

Site:

Pudding Hill, Park View, Brierley, Barnsley

Client:

Yorkshire Housing Ltd c/o
Acanthus Architects
Woodhall
Woodhall Lane
Leeds
West Yorkshire
LS28 5NY

Date:

25th November 2012

Reference:

BA3857

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1 INTRODUCTION

- 1.1 **Summary:** The trees on site offer separation between the site and the neighbouring properties to the north and west. Due to their location and visibility from both neighbouring land and public domain the trees as a the group have a relatively high amenity value.
- 1.1.1 The trees do not represent an abnormal risk to site users and their retention will help improve screening and the overall amenity of the local area. However, it should be noted that this group is not sustainable in its current form. The group has developed with limited space and generally on site too many trees are growing in a limited space. This is expected to result in localised decline and lead to the formation of poor quality trees that do not have sufficient rooting volume to attain maturity.
- 1.1.2 A breakdown of the tree categories on site shows the 12 trees to have a predominately landscape value, with the majority of trees being categorized as 'C' trees. A single tree is in a poor state and categorised 'U', with the remaining 2 trees being categorized as being 'B' category trees.
- 1.1.3 The retained trees will need to be considered as part of the site design and protected from the potentially negative effects of construction. In general, trees can be readily protected through a combination of protective fencing, ground protection, and the adoption of building materials and techniques that will sustain normal growth, all of which can be detailed in an Impact Assessment or Method Statement.
- 1.2 **Objective:** To assess the condition of the trees located close to the proposed development site. To provide sufficient information to enable a decision on the trees value, management and protection during the proposed development.
- 1.3 **Surveyor:** My name is Ian Barnes; I am an Arboricultural Association Registered Consultant, a Chartered Environmentalist, and Fellow of the Arboricultural Association and an International Society of Arboriculture Certified Arborist and Professional member of the Consulting Arborist Society.
- 1.4 **Qualifications and experience:** I have based this report on my site observations and the provided information; I have come to conclusions in the light of my experience.
- 1.5 **Weather Conditions:** The weather was clear and cold, visibility was good, however

an assessment of the ground was not possible due to a covering of snow.

- 1.6 **Documents and information provided:** I have been provided with a digital site plan of the existing site layout and the proposed site changes, which form the basis of the tree survey and my site plans.
- 1.7 **Scope of this report:** This report is principally concerned with the current condition of the trees and their retention value in relation to the redevelopment of the site. The trees have been assessed in line with the guidelines outlined in British Standard BS5837:2012 'Trees in relation to design, demolition & construction - Recommendations'. In addition, site safety is also considered and remedial recommendations are based upon current site safety.
- 1.7.1 The statements made in this report do not take account of the effects of extremes of climate, vandalism or accident, whether physical, chemical or fire. Barnes & Associates cannot therefore accept any liability in connection with these factors, nor where prescribed work is not carried out in a correct and professional manner in accordance with current good practice. The authority of this report ceases at any stated time limit within it, or if none stated after two years from the date of the survey or when any site conditions change, or pruning or other works unspecified in the report are carried out to, or affecting, the Subject Tree(s), whichever is the sooner.

2 TREE SURVEY

- 2.1 **The Terms of Reference:** This report has been based upon a brief Visual Tree Assessment (VTA) methodology, as devised by Mattheck (1993) in addition to Hazard Evaluation devised by Matheny & Clark (1993). Guidance is also taken from Lonsdale (1999) *Principles of Tree Hazard Assessment and Management*. The format of the survey follows the guidelines of British Standard 5837:2012 'Trees in relation to design, demolition & construction - Recommendations'.
- 2.2 **Date of Assessment:** 25th January 2013
- 2.3 **Brief site description:** The site appears to have been maintained as an informal green space on the entrance to the nearby estate for many years. Though based on the number of seedling tree species visible towards the boundaries it would appear that management has been limited, the area being progressively losing space to the advancing woody vegetation.
- 2.4 **Boundaries:** The site is separated from neighbouring land by fencing, a section of wall which is obscured by climbers and low level shrubs, which are in a poor state.
- 2.5 **Soil Observations:** To assess the soil type, I drilled three trial holes using a manually operated soil auger. These showed the soils to be highly disturbed with signs of stone and building debris.
- 2.5.1 To further understand the soils I referred to the soil information on Canfield University, "Soilscapes Viewer" <http://www.landis.org.uk/soilscapes/> which details the information of the National Soils Resources Institute, which refers to the site being on the boundary between two soil types '**A Freely draining slightly acid loamy soil**' and a '**Slowly permeable seasonally wet acid loamy and clayey soil**'.
- 2.5.2 The soils sampled have a reasonably high sand & stone content (inert material) therefore; I have assumed the soils shrinkage potential is low. The soils are likely to re-wet reasonably quickly in light of the inert material. However, a persistent deficit within the soil could establish close to vegetation.
- 2.5.3 These soils are likely to withstand compaction and disturbance reasonably well, although this should be avoided within the Root Protection Areas of retained trees.

