



**Arboricultural Impact Assessment
54 Norden Road
Rochdale**

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2 July 2022

Table of Contents

1	Introduction	3
1.1	Instruction and Brief	3
1.2	Site Visit	4
1.3	Site Description	4
1.4	Tree Status	5
1.5	Soil Assessment	5
2	Tree Quality Assessment	5
3	Arboricultural Implications Assessment	6
3.2	Trees to be removed to accommodate the proposal	6
3.3	Trees to be removed for Arboricultural Management Reasons	7
3.4	Below Ground Constraints	7
3.5	Above Ground Constraints	8
3.6	Alterations to Ground Levels	8
3.7	Tree Protection	8
3.8	Material Storage	8
3.9	Services	8
3.10	Landscaping	9
4	Conclusions	9
5	Appendices	
	Appendix 1 - Explanation of Survey Details	
	Appendix 2 - Cascade Chart for Tree Quality Assessment (BS5837 table 1)	
	Appendix 3 - Tree Survey Schedule	
	Appendix 4i & 4ii - Tree Constraint Plans	

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Prepared For:
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1 Introduction

1.1 Instruction and Brief

1.1.1 Tree Care Consultancy was commissioned by Northern Design Partnership to prepare an Arboricultural Survey and Impact Assessment to accompany a planning application for the proposed development at the site. The report produced includes the following information:

- A tree survey (appendix 3), undertaken in accordance with British Standard 5837:2012 'Trees in relation to design, demolition and construction' - Recommendations
- Tree Constraints Plans (appendix 4i and 4ii) which highlight the potential development limitations trees pose on site
- An Arboricultural Impact Assessment which evaluates any potential impact the proposal may have on surrounding trees.

1.1.2 This report is based on site observations and information provided. Conclusions have been made in light of the surveyor's experience and qualifications. A list of experience and qualifications in arboriculture are detailed below.

1.1.3 This report is only concerned with trees in relation to construction. This report makes no attempt to provide a full safety inspection of the trees surveyed. It should not be seen as an alternative for a Tree Hazard Assessment which is specific to minimising the risk and liability associated with trees.

1.1.4 Climatic conditions including storms, drought and temperature-related factors can cause damage and failure in apparently healthy trees. It should be remembered that all trees do pose a risk and whilst every effort has been made to detect any major defects in inspected trees, no guarantee can be given as to their safety. Although the risk should be managed to an acceptable level, no tree can be guaranteed as safe at all times.

1.1.5 This report is based on Visual Tree Assessment (VTA) methodology, as devised by Mattheck (1991). V.T.A is a ground level visual assessment of a tree, which is carried out to identify obvious mechanical defects, signs of ill health, potential mechanical failure and the suitability of a tree to a site. The survey is compiled in accordance with British Standard 5837:2012 'Trees in relation to design, demolition and construction' - Recommendations with Root Protection Areas (RPA's) based upon section 4.6 of the document.

1.2 Site Visit

- 1.2.1 An arboricultural survey was undertaken by Joe Hardaker on the 20 June 2022. Joe holds a National Diploma in Forestry and Arboriculture, a Foundation degree in Arboriculture with Urban Forestry and has recently also undergone a top up program to progress his academic qualifications into a bachelor's degree, where he achieved 1st class honors in Applied Horticulture. In addition to academic studies, Joe has worked in practical areas of Arboriculture gaining over 11 years' experience in the field. Stephen Waterson the author of this report was also present for the duration of the survey.
- 1.2.2 On the day of the survey the weather conditions were dry and still with no visibility constraints.
- 1.2.3 Measurements were estimated where access could not be gained. No climbing inspections or decay detection analysis was undertaken.
- 1.2.1 Details explaining the criteria and methodology used in generating the tree survey schedule is included at Appendix 1 and 2. Trees were graded using table 1 of BS5837. The resulting tree survey data results are included within the tree survey schedule at Appendix 3.
- 1.2.2 This survey should be read in conjunction with the Tree Constraint Plans (TCP) (located at appendix 4i and 4ii) which have been prepared by overlaying tree survey data onto site survey and site layout drawings. The author has relied on the accuracy of these drawings in the production of this report.

