



Arboricultural Report

Title: BS5837:2012 Development Site Tree Survey &
Report re Uplands, 14 Old Road, Baglan, Port
Talbot, SA12 8TT.

Instructed by: Fred Best (Owner).

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Date: 6th January 2021

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Arboricultural Report

BS5837:2012 Development Site Tree Survey and Report re Uplands, 14 Old Road, Baglan, Port Talbot, SA12 8TT.

References:

- A. E mail reply dated 23/11/20 to GCA quotation dated 20/11/20.*
- B. BS5837:2012 – Trees in relation to design, demolition and construction – Recommendations.*
- C. BS3998:2010 Tree Work – Recommendations.*
- D. BS8545:2014 Trees: from nursery to independence in the landscape - Recommendations*

1 Instructions

- 1.1 I have been instructed in writing by Fred Best, (Ref A), with regard to the proposed infill development within the grounds of his residential dwelling at Uplands, 14 Old Road, Baglan, Port Talbot, SA12 8TT and report on the site in accordance with British Standard 5837:2012 Trees in relation to design, demolition and construction - Recommendations, in order to support a planning application for the project and to comply with Supplementary Planning Guidance in the following way:
 - 1.1.1 Survey and tag all trees relevant to the site of the proposed infill development alongside the existing dwelling and plot the relevant trees by GPS on an OS base map.
 - 1.1.2 Categorise trees for quality, retention and removal.
 - 1.1.3 Produce a Tree Constraints Plan (TCP).
 - 1.1.4 Produce an Arboricultural Impact Assessment (AIA).
- 1.2 Following an initial site visit on 13/11/20 to formulate a quotation for necessary arboricultural consultancy, (Ref A), all trees which are relevant to the proposed development were tagged, plotted and surveyed on 10/12/20. Tree numbers for survey reference purposes are T1 – T8 inclusive involving a total of eight individual trees which are relevant for the purposes of Ref B to the proposed infill development in the side/rear garden of the property.

2 Introduction

2.1 Background

2.1.1 I am an experienced Certified Arboricultural Technician qualified to Level 6 in Arboriculture (ABC Awards). I have gained the Technicians Certificate of the Arboricultural Association at distinction level and I also hold the Royal Forestry Society Certificate in Arboriculture again at distinction level. Furthermore, I am qualified in Professional Tree Inspection (Lantra), trained in practical visual tree assessment (VTA) and I am a registered licence holder for Quantified Tree Risk Assessment (QTRA). Lastly, I hold current full professional memberships of the Arboricultural Association (including the Utility Arboriculture Group), the Royal Forestry Society and the Forestry Industry Safety Accord (FISA).

2.1.2 Limitations

2.1.2.1 All dimensions are measured.

2.1.2.2 No samples of soil / decay were taken. Soil data for the site has been obtained from the British Geological Survey (BGS).

2.1.2.3 No use was made of decay detection equipment.

2.1.2.4 No climbing inspection was made.

2.1.3 The presence of any protected wildlife in the trees remains the responsibility of the property owner.

2.1.4 Trees and shrubs are dynamic living organisms whose health and condition can change rapidly. The health, condition and safety of trees in particular should be checked on a regular basis, preferably annually, in order to exercise a duty of care. Accordingly, the validity period of my recommendations relating to tree condition is 12 months from the date of inspection.

2.2 **Site Location**

- 2.2.1 Baglan is a large village in South Wales adjoining the industrial town of Port Talbot within the county borough of Neath Port Talbot.
- 2.2.2 Old Road is a minor road running along the western edge of the village linking it with the nearby town of Briton Ferry. Uplands is a detached residential dwelling set back from and above the eastern footway of Old Road.
- 2.2.3 Uplands is a detached dwelling which occupies a sloping plot of land above Old Road. A redundant stone staircase leads up the front retaining wall from the eastern footway of Old Road to the front garden whilst vehicular access is up a steep concrete driveway to the side garden on the southern aspect. The front, side and rear gardens are laid out as separate terraces behind retaining walls. An Ordnance Survey base map which details site layout is appended to this report.