2.6 **Amenity Value:** The trees on site form a valuable screen that provides separation from the wider landscape and the neighbouring sites.

2.6.1 The trees combine with the intergral hedges and understorey shrubs and seedling trees which help provide continuity of tree cover within the wider area to give them value in terms of the group rather than as individual trees.

2.6.2 Any value should be viewed as short useful life as a competition between the trees is likely to result in a decline. To achieve a long term value the site will require management and additional tree planting.

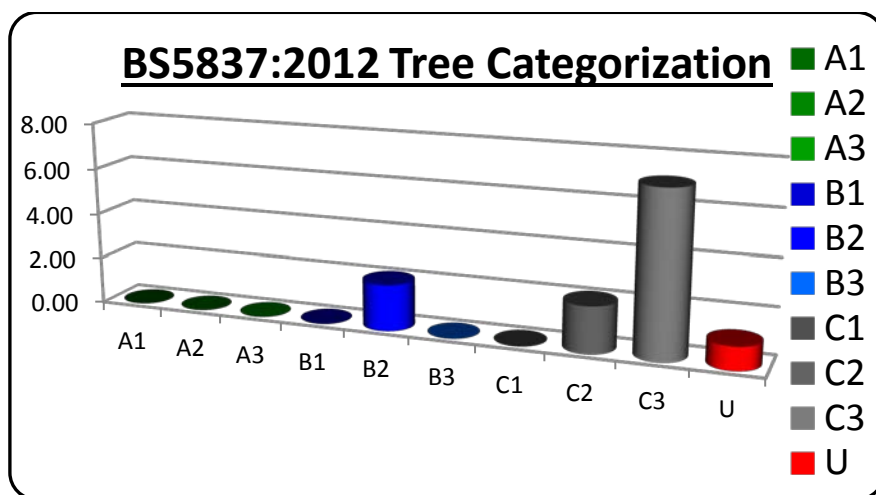
2.7 **Tree Categorization.** To help understand the value of the trees both on the site and in relation to the wider area the trees have been assessed in line with the guidelines in BS5837:2012 section 4.5 Tree categorization method. Which suggest that, trees should be categorized using the criteria shown in Table 1, which is included on the Tree Survey BA3857TS in Appendix 2.

2.7.1 The purpose of the tree categorization method is to enable the rapid identification of a trees quality and value of trees in a non-fiscal sense, in addition to providing an insight into its expected safe life.

2.7.2 For a tree to qualify under any given category, it should fall within the scope of that category's definition (U, A, B, C) and, for trees in categories A to C, it should qualify under one or more of the three subcategories (1, 2, 3). Subcategories 1, 2 and 3 are intended to reflect arboricultural and landscape qualities, and cultural values, respectively.

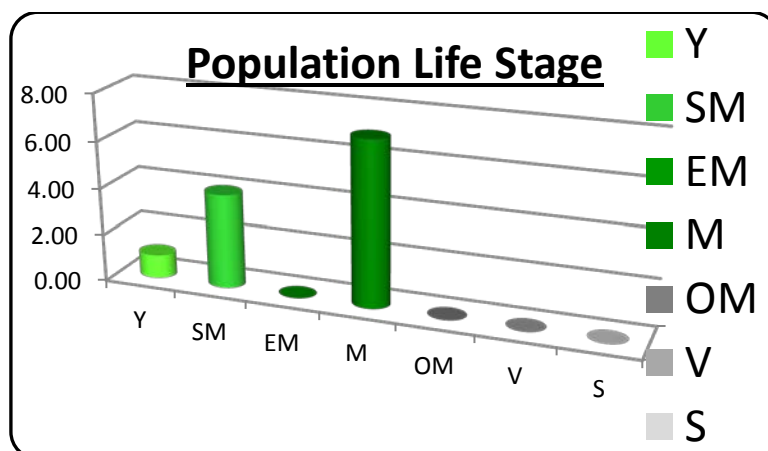
2.7.3 The graph opposite provides a breakdown of the tree categories on site and shows the trees to have a predominately landscape value. With the individual category's totals being:

Category B = 2 Trees
Category C = 9 Trees
Category U = 1 Tree

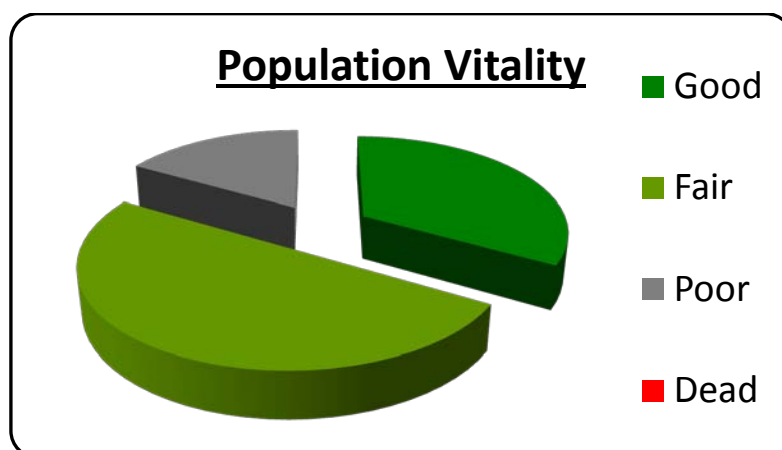


2.8 **Assessment of Trees:** This initial appraisal provides an assessment of the 12 trees and groups on site in addition to information on their condition, key population characteristics and makes general recommendations for management and protection.

