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ANDERSON
TREE CARE

Tree Survey; **Holiday Inn, Dodworth, Barnsley.
(former Brooklands)**

Client; **Francis Hindle Esq. General Manager.**

Date of Survey; **January 19th 20th, 2010.**

Weather at time of Survey; **Dull, drizzling.**

File reference **new garden area 01**

Introduction.

The Holiday Inn is a well-established hotel in Dodworth. An area of land, formerly a domestic garden, adjacent to the car park has been purchased with the intention of developing it as an ornamental garden. This is intended to be suitable not only for quiet repose but occasionally for use as a backdrop for wedding-type photographs.

Tree Preservation Orders.

The group of poor quality trees at the end of the car park were protected by a Tree Preservation Order (TPO) in 2006. This TPO was disputed at that time and the objections to the TPO were not satisfactorily considered. This was in direct contravention of Government guidance. Other trees, outside the site but close by, are also protected by the same TPO.

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.	Walnut.	8	320	M	C1	Off site but with branches extending into the site. A reasonable specimen albeit prematurely aged. Very close to a derelict outbuilding. Included in the TPO.	47
2.	Group.	15 max	490 max	M	C2	Cherry, Norway Maple, Lime, Rowan, Hybrid Black Poplar, some Leyland Cypress. These trees are all poor specimens due to having been grown in close proximity to one another and never received any silvicultural maintenance work. Some have obviously suffered root damage, some Maples are (unusually) suffering from some sort of Bleeding Canker and all the Cherries are showing signs of Bacterial Canker. Also, there are numerous Cherry seedlings emerging within the group, these are actually suckers from roots of other trees. Included in the TPO. One of the Poplars is severely decayed.	109
3.	Sycamore group.	7	250 max	Y	C2	Coppice growth backed by a Leyland Cypress hedge. Included in the TPO.	29
4.	Sycamore	8	300	EM	C1	A reasonable specimen close to a utility pole and not far from the hotel building. Included in the TPO.	41
5.	Group	6 max	250 max	EM	C2	An overgrown hedge. Mainly Leyland Cypress, some Elderberry and a Sycamore. Not included in the TPO.	29

Other arboricultural features are also pertinent to the matter in hand; namely hedges in adjacent gardens. These are Leyland Cypress and well maintained. A couple of saplings also grow in the garden area; these are easily replaced and I have therefore not included them in this report.

Discussion.

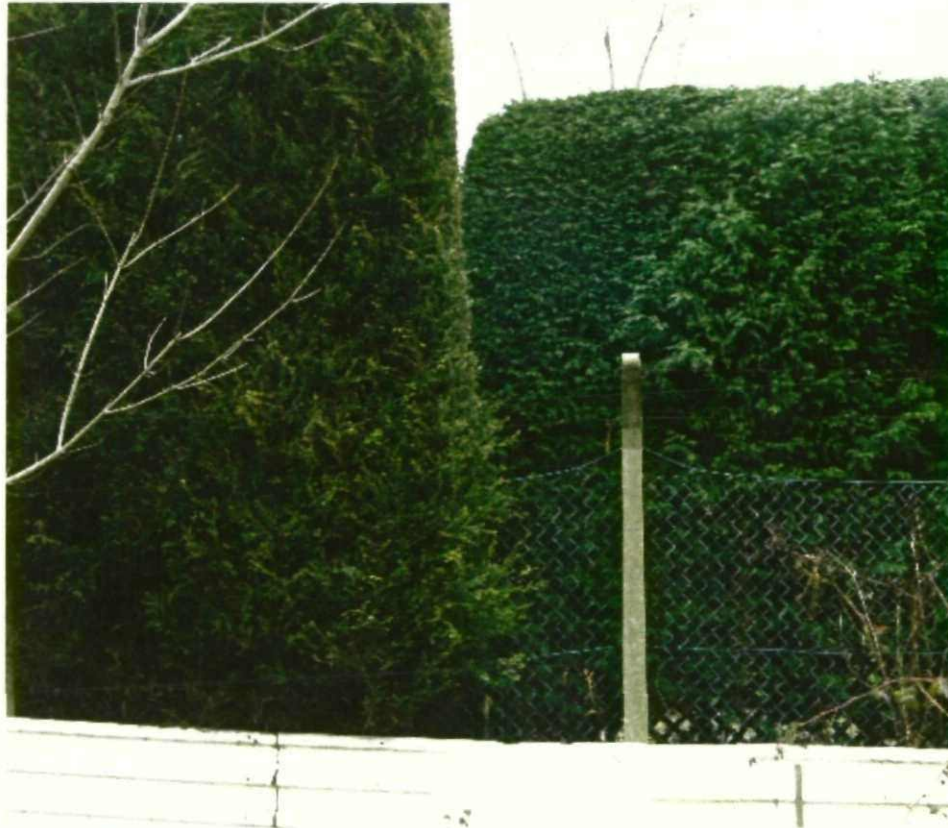


Figure 1.

I understand the former owner of the site to have been something of a gardening enthusiast and note that while the site is becoming overgrown, these hedges appear to have been regularly clipped. It is not uncommon in situations such as this, to see hedges only clipped at one side and becoming unkempt where they adjoin vacant lots.

