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ANDERSON
TREE CARE

Tree Survey;	**“Southfield,” Lingard Street, Barnsley, S75 2SW.**
Client;	**Mr & Mrs P Davies.**
Date of Survey;	**April 21st 2011.** (also inspected December 2010)
Weather at time of Survey;	**Fine, bright, sunny.**
File reference	Southfield Barnsley 01

Introduction.

This site is the garden of a large detached house. Adjoining the site is an area of woodland, not in the Davies' ownership. The proposal is to erect a single dwelling in the large garden.

Tree Preservation Orders.

The site is not in a Conservation Area although there is one nearby. I understand a single tree in the garden of Southfield is protected by a Tree Preservation Order (TPO) but that this tree is not in the part of the garden 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 should consider this Standard in its deliberations about this site. 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 suitability of the trees for retention in the development.

The Standard recommends the preparation of a "Tree Constraints Plan" (TCP) to assist the designer in preparing the layout. It suggests that the survey should include all trees over 75mm trunk diameter. Also, trees that are outside the site but close to, or overhang the site should be considered.

I have marked the trees I have considered on a "Tree Location Plan" (TLP) 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 required in order to calculate the "root protection area." 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.' Alternatively it is acceptable to measure each individual stem and calculate an equivalent single TD[1]. Obviously a pragmatic approach needs to be adopted.

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.	

[1] This system of calculating a trunk diameter was suggested by Rodney Helliwell and is widely accepted by the Arboricultural industry. The cross sectional area of each stem is measured and calculated. The figures are added and an equivalent single trunk diameter is then calculated.

TREES FOR RETENTION			
Category and definition	Criteria - Subcategories		
	1. Mainly arboricultural values	**2. Mainly landscape values**	**3. Mainly cultural values**
Category A 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)
Category B 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
Category C 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	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.
	The Standard states that C category trees "*will usually not be retained where they would impose a significant constraint on development.*"		
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. All trees are assumed to be in good condition unless mentioned otherwise. 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 707m^2, 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	Cate-gory	Comments.	RPA
1.	Lime	16	600	M	C1	Ivy clad, numerous epicormic growths. Crown rather one-sided due to neighbouring trees, and largely over the neighbouring house.	163
2.	Lime	18	600	M	C1	As tree 1.	163
3.	Lime	18	500	M	C1	As tree 1.	114
4.	Sycamore	19	750	M	C1	Ivy clad, crown slightly one-sided as tree 1.	255
5.	Sycamore	18	550	M	C1	14 metre spread alongside the drive, Ivy clad, one sided due to proximity of neighbouring (woodland) trees. A woodland-edge tree.	137
6.	Sycamore	18	650	M	C1	Ivy clad and one sided. A woodland edge tree.	192
7.	Ash	18	1050	OM	B3	An elderly tree starting to collapse (numerous broken branches on the woodland floor). A candidate for monolith-type pruning. (Will require maintenance work)	499
8.	Group	16	400 max	M	C1	Sycamore and Ash (7 stems), could be coppice growth, rather slender. Dead Hawthorn leans against them. Coppice management of these trees would be a sensible option. (Hawthorn R category)	73
9.	Sycamore	14	400	M	C2	On the boundary with a neighbouring house, one-sided crown.	73
10.	Sycamore	17	500	M	C2	In a neighbouring (woodland) garden, not closely inspected, TD estimated. Twin stemmed at 3 metres.	114
11.	Sycamore	17	500	M	C2	As tree 10, in the neighbouring garden. Ivy on the stem has been cut.	114
12.	Sycamore	17	600	M	C1	On the boundary, one-sided crown, some branches very slender.	163
13.	Woodland	20 max	750 max	M	A2	Sycamore, Ash, Horse Chestnut, Hawthorn, Holly, Privet and Laurel. Odd Laburnum, Plane, dead-Elm and Poplar. See discussion.	255

Discussion.
I first visited this site in December 2010. I was quite surprised to find such a patch of woodland (item 13) in what is a densely populated urban area. While my visit at that time was merely to appraise the site before being commissioned to undertake this survey, it was immediately apparent that some management was overdue: There were branches hanging low over Swift Street, Victoria Crescent and some Ash trees on the road side were clearly decaying . Also the neighbouring house was all but hidden by the trees. Therefore when I visited last week I was pleased to see that some maintenance work had commenced. I understand this has now paused to avoid disturbing any nesting birds.

The woodland is in the control of the Local Authority and apparently they intend to develop it for use as some sort of teaching resource. I have to say that many Local Authorities are guilty of ignoring their woodlands, they mistakenly believe that they can be left alone and that they will manage themselves. This is plainly not the case and the attitude is probably derived from the idea that in the past, before mankind started to shape his environment, the whole country was covered in woodland. Current thinking is that this is not the case and the landscape before Man started to settle (from its hunter-gatherer origins) and develop an agrarian society, was not woodland but more likely something of a “savannah” landscape. This is probably best likened to a “mediaeval deer park” similar to the one we find at nearby Chatsworth Park. This is not to say that woodlands are not important but to point out that Man’s relationship to woodland has always involved some sort of management and that it should not be neglected now. Local Authority landscape managers ought to realise this and also note that in general woodland costs less to manage than grassed areas.