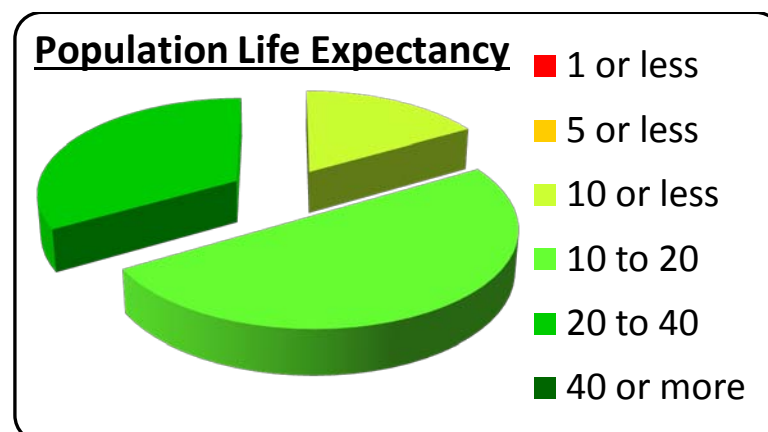
2.9 **Age Class.** The trees on site as shown in the graph opposite are predominately-young to mature trees. These have the potential to develop and provide future tree cover. The lack of significant numbers of older trees is assumed to be the result of the development of the site recently.



2.10 **General Health.** The majority of the trees are in good to fair condition, as shown in the graph opposite. Only two trees are classed as having poor vitality. This is assumed to be the result of the sites trees being young.



2.11 **Life Span.** An assessment of the population's general life expectancy again highlights the trees as being young, with the vast majority of trees having a life expectancy of 10 years or more as indicated in the graph opposite.



2.12 **Tree Identification:** The trees on site are numbered and recorded on the site plan BA3857TS included as Appendix 2.

2.13 Visual Assessment of Trees: The trees have been assessed from ground level only in line with the guidelines outlined in British Standard BS5837:2012. This provides information for the retention and protection of trees upon development sites. Information upon the trees is located in the Tree Schedule in Appendix 1.

2.13.1 The group of trees T1 & T2 in the northern corner as shown opposite; are beginning to compete for space and would benefit from thinning out.



2.13.2 The line of trees on the western boundary T5 to T12 have become established close to the neighbouring fence as shown opposite. Several of the trees are located close to the boundary fencing and damage is visible. These trees are not expected to be sustainable in the short to medium term without site management changes. Ideally the boundary should be confirmed before management of the group is finalised as the position of trees may straddle the boundary and need joint agreement.



2.13.3 The most dominant tree T11 Ash which is located in the neighbouring garden. The main stem does suggest possible internal issues and ideally, this should be assessed more closely. As shown in the photograph opposite this tree as been lopped/topped (In addition to T12 also located off site). The resultant regrowth and localised stem decay does pose a risk to the site in the near future. Ideally the owner should be encouraged to either remove the tree entirely or to maintain the tree at a lower height so the risk to both sites can be controlled to a degree.



2.13.4 A number of trees throughout the site have general structural issues or general management issues. These trees may be improved through pruning works, details are included in the tree schedule in Appendix 1.

- 2.14 **General Tree Pruning.** The trees require management to improve their condition. General works are detailed within the tree schedule in Appendix 1. This work is required regardless of development proposals and should ideally be undertaken within the next 12 months. These works should be viewed in isolation to the development proposal in planning terms.
- 2.15 **Conclusions.** The majority of trees do not represent an abnormal risk to site users and their retention will help improve shelter, screening and the overall amenity of the site. A number of the trees will benefit from works to improve their medium to long-term condition.
- 2.16 **Legal Duty:** The common law imposes on everyone a duty of care not to injure his or her neighbour. To avoid liability, a tree owner should take steps to ensure that they are aware of whether a tree is likely to cause problems and if it is, to take appropriate avoiding action as necessary. It is important for owners of trees growing close to people and property to have them regularly inspected and to act on recommendations.
- 2.17 **Trees subject to statutory controls.** Where trees are covered by a tree preservation order or located in a conservation area works may be restricted. The works specified are necessary for reasonable management and should be acceptable to the local authority.
- 2.18 **Trees outside your control:** Where trees are on neighbouring land you have no right to undertake the recommended works without the consent of the trees owner. The effect of none compliance requires legal interpretation, which is beyond the scope of this report.
- 2.19 **Implementation of works:** I advise that any arboricultural work is carried out by a reputable contractor from the local authority list or one approved by the Arboricultural Association (www.trees.org.uk). The contractor should carry out all tree works to BS 3998 *Tree Work - Recommendations* (2010) and or the European Tree Pruning Guide - European Arboricultural Council (English Version) though in strict accordance with current arboricultural best practice ensuring that any pruning works accord with current target pruning methodology.
- 2.19.1 I would always suggest that you get at least three fixed price quotations before deciding upon a contractor to undertake the works on your behalf.

