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BS5837

***Trees
in Relation
to design, demolition
&
Construction
Survey***

At

A potential development site

On

Land near

Cheadle Road, Leek

On

4Th November 2013

By

Andrew McLoughlin

of

Treestyle Consultancy

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Client:	Wainhomes
Ref no:	
Site details:	Land near to Cheadle Road Leek
Date of site inspection:	4th November 2013
Assessor & Report Author:	Andrew McLoughlin NC Arboriculture HND Arboriculture Treestyle Consultancy
Proposal:	Building of residential area

1.0 Instruction and the purpose of the report

1.1 I have been instructed to prepare an Arboricultural Implications Assessment (AIA), an Arboricultural Method Statement (AMS), and to produce a Tree Protection Plan (TPP), in accordance with BS 5837:2012 (Trees in relation to design, demolition and construction – Recommendations), by Sam Whittle from Helmrig for the above site. A topographical survey has been supplied by JLP Surveys Ltd.

1.2 This report is to be read in conjunction with the Tree Protection Plan that accompanies it if any of the trees are to be retained.

1.3 To assess the implications of the proposed development of the site in close proximity to trees, to provide a method statement for the potential works that surround a field, on public footpaths and residential areas, also several hedges border the site. Then to provide tree protection measures for any retained trees during the construction phase.

1.4 To provide a schedule of tree works to accompany a planning application.

2.0 The scope of the report - methodology & limitations

2.1 The tree survey process consisted of a ground-based visual inspection only. Where a further, more detailed or aerial inspection is required, this will be indicated within the recommendations.

2.2 The inspection consisted of an aboveground inspection only. Soil types were not assessed.

2.3 This report is valid for one year from the date of site inspection. The condition of trees can change following severe weather conditions, the effects of diseases or pests and other abiotic factors.

2.4 The adjacent properties also contained trees that were near to the site, these have been included in the survey as they will need protecting. Any works to these trees may require the consent of the owner. These trees have not all been inspected because of this, as access couldn't always be gained. Access wasn't gained to the property, which houses some of the trees. No defects were obvious at the time from any of the crowns of the trees where access couldn't be gained, observed from a short distance.

2.6 Only trees over 150mm in diameter at 1.5 meters have been included in the report. This is in accordance with British Standard for trees in relation to construction BS 5837:2012 (Trees in relation to design, demolition and construction – Recommendations). Smaller trees are only included where relevant as many were part of the overgrown hedge. The survey provided did not include all trees present. Plans supplied to myself were produced by another party, therefore I cannot guarantee their accuracy or their location.

2.7 No details relating to the location or the installation of services have been supplied. Therefore this report can only deal with this issue in a preliminary manner. The positioning of services should be approved by the appropriate organisation.

3.0 Site Description and Nature of Tree Stock

3.1 The site has seen a clearance of grass and vegetation and is walled by a young hedge to the far north east corner. This young plantation has mixed tree and shrub species and is located on a slightly elevated ground. Semi-protected by a concrete fence post sealed with a wire mesh barrier.

4.0 Description of the subject trees

4.1 The table of results in section 10 and the submitted plan show the condition of the trees and their suitability for retention according to the British Standard for trees in relation to construction BS 5837:2012 (Trees in relation to design, demolition and construction – Recommendations). This guidance sets out four categories of trees; from trees that are highly desirable to retain (A), through (B) to trees that may or may not be suitable for retention (C). This system assesses the trees health and condition, other factors such as their long-term impact on adjacent structures and good arboricultural management. A more detailed breakdown of this is included in Appendix 1.

4.2 Trees marked 'U' have a condition that cannot realistically be retained as living trees in the context of the current land use for longer than 10 years, but they may have existing or potential conservation value with might be desirable to preserve. Trees marked 'C1 – C3' are insignificant or immature specimens or those not of sufficient quality to be in the higher 'A' and 'B' categories. **'C' trees should be retained where possible or where it suits the development layout but there is a general presumption that they can be removed to facilitate development.** These trees are easily replaced with suitable landscaping.

4.3 There is a mixed species of Oak, Willow and Birch which borders the north east corner of the site. This tree plantation is young and rarely managed in being quite dense and over grown. These are on a raised area looking down on to the potential development. They have good amenity value.