2.3 **Tree Cover**

- 2.3.1 The property incorporates mature trees, shrubs and hedging of low general quality in and around the plot comprising of Leyland cypress, sycamore, birch, cherry, hawthorn and holly together with cherry laurel hedging along the property frontage.
- 2.3.2 The front, side and rear gardens are also marked by the presence of a small number of recently planted young trees, (oak, cherry and cypress) and established mixed shrubs with cherry laurel, aucuba, pieris and choisya prevalent.
- 2.3.3 Low voltage electricity cables for the domestic and street lighting supplies together with telecommunication wires are suspended from wooden poles which run alongside the property frontage in Old Road and branch off to supply the house itself. Most of the mature trees in the front and side garden adjacent to the wires have been brutally side-pruned in order to maintain crown clearance for the power cables and resilience in supply.
- 2.3.4 A total of eight individual trees (Tree No's T1 – T8 inclusive) have been identified as relevant to the development proposals by virtue of their location, above and below ground spread and are included in the Tree Survey Schedule which is appended to this report.

2.4 **Tree Categorization**

- 2.4.1 Trees are a material consideration in the UK planning system and the purpose of BS5837:2012 is to provide a tree survey and categorization in the context of the current land use independent of any specific proposals for development i.e. from the perspective of the trees themselves as they stand.
- 2.4.2 Tree categorization identifies the quality and value (in a non-fiscal sense) of the individual trees and groups of trees concerned on the site, which is then reflected in their retention category. Tree categorization and retention categories are explained in the BS5837:2012 Tree Quality Assessment Cascade Chart which is appended to this report.
- 2.4.3 The starting point is Category U which involves only those trees which have serious structural or physiological defects or the presence of major disease or decay such that they cannot realistically be retained in a safe manner in the short term. During my survey I identified no trees which fall into Category U by virtue of their current condition and merit immediate removal on these grounds alone.
- 2.4.4 After identifying Category U trees the retention process then cascades down the chart to Category A (high quality). Following on from Category A, then Category B (moderate quality) is considered. Finally, after Category B, then Category C (low quality) is the final resting place – which is where I have placed all eight individual trees – Tree Numbers T1 – T8 inclusive - by virtue of their current structural and physiological condition and their remaining life expectancy.
- 2.4.5 The accepted convention with tree categorization is that retention becomes more likely the higher the individual / group categorization. Therefore, Category A trees are almost always retained, Category B generally retained and Category C trees will usually not be retained where they impose a constraint to development. Even if Category C trees do remain then it is only until such time as new planting can be established – 10 years is the suggested figure. Existing young or small trees with a stem diameter below 150mm which are suitable for retention can be lifted and transplanted in better locations if required. Where trees are removed in order to permit development, replanting in mitigation is usually required in order to restore the balance of amenity and landscape value which is lost following tree removals.
- 2.4.6 The imposition of the likely building footprint for the proposed two new infill dwellings to occupy the side garden south of the existing building line alongside the current dwelling is likely to require the removal of the Category C trees to the front and side of the property.

- 2.4.7 The removal of this low quality stock should be viewed as an opportunity to maintain and enhance canopy cover at the site with a replanting programme of replacement trees as part of the soft landscape scheme for the development. Tree categorization and schedule of management works required are listed in the Tree Survey Schedule which is appended to this report.
- 2.5 **New Construction**
- 2.5.1 It is proposed to construct two new dwellings as an infill development in the side garden within the existing street frontage between numbers 14 and 8 Old Road.
- 2.5.2 The new dwellings will occupy the current side garden and relevant portion of the rear garden behind them to the south of the current dwelling.
- 2.5.3 The current site layout is shown in the Tree Constraints Plan (TCP) – Current Situation - which is appended to this report.