- 2.19.2 You should ensure that any contractor employed for the above works is suitably qualified and experienced, familiar with current best practice and covered by current public, products and employee liability insurance, to an adequate level. Contractors must also abide by all relevant legislation for health and safety including highway requirements.
- 2.19.3 Contractors must be fully conversant with current arboricultural best practice and adhere to all relevant legislation including the New Road & Street Works Act 1991 for works in proximity of highways, and The Working at Heights Regulation 2004.
- 2.19.4 Works should be planned to avoid times when birds are nesting, and be aware that a bat survey may be needed on significant tree hollows, though in light of the relative moderate age of the trees this is thought to be unlikely. If bats are discovered during inspection or subsequent work, English Nature must be informed immediately.

3 TREE PROTECTION METHODS

- 3.1 **Construction Activity.** Traditional construction has the potential to damage trees irreparably; I have included a brief guide as Appendix 3.
- 3.2 **Limiting Risks to Trees.** To help reduce the potential impact of site changes BS5837:2012 recommends in Section 3.7 that a **Root Protection Area (RPA)** is included as a layout design tool. This indicates the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority.
- 3.2.1 The Root Protection Area for each tree is plotted as a magenta circle on the Tree Survey plan BA3857TS included as Appendix 2.
- 3.2.2 Where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area is included. This modification to the shape of the Root Protection Area reflects a soundly based arboricultural assessment of likely root distribution where this is judged has appropriate. This has been included as a purple line on the Tree Survey plan BA3857TS included as Appendix 2.
- 3.3 **Tree Protection:** Retained trees need to be protected from the potential damage of the development process this is most easily achieved by establishing a **Construction Exclusion Zone (CEZ)** to protect the minimum **Root Protection Area (RPA)** as recommended in BS5837:2012 – further details upon request.
- 3.3.1 This protection area is based upon the Root Protection Area - a point equivalent to 12 times the trunk diameter or by ensuring the effects of site changes such as excessive root severance or compaction can be controlled.
- 3.3.2 Ideally, this area should remain free from soil disturbance whenever possible.
- 3.3.3 Tree protection should revolve around the need to prevent compaction or excavation within the soil profile or significant changes to the existing soil levels close to retained trees.
- 3.3.4 Appropriate site organisation and management are essential following the adage of '**Prevention is better than Cure**'. Unfortunately, tree damage can easily occur and although it is costly to repair, it comes with few guarantees.

3.3.5 Inside the exclusion area of the fencing, the following actions need to be avoided:-

- o No linear mechanical excavation whatsoever.
- o No excavation by any other means without arboricultural site monitoring.
- o No hand digging without a written Method Statement having first been approved in writing by the consulting arboriculturist.
- o No lowering of levels for any purpose (except removal of grass sward using hand tools).
- o No construction of a sealed hard surface (except where agreed with the consulting arboriculturist).
- o No storage of plant or materials.
- o No storage or handling of any chemical including cement washings.
- o No vehicular access.
- o No fire lighting.

3.3.6 In addition to the above, further precautions are necessary adjacent to trees:-

- o A 10m separation distance shall be observed between any tree and substances injurious to tree health, including fuels, oil, bitumen, cement (including cement washings), builders' sand, concrete mixing and other chemicals.
- o No fire shall be lit such that flames come within 5m of tree foliage; this shall be taken to mean a fire separation distance of 20m from any tree's canopy.

3.4 **Protective Fencing:** Based on tree survey data, **Root Protection Area (RPA)** have been calculated for the trees identified for retention and included in the tree schedule in Appendix 1. The Root Protection Area's are designed to protect at least a functional minimum of tree root mass in order to ensure that the trees survive the construction process.

3.4.1 Tree protection will need to be installed following the initial tree works and before the onset of any demolition or ground works. The Root Protection Area should remain in position for the whole of the construction and demolition phase.

3.5 **Type 1 Tree Protection Fencing (TPF1)**, which is suitable for areas of high intensity development, shall comprise of interlocked Heras panels, or similar, well-braced to resist

impacts by attachment to a scaffold framework that has been set firmly driven into the ground and braced.

- 3.6 **Signage:** To inform site personnel of the purpose of the fencing and to underline the importance of the Construction Exclusion Zone, information notices shall be fixed to the fencing.
- 3.7 **Ground Protection:** Access across the Root Protection Area may be required; this can be created across the Root Protection Area for the duration of that development phase which will reduce the potential negative effects of compaction.

4 CONCLUSION

4.1 **General.** Of the trees surveyed on site, the majority are in relatively poor condition and offer only limited potential for the future.