1.3 Site Description

- 1.3.1 The property consists of a two storey dwelling, attached garage and a separate detached double garage standing forward of the host dwelling. The property is served from Norden Road by means of an existing driveway. The surrounding land use is characterized by residential property to the east of Norden Road and agricultural land to the west of Norden Road.
- 1.3.2 With the exception of T1, trees within the property are predominantly positioned towards the site boundaries with 2No. items occupying offsite locations.
- 1.3.3 Tree cover within the immediate neighbourhood is moderate in terms of numbers and species mix, being defined by the prevailing land use and topography. The material present appears to be weighted towards trees of a mature age.

1.4 Tree Status

- 1.4.1 The property is not located within a Conservation Area, though certain trees within the property are understood to be subject of Tree Preservation Order (TPO) controls. In the case of trees that are subject of TPO, Conservation Area controls or planning application procedures it is essential the Local Authority's advice is sought and where necessary consent obtained prior to undertaking any tree removal or pruning operations.

1.5 Soil Assessment

- 1.5.1 No soil testing was undertaken and no soil information was provided for the author. However from studying the British Geological Survey 'Geology of Britain Viewer' the underlying geology is recorded as; Pennine Lower Coal Measures Formation - Mudstone, siltstone and sandstone.
- 1.5.2 With reference to soil information on Canfield University, 'Soilscapes Viewer' which details the information of the National Soils Resources Institute, identifies the superficial layer as, slowly permeable seasonally wet acid loamy and clayey soils.
- 1.5.3 The precise soil type could only be confirmed with further soil investigation/analysis though it is assumed that the potential for the sub soil to consist of a highly shrinkable clay to be low.

2 Tree Quality Assessment

- 2.1.1 As highlighted in table 1 below, the tree survey included no retention category "A" or "U" items. Of the 8No. trees detailed there are 3No. retention category "B" items and 5No. category "C" items.

Table 1:

Category	Category Description	Tree Numbers
'A'	Trees of high quality, with life expectancy in excess of 40 years	Not applicable
'B'	Trees of moderate quality, with life expectancy in excess of 20 years	T1, T2, T4
'C'	Trees of low quality with life expectancy in excess of 10 years or young trees	T3, T5, T6, T7, T8
'U'	Seriously defective trees that cannot be retained in present context for longer than 10 years	Not applicable
Total number of trees:		8No. individual trees.

- 2.1.2 The on-site moderate category "B" trees T1 and T2 are well formed amenity items, with T1 standing in a prominent position near to the property frontage and offering value to the local setting. T2 is a less dominant tree than its near neighbouring Ash T3. Were it not for the presence of structural defects and Ash Dieback (*Hymenoscyphus fraxinea*) this tree too would have also achieved a category "B".
- 2.1.3 The low-quality category 'C' items within the site are considered less significant items and should the need arise any of these items are readily replaceable within normal arboricultural management protocols or within the context of the proposed development.
- 2.1.4 Generally, the Local Planning Authority is likely to accept the removal of trees in a poor condition or those with a minimal, safe, useful life expectancy. This usually includes category 'U' and 'C' trees. This presumption is also viewed reasonable where it accords with accepted arboricultural objectives.

3 Arboricultural Implications Assessment

- 3.1.1 The following section evaluates the proposed layout in relation to trees within influencing distance of the proposed development. Any tree and design conflicts are highlighted, and possible remedial action recommended. The assessment is based on the surveyor's findings and the proposed plans and information provided by Northern Design Partnership.
- 3.1.2 The proposal seeks to extend the original building on 3 sides.

Table 2:

Tree categories A, B, C & U	Trees to be retained and protected	Trees to be removed for development	Trees to be removed for arboricultural management reasons
'A'	Nil	Nil	Nil
'B'	T1, T2, T4	Nil	Nil
'C'	T5, T7, T8		T3, T6
'U'	Nil	Nil	Nil

3.2 Trees to be removed to accommodate the proposal

- 3.2.1 As demonstrated in Table 2 above, no tree removal will be required for development reasons alone, though it is accepted that had the category 'C' (low quality) Ash (T3) not contracted Ash Dieback (*Hymenoscyphus fraxinea*) removal might have constituted a development loss on the basis the northern most extension would have impacted this trees RPA. In terms of the recommended removal of this tree, scope exists to adequately replace this tree with new tree planting towards the boundary fence between trees T2 and T4.