4.4 The average girth of these trees is 250mm and the maximum is 300mm with an averaged height of 10m. They are all young and most of their canopies are growing away from the proposed site. This will illuminate any potential heavy pruning required. Most of the trees are located 3m away from the current fence line.

4.5 For the planted up area of trees and shrubs to be retained, a programme of management must be implemented to properly protect and enhance the vitality of the planting. For ease, all these trees have been grouped as one as they are all of similar age as they have grown together. Therefore their crowns act as one and can all be protected equally.

5.0 Arboricultural Implication Assessment

5.1 At maximum distance from the largest tree in having a DBH of 300mm, the distance from the nearest stem would be 3.6m. Most of the trees are 3m away and partially on a raised soil profile. Therefore the trees would naturally be protected from the development with the existing fence line.

5.3 It is still recommended that no fuels or building materials such as cement should be stored within 5m's of the existing fence line.

5.4 The current fence line has been broken in several places. Either this should be fixed or a new protective fencing installed (See appendix)

6.0 Tree Protection Plan

6.1 The Tree Protection Plan (TPP) shows the ground to be designated as a Root Protection Area (RPA). The RPA also represents a Construction Exclusion Zone (CEZ).

6.2 It should be noted that the full RPA cannot always be achieved on site due to ground constraints. The RPA can also be tailored to some extent given the structure and condition of individual trees. The CEZ shows the area that should be kept free of development work.

6.3 The following are precautions that must be taken within the RPA:

- Fencing to be erected prior to any development commencing on site or any materials or machinery associated with development are brought onto the site.
- The fencing shall be maintained for the duration of the development unless otherwise agreed by the Local Planning Authority or in accordance with the approved plans and particulars.
- No materials, machinery, chemicals or fuel shall be stored within the RPA for the duration of the development.
- The ground levels within the RPA shall not be lowered or raised without the consent of the Local Planning Authority and/or in accordance with the approved plans and particulars.
- Where existing vegetation is to be replaced with new landscaping within the RPA it shall be treated with a translocated herbicide e.g. glyphosate prior to removal.
- Following treatment with herbicide, existing vegetation shall be removed once dead by the use of hand tools e.g. spade or fork and shall not be removed by machinery.

6.4 Protective measures outside the RPA: The following are additional precautions outside the RPA. In addition to the ground protection within the RPA the following should be addressed or avoided

a) Care should be taken when planning site operations to ensure that wide or tall loads or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact can result in serious damage to trees and might make their safe retention impossible. Consequently, any transit or traverse of plant in close proximity to trees should be conducted under the supervision of a banks man to ensure that adequate clearance from trees is maintained at all times.

b) Material which will contaminate the soil, e.g. concrete mixings, diesel oil and vehicle washings, should not be discharged within 10m of the tree stem.

c) It is essential that allowance be made for the slope of the ground so that damaging materials such as concrete washings, mortar or diesel oil cannot run towards trees.

d) Fires should not be lit in a position where their flames can extend to within 5m of foliage, branches or trunk. This will depend on the size of the fire and the wind direction.

e) Notice boards, telephone cables or other services should not be attached to any part of the tree.

6.5 Installation of new services: No services should be installed within the root protection area (RPA). Should existing services within the RPA need upgrading this should be done in accordance with the advice of a suitably qualified Arborist and using a method approved by the Local Planning Authority.

6.6 Site monitoring: British Standard for trees in relation to BS 5837:2012 (Trees in relation to design, demolition and construction – Recommendations). requires that any RPAs are monitored during construction by a qualified and experienced Arborist. An appointed Arborist should be involved with the pre-commencement discussions and oversee the tree protection measures.

6.7 Construction plans: The RPA should be marked on all the construction plans to prevent any breach of the protection measures and planning conditions.

7.0 Arboricultural Method Statement (AMS)

7.1 Thinning of the planted trees to be retained on the site. This may also involve dead wooding and or a crown lift to help aid the construction of the site.

7.2 The protective fencing installed prior to any construction or plant machinery is allowed on site were the existing fencing has been damaged. Fencing to be inspected by a qualified Arborist prior to any work starts on construction.

