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ANDERSON
TREE CARE

Tree Survey; **Burntwood Hall Care Centre,
Brierley Common, Barnsley, S72 9HB.**

Client; **Tim A Stubbins, Mitchell and Proctor Architects,
on behalf of Guardian Care.**

Date of Survey; **January 26th 2010**

Weather at time of Survey; **Fine slightly dull, calm.**

File reference **Burntwood Hall 01**

Introduction.

It is proposed to extend this property. The derelict part of the building will be rebuilt and an extension will be erected along the rear boundary. There are several mature trees within the grounds and the extension will necessitate the removal of a number of trees within a neglected area.

Tree Preservation Orders.

There is a Tree Preservation Order in force at the property, which dates from 1987. I have not seen the documentation but understand that it protects all the trees affected by the proposal.

The Survey.

I have taken 'British Standard 5837 2005 Trees in relation to construction – Recommendations,' as the basis for this report. The Local Planning Authority in its deliberations about this site should consider this Standard. The Standard states its objectives of achieving "a satisfactory juxtaposition of trees, including shrubs, hedges and hedgerows, with structures."

It provides us with a 'flow diagram' that summarises how trees should be considered on a potential development site. The flow diagram suggests trees should be surveyed and categorised after the initial Land (Topographical) Survey, but prior to the initial design for the site. The categorisation process is an appraisal of the value of the trees for retention in the development.

The Standard implies that the topographical survey should accurately show the extent of tree canopies, and states that all trees over 75mm trunk diameter should be shown. Also, trees that are outside the site but close to, or overhang the site should be shown. It recommends the preparation of a "Tree Constraints Plan" (TCP) to assist the designer in preparing the layout.

I have marked the trees I have considered on a site plan appended to the rear of this report. I may have marked some of the trees on site in order to help orientation on site. I may have omitted some trees that other people might have included; there will always be differences of opinion over the significance of individual trees, but I am bearing in mind the advice of the Standard. I routinely include hedges and hedgerows and deal with some trees as groups where their proximity to one another means that their crowns have merged and their retention as individuals would be questionable.

I shall summarise the information I have tabulated, the reasons for gathering it and its uses:

1. **Tree no & species.** I hope this is self-explanatory. I routinely use common names but will use scientific names where necessary to clarify the identification. Some trees are dealt with as groups. The categorisation system suggests this is reasonable.
2. **Height.** (Ht) measured in metres. This is estimated from ground level. I use a clinometer to assist. While these are reasonably accurate, actually seeing the top of a tree from ground level can be difficult so the height should always be regarded as an estimate.
3. **Trunk Diameter.** (TD) measured in millimetres. This is included in order to comply with BS5837. It is usually measured at 1.5 metres above the ground but deformities or peculiarities have to be avoided. If we were to measure an 'average' tree we would find little variation in measuring the trunk anywhere between 1 & 2 metres. I have attempted to measure the trees at a 'typical' point. Where trees have multiple stems the Standard instructs us to measure below the branch union but above the root flare; I indicate this within the data with the letters 'af.' Obviously a pragmatic approach needs to be adopted. This information is used to calculate the Root Protection Area (RPA)
4. **Age class.** BS5837 also requires the age class of the tree. The categories are Young (Y), Middle-aged (EM for early-mature), Mature (M), Over-mature (OM) and Veteran (V). A veteran tree is one that has probably exceeded its 'normal' life span and has developed attributes such as wildlife habitat, biodiversity benefits, historic association or such-like. To quote from the Standard: It is a 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.*
5. **Category.** BS5837 requires us to assess a 'retention category' for each tree. I shall interpret the standard:

TREES FOR REMOVAL	
Category and definition	Criteria
Category 'R' Those in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management	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 R category trees (i.e. 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 (e.g. Dutch elm disease), or very low quality trees suppressing adjacent trees of better quality. NOTE: Habitat reinstatement may be appropriate (e.g. installation of bat box in nearby tree).
'R' category trees do not have to be removed. If the site layout does not require their removal and there are no safety issues they can be allowed to decline naturally to perhaps provide a habitat or to contribute to biodiversity.	