3.3 Trees to be removed for Arboricultural Management Reasons

- 3.3.1 As detailed above T3 is considered to be a justifiable Arboricultural Management loss on the grounds of infection with Ash Dieback (*Hymenoscyphus fraxinea*). Similarly the category "C" Ash T6 is shown to be removed having again contracted the disease.

3.4 Below Ground Constraints

- 3.4.1 The area of roots that need to be protected around a tree to try to ensure it does not suffer damage during the construction process is called the Root Protection Area (RPA).
- 3.4.2 As recommended in BS5837 we have plotted the RPAs (in magenta) onto the attached Tree Constraints Plans (TCP) taking full account of the surrounding topographical factors, tree condition and the likely root disposition.
- 3.4.3 As previously mentioned, the proposal would have encroached upon the RPA of a low-quality Ash tree, T3. However this tree is recommended for removal on arboricultural management grounds irrespective of the proposed development and as such should not control development.
- 3.4.4 It will be noted the footprint of the proposed extension will theoretically require a minor incursion within or stand close to the RPA's of retained moderate category "B" trees T1 and T2. Additionally 2No. parking spaces will encroach within the RPA's of low quality category "C" Cypress trees T7 and T8.
- 3.4.5 Dealing firstly with Sycamore T1 the degree of encroachment will be approximately 1%, a proportion of which is already overlaid by hard surfacing where rooting volume is likely to be much reduced. As such construction of the extension foundations is unlikely to cause any demonstrable harm to the health and longer term viability of this tree.
- 3.4.1 Turning to the Lime T2 the degree of encroachment will be approximately 0.5%. Taking account of the strong growing condition of the specimen (and the markedly improved growing conditions this tree will derive from the removal of Ash T3) the tree will readily overcome any minor impacts associated with construction activities close to its RPA provided appropriate tree protection measures are adopted within an Arboricultural Method Statement controlled by planning condition. As such construction of the extension foundations is unlikely to cause any demonstrable harm to the health and longer term viability of this tree.
- 3.4.1 1no. car parking space is proposed within the RPA of 2No. low quality category "C" Cypress trees T7 and T8. In order to limit disturbance to the rooting volume of these retained trees the incorporation of a "minimal dig methodology geogrid system" will provide scope to sustain both trees. It is presumed this is a matter the Local Planning Authority would be agreeable to conditioning as part of a detailed planning permission.

3.5 Above Ground Constraints

- 3.5.1 Crown lifting of T1 is required to allow for unhindered vehicular movement within the site during the period of construction. A crown lift of 4m will provide the desired clearance.
- 3.5.2 The off-site Maple T5 is beginning to encroach upon the existing building and will need drawing back to facilitate scaffolding access in order to construct the extension. Drawing back of the crown by approximately 1.5m will provide adequate clearance.
- 3.5.3 With the exception of the off-site Maple T5 which will require periodic pruning to abate a nuisance retained trees can be expected to grow to their overall dimensions subject to routine crown lifting and cleaning maintenance. Such pruning works would be carried out in accordance with BS3998:2010 recommendations for tree work.

3.6 Alterations to Ground Levels

- 3.6.1 A rise or reduction in soil level can have major implications on the longevity and health of trees. Minor changes (up to 100mm) can be tolerated in some cases but is heavily dependent on tree species, condition and growing environment. There is no requirement for alterations to ground levels within the prescribed RPA's of retained trees.

3.7 Tree Protection

- 3.7.1 A protective fence will be erected prior to the commencement of any site works e.g. before any materials are brought on site. The fence will have signs attached to it stating that this is a Construction Exclusion Zone (CEZ) and that NO WORKS are permitted within the CEZ. The protective fence may only be removed following completion of all construction works.
- 3.7.2 The positioning and implementation of protection can be effectively controlled by imposition of a suitably worded planning condition.

