available for their establishment.
- 4.2 Other Considerations:** Trees by their very nature have structures that allow bats to shelter or roost in them, more so with moribund and decayed trees. All species of bats are protected by the Wildlife and Countryside Act 1981 (as amended), the Conservation (Natural Habitats) regulations 1994 and the Countryside Act and Rights of Way Act 2000. Also, it is an offence to disturb or destroy nesting birds. Appropriate ecological assessments should be undertaken to avoid contravention of the above.

5 RECOMMENDATIONS:
Arboricultural Method Statement (AMS);

- 5.1** Prior to any other activity on the site the following arboricultural works should be undertaken.

Table 1 Tree works:

Tree	Tree Work	Priority
T2, T3, T4, T5, T6, T7, T8 and T9; together with all other minor garden shrubs and bamboo.	Fell to ground level and dig out the remaining stumps.	Prior to any other site works
T1	Trim the foliage overhang at the southeast side of the crown, back to the boundary fence line.	Prior to any other site works

- 5.1.1** All the recommended tree works should be of a standard that is in accordance with BS 3998:2010 Tree Work-Recommendations. All the arboricultural work on this site should be undertaken by an arboricultural contractor who is able to comply with the above BS standard. The arboricultural contractor should hold public liability insurance to a minimum of £5 million and employer's liability insurance as required by law. The arboricultural contractor should be able to show competency by means of relevant certification and health and safety policy. Suitable arboricultural contractors can be sourced from the Arboricultural Association approved contractor list or the Local Planning Authority occasionally has lists of competent contractors. Rowbottom's Tree Services Ltd (arboricultural consultancy) cannot accept any liability where the prescribed work is not carried out in a correct and professional manner in accordance with current good practice.
- 5.1.2** The advised tree works within this report are recommended in order to facilitate the proposed garage demolition, extension works to the property and garden landscaping. None of these tree works should be undertaken until there has been full approval from the Local Planning Authority.
- 5.2** After the above tree works have been completed garage demolition and project construction works may proceed.
- 5.3** Fires on the site should be avoided if possible. Where they are unavoidable, they should not be lit in a position where heat could affect tree foliage or branches of the neighbouring trees. The potential size of a fire and wind direction should be taken into account when determining its location and it should be attended at all times until safe enough to leave.

6 BIBLIOGRAPHY

6.1 BS 5837:2012 Trees in Relation to Design, Demolition and Construction - Recommendations



Mr W. J. Rowbottom. HN Dip ARB

M. Arbor. A

Copyright: All rights to this report are reserved. It may only be used by the addresses for the purpose described in point 1.6 above. No part may be reproduced or transmitted in any form, or by any means, electronic, mechanical, by photocopying, recording or otherwise, or stored in any retrieval system of any nature, without the written consent of Rowbottom's Tree Services Ltd. Until all fees rendered by the consultant to the client have been paid in full, the copyright of any documents, forms, statements, maps, plans and other such material will remain vested in Rowbottom's Tree Services Ltd. No unauthorised use of such material may be made by the client, or any other person purporting to be acting on their behalf. It may not be sold, lent, hired out or divulged to any third party not directly involved with this site without the written consent of Rowbottom's Tree Services Ltd.

Appendix 1

Brief qualifications and experience of Mr W. J. Rowbottom.

1. Qualifications:

- Tree surgery craft certificate 1992
- BTEC Higher National Diploma in Arboriculture 2000 (HN Dip Arb).

2. International Society of Arboriculture (ISA):

- Tree Risk Assessment Qualification (TRAQ).
This is a systematic qualification of risks that may be posed by trees within their existing site setting over a given time frame.

3. Continuing professional development: Professional member of the Arboricultural Association.
M Arbor A. Professional member of the Consulting Arborist Society (CAS).

4. Experience: Managed an arboricultural contracting company for 20 years. Practiced arboricultural consultancy since 2010.

Appendix 2

Trees and Construction Sites – General Issues

Trees that have good health and stability are well adapted to their surroundings. Any demolition or construction activity which affects the adaptation of trees to the site could be detrimental to their health, future growth and safety. Trees tend to become less tolerant of change after they have reached maturity or have suffered previous damage or physiological stress. Site design and subsequent management, therefore, should aim to minimize the effect of change.

The part of a tree most susceptible to damage on a construction site is the root system, which, because it is not immediately visible, is frequently ignored. Within a short distance of the trunk, the roots become highly branched, so as to form a network of small diameter woody roots, which can extend radially for a distance much greater than the canopy spread of the tree, except where impeded by unfavourable soil conditions. The growth and development of all roots is influenced by the availability of water, nutrients, oxygen and the penetrability of the soil. Given favourable conditions, the tree's root system tends to develop sufficient volume to provide physical stability for the tree. Typically, however, around 80% of a tree root system is concentrated in the upper 600mm of the soil profile. Due to this relatively shallow depth, the threat to a tree root system on a development site can arise from:

- Root severance or fracture during excavation works
- Compaction of the soil structure, which restricts moisture percolation through the soil profile and gaseous exchange between the surface air and soil atmosphere. Soil compaction can occur as a result of driving heavy plant machinery over the soil surface, repetitive pedestrian footfall and storage of building materials.
- Water logging due to land grade changes
- Toxic contamination due to chemical runoff from construction activities.