3 Tree Constraints Plan (TCP)

- 3.1 The above and below ground influences that the relevant trees on the site have to the proposed infill dwelling were plotted following the tree survey on the TCP which is appended to this report.
- 3.1.1 **Above Ground Constraints**
- 3.1.1.1 The current and ultimate height of the trees has been taken into account where their position may cause obstruction of sunlight or shading to the development. This would mainly apply to any trees on the south side of the new dwelling with their influence pertinent by a segment from due north west to due east. Shade cast by the existing tree cover is not an issue for this project as the new dwellings will occupy land south of the relevant Category C tree stock which does not occupy the new build footprint and is suitable for retention. The current tree shading pattern is detailed by hatching in the Tree Constraints Plan which is appended to this report.
- 3.1.1.2 The spread of a tree is also a constraint due to its size, dominance and movement in strong winds. For this reason the spread and future branch growth of trees on the site have been taken into consideration as a constraint for the design. Spread is annotated on the TCP in ink to scale through the four cardinal points and resembles a rough circle.

- 3.1.1.3 Current and future canopy spread is an issue for the existing tree cover at the site – particularly along the frontage with Old Road and the southern side aspect of the house where spread currently conflicts with the local aerial low voltage power and telecommunications supply cables which run above the eastern footway of Old Road and branch off to supply the property in the southern quadrant. The relevant trees have been crudely side-pruned in the past to the point of crown mutilation in order to achieve clearance for the cables and resilience in their supply.
- 3.1.1.4 The resultant loss of visual amenity from the historic pruning has devalued the tree stock and has also caused a marked decline in the physiological and structural condition of some of the cypress stems. One in particular has been windblown due to increased wind exposure and is currently hung up in an adjacent stem along the property frontage above Old Road. Space available due to the location of the cables will also restrict species choice for suitable replanting in these areas.
- 3.1.1.5 Due to dense planting and lack of management pruning, some of the smaller trees (T3, T5 & T7) are heavily suppressed due to over-shading by larger adjacent trees (T2 & T6). This has resulted in unbalanced and stunted crown growth with low visual amenity value. It should also be noted that the large hawthorn (T6) is causing nuisance and direct damage to the shed roof due to a portion of its crown being in contact with the structure.

3.1.2 **Below Ground Constraints**

- 3.1.2.1 In order to avoid damage to the roots or rooting environment of trees, the Root Protection Area (RPA) has been plotted in ink on the TCP for each tree and marked by retention category. This represents a minimum area in m² which should be left undisturbed around each retained tree to ensure its stability, survival and future contribution to the site. The shape of the RPA's resembles a dodecagon and is marked in ink on the TCP.
- 3.1.2.2 The imposition of the likely construction footprint will involve incursion into the RPA's of the Category C relevant trees located to the front and side of the current dwelling – Tree Numbers T2-T7 inclusive – which will require their removal and replacement in mitigation by replanting with more suitable species under the soft landscaping scheme for the development.

3.1.2.3 Many of these trees are also incompatible with their planted locations due to the aforementioned growth hazards into adjacent electricity and telecommunications cables. Moreover, the proximity of some of the trees to important adjacent retaining walls along the frontage with Old Road (T1 & T4) and side garden (T2 & T7) of the property is also a source of actual nuisance as root growth of the trees is causing significant structural damage, namely localised bulging and cracking, to the fabric of the walls. The remaining two trees T1 & T8 are also of low quality with extremely limited future and potential in their current locations and it is recommended to remove these trees as well subject to replanting in mitigation in suitable open space post development.

3.2 **Soil Assessment**

3.2.1 **Soil type and plasticity (potential for shrinkage through drying).**

I note from the British Geological Survey report that the soil profile for the site is a slightly acidic moderately deep clayey loam to sandy loam with medium amounts of organic matter formed from glacial till eroding from parent material (sedimentary bedrock) from the South Wales Middle Coal Measures Formation - namely siltstone, sandstone and mudstone interbedded which was formed approximately 310 to 318 million years ago in the Carboniferous Period, when the local environment was dominated by swamps, estuaries and deltas. The soil type has slightly impeded drainage. This term refers to soils with a tight, compact deep subsoil that impedes downward water movement; after heavy rainfall, particularly during the winter, the subsoil becomes waterlogged. Such soil has a low plasticity index and a pH of 6. This soil type and profile will suit the proposed replanting for the site.