3.8 Material Storage

- 3.8.1 No material storage or plant movement will be required within the Construction Exclusion Zone of retained trees.

3.9 Services

- 3.9.1 No new services or soak-a-ways are to be sited or constructed within the RPA of any tree; the existing drainage and services will be used eliminating the requirement for trenching work.

- 3.9.2 Should it become necessary to excavate within the prescribed RPAs of surrounding trees these must be installed using techniques and methods described at section 4.1 of the current edition of the National Joint Utilities Group (NJUG) Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (www.njug.org.uk) or if this is not practicable, trenches are to be opened by compressed air excavation tools and not mechanically dug. Before any excavation within the highlighted RPAs commences, advice should be sought from either the project Arboriculturist or the local authority tree officer.

3.10 Landscaping

- 3.10.1 The proposed development provides opportunities for replacement planting with sufficient space available to house medium and larger sized tree species. It is presumed this is a matter the Local Planning Authority would be agreeable to conditioning as part of a detailed planning permission.

4 Conclusions

- 4.1.1 The design intention is to safeguard wherever reasonably practicable the health and longer term viability of retained tree cover and the value it affords to the property and local landscape.
- 4.1.2 As demonstrated accepting the loss of a 2No. low-quality Ash trees the proposal can safely retain existing tree cover whilst controlling the planting of replacement trees.
- 4.1.3 The protection of trees and their subsequent health and future potential is totally dependent upon all persons operating within the site. Communications are vitally important to ensure that all parties understand the reason for tree protection and its continued existence. Providing all necessary tree protection works are undertaken as required by a planning condition on any approval notice, retained trees and development alike will satisfactorily coexist.
- 4.1.4 It is hoped that this report and recommendations provides all necessary information, however, should there be any queries, or should clarification of any points be required, please contact the report author.

5 Appendices

Appendix 1 - Explanation of Survey Details

Tree Id- Each tree/group has been given a unique number, which coincides with the drawings located in appendix 3.

Species & botanical name- where identifiable the full botanical name has been given. Where a cultivar, variety or species cannot be accurately given the genus name only will be given.

Height (m)- measured approximately to the nearest 1m. If height issues are critical, measurements can be collected accurately using optical instruments.

No of stems- the number of separate stems each individual tree has.

Stem Dia @1.5m (mm)- the diameter of the given tree at 1.5m above soil level, (on sloping ground taken on the up-slope side of the tree base). Where the tree is multi-stemmed measurements will be record for each stem.

Spread- indicates the crown radius from the base of tree in four compass directions, recorded to the nearest metre.

Crown height + direction (m)- recorded as the first significant branch and direction of growth.

Life stage- described as young, semi-mature, early-mature, mature or over-mature.

Physiological condition (P)- an assessment of the tree's health. Considers vitality, die back and the presence of disease. Described as Good = no significant health problems Fair = symptoms of ill health that can be remediated Poor = significant ill health.

Structural condition (S)- an assessment of the trees structural condition. Described as Good = no significant defects Fair = significant defects that can be remediated Poor = significant defects no remedy.

Observations – negative and positive- narrative comments on general condition, significant defects and overall appearance (e.g. the presence of any decay).

Preliminary management recommendations- e.g. requires pruning or further investigation of suspected defects is needed.

Life expectancy- preliminary management recommendations, e.g. requires pruning or further investigation of suspected defects is needed.

Retention Category- Each tree/group is identified with a retention category in accordance with BS5837 (an in-depth explanation is provided on the following page)