8.0 Legal constraints

8.1 Trees subject to statutory controls: The site may be subject to a Tree Preservation Order (TPO). If this is the case then any works to trees covered by the TPO will need the consent of the Local Planning Authority (LPA), unless exempt. The site may also be within a Conservation Area. If this is the case it is necessary to give six weeks prior written notice of intent to the LPA before any tree works other than certain exemptions can be carried out. Any works specified in are necessary for the proposal to be implemented, and if approved, should be acceptable to the LPA. However, this should be confirmed in writing with the LPA prior to being implemented.

8.2 Statutory wildlife obligations: The Wildlife and Countryside Act 1981 as amended by the Countryside and Rights of Way Act 2000 provide statutory protection to birds, bats and other species that inhabit trees. All tree work operations are covered by these provisions and advice from an ecologist should be obtained before undertaking any works that might constitute an offence.

9.0 Conclusions

9.1 The existing tree population beyond the fence should be retained. This area of trees will provide great aesthetics in the future, a wildlife habitat and provide stability to the banking. Some small remedial works will be required, thinning, dead wooding and light pruning. This will help it establish as a better and healthy woodland in the future.

10.0 BS5837 Tree Survey Schedule

Tree reference number	Species	Height m	Diameter mm @ breast height	Branch spread m	Height of Crown m	Clearance	Age class	Physiological condition	Structural condition	Preliminary management recommendation	Estimated remaining contribution years	Category grading
A1	Silver birch (<i>Betula pubescens</i>) Oak (<i>Quercus spp</i>) Willow (<i>Salix spp</i>)	10	250-300	N 5 E 2 S 2 W 2	1	1	Y	Average	Average	Good screen tree area, Retain	40	B2

11.0 Tree root protection areas

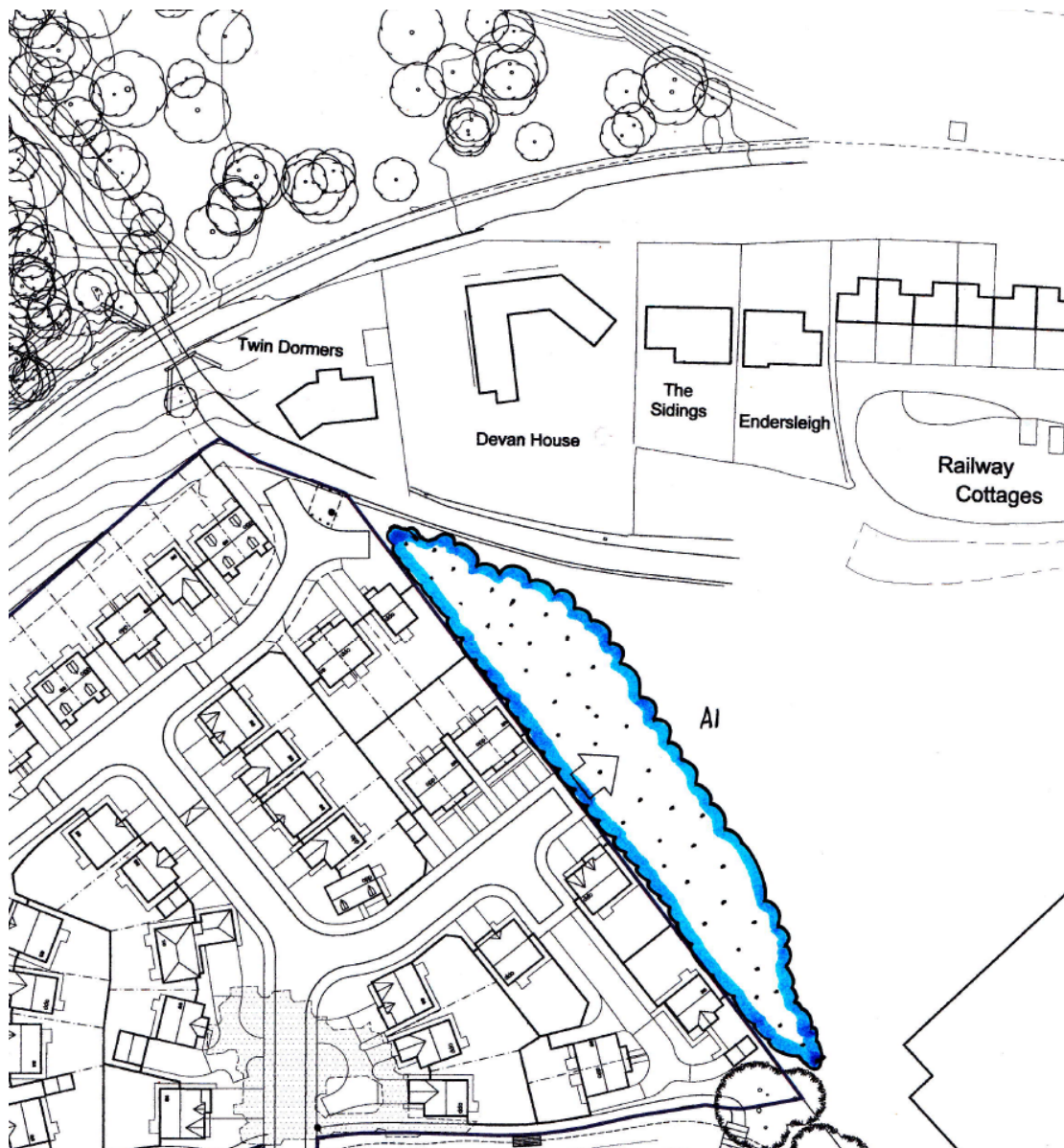
Tree / Hedge Number	Species	BS5837 Category	Root Protection (Radius m)	Root Protection (Area m2)
A1	Birch, Oak, Willow	B2	3.2	N/A