4.1.1 **Proposed development.** The retained trees need to be considered as part of the site design and protected from the potentially negative effects of construction. In general, trees can be readily protected through a combination of protective fencing, ground protection, and the adoption of building materials and techniques that will sustain normal growth, all of which can be detailed in an impact assessment or method statement.

4.1.2 In light of the poor condition of the trees, the inclusion of better trees chosen for the site constraints may prove to be more valuable in the medium to long-term, please feel free to contact me if you require help in the choice of new trees for the site for the remaining green space.

4.2 **Design consideration.** In general, developments close to trees need to maintain the site close to the current prevailing conditions and avoid significant changes, particularly in the rootzone. A development is achievable providing the key points listed below can be incorporated into the proposals design and the buildings implementation. Ideally, the issues related to the development of the site should be fully discussed within an Arboricultural Implication Assessment.

1. **Available Space,** The proposal should consider the available space both now and in the future and avoid the need to remove large diameter branches and stems whilst providing sufficient future space for growth.
2. **Foundations,** the proposal will need to offer support to the structure with the need for minimal excavations to avoid tree root severance, typically a pile and beam or partial cantilever solution should be considered and designed by a structural engineer.
3. **Ground Protection,** needs to be a principal theme running throughout the proposal with the current ground being protected from, Excavation, Cultivation or Compaction and should remain wherever possible close to its current condition. This can be significantly simplified through the adoption of a timber frame construction avoiding the need for potential damaging heavy weights

and potential noxious material such as concrete blocks, bricks and chemicals such as cements to be used near trees.

4. **Services** for the proposal should be either reused or be located outside the Root Protection Area to avoid the need for excavation. Where new services are required within the Root Protection Area, these should adopt low impact methods of installation such as moling or the adoption of low impact excavation methods.
5. **Hard surfacing** will typically be required unless it can be substituted for decking or above ground walkways. Hard surfacing will need to be installed without the need for excavation and should allow continued soil hydration and aeration. Typically, either a porous paving system or gravel supported by a NO-dig foundation should be adopted to achieve this.

4.3 **Conclusion.** The trees on site are a material consideration and the information within this report should be used to help inform the design of any development.

4.3.1 I can see no reason why a scheme cannot proceed providing it meets the general guidelines included in 4.2.

4.3.2 On this basis, I would suggest that the proposal should be relatively straightforward to defend with foreseeable impacts being readily defended.

4.3.3 Providing that the points suggested within this report are incorporated within the scheme and appropriately managed there are no significant arboricultural restrictions in relation to the proposed development.

4.3.4 Should you require any further information please contact me at the office above.

APPENDIX 1 – TREE SCHEDULE & EXPLANATORY NOTES

The following survey has been prepared from a visual assessment taken from ground level without any detailed investigation. Observations are based upon the body language of the trees and any visual indicators present at the time of inspection. This survey should be regarded as a preliminary overview; ongoing inspections will be required as specified individually. In most situations the health, condition and safety of trees should be checked on a cyclic basis, alternating between early and late seasons to ensure a full picture of tree health is established. Inspections should only be carried out by a suitably qualified arborist.

Similarly, numerous potential defects may not be detectable dependent upon timing of inspection, in particular, wood decay fungi, which may only occasionally produce external fructifications annually (rather than perennially), or may not provide external symptoms until an advanced state is achieved.

Reasonable risk management generally aims to provide a tree that can be regarded stable in a normal / foreseeable, regularly experienced storm events i.e. force 10 storms. The level of risk offered by the tree will be significantly greater as the wind speed that the tree is exposed to increases beyond this level. Additionally the threat from aerial parts i.e. tight unions may remain even following works, although failures of such parts are likely to be limited to small diameter branches and to periods of extreme weather.

As an arborist, I am a tree specialist and use my knowledge, education, training and experience to examine trees, recommend measures to enhance their beauty and health, and attempt to reduce the risk of living near trees. As a client, you may choose to accept or disregard these recommendations, or seek additional advice.

As an arborist I cannot detect every condition that could possibly lead to a tree or limb failure. Trees are living organisms that may fail in many ways, some of which we do not fully understand.

Conditions are often hidden within the tree and below the ground. As arborists, we cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Sometimes trees may appear "healthy," but may be structurally unsound. Likewise remedial treatment, like any medicine, cannot be guaranteed.

Treatment, pruning and removal of trees may involve considerations beyond the arboricultural perspective, such as property boundaries and ownership, disputes between neighbours, planning issues, sight lines, landlord-tenant matters etc. Arborists cannot take such issues into account unless complete and accurate information is given to them. Likewise, as an arborist I cannot accept any responsibility for the authorization or non-authorization of any recommended treatment or remedial measure.

Furthermore, certain trees are borderline cases as to whether they should remain or be removed. If conditions change a tree may need further monitoring in the future to determine its health and structure. Trees can be managed, but they cannot be controlled, and to live near a tree is to accept some degree of risk.

Mathematical abbreviations: > = Greater than, < = Less than.