3.2.2 **Subsidence Risk (Indirect Damage)**

Tree related subsidence can only occur on highly shrinkable clay soils. The soil data from the British Geological Survey shows that local conditions are predominantly of low plasticity and as such there is only minor potential for shrink swell (significant changes in the volume of clay rich deposits that accompany changes in moisture content). The subsidence risk for trees on this site is, therefore, assessed as insignificant.

3.2.3 **Heave**

The removal of any trees on the site is unlikely to have any 'heave' effects (upward movement of soil levels due to excess moisture content and swelling of clay soils) for the following reasons:

3.2.3.1 Soil conditions, according to the British Geological Survey are predominantly low plasticity with minor shrink/swell potential.

3.2.3.2 The house predates the tree stock at the site by some margin.

4 **Arboricultural Impact Assessment (AIA)**

4.1 **Presence of Tree Preservation Orders, Conservation Area Designation or Other Regulatory Protection**

A preliminary search with the Neath Port Talbot County Borough Council planning department reveals that none of the trees at the site are the subject of any designation under the terms of any current Tree Preservation Order (TPO). Moreover, the site does not appear to lie within a designated Conservation Area.

4.2 **Effect of New Construction on the Amenity Value of Trees on or Near the Site**

This survey and categorization of relevant tree cover within the grounds of the current dwelling on and around the site of the proposed infill development has identified a total of eight low quality Category C trees which are suitable for removal where they impose a constraint to the infill or to accommodate the imposition of the construction footprint for the new dwellings. It is considered that the loss of amenity resulting from the removal of poor quality trees from the site will be more than offset by replacement planting in mitigation into space around the new development as part of the soft landscaping plan. Furthermore, sound arboricultural management of the tree stock in the future will deliver higher quality tree cover and increased visual amenity to the locality.

4.3 **Above and Below Ground Constraints**

4.3.1 No construction of foundations or installation of services should take place within the Root Protection Area (RPA) of any retained tree. 90% of tree roots are found in the top 600mm of soil and an undisturbed rooting environment is vital to the long term health & stability of the tree.

4.3.2 Collateral damage to any retained tree stock can be minimised by the use of suitable ground protection methods and hand digging only whilst working within retained tree RPA's in accordance with Ref B and by the imposition of protective fencing (Appendix 4) to prevent major compaction and damage to structural roots. All work within RPA's of retained trees should be detailed in an Arboricultural Method Statement (AMS) and be subject to on site supervision by the project arboriculturist. In this way, the future health and stability of these retained trees will not be jeopardised.

4.4 **Construction Processes of the Proposed Development**

- 4.4.1 Development processes that lead to soil compaction in tree rooting zones and physical damage to trees can adversely affect long-term tree health. This can lead to unnecessary tree loss if not controlled properly on site during the construction of the manège. Protective fencing will be required for any retained trees throughout all phases of the development. Fence construction must be in accordance with the current British Standard (Ref B) and be fit for the purpose of excluding construction activity. A default specification for the protective fencing is included as Appendix 4. It should be noted in accordance with the current British Standard, that any alternative specification of protective fencing e.g. 2m tall Heras panels clamped together and mounted on rubber or concrete feet, must be first agreed separately by the LPA prior to use on this project.
- 4.4.2 No access to the RPAs of any retained tree – except as outlined in paragraph 4.3.2. above - will be permitted before or during construction activity. This will also negate the risk of machinery causing damage to trunks and low branches.
- 4.4.3 The processes of construction are highly unlikely to have a detrimental effect upon the health of the retained trees assuming recommendations made in this report are adhered to at all times by the contractors e.g. the positioning of a fit for purpose fence, (Appendix 4), between the retained trees and construction activities, is placed prior to commencement of works and remains intact and in position throughout the duration of the development.
- 4.4.4 Any hand digging or construction operations within the RPA's of retained trees should only be completed in accordance with an Arboricultural Method Statement (AMS) and supervised by the project arboriculturist.
- 4.4.5 A leaflet which explains the need to protect retained trees will be appended to the AMS for the information of all on-site personnel.