12.0 Map 1



Tree Numbering and Root Protection Area is to be the original fence line

12.1 Map 2



Blue is to be retained

13.0 Methodology

The data recorded includes:

Height - data gathered using a Suunto optical clinometer PM - 5/1520. Where access to the tree was not possible the Heights were estimated.

Diameter - measurements taken at 1.5 metres above ground level (complying with requirements for BS5837). Where multiple stems occurred below 1.5m the measurement was taken at the point immediately above the root flare.

Girth data was gathered using a metric diameter tape, callipers or estimated when no access.

Tree crown spread – estimated measurement of the four cardinal points to provide information to be used with the arboricultural constraints plan

Tree Crown Clearance – crown height above ground level

Tree condition - judged visually using the guidelines produced in the report. The condition is

indicated with the appropriate colour on the map found in the report

Age class - estimated from an examination of the tree in question.

13.1 Age Classification

The following classification is employed:

Y - Young: MA – Middle Aged:

M - Mature:

OM- Over mature:

V – Veteran:

Saplings and young trees under 10 years of age

Trees older than 10 years but less than one third of the life expectancy of their species, normally making substantial extension growth.

Trees between one third and two thirds of the life expectancy of their species. More or less full height and large girth, increasing only slowly.

Trees beyond two thirds of the life expectancy of their species. No significant extension growth. Crown starting to break up and decrease in size.

tree that shows features of biological, cultural or aesthetic value that are characteristic of an individual surviving beyond the typical age range for the species.

13.2 Estimated Remaining Contribution in Years

The estimated remaining contribution in years is an estimate based on currently known factors of the possible remaining life of the tree as an asset. Clearly, it is impossible to predict changes in condition which may occur in the future and this reflects what is considered reasonable under existing circumstances, The following classification is employed:

Death or removal is likely within less than 10 years Death or removal is likely within 10-20 years. Death or removal is likely within 20-40 years.

Death or removal is likely beyond 40 years The estimated remaining contribution in years will be dependent on the interaction of the typical longevity of the species, its current age and condition with prevailing environmental factors. The estimated remaining contribution in years also dependent on future tree management that can extend useful life in some instances.

13.3 Tree Condition

The tree survey assessed the individual condition of all trees identified on the site. The assessment of condition is based on a visual and professional view.

The categories considered for Physiological Condition are good, fair, poor and dead. Structural Condition is also commented on and this will include such items of presence of decay and physical defects.