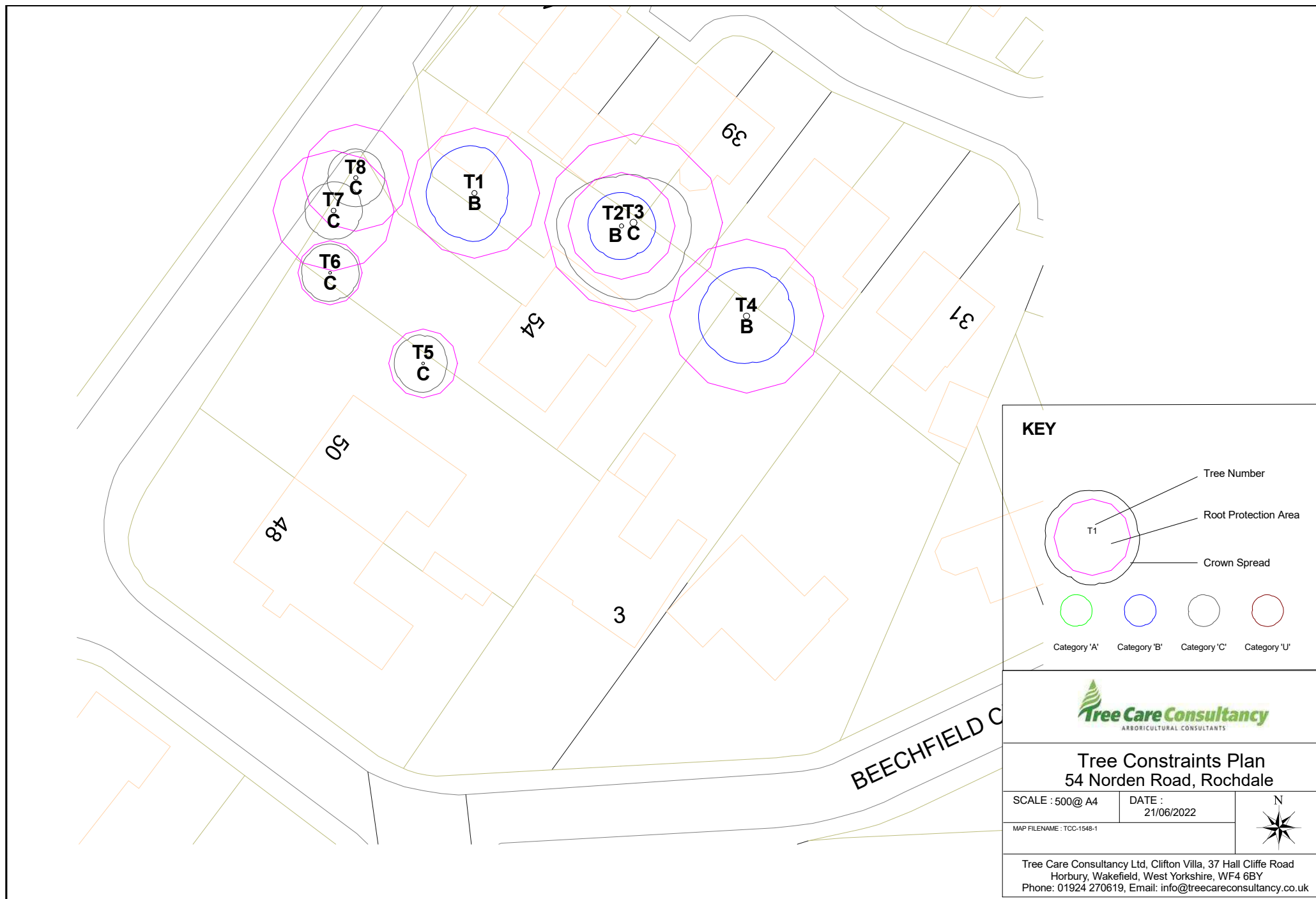
RPA radius (m)- minimum area in metres which should be left undisturbed around each retained tree.