Measurements / estimates: All dimensions are estimates unless otherwise indicated. Measurements taken with a tape or clinometer are indicated with a '#'. Less reliable estimated dimensions are indicated with a '?'.

Colour Coding – The line of information highlighted blue refer to those trees outside the security fence, this information is general generally recording an estimated of the mean heights, canopy spread or stem diameter to provide an indication of the group condition or protection requirements

Tree number: Numbered Tag attached to each stem usually on the inside face of the stem a roughly 2.5 metres. Were the number is followed by a C this denotes that the tag refers to a compartment or group.

Name: Tree species are detailed by their common name.

Age: I record the age as an estimate of the tree likely span for guidance only i.e.

Y	Young	Recently established/planted tree.
SM	Semi Mature	Fully established and growing with high vigour
EM	Early Mature	The first third of its likely expected life span
M	Mature	The middle one third of its likely expected life span
OM	Over Mature	The later one third of its likely expected life span
V	Veteran	An aged example of the species, typically with defects / <i>existing or potential conservation value</i>
S	Senescent	Beyond its expected Life span possible of historical interest or in a state of decline

Height: I estimate height to the nearest metre to the mean height.

Height to underside: I estimate height to the nearest half metre to the mean underside of the canopy.

Height to First Significant Branch (FSB): Distance of separation between the ground and the underside of the canopy.

Direction of the First Significant Branch (FSB): Orientation of the first significant branch within the canopy.

Diameter: These figures relate to a measurement of the stem at 1.5m above ground level and I record them in millimetres measure with a rounded down diameter tape. Figures prefixed with MS denote trees or shrubs with multiple stems.

No. stems: I record the number of significant stems that compose the tree i.e.

S - Single Stem 1 **M** - Multiple Stemmed. 2, 3, 4, 5 or >5

Canopy (N S E W): I estimate distance of the canopy radius to the nearest metre to provide a mean distance of separation between the stem and the outer canopy.

Vitality: Is a personal assessment of the trees growth rate in the current season, in comparison to other trees within the locality, region and an indicator of the tree likely response to site change.

D - Dead A dead or very low vitality tree

P - Poor A tree of low vitality

G - Good A tree of high vitality

L- Low / Declining A tree in noticeable poor state

F - Fair A tree of normal vitality

Safe Life: Is a personal assessment of the trees likely expected remaining safe life span assuming the tree is protected from significant change.

40 or more

10 to 20

5 or less

20-40

10 or less

1 or Less

Category / Condition Rating: This is based upon the criterion of BS5837: 2005 Recommendations for trees in relation to construction and describes the condition of the tree based on age, vigour, structure and health as follows:

UNSUITABLE TREES - Category and definition Criteria Identification on plan

Category U - **DARK RED**

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

NOTE Category U trees can have existing or potential conservation value, which it might be desirable to preserve

TREES TO BE CONSIDERED FOR RETENTION

Category and definition Criteria — Subcategories:

1 Mainly arboricultural values,

2 Mainly landscape values,

3 Mainly cultural values, including conservation

Category A - **LIGHT GREEN**

Trees of high quality with an estimated remaining life expectancy of at least 40 years

1. 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)
2. Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features
3. Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)

Category B - **MID BLUE**

Trees of moderate quality with an estimated remaining life expectancy of at least 20 year.

1. 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.
2. Trees present in numbers, usually growing 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
3. Trees with material conservation or other cultural value

Category C - **GREY**

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

1. Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.
2. 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.
3. Trees with no material conservation or other cultural value.

NOTE Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150 mm should be considered for relocation.

Comments / Observations: General comments referring to tree health, structure and condition.

Management Options: Comments detailing remedial works required improving immediate safety or improve the management of the tree.

Priority: Guidance for the time scale in which works should be completed, from the date of the report.

Minimum RPA – Root Protection Area: Minimum distance in metres of position of protective fencing in line with section 4.6 BS5837:2012. In order to avoid damage to the roots or rooting environment of retained trees, an area equivalent to a circle with a radius 12 times the stem diameter.

Root Protection Area (Radius) (M) – RPA given in metres from the centre of the stem.

Root Protection Area (Area) (M²) – The ideal total area for the RPA given in metres squared.

Preliminary BS5837 Arboricultural Assessment - This should not be referred to as a specification of Arboricultural Works