Trees are living organisms and their condition can change rapidly in response to environmental variables. Condition remarks refer to the date of survey and cannot be assumed to remain unchanged. While there is no such thing as a safe tree, regular inspection of trees is recommended to reduce the foreseeable risks associated with trees. There is currently no published guidance from the UK insurance industry on the frequency of tree inspections. In the German courts a bi-annual routine inspection is normally expected for older street trees, giving an indication of the rapidity of change in condition that can occur.

Preliminary Management Recommendations

Recommendations are given where it is felt by the arborist that further investigations are required due to suspected defects and work recommendations for pre construction tree work.

13.4 Tree Categorisation Using BS 5837 Methodology

The trees surveyed were categorised using the method explained in BS5837 Trees in Relation to Construction 2005. This method categorizes individual trees, groups and woodlands in a systematic way. Each tree, group or woodland is identified on an attached plan.

Groups are identified as those trees forming a single arboricultural feature with trees that provide companion shelter, are avenues or screens or cultural.

Initially the surveyor will determine if the tree should be regarded as an R category tree. R category trees are those that are low value trees that have little future due to physiological and structural condition.

Other trees are graded A, B or C. The initial category should reflex the trees value in making an important contribution to the amenity of the site over a period of time. The higher the category the longer the perceived time period.

A sub category is included 1, 2 or 3. This sub category reflects the type of value the surveyor feels the tree presents in regards its value to 1 – arboricultural, 2 – landscape, 3 – cultural or conservation.

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 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	<ul style="list-style-type: none">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 declineTrees 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 <p><i>NOTE: Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i></p>			See Table 2
Trees to be considered for retention				
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	1 Mainly arboricultural qualities 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 Mainly landscape qualities Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	3 Mainly cultural values, including conservation 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 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 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 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	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

14.0 Root Protection Area Fencing Details

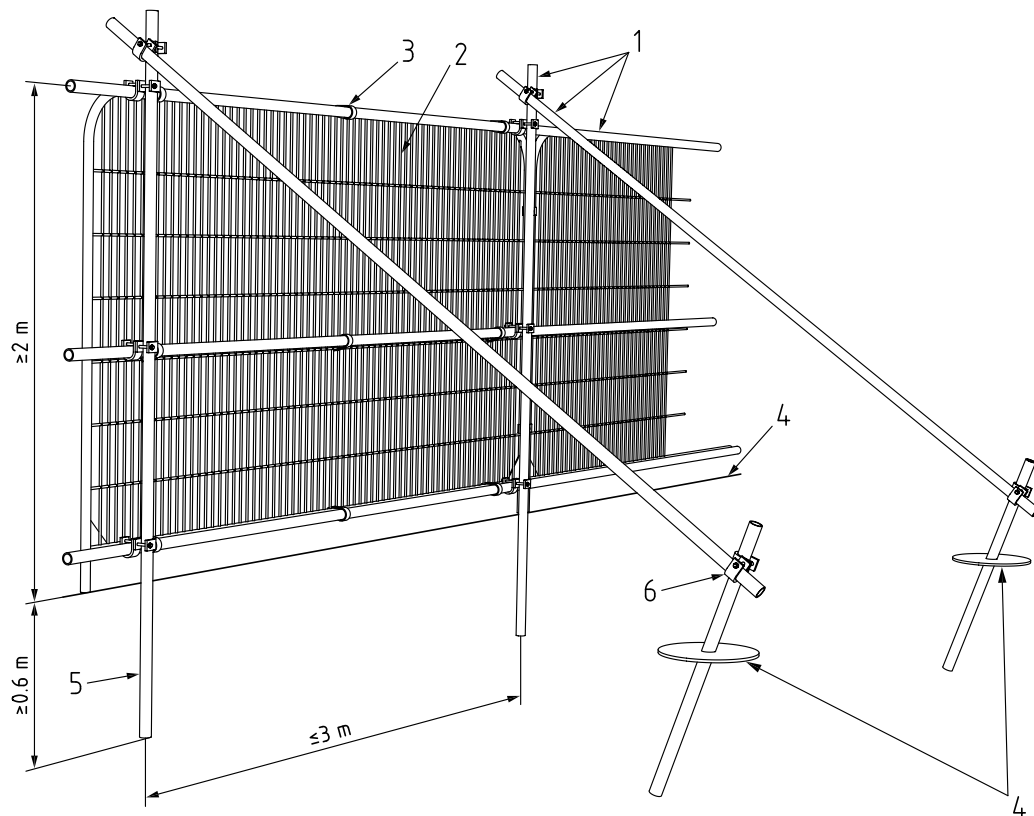
Protective Fencing Specifications

Since trees are living organisms which interact with their immediate environment any changes made to their surroundings may have a bearing on that trees future. Developing a site will undoubtedly place any trees within close proximity under some level of stress, which could predispose them to infection. The aim of this method statement is to limit the amount of stress induced by introducing protection measures.

