

eco urban
ARBORICULTURAL

**Arboricultural Implications Assessment
and Method Statement
for
Gardeners Farm Barns, Flowers Lane, Plaitford**

Ash Fraxinus excelsior Aspen Populus tremula Beech Fagus sylvatica Blackthorn Prunus spinosa Black poplar Populus nigra Box elder Acer negundo Catalpa Catalpa bignonioides Coast redwood Sequoia sempervirens Dawn redwood Metasequoia glyptostroboides Deodar cedar Cedrus deodara Douglas fir Pseudotsuga menziesii Elder Sambucus nigra False acacia Robinia pseudoacacia Field maple Acer campestre Goat willow Salix caprea Hawthorn Crataegus monogyna Hazel Corylus avellana Holm oak Quercus ilex Holly Ilex aquifolium Hornbeam Carpinus betulus Horse chestnut Aesculus hippocastanum Indian bean tree Catalpa bignonioides Japanese cedar Cryptomeria japonica Judas tree Cercis siliquastrum Lawson cypress Chamaecyparis lawsoniana Leyland cypress x Cupressocyparis leylandii Liquidambar Liquidambar styraciflua Lombardy poplar Populus nigra 'Italica' London plane Platanus x hispanica Maidenhair Ginkgo biloba Mimosa Acacia dealbata Monkey puzzle Araucaria araucana Monterey cypress Cupressus macrocarpa Monterey pine Pinus radiata Norway maple Acer platanoides Norway spruce Picea abies Oak Quercus robur Persian ironwood Parrotia persica Red horse chestnut Aesculus carnea Red oak Quercus rubra Rowan Sorbus aucuparia Scots pine Pinus sylvestris Sitka spruce Picea sitchensis Swedish whitebeam Sorbus intermedia Sweet chestnut Castanea sativa Sycamore Acer pseudoplatanus Tulip tree Liriodendron tulipifera Turkey oak Quercus cerris Walnut Juglans regia Western Hemlock Tsuga heterophylla Western red cedar Thuja plicata Whitebeam Sorbus aria Wild cherry Prunus avium Wellingtonia Sequoiadendron giganteum White poplar Populus alba White willow Salix alba Wild Cherry Prunus avium Yew Taxus baccata Ash Fraxinus excelsior Aspen Populus tremula Beech Fagus sylvatica Blackthorn Prunus spinosa Black poplar Populus nigra Box elder Acer negundo Catalpa Catalpa bignonioides Coast redwood Sequoia sempervirens Dawn redwood Metasequoia glyptostroboides Deodar cedar Cedrus deodara Douglas fir Pseudotsuga menziesii Elder Sambucus nigra False acacia Robinia pseudoacacia Field maple Acer campestre Goat willow Salix caprea Hawthorn Crataegus monogyna Hazel Corylus avellana Holm oak Quercus ilex Holly Ilex aquifolium Hornbeam Carpinus betulus Horse chestnut Aesculus hippocastanum Indian bean tree Catalpa bignonioides Japanese cedar Cryptomeria japonica Judas tree Cercis siliquastrum Lawson cypress Chamaecyparis lawsoniana Leyland cypress x Cupressocyparis leylandii Liquidambar Liquidambar styraciflua Lombardy poplar Populus nigra 'Italica' London plane Platanus x hispanica Maidenhair Ginkgo biloba Mimosa Acacia dealbata Monkey puzzle Araucaria araucana Monterey cypress Cupressus macrocarpa Monterey pine Pinus radiata Norway maple Acer platanoides Norway spruce Picea abies Oak Quercus robur Persian ironwood Parrotia persica Red horse chestnut Aesculus carnea Red oak Quercus rubra Rowan Sorbus aucuparia Scots pine Pinus sylvestris Sitka spruce Picea sitchensis Swedish whitebeam Sorbus intermedia Sweet chestnut Castanea sativa Sycamore Acer pseudoplatanus Tulip tree Liriodendron tulipifera Turkey oak Quercus cerris Walnut Juglans regia Western Hemlock Tsuga heterophylla Western red cedar Thuja plicata Whitebeam Sorbus aria Wild cherry Prunus avium Wellingtonia Sequoiadendron giganteum White poplar Populus alba White willow Salix alba Wild Cherry Prunus avium Yew Taxus baccata Ash Fraxinus excelsior Aspen Populus tremula Beech Fagus sylvatica Blackthorn Prunus spinosa Black poplar Populus nigra Box elder Acer negundo Catalpa Catalpa bignonioides Coast redwood Sequoia sempervirens Dawn redwood Metasequoia glyptostroboides Deodar cedar Cedrus

Arboricultural Implications Assessment and Method Statement

Gardeners Farm Barns, Flowers Lane, Plaitford

Produced by:

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Report Ref: **231594 - AIA 2**