The woodland is rather dense and it is plain that some species need control if not complete eradication. For example Laurel is a major woodland nuisance that is capable of preventing other species from germinating in its shade. Also there is Privet which is rather dense and appears to be similarly suppressing the herb layer. This is not the native Privet (*Ligustrum vulgare*) but the more common (*Ligustrum ovalifolium*), this should be controlled even if not completely eradicated. While there is a reasonable spread of tree species in the woodland, the age range is not diverse and the herb layer is very sparse. Most of the ground appears to be covered in Ivy although I did notice some Bluebells, both native and Spanish. Undertaking work to break up the age range of the trees would more than likely assist in allowing a more varied herb layer to develop; as light reaches the floor we are likely to find dormant seed germinating. The work undertaken so far may be seen as the initiation of this process although it has to be said that at the time of my visit the result appeared rather drastic.

I refer to this woodland as “woodland” while keeping in mind that it does not appear to be “semi-natural ancient woodland” (SNAW). This may seem like a pedantic point to make but in planning matters PPS9[2] suggests that “woodland” should mean SNAW and that it should receive special consideration. It would be fair to regard this woodland as established secondary woodland even though it is

[2] Planning Policy Statement 9; Biodiversity and Geological Conservation. 2005.

probably not ancient. Ascertaining if woodland is SNAW is something of a moot subject; old maps can help and some plants can be regarded as “indicator species.” These may sometimes lie dormant for many years when a woodland is neglected or converted to plantation. This may sound unlikely but some forest owners are discovering that woodlands that were felled for the war effort (WW1) and then converted to plantation-forestry, can sometimes be allowed to redevelop when the planted timber crop is harvested. It appears that seed can sometimes lie dormant in shaded soils for many decades, only germinating when conditions permit.

My reason for focussing on the woodland is that it is by far the most significant feature of the site. The question that any Arborist visiting a site such as this is bound to ask is “will the project prevent or instigate management of the woodland.” In my opinion anyone living in a house adjacent to a woodland such as this is more or less bound to apply pressure for considered management. While it is not uncommon to see developments that effectively prevent management of woodlands (by preventing access to the woodland), this proposal could reasonably aid the management by improving access and monitoring the woodland’s use and condition.



Photograph 1.

Photograph 1 shows tree 1 to 4 as viewed from Lingard Street. I’m surprised the neighbour hasn’t complained about these trees as the majority of their crowns are over the property and the shade must be somewhat disconcerting. Photo 2 shows the same trees as viewed from within the garden. The crowns have developed in this way because of competition from trees within the woodland.



Photograph 2.



Photograph 3.

Photograph 3 shows a general view of the site from the near end of the drive. Tree 12 is to the left, the two trees with dead Ivy on their trunks are trees 10 & 11. Photograph 4 is a better view of tree 12 showing its one-sided crown. It grew this way because a companion tree has been removed.



Photograph 4



Photograph 5.

Photograph 5 shows a view of Swift Street with the trees having recently had lower branches removed to give more headroom over the highway. In December it looked very different. Photo 6 shows an Ash tree log; this was growing at the side of the gate that can be seen in photo 5. The decay can now be seen even more clearly.



Photograph 6.



Photograph 7.

Photograph 7 shows the base of Ash tree 7. While this is starting to collapse it does not particularly matter at the moment. In collapsing and decaying it will provide numerous “niche-habitats.” Undertaking work to retain such habitats is commonplace nowadays and this tree would be a choice specimen for this sort of treatment. (this is called “monolith pruning” or “standing carcass management.”) This ought to be considered part of the future woodland management.

Photograph 8 shows the base of the Hawthorn in tree group 8. This is dead with roots broken and exposed as it leaned into the rest of the group. This tree creaks (rather alarmingly) as it moves in the breeze and rubs against the other trees in the group.



Photograph 8.



Photograph 9.

Photograph 9 shows a pile of debris that has been bulldozed in the woodland, Southfields can be glimpsed in the background. I imagine this was done to remove the dense layer of Ivy. It is noticeable that Blackberry Bramble is germinating already. Photo 10 shows some Bluebells, apparently exploiting the increased light levels brought about by the removal of the nearby Ash trees.



Photograph 10.



Photograph 11.

Photo 11 shows more tree clearing that must have made the neighbouring house on Victoria Crescent much brighter. Photo 12 shows an Ash tree that was probably pruned to reduce the shade to the same property. I say “pruned” it was obviously cut to little more than a telegraph pole although it has still managed to sprout again.

While the bulldozing and tree felling is no doubt welcomed by the neighbours it has to be said that the work does appear rather drastic. In my opinion some burning of the debris would not be unwise.