TAG No.	Species	Age	Height	Underside of Canopy	Ht FSB	Direction of FSB	Canopy Radius				Vitality	Safe Life	Category	Diameter @ 1.5m (mm)	NO. Stems	Observations / Comments	Recommendations	Minimum RPA (Radius) (m)	Minimum RPA (Area) (m ²)
							North	South	East	West									
1	Plum Group x 5	SM	8	0.25			2.5	2.5	2.5	2.5	Good	20 to 40	B 2	upto 200	1	Possibly Greengage. Single stem. Growing close to fence. Debris / tipping throughout the area. A typical example of the species.		2.4	18.1
2	Elder	SM	4	0			1.5	1.5	1.5	1.5	Fair	10 to 20	C 3	90	4	Growing as part of a group. Growing close to fence. Canopy is swamped by neighbouring trees. A poorly developing suppressed canopy.	Remove and treat stump to prevent regrowth.	2.16	14.7
3	Plum	M	8	1.5			4.5	2.5	3	5	Fair	20 to 40	B 2	180	2	Biforked close to ground level. Growing within shrub border. Impact wounding visible on the southern stem. Slight lean to north branch failures are visible within the canopy. Cracks are visible in the main branches. A poorly developing tree.	Formative pruning required to improve the main branch architecture.	3.06	29.4
4	Plum	Y	5	0.25			2.5	2.5	2.5	2.5	Fair	10 to 20	C 3	90	5	Multiple stemmed close to ground level. Growing as a thicket close to a fence. Climber has started to develop on the main stem. A reasonable example of the species though limited potential.		2.41	18.2
5	Goat Willow	M	5	1			4	4	4	4	Good	10 to 20	C 2	110	12	Growing on neighbouring land. Multiple stemmed close to ground level. Crossing and rubbing main leaders visible throughout the canopy. A good typical example of the species. A number of stems are rubbing on the fence line.	Crown lift canopy above fence to provide 1m clearance.	4.57	65.6
6	Golden Leyland Cypress group x 2	SM	5.5	1			1	1	1	1	Good	20 to 40	C 3	120	1	Growing on neighbouring land. A typical example of the species. Recently trimmed to maintain their shape.		1.44	6.5
7	Elder	M	8	0.25			5.5	1	3.5	1	Good	10 to 20	C 2	300	1	Multiple stemmed close to ground level. Growing close to fence. Close to structure damage likely in the near future. Canopy is suppressed by more dominate Ash. Significant quantities of deadwood can be seen within the canopy. A poorly developing tree.	Remove and replace with a more appropriate species.	3.6	40.7

Preliminary BS5837 Arboricultural Assessment - This should not be referred to as a specification of Arboricultural Works

TAG No.	Species	Age	Height	Underside of Canopy	Ht FSB	Direction of FSB	Canopy Radius				Vitality	Safe Life	Category	Diameter @ 1.5m (mm)	NO. Stems	Observations / Comments	Recommendations	Minimum RPA (Radius) (m)	Minimum RPA (Area) (m ²)
							North	South	East	West									
8	Sycamore	SM	9	2.5			4	4	4	4	Fair	Upto 10	C 3	250	1	Growing close to fence with damage visible. Ownership may need to be confirmed. A good example of the species though limited potential due to direct damage.	Establish a replacement tree and remove and replace with a more appropriate species. Within the next 5 years.	3	28.3
9	Elder	M	7	1			4.5	4	4	2.5	Fair	10 to 20	C 3	250	3	Triforked close to ground level. Growing close to fence damage likely in the near future. Small deadwood can be seen in the outer canopy. Significant epicormic shoots are visible throughout the canopy. A typical example of the species.		5.2	84.9
10	Lilac	M	4.5	0			3	3	3	3	Fair	20 to 40	C 3	80	5	Typical form partially swamped with blackberry. A good example of the species.		2.15	14.5
11	Ash	M	13	2			7	4	5.5	5	Poor	10 to 20	C 3	320	3	Growing on neighbouring land. Canopy has been reduced (topped) & redeveloped. Multiple attachments with high end loading throughout. Large deadwood can be seen in the outer canopy. A poorly developing tree with little potential.	Ideally the owner should be encouraged to either remove the tree entirely or to maintain the tree at a lower height so the risk to both sites can be controlled to a degree. Formative pruning required to improve the main branch architecture. Establish a replacement tree and remove within the next 5 years.	6.65	138.9
12	Ash	M	3.5	2			2	3.5	1	3	Poor	Less than 10	U	180	1	Growing on neighbouring land. Canopy has been lopped & topped. Multiple attachments with high end loading throughout. Large deadwood can be seen in the outer canopy. A poorly developing tree with little potential.	Ideally the owner should be encouraged to either remove the tree entirely or to maintain the tree at a lower height so the risk to both sites can be controlled to a degree. Ideally the tree should be removed and replaced with a more appropriate species.	2.16	14.7

APPENDIX 2- TREE SURVEY PLAN

Tree Survey Plan - BA3857TS

A1 Plan Attached

APPENDIX 3 - GENERAL THREAT TO TREES DURING DEVELOPMENT

The following operations are all very damaging to trees, I have included a poster that demonstrates these points, and this might be useful for full circulation:

Compaction of the soil - Compaction will destroy the soil structure by removing the spaces between soil particles preventing the uptake of oxygen and nutrients. Compaction is caused by storage of materials, including bricks, soil, gravel and cement, and even a single vehicle movement will cause damage. Compacted ground will also damage soil drainage, which may then become waterlogged.

Excavations - any excavations close to the tree are likely to cause root severance. The closer excavations occur to the tree the more severe the damage. Root severance will lead to loss of vigour of the tree, reduce uptake of water and nutrients, allow access for decay organisms and increase likelihood of wind throw.