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1 INTRODUCTION

- 1.1 **Instruction:** I am instructed by Clydesdale Group Limited to report on trees which could be affected by proposed site changes at Gardeners Farm Barns, Flowers Lane, Plaitford and prepare an Arboricultural Implications Assessment (AIA) and preliminary Arboricultural Method Statement (AMS) to support the changes to the existing site configuration.
- 1.2 **Document disclosure:** Initially, I was provided with a topographical survey (drawing reference 'ADS-0901'). This showed the positions of the significant trees on or near the site, together with any existing or nearby buildings and any other important site features. Subsequently, I was supplied with a copy of the proposed layout, (drawing reference '51532-XX-P1-02_v6 Prop Site Plan') showing a new site configuration.
- 1.3 **Scope of report:** All my tree observations are of a preliminary nature, with the tree survey carried out from ground level without any investigations using invasive or diagnostic equipment. I was not able to fully view all the trees detailed in this report from all directions, as some were located on adjacent private property. I have therefore confined observations of these trees to what was visible from within the site. I have not checked the accuracy of the positions of the trees shown on the provided plans and I have estimated all dimensions unless otherwise indicated.
- 1.4 **The Tree Protection Plan:** This is included in Appendix 1 and is a composite drawing derived from the information provided. It shows the existing landscape features (from the land survey) in grey superimposed over the proposed site changes shown in colour. This allows the relationship between the two to be clearly seen and an appropriate analysis of the implications of the proposed site changes to be undertaken. The Tree Protection Plan has also been annotated to show protection measures for any retained trees which could realistically be affected by the proposed site changes. It shows any activities in Root Protection Areas (RPAs) and if trees are to be removed, they are shown with a red dashed outline.
- 1.5 **Qualifications and experience:** This report is based on my site observations and I have come to my conclusions in the context of my experience as a former local government tree officer and a private practice arboricultural consultant. I have qualifications in both arboriculture and forestry and details of these, together with a career summary are provided in Appendix 5.

1.6 **Ecological issues and statutory tree protection:** Providing guidance on ecological issues is not within my sphere of expertise. However, trees and other vegetation can often provide nesting, roosting and feeding opportunities for protected species. Therefore, before any tree work proceeds on site, I advise that appropriate advice is sought to see whether the trees to be removed are being utilised by any protected species. At the time of writing, I have made no checks to ascertain whether any of the trees discussed are covered by tree preservation orders, or if the site is located within a conservation area. Therefore, any person intending to carry out any operations involving trees (before a formal planning consent is issued) should consult the council before any such works are undertaken.

2 SITE VISIT, DESCRIPTIONS, OBSERVATIONS AND SURVEY METHODOLOGY

- 2.1 **Site visit and description:** I visited the site on 19 December 2023 to gather my tree data. The site is located in Flowers Lane, which is situated in the village of Plaitford. It is positioned on the western side of the road and consists of an area of hardstanding, with agricultural type barns located to the north, south and west of the site. Scattered groups and individual trees are located around the site margins, with the principal trees on the site being a linear grouping of oak trees located adjacent to the southern site boundary.
- 2.2 **Description of proposed site changes:** Change of use of barn/stable building to a three-bedroom dwelling, parking, plus associated works.
- 2.3 **Soil assessment:** British Standard (BS) 5837:2012 Trees in relation to design, demolition and construction – Recommendations advocates that a soil assessment should be carried out to inform decisions relating to Root Protection Areas (RPAs), tree protection, new planting and foundation design. I have consulted the British Geological Survey (BGS) website and their Geology Viewer and this advises that the bedrock geology for the site is Whitecliff Sand Member - Sand. I did not undertake any excavations on site to confirm this and a full geotechnical site investigation may need to be undertaken to provide a more in-depth level of information regarding soil type for the site.
- 2.4 **Tree survey methodology:** My inspection of the trees was visual and did not involve any climbing or exploratory investigations. During my visit, I identified obvious groups where appropriate and I assigned an identification number to each, as shown on the plan in Appendix 1. Tree stem diameters are also indicated on the Tree Protection Plan and for trees assessed as groups, I have assigned an additional number to the main group figure (e.g., G1-1) to aid identification. I then collected the tree data included in Appendix 2 and placed the vegetation in one of four categories (U, A, B or C), as set out in BS 5837:2012. I have included the BS categorisations in Appendix 4 for easy reference. Where of relevance, I also estimated the crown spreads for each tree/group at the appropriate cardinal compass points and this information is also shown in the tree schedule in Appendix 2. Although this document is not a full and detailed report on tree health and safety, any significant visible structural defects or physiological conditions identified, together with preliminary tree works, are also noted in the appropriate columns in the tree schedule. However, this report is not a tree condition survey and a full post development tree inspection is recommended to establish that the trees retained pose acceptable levels of risk once the construction phase has been completed.