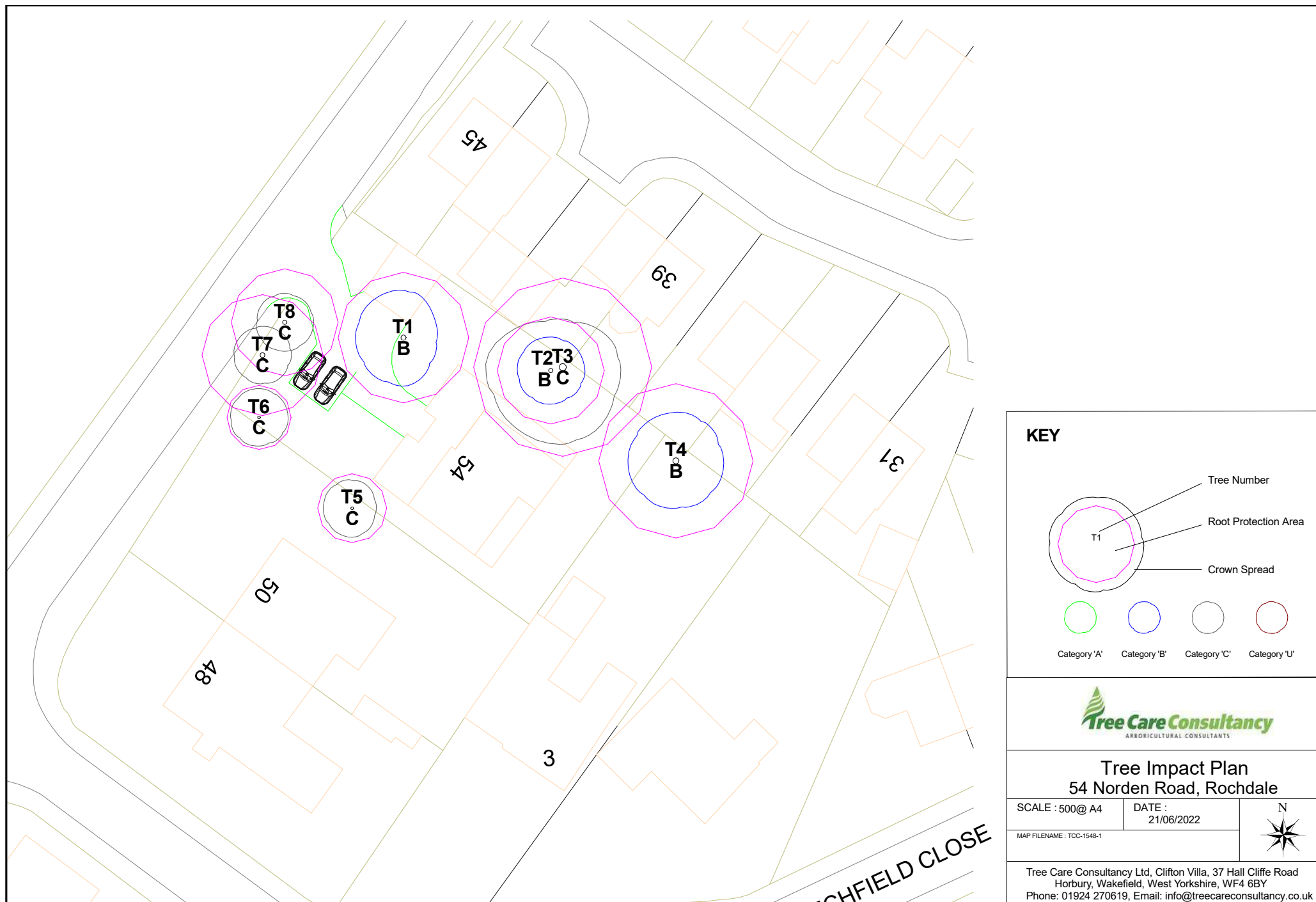
Appendix 2 - Cascade Chart for Tree Quality Assessment (Extract from BS5837 table 1)

Category and definition	Criteria (including subcategories where appropriate)			Identification on Plan
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 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 it might be desirable to preserve			DARK RED
TREES TO BE CONSIDERED FOR RETENTION				
Category and definition	Criteria – Subcategories			Identification on Plan
	1 Mainly arboricultural values	2 Mainly landscape values	3 Mainly cultural values, including conservation	
Category A Trees of a 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 essential components of groups, or of 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)	LIGHT GREEN
Category B Those 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 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 Those of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm	Unremarkable trees of a 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 landscape value; and/or trees offering low or only temporary/transient screening benefits	Trees with no material conservation or other cultural values	GREY