The most effective way of offering protection is by erecting protective barriers set at a distance from the tree stem using the methods given within BS 5837: 2005 Trees in Relation to Construction. Barriers should be braced and constructed to resist impacts; see figures 1 & 2 below for barrier specifications.

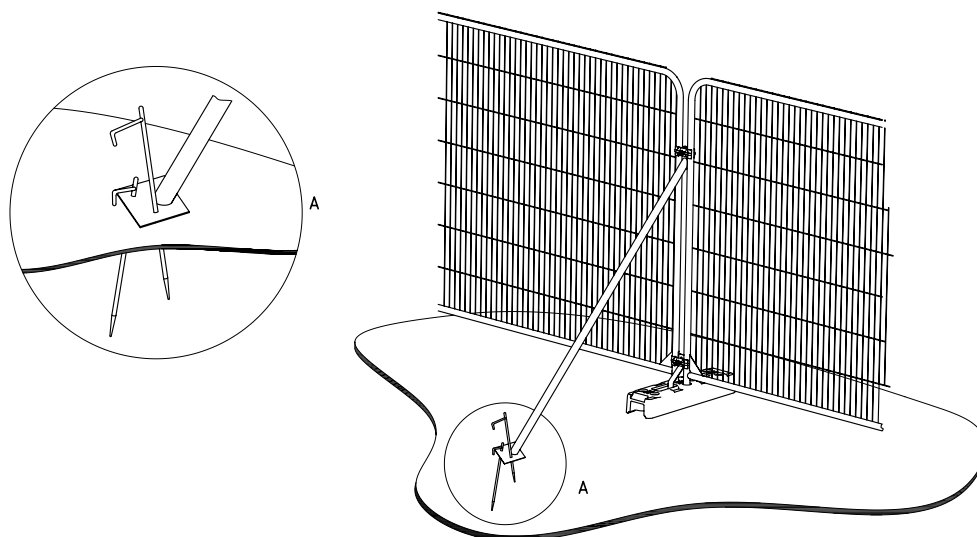
Barriers should be erected before any works commence on site with the exception of recommended tree work. Areas of retained and future structure planting should be similarly protected.

All personnel should be made aware of the protected areas and instructed to keep them free of materials, waste and excess soil. Soil disturbance should be prohibited and travel of any kind, including foot traffic should also be excluded within the root protection area (RPA) unless previously agreed and adequate ground protection has been installed. Where foot traffic is agreed within the RPA, single thickness scaffold boards laid over a compressible material on a geotextile, or supported by scaffold should suffice. Where vehicular access through the RPA is agreed an engineer should be consulted to design adequate ground protection methods.