4.5 **Modifications Proposed to Accommodate Trees**

- 4.5.1 Modifications to the design or location of the new dwellings have not been considered in this report due to this not being an aspect of my brief.
- 4.5.2 BS5837:2012 does allow an arboriculturist to consider the offset the RPA's of open grown trees by up to 20% in any one direction. This offset must be justified on a case by case basis taking into account the soil assessment and likely root morphology of the tree(s) in question. However, as this site is based upon existing tree cover where the trees are closely spaced and their root systems are in direct competition for anchorage, moisture and nutrients, RPA offset has not been considered.

4.6 **Infrastructure Requirements**

- 4.6.1 The installation of services within the rooting zones of trees can have a large detrimental impact on the long-term survival of retained trees leading to their unnecessary loss or root failure in high winds. No services are to be installed within the RPA of any retained tree.
- 4.6.2 Undisclosed siting of above ground services, CCTV cameras, electrical sub-stations, refuse stores, lighting and other infrastructure requirements can lead to unnecessary pruning of tree crowns or root loss during or post development. I have not been advised that there are any such developments planned to take place adjacent to or within the RPA of any retained tree.
- 4.6.3 If underground services require installation close to, under or through areas earmarked for tree planting, then consideration should be given to the use of open structured crates such as Silva Cells.
- 4.6.4 Removal of some of the Category C tree stock not growing directly under the new construction footprint is nonetheless justifiable by the condition of the trees and the risk of continued structural damage below ground to the fabric of retaining walls adjacent to the root systems and above ground close to existing overhead power and telecommunications supply cables.

4.7 **Mitigating Tree Loss/New Plantings**

- 4.7.1 My initial tree survey and categorization involves the potential loss of all eight low quality Category C trees (T1- T8) from the affected garden space where they fall under the construction footprint or impose a constraint to hard landscaping and infrastructure measures.
- 4.7.2 Poor tree loss coupled with the recommended replanting with suitable new stock will improve the safety and durability of the tree canopy, leaving a balance of better tree cover and increased amenity value for the new development. Furthermore, future sound arboricultural management will result in an increase in the long-term sustainability of tree cover on the site.
- 4.7.3 The new landscape scheme should seek to maximise the soft landscape space available to the new residential plots for replacement planting to compensate for existing tree loss. In particular the current tree and shrub cover along the property frontage with Old Road and retained terraced side garden is very congested and the removal of the low quality stock will free up space for replanting to restore the balance and quality of tree cover lost in order to accommodate the new build.

4.7.4 **Tree Replacement**

4.7.4.1 **Tree Species**

It is recommended that the following trees are considered for planting as replacements in new soft landscape space in mitigation for the removal of the existing poor quality stock:

Thuja occidentalis ‘Smaragd’ x 2 as specimen evergreen trees to replace the 2 x Leyland cypress (T1 & T4).

Betula utilis var. *jacquemontii* ‘Trinity College’ to replace the birch (T5).

Arbutus unedo rubra as a single replacement specimen tree to replace the existing sycamore (T2).

Ilex aquifolium ‘Green Pillar’ to replace the existing holly (T3).

Acer palmatum varieties x 2 to replace the 2 x existing hawthorn (T6 & T8).

Prunus avium ‘Plena’ to replace the existing cherry tree (T7)

4.7.4.2 **Tree Stock Size**

In order to deliver maximum visual impact, the replacement tree stock should be of advanced nursery stock size. With regard to current tree nursery industry standards, (Ref D), advanced nursery stock size falls between extra heavy standard and semi-mature trees and is defined by two accepted girth and overall height categories:

<u>Girth</u>	<u>Height</u>
(Measured at 1m above ground level (agl))	(agl)
16 - 18cm	4.0 - 4.5m
<i>OR</i>	
18 – 20cm	4.5 – 5.0m

The replacement tree stock specified at para 4.7.4.1 above for replanting on site shall conform with either of these two advanced nursery stock sizes. Where stock size is at odds with available space for tree pits, smaller stock size such as heavy standards or standard standards may be considered, albeit these reduced sizes will deliver reduced levels of visual impact.