2.5 **Data interpretation:** The Root Protection Area (RPA) figures are included in Appendix 2. As set out in paragraphs 4.6.2 and 4.6.3 of BS 5837:2012, the RPAs may have been adjusted as a matter of arboricultural judgement to indicate the estimated likely position of important tree roots. These modified (or unmodified) RPAs can then help determine the location of the tree protection barriers and the position of any ground protection measures. Tree protection details are shown on the plan included in Appendix 1. Where there is a need for incursions into RPAs, an assessment of the implications of these activities is set out in Section 3 (Arboricultural Implications Assessment) of this report. Where appropriate, details of suitable work methodologies to protect trees and also mitigate any impact are set out in Section 5 (Arboricultural Method Statement).

3 ARBORICULTURAL IMPLICATIONS ASSESSMENT

3.1 **Introduction to the implications of the proposed site changes on trees:** BS 5837:2012 sets out in some detail how trees on development sites should be managed. It is usually accepted amongst arboriculturists that Category A (high quality) and Category B (moderate quality) trees are potential constraints on any development proposal. Trees and hedges belonging to Category C (low quality) are considered to be generally less important and such vegetation would not normally constrain site development proposals. Category U trees/hedges are in such poor condition that they can be considered for removal, as they cannot realistically be retained as living trees in respect of the current land use for longer than 10 years. Therefore, these can be generally discounted in the context of a planning application. On this site a total of ten individual trees/groups were recorded during the tree survey and these were assigned to the BS 5837:2012 categories, as set out in Table 1 below:

Category A and B trees	Category C trees	Category U trees
A total of three trees/groups (T2, G6 and T10) were rated Category B	A total of five trees/groups (G1, G3, T4, T7 and G9) were rated Category C	A total of two trees/groups (G5 and T8) were rated Category U

Table 1: Tree numbers and BS categories

No Category A trees were recorded during my survey and I have therefore focussed on the implications of the site changes mainly on the Category B trees on or near the site, but I have also considered the implications for the Category C and U trees present. Of the total of ten trees/groups surveyed, only a small number of trees in one group are scheduled to be removed to facilitate the site changes. I have summarised the tree related implications on trees in Table 2 below and set out the site tree issues in more detail in the following paragraphs.

Trees to be removed		Activities in RPAs	
Category A and B	Category C and U	Category A and B	Category C and U
None	Some tree loss in group G5	None	None

Table 2: Trees lost and activities within RPAs

3.2 **Direct implications arising from the site changes - Tree retention and tree loss**

3.2.1 **BS Category B and C trees to be retained (trees of moderate and low quality):** All the Category B trees surveyed will be retained and protected in accordance with the guidance set out in BS 5837:2012. Consequently, no high, moderate or low category trees will need to be removed to facilitate the proposed site changes.

3.2.2 **Tree removal:** A small number of trees in group G5 will need to be removed to allow the visibility splay south of the existing access to be achieved. Most of the trees in the group are elm species and I think it likely that these will succumb to Dutch Elm Disease at some stage in the future. Nonetheless, in the interim time, the bulk of the tree group can be retained and protected in accordance with BS5837 guidance. Consequently, I feel that the loss of the small number of trees required to facilitate the visibility splay is unlikely to have any particular visual implications in the locality.

3.3 **Additional site tree issues**

3.3.1 **Tree protection during the construction phase:** A preliminary Arboricultural Method Statement is included in Section 5 and this details the various issues associated with successful tree protection in a construction context on this site.

4 SUMMARY OF THE IMPLICATIONS OF THE PROPOSED SITE CHANGES ON TREES

- 4.1 **Summary:** Of the total of ten trees/groups surveyed, only a small number of trees in one group are scheduled to be removed to facilitate the site changes. The small number of trees to be removed to facilitate the visibility splay are poor quality and the bulk of the trees within the group will be retained. Consequently, the loss of the trees required is unlikely to have any significant implications in the locality. Provided the tree protection measures set out in this document are realised, then the proposal is acceptable from an arboricultural perspective and the risk of any significant implications for the retained trees are likely to be low.

5 PRELIMINARY ARBORICULTURAL METHOD STATEMENT

5.1 Tree protection issues

5.1.1 **Tree Protection Plan (TPP):** The plan in Appendix 1 is illustrative, but is based on the layout drawings and topographical survey provided. Therefore, all scaled measurements should be checked against the original design documents. The attached plan and all other information in this report should only be used for dealing with the tree protection issues and all other uses are prohibited, unless authorised by **ecourban** Ltd. All the existing trees will have been numbered, with any higher categories (A and B) highlighted in green and blue rectangles and any low categories (C and U) highlighted in grey and red respectively. The plan also shows the locations of the proposed protective measures, including areas where special care may be required. Additionally, any trees to be removed are indicated with a red dashed outline. The TPP is an important document and a copy of it should be kept on site for reference during the construction phase of the project.