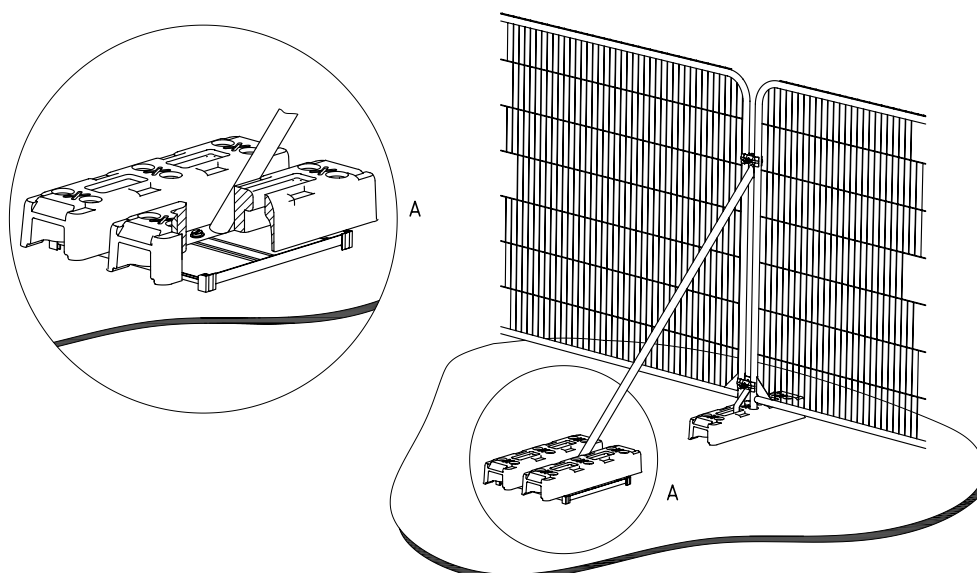


Key

- 1 Standard scaffold poles
- 2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
- 3 Panels secured to uprights and cross-members with wire ties
- 4 Ground level
- 5 Uprights driven into the ground until secure (minimum depth 0.6 m)
- 6 Standard scaffold clamps



a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray

15.0 Arboricultural Glossary

Abiotic Factors - Nonliving factors of the environment, including temperature & wind.

Age-class - A general classification of the tree into either - young, semi-mature/maturing, mature, over-mature, or senescent.

Apical Bud/Shoot – The apical bud, also known as the leading shoot, is responsible for shoot extension and is dominant.

Apical Dominance – A singular, leading shoot remains dominant.

Arboreal - In connection with, or in relation to, trees.

Arboriculturalist – Person who has, through relevant education, training and experience, gained recognised qualifications and expertise in the field of trees in relation to construction.

Arboricultural Implications Assessment (AIA) – Study, undertaken by an arboriculturalist, to identify, evaluate and possibly mitigate the extent of direct and indirect impacts on existing trees that may arise as a result of the implementation of any site layout proposal.

Arboricultural Method Statement (AMS) – Methodology for the implementation of any aspect of development that has the potential to result in the loss of or damage to a tree. Note The AMS is likely to include details of an on-site tree protection monitoring regime.

Biotic factors - Living factors. For example, animals and pathogens. **Bottle Butt** – Term used to describe shape of stem base, usually associated with an internal defect – refer to 'Reaction Wood' below.

Branch union/junction - The point at which a branch joins a larger stem. Can be a point of weakness, especially in certain species.

Cambium - A lateral meristem (see below) in vascular plants located just beneath the bark responsible for secondary growth, e.g. production of annual growth rings.

Canker – A clearly defined area of dead and sunken or malformed bark, caused by bacteria or fungi. Can have a bearing on structural integrity of infected limb(s) depending on size and location.

Chlorosis/Chlorotic – Abnormal yellow or yellow-green coloration of usually green leaves.

Essentially a reduction of chlorophyll levels often as a result disease or nutrient deficiency.

Co-dominant stems - A growth characteristic, where two or more stems of similar size grow from the same point. Can create an inherent weakness. **Compaction** - The compressing & hardening of soil around tree root systems, due to vehicular/pedestrian use etc. Loss of pore space between soil granules limits water movement and gaseous exchange, and inhibits root growth.

Competent person – Person who has training and experience relevant to the matter being addressed and an understanding of the requirements of the particular task being approached
Note 1 A competent person understands the hazards and the methods to be implemented to eliminate or reduce the risks that can arise. For example, when on site, a competent person is able to recognise at all times whether it is safe to proceed.

Note 2 A competent person is able to advise on the best means by which the recommendations of this British Standard may be implemented.

Condition – Assessment based on a visual and professional view giving consideration to many factors such as tree health, structural integrity and suitability of its position.

Construction Exclusion Zone – Area based on the RPA (in m²), identified by an arboriculturalist, to be protected by 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 a tree.

Coppice - The method of managing trees by cutting the stems at between 1.0 inch and 1.0 foot from the ground level on a regular cycle, the cut stumps of the trees or shrubs are allowed to re-grow many new stems.

Crown spread - Gives distances between extreme limits of the crown and the stem, usually along the four compass points. Helps to show crown symmetry.

Crown Reduction – The removal of branch ends to reduce the extreme limits of a trees branch spread and height.

Crown Thin – The removal of selected branches within the crown to thin the internal branch structure. **D.B.H.** - 'Diameter at Breast Height', an industry standard to gauge tree stem size and development.

Within arboriculture, breast height is taken to be 1.5m above ground level.

Dieback - The reduction in crown vigour and extension growth progressing to death of distal parts; often associated with decline.

Epicormic/adventitious growth - New growth from dormant buds that can often form tenuous attachments. Although some species readily form such shoots, it can be an indication of stress.

Feathered Whip – Size of tree for planting, usually ranging from 1.25m to 2.5m in height. **Form** - A general assessment of the shape and position of the tree within its' environment. **Frass** – Debris such as bore dust left by wood boring insects.

Hanger – Term used to describe a branch that has become detached and is being supported by

other branches. Can be a hazard to persons and property below.

Hazard Beam – After the loss of a distal part, a limb concentrates growth upwards creating adverse end weights that can render the limb susceptible to failure.

Heavy Standard – Size of tree for planting, usually above 3.5m in height.

Included bark – Growth characteristic usually caused when two or more stems/branches growing in close proximity 'fuse' together entrapping the bark from when the parts were separate in the middle, creating a structural weakness.

Meristem – The undifferentiated plant tissue from which new cells are formed, such as that at the tip of a stem or root.

Meristematic Disorder – A growth disorder caused by a disruption of the meristem (see above) from any of a number of biotic factors (see above). Manifests as growths such as 'Witches Brooms' & 'Galls'.

Necrosis/Necrotic – Death of tissues usually characterised by a blackening in colour.

Occlusion/Occluded – Normally used to describe the overgrowth of a wound. Also, immovable foreign objects in contact with a tree part can become encased or 'occluded' by the tree as it grows incrementally.

Pathogen – An agent that causes disease, especially a living microorganism such as a bacterium or fungus.

Plasticity index – The table used to calibrate the shrinkability of a clay soil.

Pollard – The removal and subsequent regular re-removal of the crown of a tree above animal browsing height. Can be an effective method of controlling the size of trees in urban areas. This is ideally begun in the trees early stages and maintained throughout its life.

Reaction wood – Essentially additional wood laid down by the tree to compensate for structural defects such as cavities.

Ring barking/Girdling – the removal of bark around the entire circumference of a stem or branch, causing the death of all distal parts.

Root Protection Area (RPA) – 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 in m2.

Saprophyte – An organism which exists on dead plant material.

Scaffold branches – The main structural branches within the crown.

Services – Any above ground and piped and/or ducted underground infrastructure including water main, electricity supply, gas supply, fibre optic utilities, telecommunications cabling, storm and foul water drainage, including temporary storage for run-off, pumping stations, interceptors and other allied buried structures.

Shrinkable clay – Clay soil which alters in volume depending on moisture content. Property sited on shrinkable clay can suffer subsidence damage due to soil desiccation; this can be due to the water uptake of nearby vegetation, including trees.

Special engineering – design of a structure with the physiological requirements of trees as the priority.

Standard – Size of tree for planting, usually ranging from 2m to 3.5m in height. **Structure** – Man-made object, such as a building, carriageway, path, wall, services, and built and excavated earthworks.

Transplant – (1) size of tree for planting, usually ranges from 0.2m to 0.9m in height (2) the relocation of a tree or shrub including a given portion of the root system.

Tree Constraints Plan (TCP) – Plan prepared by an arboriculturalist for the purposes of layout design showing the RPA and representing the effect that the mature height and spread of retained trees will have on layouts through shade, dominance, etc.

Tree protection plan – scale drawing prepared by an arboriculturalist showing the finalised layout proposals, tree retention and tree and landscape protection measures detailed within the arboricultural method statement (AMS), which can be shown graphically.

U.L.E – 'Useful Life Expectancy' is an estimate based on currently known factors of the possible remaining life of the tree as an asset.

Veteran tree – Tree that, by recognised criteria, shows features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned.

Vigour – A general classification, as to the present and future potential growth and development of a tree. A comment regarding the health status of the tree specific to its species.

Water Demand – A generic classification of the water demand of specific species as outlined by the NHBC (National House Building Council).

Whip – Size of tree for planting, usually ranging from 1m to 1.75m in height.