4.7.4.3 **Tree Replanting Timescale**

- 4.7.4.3.1 The replacement stock specified should be planted during the first planting season (October – March) following the conclusion of all construction activity for the new infill dwelling.
- 4.7.4.3.2 Tree replanting shall take place following the conclusion of all construction activity in suitable pits prepared adequately in the gaps in the new landscape space along the front, side and rear of the site. Positions approved for tree replanting are to be protected as far as possible in accordance with the provisions of Ref B during the construction phase of the project. The replanting positions will be remediated and any soil compaction alleviated following the same industry recommendations prior to planting following completion of all construction works.
- 4.7.4.3.3 Tree replanting shall be undertaken by suitably qualified and insured arborists in accordance with current industry standards and best practice, (Ref D).

4.7.4.4 **Tree Pit Size**

- 4.7.4.4.1 Root Available Soil volume (RASV) is the amount of soil available to tree roots due to its physical accessibility and suitable conditions of aeration, fertility and irrigation.
- 4.7.4.4.2 The target minimum RASV which should be provided for individually planted medium – large trees is thirty cubic metres.

4.7.4.5 **Soils**

- 4.7.4.5.1 Where possible, the existing topsoil on site which is extracted to achieve site levels for the new dwellings should be reused in the proposed new tree pits following the conclusion of construction activity. During this time, the soil should remain loose tipped away from construction activity in order to avoid compaction and damage to the soil structure.

- 4.7.4.5.2 If there is no reusable planting soil, it may need to be imported with a specification dependent on local conditions and the soil assessment for this project.

4.7.4.6 Tree Replanting Aftercare and Survival

- 4.7.4.6.1 The provision of aftercare following tree replanting in relation to irrigation, formative pruning, routine assessment and maintenance should conform to the provisions contained in Ref D.
- 4.7.4.6.2 If the replacement trees be removed from their approved positions, die, or become severely damaged or seriously diseased all within 5 years of planting, they should be replaced by trees of similar size and species to that originally planted.

4.8 Proximity of Trees to Structure

- 4.8.1 The impacts of trees on the new build and vice versa and allowances for future growth have all been considered in this report. Tree size, future growth, light/shading, leaf and fruit nuisance etc., have received due attention in the TCP and are not considered to be an issue if my recommendations are followed. However, as retained and introduced trees respond differently in the future due to different light levels, a cyclical pruning regime may be required particularly for any trees close to the new infill dwelling.
- 4.8.2 Where feasible, the minimum distances required by BS5837:2012 in relation to proximity of buildings should be exceeded to ensure tree survival and that the new dwelling has a green and leafy feel to it in keeping with the locality.
- 4.8.3 Due to the current condition of the tree stock, tree removal followed by the development of the site will, in my opinion, decrease the existing tree safety risk significantly. Similarly, tree replacement will also contribute to tree risk management for the future.

4.9 Pre-Development Tree Work

A list of recommended safety related tree management work for the short term is included in the tree survey schedule which is appended to this report.

5.0 **Final Design**

Once the final design of the new build and hard/soft landscape for the infill development and associated tree removals and replanting are agreed, it will be necessary to re-visit the AIA in order to mitigate any residual arboricultural implications of the project. Thereafter, it is recommended that an Arboricultural Method Statement (AMS) is produced by an arboriculturist together with a Tree Protection Plan (TPP) and an arboricultural site supervision model in order to protect any retained trees through the construction phases of the new dwelling and to protect and enhance the historic local environment.



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06/01/21

Appendices:

1. Glossary of BS5837:2012 terms
2. BS5837:2012 Tree Survey Schedule (TreeMinder Report pdf @ A4)
3. BS5837:2012 Tree Quality Assessment Cascade Chart
4. BS5837:2012 Protective fencing specification for retained trees
5. Tree Constraints Plan – Current Situation (OS Base Map pdf @ A4)

Appendix 1

BS 5837:2012 Key to the Tree Survey Schedule & Glossary of Terms

Tree No.