5.1.2 **Protective barriers:** The approximate location of the barriers is illustrated on the plan in Appendix 1 and information on barrier design based on BS 5837:2012 guidance is included in Appendix 3. The protective barriers will be erected before any materials or machinery are brought onto the site and before any clearance or construction activities occur. Once the protective barriers have been positioned, these will stay in situ for the duration of the construction phase, unless previously agreed with the project arboricultural consultant or council's tree officer. There will be no access into the protected areas and the storage of excavated debris and building materials will be prohibited in RPAs, unless authorised by the project arboricultural consultant, after discussion with the council's tree officer. No fires or fuel storage will be allowed within or near to protected areas under any circumstances.

5.2 Additional tree-related issues

5.2.1 **Site supervision:** Site personnel will be properly briefed regarding the tree protection issues before any work starts and the tree protection will be inspected periodically to ensure the retained trees are protected in accordance with this document and any conditions imposed by the council.

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- 5.2.2 **Installation of new services or upgrading of existing provision:** Where practicable, all new services will be outside the protected areas indicated on the plan in Appendix 1, but where existing services within RPAs require upgrading or new provision is needed, great care will be taken to minimise any disturbance. Trenchless installation will be the preferred option, but if this is not feasible for any reason, then excavation will be carried out by hand in accordance with the guidelines set out in NJUG Volume 4 - Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees.
- 5.2.3 **Material storage areas and site compounds:** All construction material storage areas, cement silos or cement mixing areas, fuel storage points and compounds for machinery etc. will be outside protected areas, unless otherwise agreed with the council.
- 5.2.4 **Site offices, welfare facilities and contractor's car parking:** Whilst it is possible to have site offices and welfare facilities within RPAs, care is needed in their positioning and also in the connection of water, electricity and drainage to service them. Therefore, these will generally be sited outside the tree RPAs, unless agreed previously with the council. Contractor's car parking facilities will also be located away from retained trees.
- 5.2.5 **Tree works:** Any tree pruning or tree removal operations are set out in the tree schedule included in Appendix 2. Additionally, those trees scheduled for removal are also shown on the Tree Protection Plan included in Appendix 1.
- 5.2.6 **Planning, communication and preliminary timing of events:** It is not unusual for the details of timing of operations that could impact on important trees to only be confirmed once the planning position has been formalised. Site managers, clearance and construction teams and other important personnel are normally only appointed at this stage and it is these people who will be crucial in delivering the tree protection detailed in this report. My experience is that the pre commencement site meeting is critical in terms of avoiding damage to trees. In the interim, I propose the following preliminary cascading timetable of events to help minimise the risk of impact on important trees. However, the following schedule may be modified at the pre-commencement meeting, subject to discussion with all parties and further agreement with the council:
1. Pre-commencement site meeting
 2. Extent of any arboricultural supervision agreed
 3. Tree works undertaken

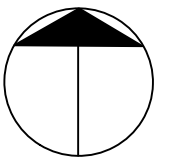
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4. Protective barriers erected before any clearance or construction activities occur on site and notification to the council that this is in place
 5. Tree protection only removed at the end of the construction phase when there is no longer any risk to trees