TREES FOR RETENTION			
Category and definition	Criteria - Subcategories		
	1. Mainly arboricultural values	2. Mainly landscape values	3. Mainly cultural values
<u>Category A</u> Those of high quality and value: in such a condition as to be able to make a substantial contribution (a minimum of 40 years is suggested)	Trees that are particularly good examples of their species, especially if rare or unusual, or essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands which provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance (e.g. avenues or other arboricultural features assessed as groups)	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)
<u>Category B</u> Those of moderate quality and value: those in such a condition as to make a significant contribution (a minimum of 20 years is suggested)	Trees that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of remediable defects including unsympathetic past management and minor storm damage)	Trees present in numbers, usually as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals but which are not, individually, essential components of formal or semi-formal arboricultural features (e.g. trees of moderate quality within an avenue that includes better, A category specimens), or trees situated mainly internally to the site, therefore individually having little visual impact on the wider locality	Trees with clearly identifiable conservation or other cultural benefits
<u>Category C</u> Those of low quality and value: currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested), or young trees with a stem diameter below 150 mm	Trees not qualifying in higher categories The Standard states that C category trees “ <i>will usually not be retained where they would impose a significant constraint on development.</i> ”	Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value, and/or trees offering low or only temporary screening benefit	Trees with very limited conservation or other cultural benefits.
NB. This is an interpretation not a reproduction of BS5837's table 1.			

- 6. Comments.** This column is simply to impart additional information and may cover reasons for the trees' categorisation or anything else that I feel is worthy of mention. Peculiar crown formation might be mentioned, or an unusual branch configuration. BS5837 recommends we measure the "*radius of branch spread at the four cardinal points.*" This section will contain that information if I feel it necessary to measure unusual crown formation. Otherwise the presumption is that the trees are fairly typical for the species. The Standard also suggests that we record the height of crown-clearance; that is how far from the ground the branches grow. I shall not mention this unless it is unusual or particularly relevant. I shall broadly confine my assessment of the trees physiological condition to poor, fair, good, or dead and mention it here. The Standard asks us to include the "*estimated remaining contribution in years.*" This is rather a "how long is a piece of string" question. I shall include a rough assessment of remaining life where I deem it necessary. By and large this will have been included as part of the 'category' assessment. If necessary I shall comment here.
- 7. Root Protection Area. (RPA)** Measured in square metres. This is calculated as a circular area with a radius of 12 times the diameter of the tree if measured at 1.5 metres, or 10 times the diameter if measured below the fork and above the root flare (af). An 'R' category tree obviously will not require any RPA. (See BS5837's table 2) I shall round the figure up to the nearest square metre. The Standard suggests that the area does not need to be round but may change shape where this can be achieved while maintaining the necessary tree to building distances. The square root of the RPA gives us the length of the sides if the shape was a square. Half the side conveniently gives us a minimum 'tree to building distance.' The Standard suggests this distance can be reduced by 20% in one direction as long as the protected area can be maintained. (The circular area can be "offset"). Peculiar site restrictions might also have a bearing on the layout. For example if root growth might have been anticipated in a certain area due to a nearby building or road restricting root development, then obviously this area cannot be omitted from the RPA. In reality such a situation would probably mean the tree would be graded as category 'R.' (The RPA is 'capped' at 707m², i.e. a circle with 15m radius or a square with 26m sides.)

Tree Constraints Plan.

BS 5837 is quite clear about the TCP being a 'tool' for the designers of a site layout. It is not clear to me whether a Planning Department can reasonably ask to see a tool that an applicant has used in order to design a layout. The ODPM has issued guidance on the use of planning conditions (circular 11/95). Suffice to say that a planning condition needs to be reasonable.