Damage to the tree trunk and branches can also occur on development sites if appropriate distances between tree and construction work is not maintained. Such damage, however, is not usually sufficient to kill a tree directly, but can make it unsafe by affecting the dynamics and growth of the tree, or by initiating long term decay. Such damage can also be disfiguring. The attachment of notice boards and cables etc. can all damage trees, as can the use of tree trunks as a winch anchor.

Damage to a tree on a construction site may not at first be noticeably obvious, the full effect of such damage usually taking 3 or 4 years to become evident, at which time the tree may die and/or become unsafe. A tree that has taken decades to reach maturity can be damaged irreparably in a few minutes by actions that might be unwitting, negligent or wilful. The early provision of physical protection of the tree from damage is therefore critical.

Appendix 3

Tree Data (Explanations of):

The data collected and recorded on each tree reflects the recommendations provided in section 4.4.2 of BS 5837:2012 Trees in Relation to Design, Demolition and Construction-recommendations.

Tree number: T (individual tree), G (group of stems or several trees planted together or self-seeded), S (stump of a tree that has been cut at or close to ground level), SH (shrub masses).

Species: Common tree name; *specific name recorded in italics*.

Height: Approximate height of the tree to the nearest metre.

DBH: Stem diameter (recorded in millimetres) measured in accordance with Annex C of the BS 5837:2012.

Crown Spread: A record (to the nearest half metre) of the radial distances between the tree trunk and the end of the further most branches, in the direction of the four cardinal compass points.

Height to Lowest Branch: This parameter estimates the lowest point of the crown above the ground. Minor and dead branches are ignored.

Age: Estimated maturity of the tree; Moribund (at the point of death), Mature (last one third of life expectancy), Early mature (one third to two thirds life expectancy), Young (at less than one third of life expectancy).

Condition: An assessment of tree physiological condition. Good (high vigour and strong growth), fair (average vigour and growth), Poor (low vigour and declining growth).

Category Rating: An assessment to identify the quality and value (in non-fiscal terms) of the existing tree stock, allowing informed decisions to be made concerning which trees should be removed or retained in the event of a development occurring, (for categorisation criterion see appendix 6).

Observations and Comments: A preliminary observation of the tree's physiological condition, structural form and its suitability to the existing site setting. Basic tree management advice may be recommended.

Appendix 4

Explanatory notes

AIA:	Arboricultural Impact Assessment; an assessment that evaluates the effects that the proposed design may have on the existing site trees and any constraints that the trees pose to the design, and where necessary recommend mitigation measures.
AMS:	Arboricultural Method Statement.
CEZ:	Construction Exclusion Zone; a fenced off area around a tree or group of trees that should remain undisturbed and free from demolition and construction activity.
Crown:	The structural part of the tree above ground level that consists of branches, twigs and foliage.
Included Bark:	Bark that remains (trapped) between branch and trunk or co-dominant stems. Has potential to be a structurally weak union.
Measurements:	All dimensions are estimated unless otherwise indicated. Measurements taken with a tape or clinometer are indicated with a *. Less reliable estimated dimensions are indicated with a ‘?’.
RPA:	Root Protection Area; The minimum area around a tree deemed to contain sufficient roots and soil volume to maintain the tree’s viability, and where the protection of roots and soil structure is treated as a priority. The RPA increases with tree size and is calculated from a measurement of the trunk diameter.
Species:	The tree species identification is based on visual identification. The common English name of what the tree appeared to be is listed first followed by the botanical name in <i>italics</i> . In some instances, it may be difficult to quickly and accurately identify a particular tree without further detailed investigation. Where there is some doubt as to the precise species of the tree, the genus is followed by the abbreviation spp; in order to avoid delay in the production of the report. The species listed for groups and hedges represent the main component and there may be other minor species not listed.
TRAQ:	Tree Risk Assessment Qualification. A tree risk qualification methodology; Level one; is a basic visual assessment of an individual tree or a population of trees near to targets of concern, conducted from a specified perspective, to identify obvious defects or specified conditions. Only defects visible from the perspective from which the assessment is made are expected to be identified.
VTA:	Visual Tree Assessment; a non-invasive method of examining the health and structural condition of individual trees, as advised by Mattheck (1993) and Hazard Evaluation by Matheny and Clark (1993). Guidance is also taken from Lonsdale (1999) Principles of Tree Hazard Assessment and Management.