I have seen a proposal for the garden area which features a stone gazebo, stone benches and water features. I presume these will be surrounded by the existing trees and hedges. Practicality demands that we do not create something that makes routine maintenance of the neighbouring hedges and trees extremely difficult. I am specifically referring to the hedges along the eastern boundary. Figure 1 to the left shows part of the boundary. These are tall hedges, not so tall that the high hedges legislation might render them a statutory nuisance, but sufficiently tall to make clipping a task that might require a scaffold of some sort. They grow outside the site in neighbouring gardens.

The concrete posts, chain link fencing and sheet metal obviously needs screening or removing; it's not a particularly tasteful backdrop for a wedding photograph. We need to ensure that the person charged with clipping the hedge can properly position his equipment.



Figure 2

The boundary of the site is within the branch spread of this tree and some lower branches will require removal to permit the erection of a fence or whatever boundary treatment is decided upon.

Figure 2 to the left shows tree 1, the Walnut. This is one of 3 Walnuts within the neighbouring garden but the only one in close proximity to the plot. I measured the tree's trunk diameter in August 2006 as 300mm suggesting it has only increased by 20mm after 3 growing seasons. I would expect a young Walnut tree to have grown considerably more than this over such a period. I accept that the measurements are not particularly scientific but if we look at the tree's form it is clear that it is not growing vigorously. The height suggests it is a young tree but its overall habit suggests it is well into maturity. It is no longer showing any signs of youthful vigour, it is no longer growing upwards or showing 'apical dominance.'

Dr Pierre Raimbault of the French National Horticultural Institute calls this subject "morpho-physiological tree assessment." He relates how a tree grows to its age. It is outside the scope of this report to go into the subject in detail but is reasonable to note that the life span of trees is not pre-ordained, but related to numerous factors such as breeding and surroundings. This tree is (apparently) prematurely aged and does not appear to be a specimen that is likely to achieve any great size or age. Also it is hard to imagine any realistic treatment that might rejuvenate the tree. Note in figure 2 the derelict outbuilding close to the tree; hardly a situation conducive to growing good specimens.



Figure 3.



Figure 4.



Figure 5.

Figures 3 and 4 are views of the trees in group 2 as viewed from within the plot. Note the decrepit structures against the brick wall; I'm not sure of their purpose but I note that they probably support the wall a little. They will need to be removed carefully. Note that the trees are all somewhat slender for their height. This is because they have grown in close proximity to one another. Had the group been thinned out sometime in the past the individual specimens would probably have grown with better form.

Figure 5 is a view of the trees in group 5, taken from within the plot.



Figure 6.



Figure 7

Figure 6 shows group 2 as viewed from the hotel car park. It is clear that the soil level adjacent to the trees has been altered, presumably without any great consideration for the roots of the trees, which must have been present when the excavations took place. Figure 7 shows one of the Maples within the group. Note the tree forks in 2 and the union 'includes' bark, this is a widely recognised structural fault on trees. It is possibly attributable to poor plant selection but also due to trees growing in close proximity. Careful husbandry would have removed either the whole tree or the offending branch. Note also the dark stains on the trunk of the tree in figure 7. These are a symptom of "Bleeding Canker" (*Phytophthora*). Currently this disease is seen as a great threat to the Country's Horse Chestnut population although it is known to affect other species. In my experience it infects trees that are stressed, perhaps by root damage or other abiotic factors. (Figure 10 is a better picture of this symptom)



Figure 8.



Figure 9.



Figure 10.

Figures 8, 9, & 10 show various tree problems in group 2. Figure 8 is the coppice growth from a Maple stump that was cut down, presumably because it was too close to the wall. Currently the re-growth is protected by the Tree Preservation Order. I don't suppose the Council would pursue a prosecution if it were to be removed (to stop it disturbing the wall) but technically this mundane task would require a written application including technical advice. Figure 9 is a Cherry showing weak branch unions as well as bacterial canker, and figure 10 more clearly shows the aforementioned Maple's *Phytophthora* infection.

All the above problems are fairly typical for urban trees. No one has actually set out to damage or abuse any of these trees they have simply been left alone. While it might be reasoned that the Tree Preservation Order (TPO) should have led to them being venerated and thus looked after, this has obviously not occurred. Future management for this group really needs to address whether we want to keep them as group or to allow one or two specimens to develop out of the group. Really if we want to grow a few specimen trees, then it would be as well to remove all these and plant some different species. Currently not a single tree in the group could be called a "fine specimen." If growing specimen trees was an objective I would suggest planting something like a Tulip Tree or a Hungarian Oak. Walnut might be a good choice but they don't seem to grow too well in the neighbouring garden.



Figure 11.

Figure 11 to the left shows group 3 and tree 4 adjacent to the utility pole. The new planting of shrubs is into soil that appears to have been remodelled, presumably when the car park was installed. A geo-textile membrane can be seen through the topsoil. This was presumably installed in order to prevent weed germination. While it's been reasonably successful the ground between the shrubs looks rather sterile.