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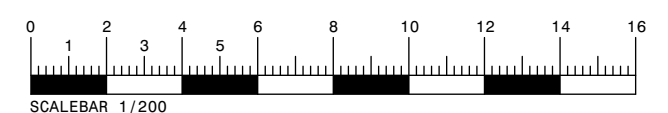
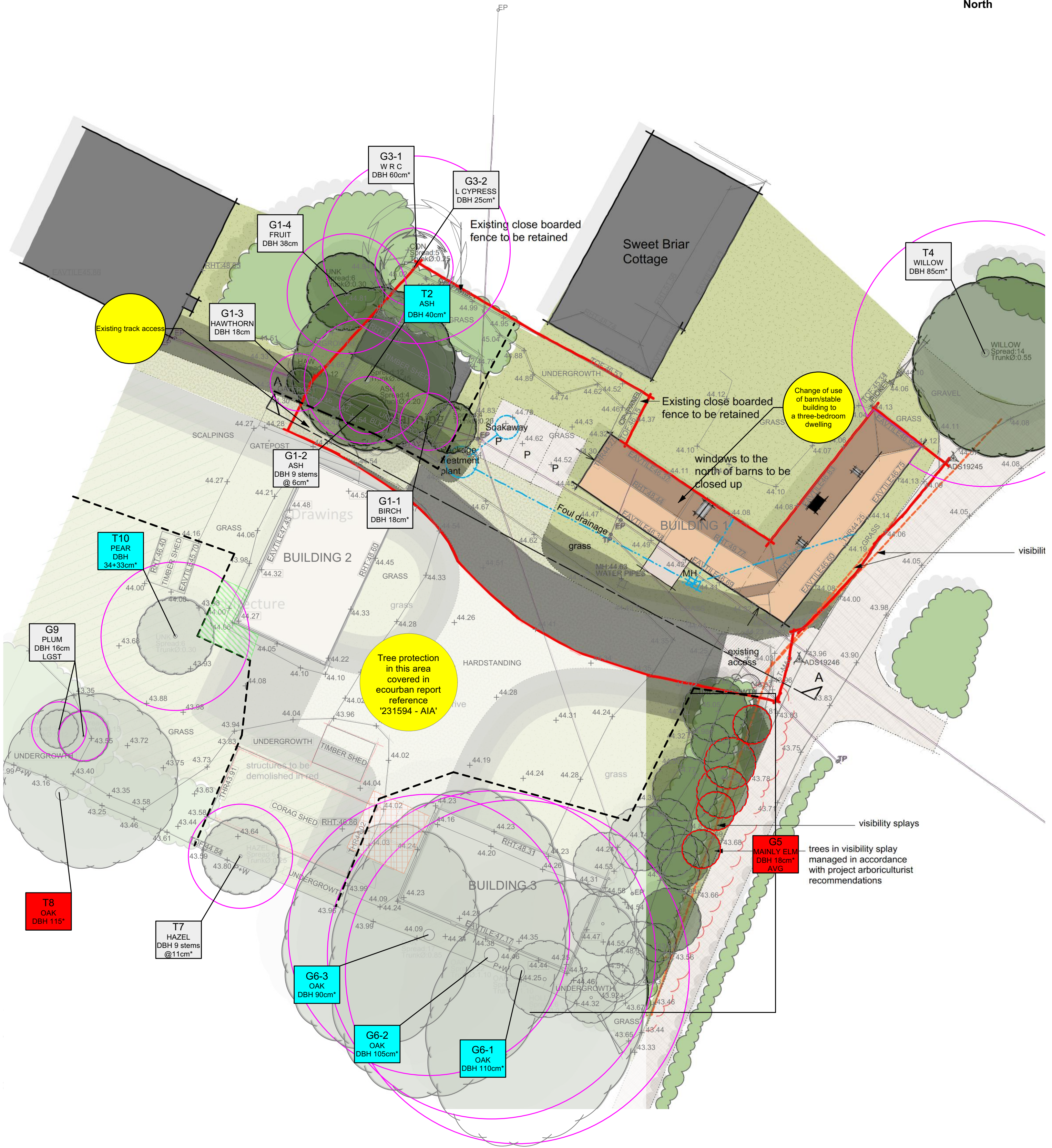
Date: **22 February 2024**

Appendix 1: Tree Protection Plan

1 A2 plan



Indicative North



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ECO 3 - TREE PROTECTION AT GARDENERS FARM BARN, FLOWERS LANE, PLAISTFORD

SCALE: 1:200 @ A2

COMPOSITE PLAN: LAND SURVEY IN GREY, PROPOSED CHANGES IN COLOUR

<p>BS Category B: Trees of moderate quality and value. DBH (Stem diameter @ 1.5m in cm. * Indicates estimates).</p> <p>BS Category C: Trees of low quality and value. DBH (Stem diameter @ 1.5m in cm. * Indicates estimates).</p>	<p>BS Category U: Trees normally unsuitable for retention. DBH (Stem diameter @ 1.5m in cm. * Indicates estimates).</p>	<p> Tree protection barriers</p> <p> RPA where 'Low Invasive' type surfacing is to be installed</p> <p> RPA outside barriers requiring ground protection</p>	<p> Trees to be removed</p> <p> Root Protection Areas (RPAs): Preliminary tree constraints for Category B and C trees based on BS 5837 guidance</p>
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This drawing was originally produced in colour, therefore any subsequent monochrome photocopies may not show appropriate levels of detail and should not be relied upon for the purposes of dealing with site tree issues

Appendix 2: Tree Schedule and Inventory

Background fill colour represents BS 5837:2012 categories: A Category trees have green backgrounds, B Category trees have light blue backgrounds, C Category trees have grey backgrounds and U Category trees have red backgrounds.