The tree reference number allocated to each relevant individual tree e.g. T1 and included in the Tree Survey Schedule and Tree Constraints Plan for identification purposes.

Height (m)

Tree height measured in metres (m)

Stem diameter (mm)

Stem diameter in millimeters (mm) measured at 1.5m above ground level. Where the stem is divided below 1.5m, measurement is taken immediately above the root flare and indicated by the notation 'RF'

Branch spread (m)

Radial crown spread measured in metres for each of the four cardinal compass points from the centre of the stem.

Height of Crown Clearance (m)

Height above ground of the first significant branch and a direction of growth e.g. 2.4 – N together with the canopy height.

Age Class

- NP** Newly Planted – a tree within 3 years after planting. Normally still attached to the stake
- YM** Young Mature – a tree within its first third of life expectancy
- MA** Middle Aged – a tree within its second third of life expectancy
- M** Mature - a tree within its final third of life expectancy
- OM** Over Mature – a tree which has reached its maximum average life span and is declining in health and size.
- V** Veteran – a tree which is of interest aesthetically, biologically or culturally due to its age, size or condition.

Physiological Condition

An assessment of the health and vitality of the tree categorized into:

GOOD	A tree in healthy condition with no significant problems
FAIR	A tree generally in good health with some problems that can be remedied
POOR	A tree in poor health with significant problems that can't be remedied
DEAD	A tree without sufficient live material to sustain its life

Structural Condition

An assessment of the structural / safe condition of the tree categorized into:

GOOD	A tree in safe condition with no significant defects
FAIR	A tree with significant defects that can be remedied
POOR	A tree with significant defects that can't be remedied

Notes related to both physiological and structural condition follow the categorization in order to support the statement and give greater detail on the quality and value of the tree.

Preliminary Management Recommendations

These may include further investigations for the presence or extent of decay, climbed inspections, potential for wildlife habitat, ivy removal or pruning works where access is a non-moveable aspect. Trees assessed as being in apparently immediately hazardous condition will be notified to the client separately as soon as practicable.

Estimated Remaining Life Contribution

An estimate of the remaining life contribution in years that the tree or group of trees is expected to have based on species and condition on the site in its current context. The following bands are used:

<10	Tree is dead or dying and unlikely to contribute beyond 10 years.
>10 / <20	Tree is assessed as being able to contribute to the site for 10 – 20 years.
>20 / <40	Tree is assessed as being able to contribute to the site for 20 – 40 years.
>40	Tree is assessed as being able to contribute to the site for more than 40 years.

Quality & Value Category

Quality and value grade classification according to BS5837:2012 Table 1 – Cascade Chart for Tree Quality Assessment (See Appendix 3).

Glossary of Terms

A definition of arboricultural terms used in this report which are drawn from BS5837:2012 as follows:

Root Protection Area (RPA). A layout design tool indicating the area surrounding a tree that contains sufficient rooting volume to ensure the survival of the tree, shown in plan form. The area is equivalent to a circle with a radius 12 times the diameter of the tree measured at 1.5m above ground level (a.g.l.). This is a minimum area which should be left undisturbed around each retained tree.

Crown. That part of a tree which is composed of the branches and foliage

Crown lifting. An arboricultural operation which involves the removal of lower branches to a given height above ground level to achieve safe passage of vehicles / pedestrians or clear lines of sight / daylight. It is achieved either by the removal of whole branches, or by the removal of only those parts which extend below the desired clear height.

Crown reduction. Operation that results in an overall reduction in the height and/or spread of the crown by means of a general shortening of twigs and/or branches to strong growth points, (natural targets), whilst retaining the main framework of the crown.

Stem. Principal above ground structural component of a tree that supports the branches (trunk).

Tree Constraints Plan (TCP) A TCP is a layout design tool which is prepared by an arboriculturist showing the below ground constraints represented by the RPA's and above ground constraints the retained trees on and adjacent to the site pose by virtue of their size and position in relation to shading and influence.