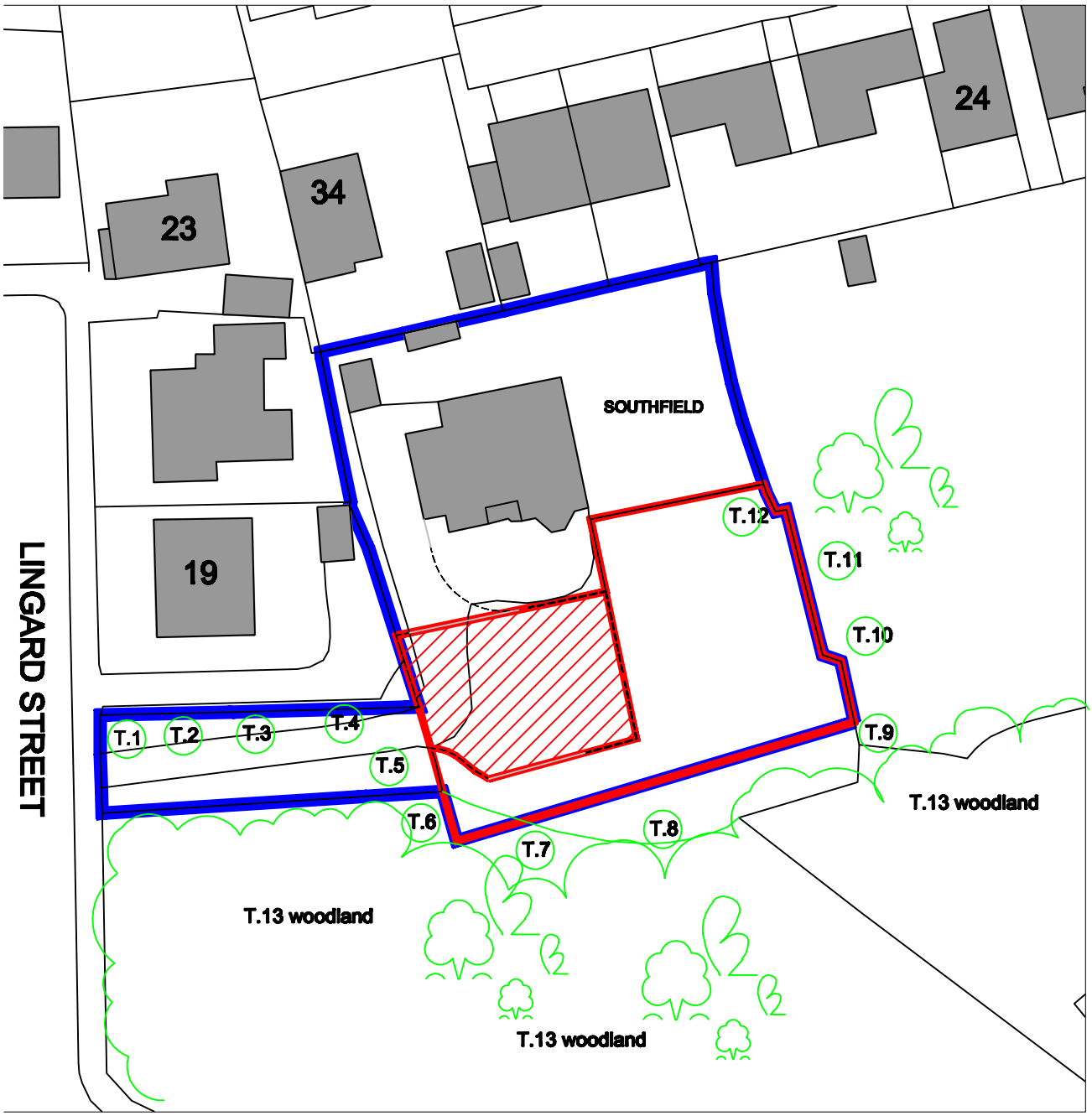
Photograph 12.

I don’t know if anyone has actually prepared a woodland management plan for this woodland, but it would be interesting to see it if they have. I noticed that quite a lot of the debris from the tree clearing appeared to have been converted to woodchips and left in the woodland. While I understand that these will eventually rot down and be incorporated into the topsoil, I think it would be wise to ensure the amount of woodchip and bulldozed material does not become excessive. To this end some burning of the debris ought to be acceptable although the removal of some of the timber for firewood or other uses would also be prudent. I make this comment while being aware that Barnsley is well ahead of its obligations with regard to making use of renewable resources. (The Council have installed biomass (woodchip) heating systems in numerous buildings.)

Conclusion.
I think it is fair to say that a modest building proposal on this site will have no adverse affects on the tree stock of the area. This report has shown that management of trees around the site has been substantially neglected in recent years; it is entirely possible that pre-application discussions with Council Officers has already led to woodland management being put in hand.

I see no reason why trees should be a hindrance to this project.

W. L. Anderson. Dip.Arb. (RFS) M.Arbor.A.
ANDERSON TREE CARE. April 2011.



Tree location plan
Lingard St. Barnsley
April 2011

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Arboricultural Contractors and Consultants