

Site Tree Appraisal
48 Wilton Road, Crumpsall M8 4EL

‘BS 5837 2012: Trees in Relation to Design, Demolition and Construction – Recommendations’



ROWBOTTOM'S TREE SERVICES LTD
INDEPENDENT ARBORICULTURAL CONSULTANCY

Date:	8 th April 2022
Ref:	RTS/08042022
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

48 Wilton Road, Crumpsall M8 4EL:

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 satisfy condition 8 of Manchester City Council planning consent 129161/FH/2021.

Table of Contents

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

Appendices

1. Qualifications and Experience	9
2. Trees and Construction Sites – General Issues	10
3. Tree Data	11
4. Explanatory Notes	12
5. Tree Schedule	13
6. Tree Quality Assessment and Categorization Criterion	14
7. Site Photographs	16

1. Introduction:

1.1 This tree survey has been commissioned by Mr Aslam of 48 Wilton Road, Crumpsall.

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 Mr Aslam to inspect the significant trees adjacent to his garden that may be affected by the proposed extension works to the property and to provide an arboricultural report to satisfy condition 8 of planning consent 129161/FH/2021. The relevant tree information that has been noted and prepared to accompany the planning application is;

- A schedule of the significant trees on the Metro-Link land 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 house extension 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 to be retained and any tree works that may be required to facilitate the proposed property extension.

1.4 **Documents and information provided:** Mr Aslam provided me with the following documents:

- *Manchester City Council Planning Consent 129161/FH2021*
- *Site Location and Block Plan*
- *ZA-PP-04 04/01/2021 Existing and Proposed Block plan*
- *ZA-PP-03 04/01/21 Proposed Front Elevation and Cellar Plan*
- *ZA-PP-05 Proposed Rear and Proposed Side Elevations*

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 extension works 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 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 8th April 2022. 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 dry and clear with good visibility.

2.2 Brief site description: 48 and 50 Wilton Road are a pair of semi-detached two storey properties with cellars. The rear gardens are all paved hardstanding, but there is a small lawn area to the rear of number 50. The front gardens are a combination of hardstanding tarmacadam and paving, there are no trees or significant shrub masses in either the front or rear gardens of the properties. The main Metro-Link tram line runs along the west boundary of number 48.

2.2.1 Site Aspect and Topography:

- The front of the properties are north facing.
- The gardens are relatively level from Wilton Road to the rear of the house, with only a gentle downwards slope. From here (at the rear of number 48) brick-built steps descend for approximately 1.2 metres to a paved patio area. From the 4.4-metre-wide patio there is then a further step down of 0.6 metres to the main paved garden area below, (see photo 01).

2.2.2 Preliminary Geological Information:

Soil Texture:	Loamy Clay
Soil pH:	Acid
Drainage:	Impeded Drainage
Fertility:	Low
Carbon:	Medium
Drains to:	Stream Network

(Land Information Systems, 2022)

2.3 Identification and location of the trees: The locations of the significant trees are illustrated on the Tree Protection Plan *RTS/08042022/TPP 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.

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 construct a two storey and cellar extension to the rear of properties 48 and 50 Wilton Road. 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** There will be no requirement to excavate for the placement of building foundations within the calculated root protection area (RPA) of any of the trees on the Metro-Link embankment (adjacent to the property). The RPA of all of the adjacent trees remain located within the grounds of the Metro-Link embankment, except the RPA of T6. T6 RPA does slightly overlap into the rear garden area of 48 Wilton Road; however, the RPA overlap here is sufficiently distant from the proposed building works that no foundation excavation will be required within it. Also, given the substantial existing boundary wall, it is unlikely that roots from any of the adjacent trees will have grown under the wall foundations into the ‘unfavourable’ soil conditions beneath the paved area of the rear garden.
- 3.4** There will be no requirement to remove any of the trees to facilitate the extension works to the property. Also, given that the ground level of the Metro-Link embankment lies at approximately the same level as that of the lower garden area of 48 Wilton Road, as long as an appropriate foundation design is drawn up, soil erosion of the Metro-Link embankment as a result of the extension proposal is not anticipated.
- 3.5** All the adjacent trees are relatively small, either young or early mature. Their branch structures, therefore, do not overhang the boundary wall and remain confined to within the Metro-Link land (photo 02). There will be no requirement to prune any of the trees in order to facilitate the proposed extension works. Due to the trees’ isolated locations from the build area and the existing presence of the brick boundary wall, there will be no requirement to erect temporary protective fencing in order to avoid accidental damage to the trees during the build process.

4 CONCLUSIONS:

- 4.1** No tree works will be required to facilitate the proposed extension works to the properties, therefore, there is to be no arboricultural facilitation works that could affect the visual amenity of the locale. The close location of the trees to the proposed property extension will mean that future branch growth will need to be undertaken to avoid branch contact with the building fabric. However, given the location of the existing building to the trees, future pruning would need to be undertaken irrespective of the proposed property extension. The Metro-Link are aware of this requirement and already undertake a cyclic regime of tree pruning to abate nuisance in any case.