Appendix 5
Tree Schedule

Tree No	Species	Height (M) * Crown Height above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M) Direction of Lowest Branch	Age Range	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
T1	Leyland Cypress <i>X Cupressocyparis leylandii</i>	<u>10.0</u> 2.0	450	N – 3.5 S – 4.0 E – 2.0 W – 3.0	<u>2.0</u> N	Mature	Fair	5.4	91	C1	Neighbour's tree; it has been topped in the past
T2	Sycamore <i>Acer pseudoplatanus</i>	<u>13.0</u> 9.0	390	N – 3.0 S – 2.5 E – 3.0 W – 3.0	<u>9.0</u> N	Early Mature	Fair	4.6	66	C1	The tree is located close to and between the existing two garages; the trunk base and buttress roots are in contact with the boundary fencing.
T3	Cherry <i>Prunus avium</i>	<u>5.0</u> 3.5	270	N – 2.0 S – 4.0 E – 3.0 W – 2.0	<u>2.0</u> N	Early Mature	Fair	3.2	32	C1	Slight crown asymmetry; There is a decay wound to the lower east side of the trunk less than 1 metre above ground level.
T4	Sycamore <i>Acer pseudoplatanus</i>	<u>3.5</u> 2.0	185	N – 4.5 S – 2.5 E – 2.0 W – 2.0	<u>2.5</u> N	Early mature	Poor	2.2	15	C1	Topped tree with ivy climber ascending the trunk
T5	Silver Birch <i>Betula pendula</i>	<u>5.0</u> 4.0	160	N – 1.0 S – 1.5 E – 1.0 W – 2.0	<u>4.0</u> N	Early Mature	Poor	1.9	11	C1	Topped tree with ivy climber ascending the trunk
T6	Sycamore <i>Acer pseudoplatanus</i>	<u>5.0</u> 2.5	170	N – 3.0 S – 3.0 E – 2.5 W – 2.0	<u>2.5</u> W	Early Mature	Poore	2.0	12	C1	Topped tree with ivy climber ascending the trunk

Tree No	Species	Height (M) * Crown Height above GL	DBH (mm) *	Crown Spread (M) *	Height to Lowest Branch (M) Direction of Lowest Branch	Age Range	Condition	RPA Radius (M)	RPA Square metres	BS 5837 Category Rating	Observations and Comments
T7	Silver Birch <i>Betula pendula</i>	<u>7.0</u> 5.0	150	N – 2.0 S – 1.5 E – 2.0 W – 3.0	<u>5.0</u> E	Early Mature	Poor	1.8	10	C1	Topped tree with ivy climber ascending the trunk
T8	Beech <i>Fagus sylvatica</i>	<u>5.0</u> 2.5	110	N – 1.0 S – 2.5 E – 1.0 W – 1.0	<u>2.5</u> S	Early Mature	Poor	1.3	5.0	C1	Topped tree
T9	Beech <i>Fagus sylvatica</i>	<u>6.0</u> 2.0	170	N – 1.5 S – 3.0 E – 3.0 W – 2.0	<u>1.8</u> E	Early Mature	Poor	2.0	12	C1	Topped tree

Appendix 6

Tree Quality Assessment and Categorization Criterion

Identification on the plan

Category U: Trees unsuitable for retention;

Trees which are 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. These trees, however, can have existing or potential conservation value. They could, therefore, be up graded from a U category if issues concerning their safety can be appropriately managed.

Dark Red

Trees to be considered for retention;

Category A: trees of high quality

Have an estimated remaining life expectancy of at least 40 years.

Light Green

Category B: Trees of moderate quality

Have an estimated remaining life expectancy of at least 20 years.

Mid Blue

Category C: Trees of low quality.

Have an estimated life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.

Grey

For a tree to qualify under any given category, it should fall within the scope of that categories definition (U, A, B, C).

Trees in categories A to C should then qualify under one or more of three subcategories (1, 2, and 3). The subcategories 1, 2 and 3 are intended to reflect arboricultural and landscape qualities, and cultural values, respectively. These definitions are described below:

Arboricultural Qualities:**Sub-Category A1:**

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).

Sub-Category B1: Trees that might be included in category A, but have been 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 beyond 40 years; or trees lacking the special quality necessary to merit the category A designation.

Sub-Category C1: Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.

Landscape Qualities:

Sub-Category A2: Trees, groups or woodlands of particular visual importance as arboricultural and / or landscape features.

Sub-Category B2: 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.

Sub-Category C2: 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 benefits.

Cultural Values:

Sub-Category A3: Trees or woodlands of significant conservation, historical, commercial or other value (e.g., veteran trees or woodland pasture).

Sub-Category B3: Trees with material conservation or other cultural value.

Sub-category C3: Trees with no material conservation or other cultural value.

Photo 01:



Photo 02:



Photo 03:



Photo 04:

