



Arboricultural Survey

at

Hartwell Dealership Acquisition,

25-27 Rose Kiln Lane,
Reading,
RG2 0JZ.

prepared for:

Hartwell plc,
Wootton Business Park,
Besselsleigh Road,
Boars Hill,
Wootton, OX13 6FD.

February 2020

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ARBORICULTURAL SURVEY

Section 1. Introduction & Methodology

1.1 Introduction & the Brief.

- 1.1.1 This Arboricultural Survey has been prepared in response to an instruction given by Hartwell plc (the Client), to prepare an Arboricultural Survey of trees on and immediately adjacent to the site.
- 1.1.2 The trees covered by this report are located to the rear of the Infiniti car dealership and are illustrated on the Arboricultural Survey drawing.
- 1.1.3 The tree inspection was undertaken on Wednesday 7 January 2020 to assess the condition of trees as noted on the site and on the site survey drawing, specifically:
- the main bole and central stem;
 - the primary and secondary branch system and crown supported thereon;
 - trees in relation to their surroundings and to the conditions likely to be imposed by proposed development.
- 1.1.4 This report has been prepared with reference to the British Standard BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations (the BS). It considers arboricultural matters only and it is not an ecological survey.
- 1.1.5 This report has been prepared to be printed double-sided in colour and should be read with the Arboricultural Survey drawing 19048/100.

1.2 The Survey Area.

- 1.2.1 The arboricultural survey covers trees illustrated on a topographical survey prepared by CSL Surveys.com referenced 20619RP and dated October 2019 provided by Hartwell plc.
- 1.2.2 This drawing has been used as the base for the arboricultural survey drawing 19048/100.

1.3 Site Trees, Groups, Hedges & Related Vegetation.

1.3.1 The site trees covered by this report are those specifically noted on the arboricultural survey drawing with a tree number and are as detailed in Section 5 Tree Survey Details.

1.3.2 The location of trees, hedges and associated vegetation illustrated on the arboricultural survey drawing should be the subject of on-site verification.

1.4 Tree Survey Methods.

1.4.1 'T' numbers have been used to identify individual trees and 'G' numbers to identify individual groups that are identified on the arboricultural survey drawing. Tree numbers commence with T1 and run to T3 with one group, Group 1 being noted.

1.4.2 All trees and groups have been visually inspected from ground level unless otherwise stated with no climbing or boring tests being undertaken. All measurements are metric and are approximate.

1.4.3 The comments made on their condition in Section 5 are based on observable factors present at the time of inspection. Where trees are recommended for retention, this recommendation is given based on maximising tree life expectancy given their current situation only.

1.5 Recorded Information: for each tree/group/hedge/area of vegetation the following information is recorded:

i. **Height & Branch Spread:** these are taken from site observation and are approximate.

Branch spread is taken at four cardinal points (north, south, east and west) and these are noted in section 5.

Where our drawings are based on a site survey the canopy spreads illustrated on the site survey are also illustrated on the Arboricultural Survey drawing. They have not been revised to follow the measurements taken on site.

ii. **Life Expectancy:** an estimated remaining contribution is given for each tree:



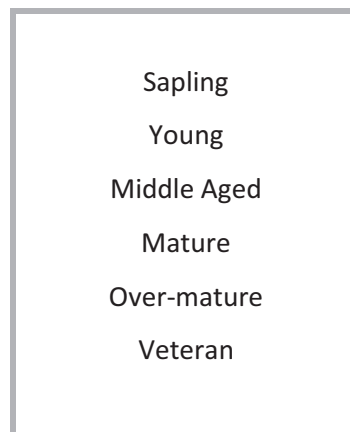
-10 years
10+ years
20+ years
40+ years

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- iii. **Stem Diameter / Trunk Girth (DBH):** this measurement is used to establish a trees root protection area. It is taken in millimetres at 1.5 metres above adjacent ground level and then multiplied by 12. On sloping ground the measurement is taken on the upslope side of the tree.

Where trees are multi-stemmed this measurement is taken for each stem as above with the root protection area calculate for trees with two to five stems and trees with six stems and above as prescribed in section 4.6 Root protection area of the BS.

- iv. **Age / Class or Life Stage:** the following classes have been used to codify the age of a tree as follows:



- v. **Crown Clearance:** this is height of the lowest branch. It does not include epicormic growth or very small branches.
- vi. **Physiology, Structure & Management Recommendations:** each tree is assessed as to its physiological condition (good, fair, poor or dead) and its structural condition (such as evidence of any decay and physical defects) with management recommendations being given.

This includes recommendations regarding any further investigations that may be required and noting any specific wildlife potential.

1.6 Tree Quality Assessment – Category Grading.

- 1.6.1 Each tree is attributed to one of four categories that reflect their overall arboricultural and amenity value in relation to the site and its surroundings, with an individual colour applied to each. Categories 'A', 'B' and 'C' cover trees that are to be considered for retention.

Category 'U' identifies trees recommended for removal on arboricultural grounds.

- 1.6.2 Three subcategories can be applied to categories 'A' to 'C' to reflect the trees arboricultural, landscape and cultural value. Only one set of criteria is applied to category 'U' that establishes the reasons for recommending removal.

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1.6.3 Each of the assigned colours is used for identification purposes on the Arboricultural Survey drawings. These terms are defined and illustrated in the table 1 Cascade chart for tree quality assessment on page 9 of the BS. This is reproduced for reference in table 1 below.

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	• 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 <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
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Trees to be considered for retention				
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or 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 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

Table 1: Cascade chart for tree quality assessment.

Taken from table 1 titled 'Cascade chart for tree quality assessment' of the British Standard BS 5837:2012 *Trees in relation to design, demolition and constructions – Recommendations*.

1.6.4 In summary, category 'A' trees are of the highest priority for retention with category 'B' of moderate priority and those of category 'C' standing of lower priority. Category 'U' trees are given the lowest priority for retention and subject to the context will usually require removal.

1.7 Priority Codes.

Priority codes from 1 to 3 have been given for each tree. The definition of the codes is as follows:

- Priority 1:** Work that should be undertaken urgently due to the identification of a potential hazard.
- Priority 2:** Work that should be undertaken prior to any works commencing on site.
- Priority 3:** Work that should be undertaken following the completion of the development.

1.8 Canopy Density, Leaf Size & Colouration, & Vigour.

It should be taken that, unless otherwise stated with each individual entry, the canopy density, leaf size and colouration, and vigour of the trees is typical of the species.

1.9 Root & Butt Decay Pathogens & Structural Defects.

It should be taken that, unless otherwise stated with each individual entry, there were no external signs that root and butt decay pathogens or structural defects were present at the time the inspection was undertaken.

1.10 Limitations.

- 1.10.1 Due to the changing nature of trees and other site circumstances, this report and any recommendations made are limited to a 5-year period.
- 1.10.2 This report does not constitute a health and safety survey report which is outside of the scope of this document. Where concerns regarding tree health and safety exist appropriate specific tree inspections should be undertaken.
- 1.10.3 Any alteration to the site or development proposals could change the current circumstances and may invalidate this report and any recommendations made. Should this be the case this report will require revision to reflect the new proposals.
- 1.10.4 Trees are dynamic structures that can never be guaranteed 100% safe. Even trees in good condition can suffer damage under average conditions. Regular inspections can help to identify potential problems before they become acute.
- 1.10.5 A lack of recommended work does not imply that a tree is safe and likewise it should not be implied that a tree will be made safe following the completion of any recommended work.

1.11 Statutory Designations.

- 1.11.1 The site is not located within the Green Belt or within a Conservation Area with no trees in the location of the proposed development being covered by a Tree Preservation Order. However, a Tree Preservation order does cover trees located to the front of the Infiniti car dealership and the adjacent Big Yellow Storage building.

This Tree Preservation Order is referenced Order Number 2/11, T7 that is illustrated below.

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*extract of Tree Preservation Order plan referenced 2/11, T7
that includes 25-27 Kiln Lane Reading, provided by the
Natural Environment Officer, Planning & Building Control,
Reading Borough Council.*

- 1.11.2 No work shall take place to site trees without prior consultation with the Tree Officer/ Natural Environment Officer and the written consent Reading Borough Council. Their contact details are given below:

1.12 Planning Authority & Tree Officer Details.

- 1.12.1 Contact details for Reading Borough Council:

Address: Natural Environment Officer, Planning & Building Control, Directorate for Economic Growth and Neighbourhood Services. Reading Borough Council, Level 1, North Civic Offices, Bridge Street, Reading RG1 2LU.

Contact: Sarah Hanson.

Tel: Direct No. 018 937 2440.

Email: sarah.hanson@reading.gov.uk

1.13 Works to Trees Off-Site

Where work is proposed to off-site trees, then consent will be required from the adjacent landowners prior to this work commencing.

Section 2. Tree Constraints

2.1 Site Description

- 2.1.1 The site comprises the rear parking area to the Infiniti car dealership. This is a roughly rectangular area that is defined by metal palisade perimeter fencing that defines the site boundary. Most of the area is surfaced in asphalt with a rectangular area to the south-eastern corner being surfaced in brick paviours.

The asphalt and brick paving looked to be in good order with no evidence of deformation from the adjacent individual trees or the tree group.

- 2.1.2 To the north is another car dealership that has an ornamental evergreen hedge and line of trees running along its southern boundary just offsite and adjacent to the line of the palisade fencing. To the south is the car park to the Big Yellow Storage building. To the east, located outside of the site behind the palisade fence, is a small group of trees and scrub that visually separates a public path and the river Kennet from the site. To the west is the main building to the car dealership.
- 2.1.3 As noted above, existing trees and a hedge run just off-site along the northern boundary and a group comprising some individual trees and scrub vegetation are located just off site to the east. Please refer to drawing 19048/100 Arboricultural Survey where these are illustrated.

2.2 Development Proposals

- 2.2.1 Development comprises the erection of a single deck demountable modular car park located within the site boundary to the rear of the car dealership site.
- 2.2.2 We understand that the proposal is for the modular deck to be erected directly onto the existing surfacing. This will avoid the requirement for the construction of support foundations. However the proximity of the deck structure to the northern boundary is like to require the removal of three adjacent trees located just off-site.
- 2.2.3 Please refer to drawing 19048/110 Tree Protection that illustrates the proposed development plan, and also to drawings prepared by hnw Architects, 61 North Street, Chichester, West Sussex PO19 1NB (tel: 01243 533300, email: hnw@hnw.co.uk).

2.3 Site Trees: existing context.

- 2.3.1 There are three individual tree entries in Section 5, Tree Survey details along and one group entry. All individually noted trees and the group are off-site.

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- 2.3.2 The inspection identified one dead tree on the northern boundary that is recommended for removal. The five individual trees at the eastern end of the site are recommended for a more detailed inspection once the ivy that obscures their bases and sections of their main stems has been severed and has died off.
- 2.3.3 Two individual trees have been assessed as being borderline Category 'C' to 'B' trees, along with Group 1 being Category 'B' when this is viewed as a whole.
- 2.3.4 The age/class of the trees has been assessed with the two individual trees being Mature. Within Group 1 the five trees in the southern end of the group are again considered to be mature with the remaining vegetation ranging from sapling to young. No over Mature or Veteran trees are present.
- 2.3.5 Given the location the two individual trees on the western boundary they have been given an estimated life expectancy of 20+ years, with the trees within the group having an estimated life expectancy that ranges between -10 and 20+ years.
- 2.3.6 The assessment of life expectancy relates to their current circumstances without any management works or any site development work taking place.

2.4 Conclusion to Tree Constraints

- 2.4.1 Group 1 forms a visual buffer between the rear of the existing car dealership and adjacent river Kennet and the riverside path. To ensure it remains a viable buffer into the future and its ecological integrity is retained, it is recommended that the recommendations given in Section 5 Tree Survey Details are undertaken. The removal of non-native tree species and their replacement with native tree is specifically recommended.
- 2.4.2 If the proposed development does not proceed the replacement of the failed Snakebark Maple on the northern boundary is recommended to ensure the continuity of this line of trees along with the recommended minor tree works to ensure clearance of the tree canopies from lighting columns and buildings.
- 2.4.3 Should the development proceed replacement tree planting of some native species trees off-site along the eastern boundary should be considered to replace the lost trees and to enhance the level of screening. The number, tree species and their specific locations should be agreed with the Tree Officer.

Section 3. Root Protection Areas

3.1 Introduction

- 3.1.1 As required by the British Standard, all trees not proposed for removal on arboricultural grounds shall have their root protection areas calculated as detailed in 1.7 above. These trees are noted in Section 5 Tree Details and are illustrated on the arboricultural survey drawings 19048/100.
- 3.1.2 Trees to be retained shall have their root zones protected during work to ensure their long-term viability following the completion of the work. The following is a general guide to these requirements.
- 3.1.3 It is considered that the root zones of off-site trees are not likely to enter the site area due to the impervious nature of the asphalt and block paving surfacing that is unfavourable to supporting root growth beneath it.

3.2 Site Trees

- 3.2.1 The objective is to avoid compaction of the soil (that can arise from the passage of a single vehicle in wet weather) so that the tree root functions remain unimpaired.
- 3.2.2 Root protection areas are those areas under and adjacent to tree/hedge canopies (known as the root zone) that would require protection from damage should development be proposed on the site. These areas are established as set out in the BS with reference to its section 4.6 Root Protection Area (RPA) that is not reproduced here.
- 3.2.3 Tree protection fencing is usually proposed to protect the root zone areas of site trees to be retained during a development. These areas are termed Construction Exclusion Zones (CEZ) and are illustrated on a separate tree protection drawing prepared to illustrate tree protection in relation to a known accurate proposed site development plan (please refer to drawing 19048/110 Tree Protection).
- 3.2.4 The potential RPA for each individual tree is illustrated by a yellow dashed circle on the arboricultural survey drawings. The radius for the RPA is also given.

3.3 Tree Protection Fencing

- 3.3.1 The BS proposes a detail for a protective barrier comprising a 2-metre-tall scaffold framework to which 'weldmesh' is fixed. This is illustrated in Appendix A. Where site working areas are more restricted a 2-metre-tall weldmesh type fence may sometimes be suitable, and this detail is illustrated in Appendix B. In some instances, ground protection will also be required as detailed in 3.5 below.

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- 3.3.2 With reference to 1.12 above, it is recommended that the type of fencing to be used and the lines of tree protection fencing proposed on site are agreed with the Tree Officer prior to its erection on site.
- 3.3.3 Tree protection fencing must be erected following tree works being completed on site and prior to any construction works commencing. It must remain in place and intact until the completion of the works.
- 3.3.4 The areas protected by tree protection fencing are termed Construction Exclusion Zones (CEZ).

3.4 Root Protection Areas (RPA) & Construction Exclusion Zones (CEZ)

- 3.4.1 All of the trees RPA/CEZ shall be protected and fenced off as noted in 3.3 above. As a general rule the Contractor shall have no access to these areas for any reason. They shall remain clear of all plant, equipment, materials, Contractor's vehicles and personnel during the works.
- 3.4.2 No fuel, cement or other materials shall be stored or mixed in these areas.
- 3.4.3 Where space allows the line of tree protection fencing shall be increased outside of the RPA (as defined by the yellow dashed circle around each tree) to increase the level of protection afforded by the CEZ.
- 3.4.4 Where not all the RPA can be fenced off as access is required for construction then these areas require ground protection as detailed in 3.5 below.

3.5 Ground Protection / Scaffolding within Construction Exclusion Zones (CEZ)

- 3.5.1 Where space will be required to allow construction within the CEZ the ground will require protection. Areas requiring ground protection and the method of ground protection to be employed shall be agreed with the Tree Officer (with reference to 1.12) above prior to its erection on site.
- 3.5.2 As a rule the root zone within the CEZ shall be protected as follows though other ground protection details can be used subject to the approval of the Tree Officer:
- **For Pedestrian Traffic Only:** a single thickness of scaffold boards placed on top of a 100mm depth of wood chip or similar laid over a geotextile membrane.
 - **Where pedestrian operated plant up to a gross weight of 2 t are to be used:** interlinked ground protection boards placed on top of a compression-resistant layer (150mm depth of woodchip) laid over a geotextile membrane.
 - **For wheeled or tracked vehicles exceeding 2 t gross weight:** the use of a proprietary system to an engineering specification designed in conjunction with arboricultural advice.
- 3.5.3 Ground protection must be installed following setting out but prior to construction commencing on site and must remain in place until the completion of construction.

3.6 No Dig Method of Construction & hand excavation within Construction Exclusion Zones (CEZ)

- 3.6.1 Generally where excavation is required, such as to install services, this shall be undertaken by hand. This applies to areas where there is existing hard surfacing, such as roads, drives, footpaths, unpaved areas of existing ground within and outside of the site area.
- 3.6.2 Where new areas of paving, hard standing etc are proposed this shall be constructed using a no-dig method of construction, the details of which shall be agreed with the Tree Officer (with reference to 1.12 above) prior to construction commencing.
- 3.6.3 Where existing hard surfacing requires removal within the CEZ this shall be removed under Arboricultural Supervision.
- 3.6.4 Where roots are encountered, they shall be immediately wrapped or covered to prevent desiccation. The wrapping shall be removed prior to backfilling that should take place as soon as possible.
- 3.6.5 On no account shall any roots having a diameter of 25mm or greater be cut as this may affect the stability of the tree. Roots shall not be cut without first seeking arboricultural advice (please refer to section 3.7 below).

3.7 Arboricultural Supervision

- 3.7.1 It is recommended that a programme of arboricultural supervision should commence with the appointment of an Arboricultural Consultant to monitor the development until the completion of construction.
- 3.7.2 The Arboricultural Consultant should be someone who has, through relevant education, training and experience, gained expertise in the field of trees in relation to construction and who through training and experience relevant to the matter being addressed, understands the requirements of the task being approached.

Section 4. Tree Surgery Works

4.1 Tree Surgery Works – Arboricultural Contractor

- 4.1.1 The tree surgery works detailed in this report are proposed on the basis that tree works are undertaken by a qualified arboricultural contractor who must be listed in the Arboricultural Association's Approved Contractors Directory (ref: www.trees.org.uk).
- 4.1.2 All tree surgery works shall be undertaken in accordance with the requirements of BS 3998 : 2010 British Standard Recommendations for Tree Work (not reproduced here) and follow the separate Schedule of Tree Surgery and Related Work document.

4.2 Tree Surgery Works – Timing

- 4.2.1 It is recommended that the works proposed to trees that have been given a Priority Code of 1 are undertaken as soon as possible as they present a potential hazard.
- 4.2.2 Works noted as Priority Code 2 should commence prior to any demolition or other site works commencing. This will allow tree works to be undertaken without there being other contractors on the site and will enable tree protection measures to be implemented that will help to prevent damage to the trees during the construction period.
- 4.2.3 Works noted as Priority Code 3 are to take place following the completion of construction work.
- 4.2.4 Should no development take place then the tree works detailed in this report should be implemented within a period of six months from the date of this report.

4.3 Local Planning Authority - Notification

With reference to section 1.12 above it is recommended that the Tree Officer is notified prior to tree works commencing on site. He should also be informed when tree protection measures have been implemented and when any previously agreed excavation within tree protection areas is to take place to give him the opportunity of being present.

Section 5 Tree Survey Details

T = numbers - individual trees	H = numbers - hedges	G = Group areas	S = Shrub areas
● = Individually noted trees recommended for removal on arboricultural grounds.		# = restricted access, tree data estimated.	

Introduction:

- The following details are to be read with drawing 19048/100 Arboricultural Survey.
- Individual tree numbering commences with T1 and runs to T3. One tree group is covered noted as Group 1.
- The location of trees, tree groups, hedges and areas of scrub vegetation illustrated on the drawings should be regarded as approximate & subject to site verification.
- All measurements including canopy spreads & tree heights are approximate.
- Recommendations are made based on maximising the trees life expectancy given their current situation. Should any development be proposed, or other changes take place on or adjacent to the site then this could invalidate the recommendation made in this report.
- Root Protection Areas are calculated in accordance with BS5837:2012 and are illustrated on the drawing by a yellow dashed line.

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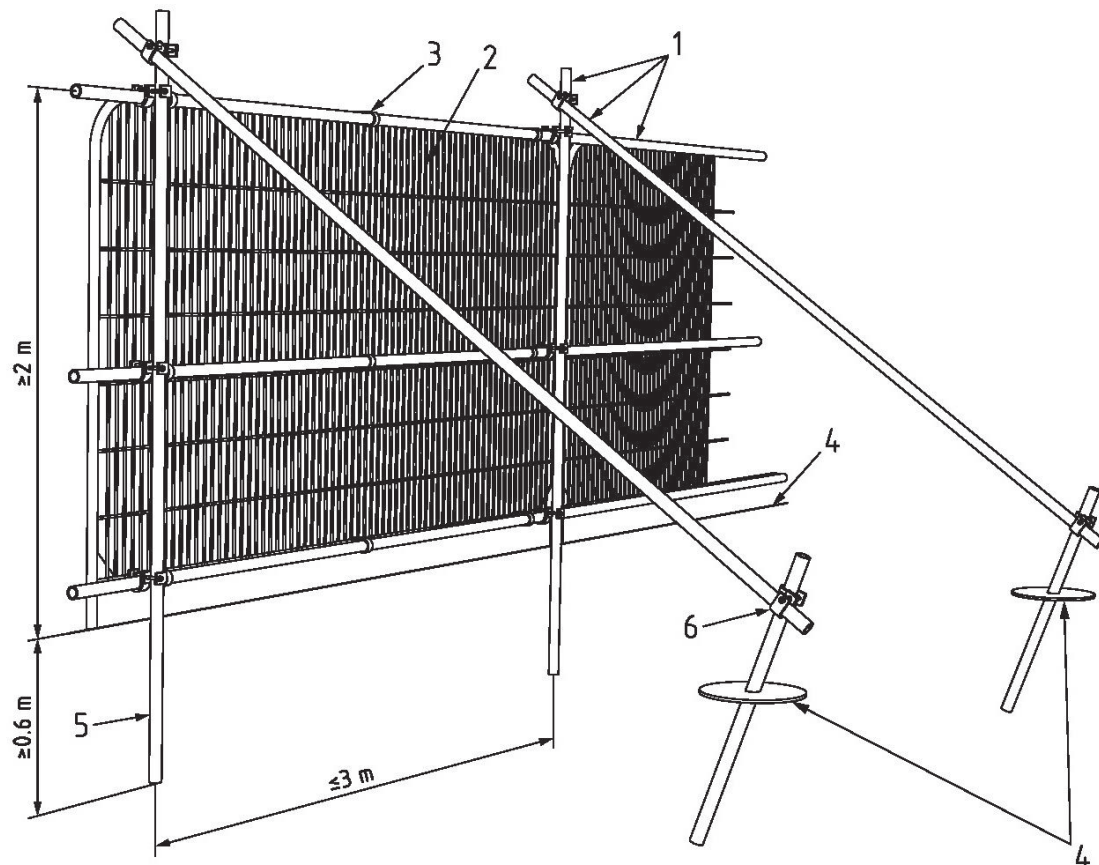
5.1 Individual Trees & Groups:

No.	Species	Age/ Class	Height (metres)	Spread (metres)	Crown clearance	Grading (Quality Class)	Life Expect.	Priority Code	Stem Dia. (mm)	RPA: radius in metres	Condition & Recommendations.
# T1	Snakebark Maple (variety of <i>Acer capillipes</i>)	mature	8.5	N1.5 E2 S2 W2	2.2	border- line C2-B2	20+	2	175	2.10	Condition: physiologically fair & structurally fair for species with potentially weak unions. Growing immediately off-site in a narrow planting strip that also contains an evergreen hedge of <i>Prunus lusitanica</i> & <i>Viburnum tinus</i>. Evidence of poor pruning to the canopy to clear boundary fence with branch stubs present. Restricted canopy to northern side, possibly due to pruning, creating an unbalanced canopy & poor form. Western canopy close to lighting column. Recommendations: retain, formative prune & to clear lighting column, remove branch stubs to branch collars.
# ● T2	Snakebark Maple (variety of <i>Acer capillipes</i>)	---	---	---	---	U	0	2	---	---	Condition: dead. Recommendations: remove & replace.
# T3	Snakebark Maple (variety of <i>Acer capillipes</i>)	mature	8.5	N1.5 E2 S2 W2	2.2	B2	20+	2	175	2.10	Condition: physiologically & structurally fair for species with potentially weak unions. Growing immediately off-site in a narrow planting strip that also contains an evergreen hedge of <i>Prunus lusitanica</i> & <i>Viburnum tinus</i>. Evidence of some poor pruning to the canopy to clear boundary fence with branch stubs present. Cannot see if there is a restricted canopy to the northern side. Western & Southern canopy close & touching a lighting column & site building. Recommendations: retain, formative prune & to clear building & lighting column, remove branch stubs to branch collars.

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No.	Species	Age/ Class	Height (metres)	Spread (metres)	Crown clearance	Grading (Quality Class)	Life- Expect.	Priority Code	Stem Dia. (mm)	RPA: radius in metres	Condition & Recommendations.
# Group 1	Northern end: Sapling & young trees: Alder, Elder, Field Maple, Goat Willow, Hawthorn, Holm Oak.	sapling to young	up to 9	N- E- S- W-	0	B2	-10 20+	2	---	---	Condition: Northern half - Sapling & young trees: physiologically & structurally poor to fair. Single & multi-stemmed, possibly mainly self set showing evidence of having been trimmed back from boundary fence. No evidence of any holistic management.
	Southern half contains larger trees of: Black Alder Blue Atlas Cedar with adjacent young Norway Maple Pine sp. Red Oak	mature	up to 13								<u>Trees to southern half:</u> Black Alder – two mature trees, physiologically & structurally poor to fair. One single & one twin-stemmed from base with an adjacent Hawthorn. Ivy clad preventing detailed inspection. Dead wood & broken branches with evidence of branch removal to clear boundary. Blue Atlas Cedar - physiologically poor & structurally fair. Single stemmed with ivy developing on main stem. Suppressed by adjacent trees. Dead wood in canopy typical of species & suppression. Poor form. Pine sp. - physiologically fair to poor & structurally fair. Single stemmed with ivy developing on main stem preventing detailed inspection. Canopy slightly sparse in areas with dead wood & evidence of branch removal clear of the site boundary. Two bat boxes & one bird box on western side with a bird's nest in upper canopy. Red Oak - physiologically & structurally poor to fair. Single stemmed with ivy developing on main stem preventing detailed inspection. Some minor dead wood due to suppression & evidence of branch removal to clear boundary, with decay evident at main pruning points. Upper canopy developing to the north due to adjacent Pine. Birds nest in canopy at about 6m & evidence of woodpecker activity on the main stem. Recommendations: girdle ivy abase to 1 metre & once this has died off inspect again reporting findings to with recommendations to the Client. Coppice Elder, larger Goat Willows & weak specimens. Remove Norway Maple, treating stump to inhibit regrowth. Consider the removal of the Blue Atlas Cedar & Red Oak & replace with native tree species.

Appendix A: Tree Protective Fencing on Scaffold Framework 2.0m High Above Ground Level.



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

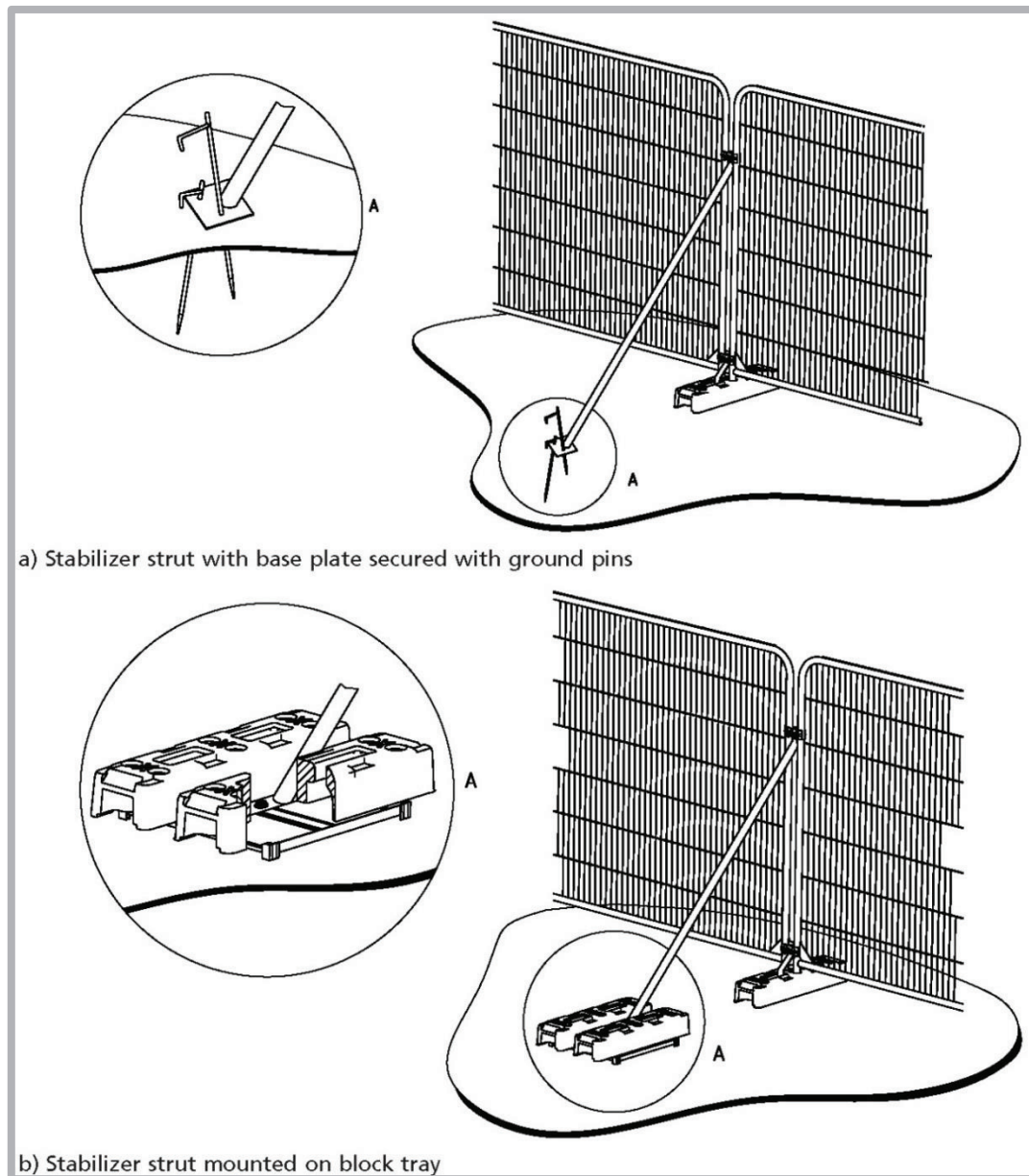
This detail is taken from figure 2 of the British Standard BS 5837:2012 Trees in relation to design, demolition & construction - Recommendations.

Along the lines illustrated on the tree protection drawing a vertical and horizontal scaffold framework, well braced to resist impacts shall be erected. The vertical tubes should be spaced at a maximum interval of 3 m and driven securely into the ground. Onto this framework welded mesh panels shall be securely fixed.

Care should be exercised when locating the vertical poles to avoid underground services and, in the case of the bracing poles, also to avoid contact with structural roots. If the presence of underground services precludes the use of driven poles, the detail illustrated below should be used in consultation with the Project Arboriculturalist to provide an equal level of protection.

Notice to be fixed to each run to each protected area instruction machines, materials & people to keep out.

Appendix B: Weldmesh Type Fencing: with tree protection notice.



This detail is taken from figure 3 of the British Standard BS 5837:2012 Trees in relation to design, demolition & construction - Recommendations.

2m tall welded mesh panels on rubber or concrete feet with panels fitted together using a minimum of two anti-tamper clasps a minimum of 1m apart, installed so that they can only be removed from inside the fence.

The panels should be supported on the inner side by stabilizer struts which should normally be attached to a base plate secured with ground pins (Figure a).

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Where the fencing is to be erected on retained hard surfacing or it is otherwise unfeasible to use ground pins, e.g. due to the presence of underground services, the stabilizer struts should be mounted on a block tray (Figure b).

Notice to be fixed to each run to each protected area instructing machines, materials & people to keep out as illustrated below.



Heras fencing can be obtained from:

Heras U.K. Fencing Systems
 Herons Way
 Carr Hill
 Doncaster
 South Yorkshire
 DN4 8WA

Tel: (0)808 164 2250

Email: enquiries@herasuk.co.uk