5 BIBLIOGRAPHY

5.1 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	Sycamore <i>Acer pseudoplatanus</i>	<u>10.0</u> 5.0	160	N – 2.0 S – 1.5 E – 1.0 W – 2.0	<u>5.0</u> N	Early Mature	Good	1.9	11.3	C1	Self-seeded sapling tree beyond the boundary wall on the Metro-link embankment
T2	Sycamore <i>Acer pseudoplatanus</i>	<u>10.0</u> 4.0	150	N – 2.0 S – 1.0 E – 1.0 W – 1.0	<u>4.0</u> E	Early Mature	Good	1.8	10.0	C1	Self-seeded sapling tree beyond the boundary wall on the Metro-link embankment
T3	Sycamore <i>Acer pseudoplatanus</i>	7.0 3.0	70	N – 0.5 S – 1.0 E – 0.5 W – 0.5	<u>3.0</u> S	Young	Good	0.85	2.2	C1	Self-seeded sapling tree beyond the boundary wall on the Metro-link embankment
T4	Sycamore <i>Acer pseudoplatanus</i>	<u>9.0</u> 2.5	160	N – 1.5 S – 3.0 E – 2.0 W – 1.0	<u>2.0</u> S	Early Mature	Good	1.9	11.3	C1	Self-seeded sapling tree beyond the boundary wall on the Metro-link embankment. Honey-suckle climber ascending the trunk
T5	Ash <i>Fraxinus excelsior</i>	<u>12.0</u> 3.0	250	N – 4.0 S – 3.0 E – 4.0 W – 4.0	<u>3.5</u> W	Early Mature	Fair	3.0	28	C1	Self-seeded sapling tree 4.5 metres beyond the boundary wall on the Metro-link embankment
T6	Sycamore <i>Acer pseudoplatanus</i>	<u>10.0</u> 2.0	200	N – 3.0 S – 3.0 E – 2.0 W – 4.0	<u>2.0</u> S	Early Mature	Fair	2.4	18	C1	Self-seeded sapling tree beyond the boundary wall on the Metro-link embankment. Honey-suckle climber ascending the trunk

Appendix 6

Tree Quality Assessment and Categorization Criterion

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.

Trees to be considered for retention;

Category A: trees of high quality

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

Category B: Trees of moderate quality

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

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.

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:

Identification on the plan

Dark Red

Light Green

Mid Blue

Grey

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.

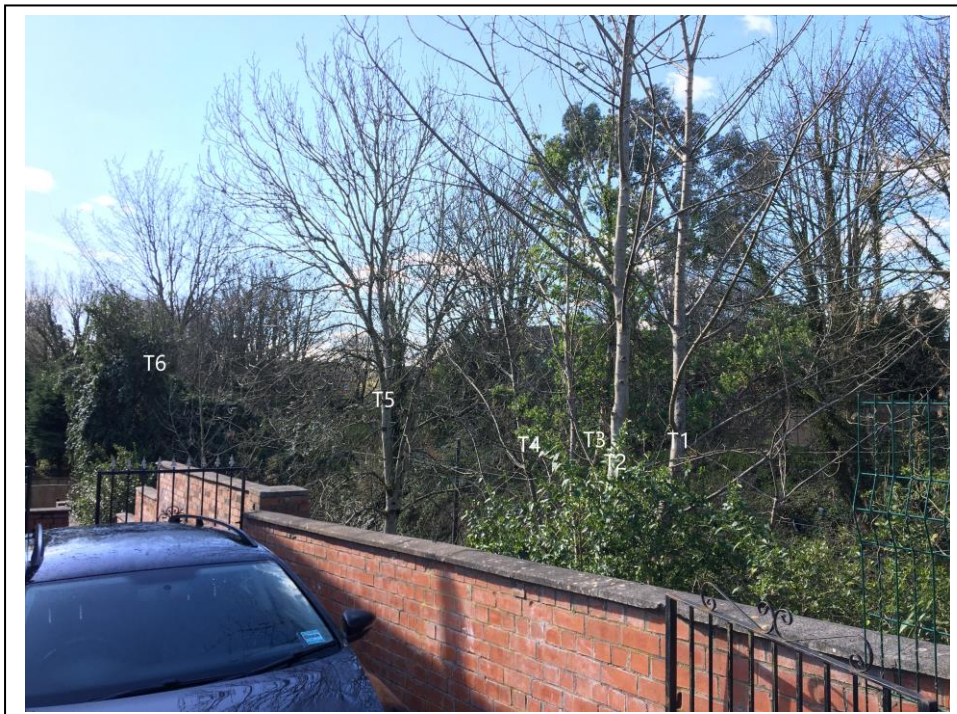
Appendix 7:

Site Photos

Photo 01:



Photo 02:



No tree branches overhang the existing boundary wall