BS5837 also suggests that trees be coloured on the TCP in the following way: R category - Dark Red, A category - Light Green, B category – Mid Blue, C category – Grey. It occurs to me that a plan marked with RPAs, actual crown spreads, and then areas likely to be shaded by trees, would be at best complicated, and at worst hopelessly confusing.

The Trees.

Tree No.	Species.	Ht	TD	Age class	Category	Comments.	RPA
1.	Beech	18	1100	M	B1	22 metre spread. An imposing specimen, Ivy clad. Some lower branches are close to the ground. Dead wood and debris heaped around the base of the trunk prevented a detailed inspection. Some minor dead wood in the crown.	548
2.	False Cypress	9	260	M	C1	A reasonable specimen.	31
3.	Pussy Willow	6	220	Y	C1	Good condition but less than 2 metres from the building. Not a suitable species for the position.	22
4.	False Cypress	8	300	M	C1	Tiles stacked against the trunk. Lower branches fire-scorched.	41
5.	Yew	6	400af	M	C1	As tree 4.	51
6.	Deodar Cedar	15	720 ¹	M	B1	5 stems. An interesting specimen. Reasonable condition, soil level may have been raised at one side of the trunk.	231
7.	Yew	6	450af	M	C1	A reasonable specimen but suppressed by neighbouring trees.	64
8.	Holly	6	250af	M	C1	As tree 7, close to wall.	20
9.	Beech	16	720	M	C1	Superficially a reasonable specimen, but some die-back and an extensive infestation of Felted Beech Coccus; a sap sucking insect that is often the vector for Beech Bark Disease.	235
10.	False Cypress	9	290	M	C1	Close to the boundary fence. A reasonable specimen albeit slightly one-sided crown due to proximity of Beech 9.	39
11.	Holly	7	300	M	C1	Somewhat one-sided due to neighbouring Laurel, some lower branches scorched by fire.	41

¹ This measurement has been reached by calculating the cross sectional area of each stem, adding those figures together and ascertaining an equivalent diameter. This system is widely accepted and was originally suggested by the renowned Arboriculturist Rodney Helliwell. The system is likely to be adopted in the revised BS5837.

Tree No.	Species.	Ht	TD	Age class	Category	Comments.	RPA
12.	Laurel	6	500af	M	R	This is a very large shrub. Without getting into a debate about when a shrub becomes a tree I would simply remove it as Laurel is an invasive pest that suppresses our native flora. Otherwise there's nothing at all wrong with it, but other nearby trees would grow better were it not there.	0
13.	Yew	8	400	M	C1	A reasonable specimen but one-sided due to suppression from the above-mentioned Laurel.	73
14.	Walnut	7	170 x 8	M	C1	This is very unusual in that we do not often see multi-stemmed Walnuts. This tree has 8 stems all growing from a decayed stump. It is coppice growth and while it is an interesting feature it does not have much future as the individual stems are weakly attached to the remnants of the decayed stump.	105
15.	Holly group.	7	350	M	C1	3 stems, appears to be an overgrown hedge.	56

There are other shrubs and saplings amongst the above trees, Rhododendron, more Laurels, Elderberry and Holly. These are relatively insignificant and mentioned only in passing. They have served to screen the quantities of garden refuse that have been tipped amongst the trees.

Discussion.

This is an attractive property and from the front there is a commanding view across the valley. I do not know much about the history of the place but the original builders obviously knew how to select a commanding position. However it appears that certain aspects of the Hall have been ignored in recent years. By this I mean that trees have been planted or allowed to grow in positions that ignore the Hall's history. For example tree 10 is on the boundary in a position that obscures the view to the southeast. There is what appears to be a buried 'ha-ha' there which suggests the Hall would have had an uninterrupted view across the adjacent fields. I also cannot imagine that the dense group of trees that we currently have was any part of the Hall's planned landscape.