Tree No.	Species	Ht (m)	Single stem dia. at 1.5m (cm)	Est. Dia. *	STEM DIAMETERS (MULTIPLE)							Branch spread (m)	Ht above ground (m)	Age class	Notes	Management proposals	BS cat	RPA area (m ²)	RPA radius (m)					
					Multi stemmed trees with 1 - 5 stems (cm)					Multi stemmed trees with 1 - 5 stems combined (cm)	Multi stemmed trees >5 stems									N	E	S	W	
					1	2	3	4	5		Mean stem dia. (cm)													No. of stems
All trees																		Where needed for construction access, crown lift trees by up to 4m over site.						
G1	Mixed species including birch, ash, hawthorn and fruit	10 Avg	38	* Lgst	-	-	-	-	-	-	-	-	2	4	3	3	2	Y	Small sized and self-sown trees. Generally poor form and in close proximity to overhead service. No direct access to survey.	C1	65	4.6		
T2	Ash	15	40	-	-	-	-	-	-	-	-	-	5	4	4	4	4	Y/MA	Self-sown tree. No direct access to survey. Close proximity to overhead service. Marginal Cate B tree.	B2	72	4.8		
G3	Western red cedar and Lawson cypress	14	60	* Lgst	-	-	-	-	-	-	-	-	-	4	4	4	3	Y/MA	Closely spaced offsite trees. Unremarkable domestic conifer type planting. Only one tree shown on land survey.	C1	163	7.2		

Appendix 2: Tree Schedule and Inventory

Tree No.	Species	Ht (m)	Single stem dia. at 1.5m (cm)	Est. Dia. *	STEM DIAMETERS (MULTIPLE)								Branch spread (m)	Ht above ground (m)	Age class	Notes	Management proposals	BS cat	RPA area (m²)	RPA radius (m)				
					Multi stemmed trees with 1 - 5 stems (cm)					Multi stemmed trees with 1 - 5 stems combined (cm)	Multi stemmed trees >5 stems										N	E	S	W
					1	2	3	4	5		Mean stem dia. (cm)	No. of stems												
T4	Willow	15	85	*	-	-	-	-	-	-	-	-	7	8	8	7	3	M/OM	Offsite tree, main stem covered in ivy, limiting access to survey. Pollarded previously.		C1	327	10.2	
G5	Mainly elm with holly	11	18	* Avg	-	-	-	-	-	-	-	-	3	-	3	3	3	Y	Linear grouping of roadside trees. Elm species likely Dutch Elm Disease candidates. Not all trees shown on land survey.	Fell trees within vis splay.	U	15	2.2	
G6	Oak	22	110	* Lgst	-	-	-	-	-	-	-	-	10	9	-	9	5	M	Linear grouping of large sized boundary trees. Ivy on main stems and scaffolds, this and position of adjacent shed limits access to survey. Some large diameter dead wood in canopies and localised dieback of branch extremities. Eastern tree with patches of dead bark lower stem.		B1	547	13.2	
T7	Hazel	6	-	*	-	-	-	-	-	-	11	9 main	2	3	-	3	2	MA	Small sized multi stemmed tree/shrub.		C1	49	4.0	

Appendix 2: Tree Schedule and Inventory

Tree No.	Species	Ht (m)	Single stem dia. at 1.5m (cm)	Est. Dia. *	STEM DIAMETERS (MULTIPLE)								Branch spread (m)	Ht above ground (m)	Age class	Notes	Management proposals	BS cat	RPA area (m ²)	RPA radius (m)				
					Multi stemmed trees with 1 - 5 stems (cm)					Multi stemmed trees with 1 - 5 stems combined (cm)	Multi stemmed trees >5 stems										N	E	S	W
					1	2	3	4	5		Mean stem dia. (cm)	No. of stems												
T8	Oak	16	115	*	-	-	-	-	-	-	-	-	8	9	-	9	5	M	Extensive dieback of canopy and copious deadwood. Dying.		U	598	13.8	
G9	Plum	7	-	* Lgst	11	10	10	-	-	-	-	-	3	3	-	-	3	Y	Small trees. Part of larger group.		C1	15	2.1	
T10	Pear	10	-	-	33	34	-	-	-	-	-	-	2	2	2	-	3	MA	Ivy on main stem and scaffolds, restricting access to survey. End tree of linear group.		B1	102	5.7	

Abbreviations:

Abbreviations	Meaning	Abbreviations	Meaning	Abbreviations	Meaning
T	<i>Individual tree</i>	M	<i>Mature</i>	>	<i>More than</i>
G	<i>Groups of trees</i>	MA	<i>Maturing</i>	<	<i>Less than</i>
H	<i>Hedge</i>	Y	<i>Young</i>	Lgst	<i>Largest tree diameter within group</i>
W	<i>Woodland</i>	RPA	<i>Root Protection Area</i>	Avg	<i>Average tree diameter within group</i>

Appendix 2: Tree Schedule and Inventory

Tree Schedule Notes:

Tree number	Assigned during the site visit and also referenced on the plan in Appendix 1.
Species	Common name and referenced to scientific name in the above list. Where I have some doubt over the actual tree species, the genus will have been noted followed by sp. Where trees are numerous and present in groups, not every individual species may have been noted.
Height	Measurement of total tree height using a laser hypsometer to nearest metre or where clear line of site is not possible then an estimate based on interpolation of heights of nearby measured trees.
Stem diameters	Measurement of stem diameter either at 1.5m above ground (or in accordance with BS guidance where trees have multiple stems) with a forester's girth measuring tape. Diameters followed by asterisk symbol indicate estimated diameters because of access difficulties, presence of ivy or other obstructions. Where trees are present in a group, the tree with the largest stem diameter within the group will have been measured/estimated.
Est. Dia.	Estimated diameters due to access restrictions are indicated with an asterisk
Branch spread	Where appropriate and where ground conditions allow, an estimate of the crown spread at each of the cardinal compass points. Where only part of the site is affected by trees, measurement may be in one or two directions only
Existing height above ground level	Distance in metres to first significant branch or canopy or a height above which crown lifting operations would not be appropriate
Age class	Simplistic estimate of tree age in one of FOUR categories (young, maturing, mature or over mature).
Notes	Although this document is not intended to be a full and detailed report on tree health and safety, any significant structural defects or physiological conditions have been identified where these were visible. Where no entries are recorded, this indicates no observable issues were identified. Where there is restricted access to the base of a tree, its attributes are assessed from the nearest point of access. Climbing inspections are not carried out during a walkover tree survey and, if heavy ivy is present, tree condition is assessed from what can be seen from the ground.