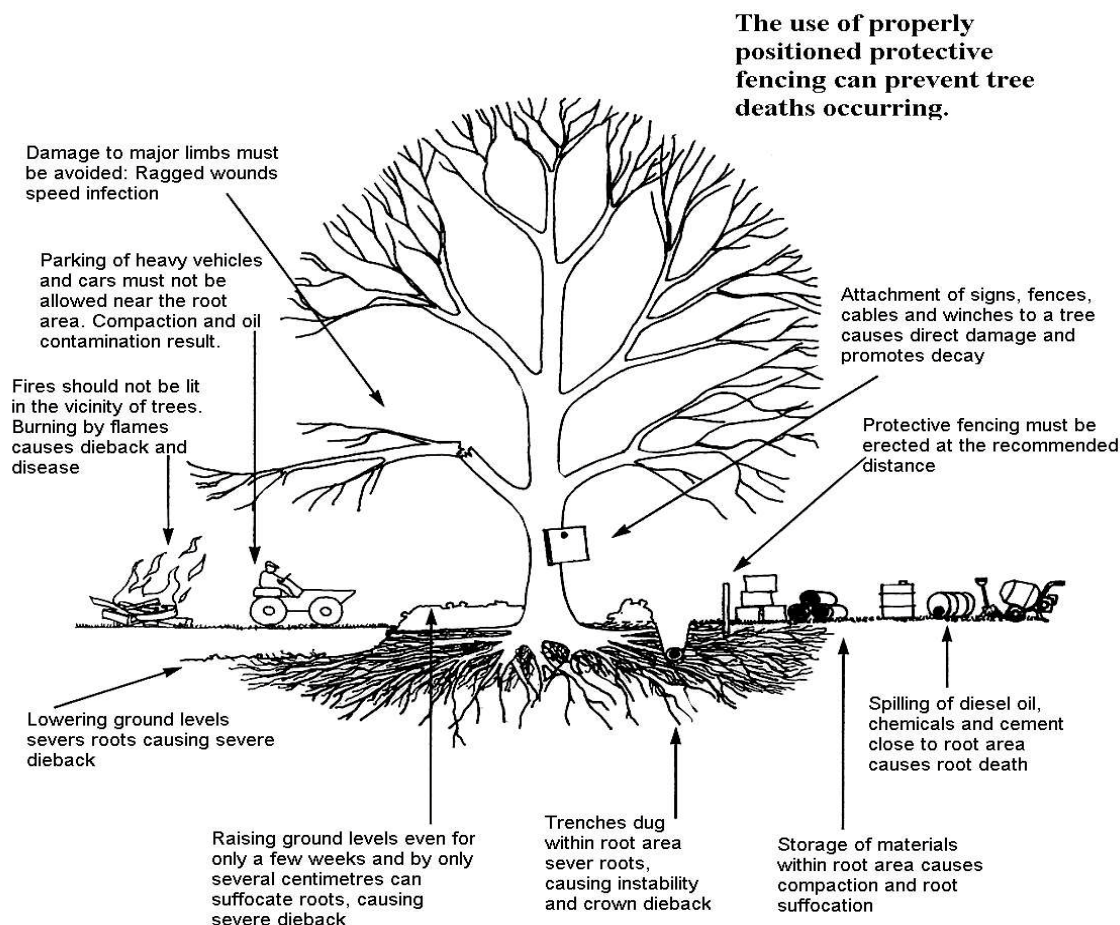
Ground level changes - both reduction and raising of soil levels will be detrimental even if this is only by a few centimetres. Reducing ground levels will sever roots, and can increase the drainage of a site thereby reducing water availability. Raising ground levels will cause compaction, suffocate roots and damage fibrous roots.

Impact damage - this can be caused by machinery - including torn branches and damage to bark and trunks. This will lead to entry for decay organisms and reduced vigour.

Soil contamination - this can be caused by spillage of oil, fuel and chemicals and mixing cement or other materials. Allow for sloping ground - keeping toxic material downhill from trees and aim to store them 10m from the Protected Zone to allow for leaching through the soil.

Fires - both the intense heat and direct flame will damage the trees causing loss and damage to both major roots and fibrous roots. Intense heat will damage the trees vascular system under the bark even if the bark does not appear burnt.

Common causes of Tree Death





Tree Surveys & Condition Reports

Development Site Tree Reports to BS5837

Tree Health & Safety Reports

Arboricultural Implication Assessments (AIA)

Tree Risk Assessments

Arboricultural Method Statements (AMS)

Tree Population Site Inventories

Construction Exclusion Zone Management

Estate Tree Management

Tree Protection Plan Design

Woodland Management

Tree Valuation & Replacement Costing

Tree Work Specification & Tenders

TPO Objections & Appeals

Insurance & Mortgage Reports

Tree planting Schemes & Landscape Design

Decay Detection & Mapping – Picus

Environmental Design

Windload & Stability Assessments

Orchard Design & Forest Gardens



Professional
Memberships & Registrations



SocEnv
Society for the Environment

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