Figure 12 to the right shows the opposite side of group 5 to the view in figure 5. It is intended to access the new plot through this group and I presume they will all be removed. It is no great loss.



Figure 12.

It needs to be borne in mind that the garden is aligned north south, with the majority of the trees (group 2) to the west. Therefore the plot might be shaded from late afternoon sunshine, particularly in spring and autumn. I suggest the removal of some of the group and the pruning of some of the retained specimens. Taking some steps to improve the overall health of the group by the removal of the less choice specimens, would improve the condition of the whole group. If the scheme calls for planting new trees the effect of shade from neighbouring trees on the new planting needs to be properly considered.

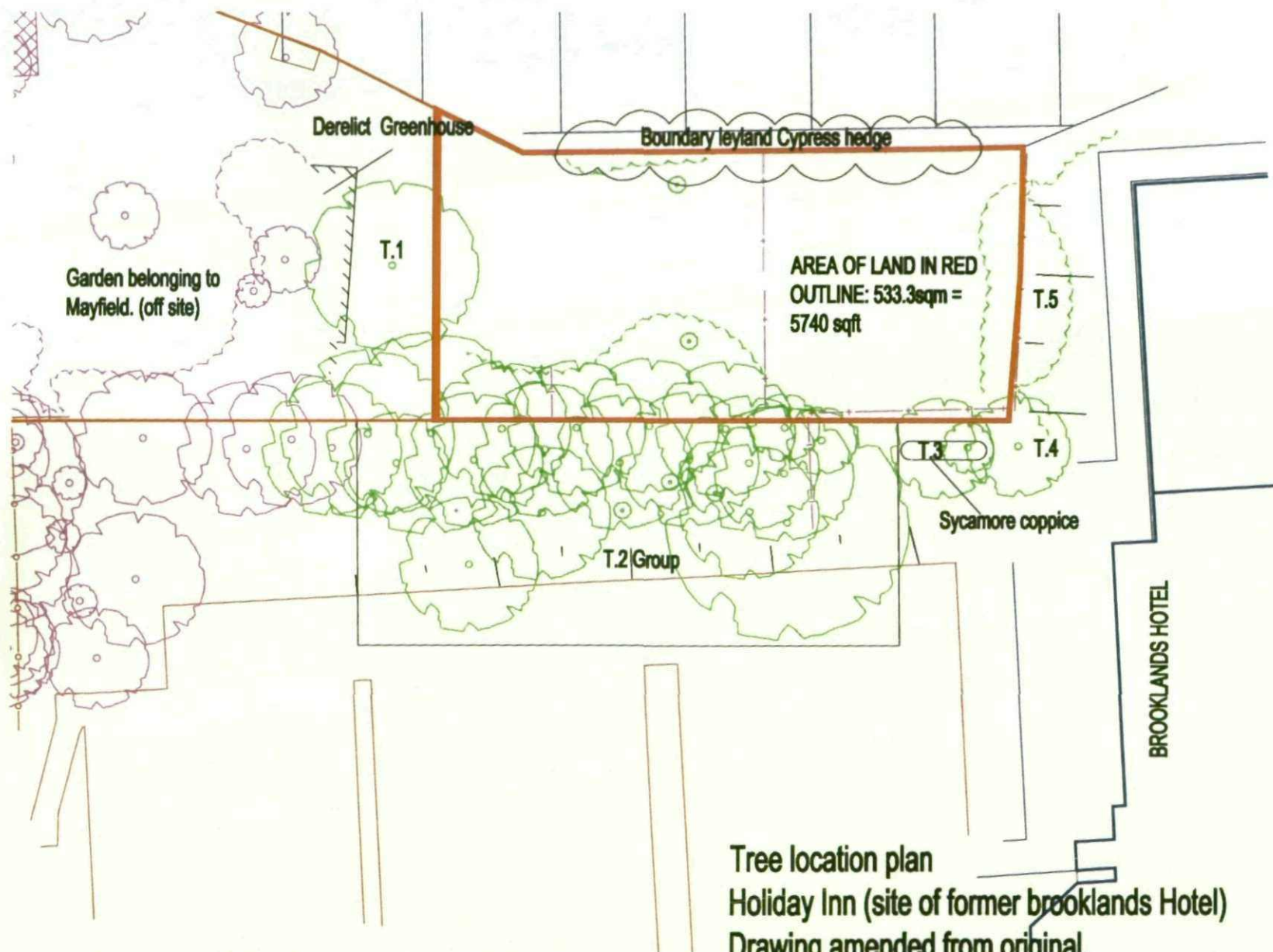
Conclusion.

I see no reason why this project should be hindered by any of the existing trees. Any steps taken to improve the overall health of the group should be seen as a benefit to the tree stock of the area.

Once the proposal for the garden is finalised the trees need to be appraised to ascertain what tree work will be required (Arboricultural Implications Assessment). Also, protective measures for the existing trees can be prepared.

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ANDERSON TREE CARE.

January 2010.



Tree location plan
 Holiday Inn (site of former Brooklands Hotel)
 Drawing amended from original.
 Drawing not to scale
 January 2010