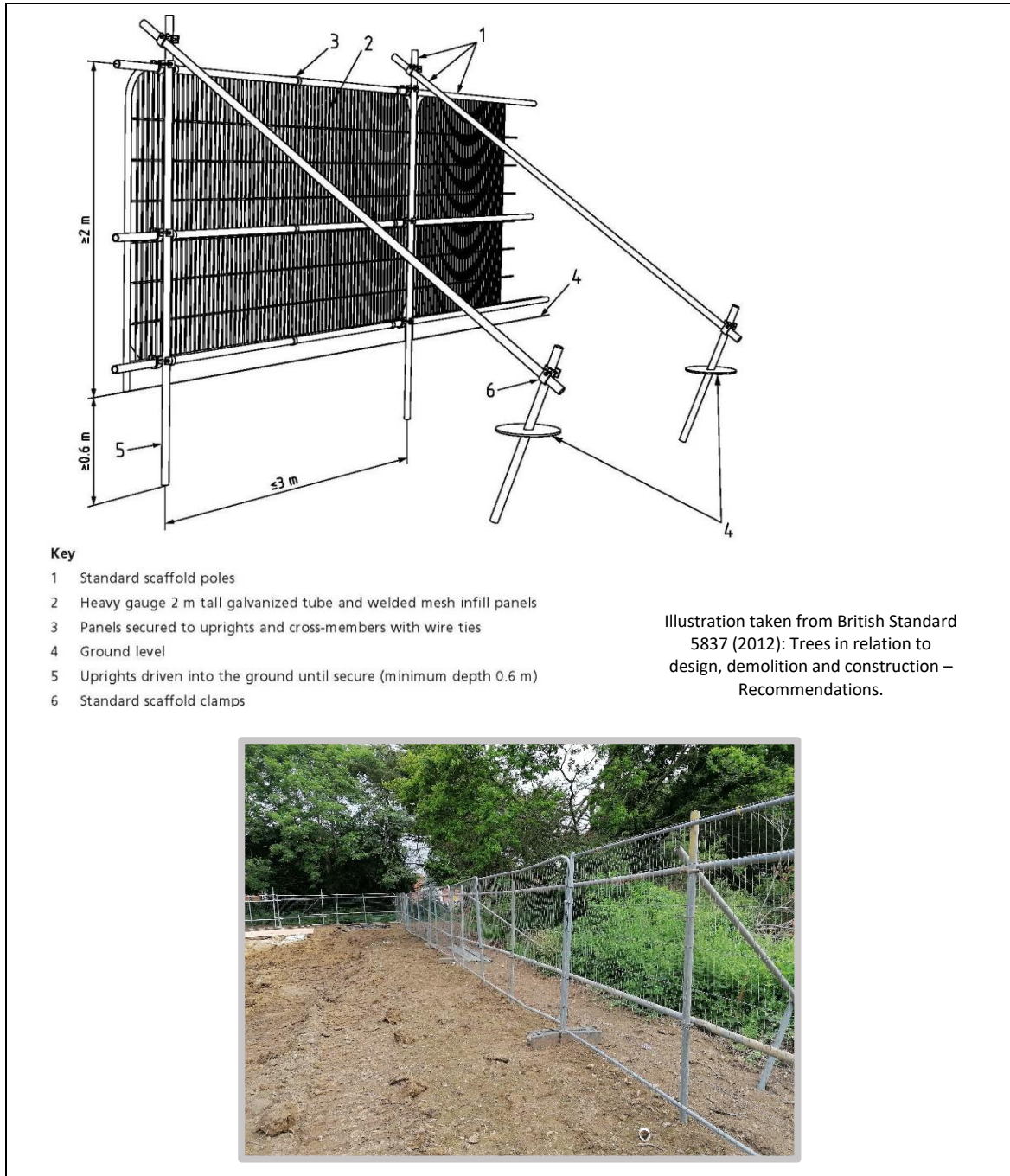
Appendix 2: Tree Schedule and Inventory

Management proposals	<i>The inspection of all trees was of a preliminary nature and only defects visible from the ground have been identified. Each individual tree may not have been inspected closely because of access difficulties and only defects visible from the inspection point have been identified. Monitoring may be indicated where tree risk can be adequately managed by increased frequency of site inspections. Further investigation may be indicated where additional data may be required beyond a purely visual assessment. However, a full post development tree inspection is recommended to establish that the trees retained during construction pose acceptable levels of risk once the development has been completed.</i>
BS 5837 :2012 Category	<i>Either U, A, B or C based on the BS 5837:2012 guidance.</i>
RPA and RPA radius	<i>RPA and RPA radius calculations have been undertaken in accordance with the guidance set out in BS 5837:2012.</i>

Tree Inventory:

Common Tree Names	Scientific Tree Names		Common Tree Names	Scientific Tree Names
Ash	<i>Fraxinus excelsior</i>		Lawson cypress	<i>Chamaecyparis lawsoniana</i>
Birch	<i>Betula pendula / pubescens</i>		Oak	<i>Quercus robur</i>
Elm	<i>Ulmus sp.</i>		Pear	<i>Pyrus sp.</i>
Fruit	<i>Malus sp., Prunus sp. or Pyrus sp.</i>		Plum	<i>Prunus sp.</i>
Hawthorn	<i>Crataegus monogyna</i>		Western red cedar	<i>Thuja plicata</i>
Hazel	<i>Corylus avellana</i>		Willow	<i>Salix babylonica / x sepulcralis 'Chrysocoma'</i>
Holly	<i>Ilex aquifolium</i>			

Appendix 3: Illustrative Specification for Tree Protection Barriers



The default specification should consist of a vertical and horizontal scaffold framework, well braced to resist impacts. 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 should be securely fixed.
 – BS 5837:2012

Ref: Tree Protection Barriers (Type 1)	Drawing No. TPB1
Scale: N/A	

Appendix 4: BS 5837:2012 – Assessment Categories

TREES FOR REMOVAL				
Category and definition	Criteria			Identification on plan
<p><u>Category U</u></p> <p>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</p>	<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 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 <p><i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve.</i></p>			RED
TREES TO BE CONSIDERED FOR RETENTION				
Category and definition	Criteria — Subcategories			Identification on plan
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
<p><u>Category A</u></p> <p>Trees of high quality with an estimated remaining life expectancy of at least 40 years</p>	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)	GREEN
<p><u>Category B</u></p> <p>Trees of moderate quality with an estimated remaining life expectancy of at least 20 years</p>	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	BLUE
<p><u>Category C</u></p> <p>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</p>	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	GREY

Appendix 5: Qualifications and Experience of Barrie Draper

- 1** **Qualifications:** I have a BSc degree (with Honours) in Arboriculture from the University of Central Lancashire. I also hold a BTEC Higher National Diploma (HND) in Forestry (Lowland Management), the Arboricultural Association's Technician's Certificate in Arboriculture (Tech Cert), the Royal Forestry Society's Certificate in Arboriculture (Cert Arb) and the National Examinations Board Certificate in Forestry.

- 2** **Career experience:** I began my arboricultural career in 1993 as an arborist with Portsmouth City Council. During my time with the council I worked for both the direct labour organisation and for a private contractor where I obtained valuable hands on experience in all aspects of arboriculture. From 1999 to 2002 I was employed as Senior Arborist by Parchment Housing Group, a housing association based near Portsmouth. I managed the Groups' tree stock on their behalf, carrying out tree inspections and practical management operations. I have also worked in local government, spending time with Thurrock Borough Council in Essex where I was the Tree and Landscape Officer, and with Winchester City Council, where I was Arboricultural Officer for a period of 2 years. During my time working in local government, I was responsible for making Tree Preservation Orders, administering applications to work on protected trees and advising on planning applications when trees were considered material constraints on development. Working within a planning environment allowed me to gain valuable experience in the management of trees in development situations and an understanding of the planning process and how it relates to trees. From January 2005 I worked for Barrell Tree Consultancy Ltd advising clients on a wide range of tree related issues. I left the company in September 2008 and set up **ecourban** ltd.



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