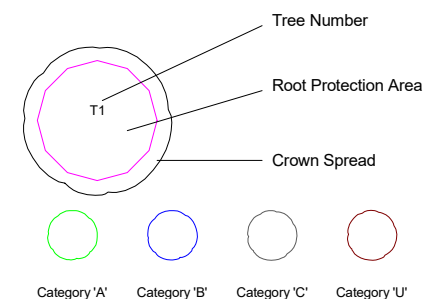
Appendix 3- Tree Survey Schedule

Tree ID	Species, Botanical Name	Height (m)	No of stems	Stem@ 1.5M (mm)	Spread - N, E, S, W				Crown height+ direction (m)	Life stage	Physiological (P) and Structural (S) condition. Observations- negative and positive	Recommendations	Life expectancy	Retention category	RPA Radius (m)
T1	Sycamore, <i>Acer pseudoplatanus</i>	13	1	550	5	4	5	5	3w	Mature	P= Fair, S= Good. Well formed mature item. Existing hard surfacing overlies substantial area of the trees RPA. Minor deadwood present in crown. The tree will require a minor crown lift to 4m to facilitate access during construction phase.	Retain tree and crown lift to 4m.	20 to 40 yrs	B2	6.6
T2	Common Lime, <i>Tilia europaea</i>	13	1	450	3.5	4	4	4	2ar	Mature	P= Good, S= Good. Well formed item located beneath larger more dominant Ash T3. Will effectively mitigate for recommended removal of neighbouring T3. Epicormic growth is present to base. Minor deadwood due to squirrel damage.	Retain tree, no work required.	20 to 40 yrs	B2	5.4
T3	Common Ash, <i>Fraxinus excelsior</i>	19	1	750	5	6	8	8	4s	Mature	P= Poor, S= Fair. Dominant single stemmed to 3.5m becoming codominant thereafter. Appears to have been heavily topped to 8m in the distant past, with resulting major cavities/pockets of decay evident. Minor deadwood, apical thinning and Ash Dieback (<i>Hymenoscyphus fraxinea</i>) is present. Embrittlement of crown will increasingly compromise public safety and the owners duty of care. Removal will aid development of neighbouring Lime T2 and offset the minor encroachment within the trees RPA.	Remove tree and replace within development context with 1No. Silver Birch - <i>Betula pendula</i> at standard variety size (8-10cm girth) mid way between T2 and T4.	10 to 20 yrs	C2	9
T4	Common Lime, <i>Tilia europaea</i>	18	1	650	5	5	5	5	4ar	Mature	P= Good, S= Good. Large mature off site tree. All measurements estimated due to restricted access.	Retain tree, no work required.	20 to 40 yrs	B2	7.8
T5	Norway Maple, <i>Acer platanooides</i> 'Purpurea'	8	1	290	3	3	3	3	2w	Semi-mature	P= Good, S= Good. Off site establishing tree with crown encroaching towards existing property.	Retain tree and draw back north-eastern quadrant of crown by maximum of 1.5m to suitable growing points.	10 to 20 yrs	C2	3.5
T6	Common Ash, <i>Fraxinus excelsior</i>	8	1	270	3	3	3	3	3n	Semi-mature	P= Fair, S= Fair. Single stemmed to 3.5m before becoming codominant. Minor pruning wounds, snags and Ash Dieback (<i>Hymenoscyphus fraxinea</i>) is again evident.	Remove tree and replace within development context with 1No. Silver Birch - <i>Betula pendula</i> at standard variety size (8-10cm girth) within 2m of felled tree.	10 to 20 yrs	C2	3.2
T7	Lawson Cypress, <i>Chamaecyparis lawsoniana</i>	7	3	320, 300, 260	3	3	3	3	0ar	Mature	P= Fair, S= Good. Growing close to boundary wall with which it will ultimately conflict. Topped in the past.	Retain tree, no work required at this stage.	10 to 20 yrs	C2	6.2
T8	Lawson Cypress, <i>Chamaecyparis lawsoniana</i> 'Castlewellan Gold'	7	1	450	3	3	3	3	0ar	Mature	P= Fair, S= Good. Previously topped item, possibly to limit conflict with neighbouring street light.	Retain tree, no work required.	10 to 20 yrs	C2	5.4





KEY



Tree Impact Plan 54 Norden Road, Rochdale

SCALE : 500@ A4

DATE :
21/06/2022

MAP FILENAME : TCC-1548-1



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