Arboricultural Impact Assessment (AIA). A study undertaken by an arboriculturist to identify, evaluate and possibly mitigate the extent of direct and indirect impacts on existing trees that may arise as a result of any site layout proposal.

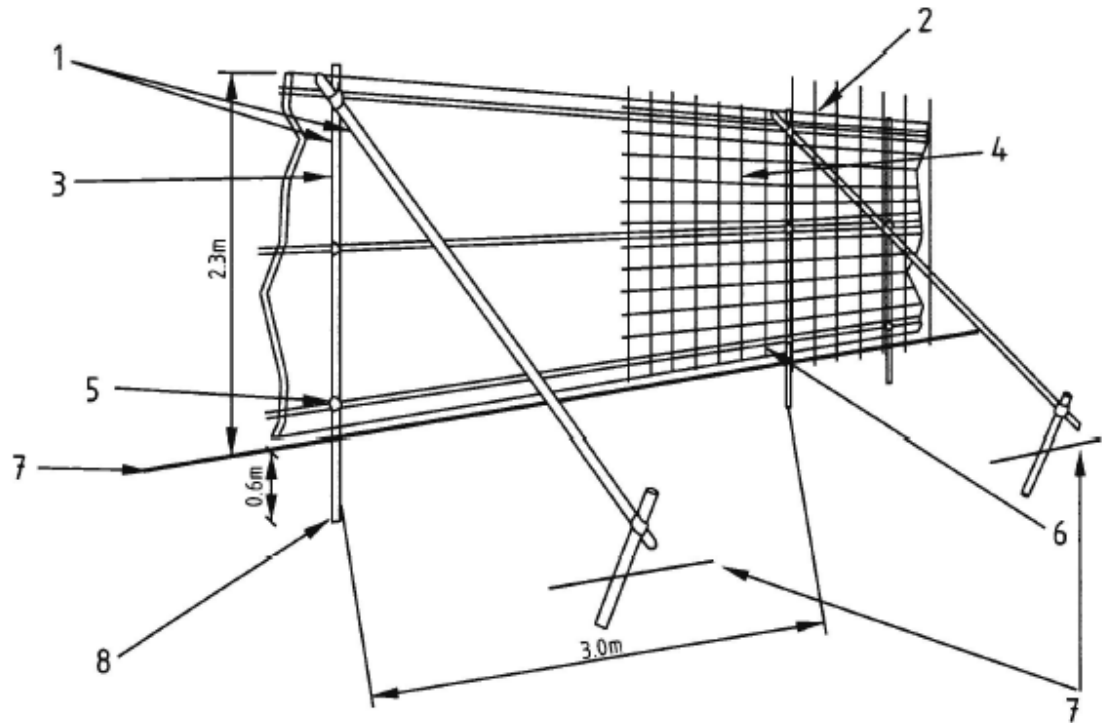
Arboricultural Method Statement (AMS). A methodology for the implementation of any aspect of development that has the potential to result in loss of or damage to any tree. The AMS is also likely to include details of an onsite tree protection monitoring regime.

Tree Protection Plan (TPP). A scale drawing prepared by an arboriculturist showing the finalized layout proposals, tree retention and tree and landscape protection measures detailed within the AMS which can be shown graphically

Construction Exclusion Zone (CEZ). An area based on the RPA (in m²), of retained trees identified by an arboriculturist, to be protected during development including demolition and construction work, by the use of barriers and/or ground protection fit for purpose to ensure the successful long term retention of the tree.

Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U	- Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unsuitable 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 <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i>			See Table 2
Trees to be considered for retention				
Category A	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	See Table 2
Category C	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	See Table 2
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				

Appendix 4**Default Protective Barrier (BS5837:2012)**

1. Standard scaffold poles
2. Uprights to be driven into ground
3. Panels secured to uprights with wire ties and where necessary standard scaffold clamps
4. Heras panels wired to uprights and horizontals
5. Standard clamps
6. Wire twisted and secured on inside face of fencing to avoid easy dismantling
7. Ground level
8. Approximately 0.6m driven into the ground