Figure 1.



Figure 2.

Figure 1 is a photograph of tree 1, the Beech. It is an imposing specimen and in better condition than might be anticipated. There is some minor dead wood in the crown, less than might have been anticipated for a tree in this position and of this size. Figure 2 shows that where dead twigs and branches have fallen from the tree they have been simply stacked at the base. While this is not particularly a problem it did prevent me from thoroughly inspecting the tree's trunk at ground level. I mention this merely to emphasise that I have not thoroughly examined the tree. I did note that the crown appears quite healthy and there is no sign of any die-back. I also noted that the soil profile at the base of the tree might have been altered so there could have been some root damage in the past.



Figure 3.



Figure 4.

Figure 3 above shows the crown of Beech tree 9. In contrast to tree 1 we can see some die-back in the crown. (Tree 10 is to the left and tree 6 to the right) Figure 4 shows the trunk of tree 9; the white striations are actually masses of the sap-sucking insect Felted Beech Coccus (*Cryptococcus fagisuga*). This is not much of an insect in that it's very small and has no legs or wings, it's just a mouth and a stomach, but it is frequently a precursor to the development of Beech Bark Disease. The die-back may be related to this insect or it may be that the tree has had the soil level altered over its roots.

Infestations with insect pests pose something of a conundrum in that we're never completely sure whether the insect pest has become established because a tree is in decline or whether it's the infestation that leads to decline. With many tree problems the primary cause is the tree becoming damaged by, say, lightning or mechanical damage. Opportunist infections and infestations then hasten the tree along its "mortality spiral." This is obviously a subject beyond the scope of this report, suffice to say this tree is not in as good a condition as it might be, certainly not as good as tree 1.



Figure 5.

Figure 5 shows tree 6 with its interesting, architectural trunks. Figure 6 shows tree 14, the Walnut coppice-growth. Tree 14 will require removal for the proposed extension and while I consider it to be an unusual feature I have to accept that my tastes are not particularly mainstream, and visually this is not an impressive feature. It also has no special value to wildlife and is not particularly rare. The Romans are thought to have introduced it and now it's widespread but I'm not aware of it having become naturalised anywhere.



Figure 6.



Figure 7.

Figure 7 shows the base of tree 12. As I pointed out it is hardly a tree at all and I only mention it because it is so large. I also would not normally condemn (categorise it as 'R') a tree unless it was actually some sort of danger, however in this case I make an exception as it is clearly interfering with the growth of better and much more desirable trees. Laurel has a reputation for being invasive and while not as notorious as Rhododendron it is a similar-sized problem at many locations.



Figure 8.

Figure 8 shows the base of tree 5. Behind the brick wall is an area used for burning garden (presumably) refuse. It is apparent that lower branches of this tree and others get scorched on a regular basis. The picture shows a quantity of stone roof tiles stacked against the tree. While it is not immediately apparent that they are causing any problems it is obvious that this is no way to treat trees. I don't know if it is intended to remove the outbuilding but this is all but impossible without causing extensive root damage.



Figure 9.

Figure 9 shows a pile of garden refuse at the base of tree 13. Again it appears that an out-of-sight, out-of-mind situation has prevailed. While it is not immediately obvious that damage is being done, the situation is unlikely to be beneficial to this or any other tree.



Figure 10 is a view of the garden to the southwest. It is reasonably well kept and obviously an asset to the Burntwood Hall's business. This part of the garden will be completely unaffected by the proposal.

Figure 10.

Conclusion.

This proposal will lead to the removal of some trees. This survey has shown that by and large these trees are run-of-the-mill specimens. These can be replaced with new planting. If your proposal can be designed to fall outside these trees' Root Protection Areas then there should be no real hindrance to your proposal.

Barnsley Council will require a Tree Protection Plan which should show the position of the fence and what tree work is proposed prior to the commencement of the scheme.

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ANDERSON TREE CARE.

January 2010.

