



ANDERSON

TREE CARE

Arboricultural Contractors and Consultants

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**Tree Survey: 70 Church Street,
Brierley, Barnsley, S72 9JG.**

Client: Anita Barry

Date of Survey: January 9th 2023.

Weather at time of Survey: Fine and bright, cold.

File reference: Brierley 70 Church Street 01

Appendices: 1. Tree location plan.
2.

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Introduction.

This project is a fairly straightforward extension to an existing detached property. The site contains a number of trees, this report will show that none of them can be considered unusual or out-of-the-ordinary in any way. The property is slightly unusual in that it is accessed not from Church Street, but from a shared lane at the rear of the dwelling. I got there through the village hall's car park, which also seems to use the back lane.

Tree Preservation Orders.

There are no Tree Preservation Orders on the site but it does fall in the Brierley Conservation Area. Therefore most of the trees considered in this report have rudimentary protection.

British Standard 5837 2012 Trees in relation to design demolition and construction – Recommendations.

I have taken the above document as the basis for this report. The Local Planning Authority will almost certainly consider this Standard in its deliberations about this site. The Standard states its objectives as achieving a harmonious and sustainable relationship between trees and structures.

The preoccupation of this standard is the categorisation method and the Root Protection Area (RPA). The logic for this is that resources should not be wasted attempting to retain trees that do not justify retention, nor should a project set out to retain a tree only to ensure its rapid demise by failing to take account of its growing conditions.

While the Standard covers much more than these matters, at this stage in this project these are the major concerns. This survey is intended to supply the information necessary to ascertain which trees are suitable for inclusion in the project and how their retention will affect the manner in which the site is developed. BS5837 anticipates that an Arboricultural Impact Assessment (AIA) will be undertaken once the layout is finalised and that the planning application will be accompanied by a Tree Protection Plan (TPP).

The TPP is a drawing that shows which trees are to be retained and where the protection measures are to be installed. This should be accompanied by a "Method Statement" detailing the measures to protect the trees. The AIA will contain details of tree work to be undertaken to facilitate the development and a summary of any tree planting.

BS5837; Tree Categorisation Method.

The categorisation method is summarised in BS5837 at section 4.5 where it emphasises the need for it to be undertaken by an Arboriculturist. Elsewhere the Standard tells us that an Arboriculturist should be a "person who has, through relevant education, training and experience, gained expertise in the field of trees in relation to construction."

There are 4 retention categories; U, A, B & C. The criteria for inclusion in each category and subcategory are summarised in Table 1 "Cascade chart for tree quality assessment," an interpretation of which follows:

Trees unsuitable for retention.			
Category and definition			
Category U: Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.	Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees. Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline. Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality. <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve.</i>		
Trees to be considered for retention.			
Category and definition	Subcategories		
	1. Mainly arboricultural qualities	2. Mainly landscape qualities	3. Mainly cultural qualities
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years.	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal Arboricultural features (e.g. the dominant 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).
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit category A.	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.
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm.	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits.	Trees with no material conservation or other cultural value.

NB. This is an interpretation of table 1, not a copy, although much of the text is verbatim.

BS5837 contains details about what colours should be used to indicate their categories on any drawings; these are U = dark red, A = light green, B = mid blue, and C = grey.

BS5837 goes into greater detail (at 4.5.10) about the appraisal of small trees; those of less than 150mm diameter, as these are easily replaced with similar sized new trees. It notes that they might even be transplanted.

It includes further detail (at 4.5.11) about the importance of veteran trees and the measures that are likely to be needed to avoid damaging them and to ensure they are not an imposition upon a development.

BS 5837; Root Protection Area.

The Root Protection Area (RPA) is defined as a circular area of radius 12 times the trunk (stem) diameter (TD). BS5837 contains details as to where and how it should be measured, and also as to how to treat trees with more than one stem; an equivalent diameter is calculated. I use a diameter tape to measure this and use common sense to adjust this measurement where Ivy or other factors affect the measurement. Despite the Standard's attempts to standardise the measurement conventions there will be times when there is little choice but to estimate the measurement.

While the RPA is defined as a circle the Standard accepts the impracticality of erecting circular fences and it implies that other shapes are acceptable as long as the impact of the alteration is properly appraised. As a general rule, the 12 times the TD sum can be interpreted as a "tree to building distance" that is easy to calculate. It would usually be acceptable to plot the RPA on any drawing as a square with sides of twice the tree to building distance, notwithstanding the fact that this would have a greater area than the circular area.

The two previous versions of BS 5837 have contained advice about offsetting the RPA. The 2012 version does not but allows (at 4.6.2) deviation based upon "a soundly based Arboricultural assessment of likely root distribution."

The 12 times the TD rule is often seen as a mathematical method of calculating where a tree might have grown roots, plainly it is not. It might be helpful to consider it as a system of calculating the size of pot that might be needed were it possible to transplant a mature tree into a pot. The calculation is actually for a volume of soil, although as the pot is predetermined to be 600mm deep (most tree root action is in the upper 600mm of a soil profile), it is only necessary to calculate an area.

Clearly if a tree has grown on very shallow soils it might be necessary to have a larger RPA. I anticipate that a tree grown in such conditions would be of relatively poor quality, although making firm predictions about such things should be avoided.

At Annex D, BS5837 contains a table of RPA areas for single stem diameters, and at Annex C the measuring conventions are illustrated. Annex D rounds the TD to multiples of 25mm and the RPA to the nearest whole square metre.

While damage to tree roots is paramount, other factors need to be taken into consideration; factors such as shade from nearby trees, future growth and even access for machinery in order to undertake future tree management. These factors may affect the categorisation.

The Survey Schedule.

While BS5837 suggests numerous factors that should be recorded on the schedule the information presented in this survey is as follows:

1. **Tree no & species.** I hope this is self-explanatory. I routinely use common names but will use scientific names to clarify the identification where necessary. Some trees are dealt with as groups. Hedges are dealt with similarly.
2. **Height.** (Ht) measured in metres. This is estimated from ground level. I use a clinometer and laser range finder 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 using a tape. This is rounded up to the nearest 10, greater accuracy is unnecessary. Where I have been forced to estimate the measurement due to basal growths or some-such, the figure is appended with an "E."
4. **Age class.** BS 5837 uses the term "life stage." I consider this to mean the same as age class. The categories are Young (Y), Middle-aged (EM for early-mature), Mature (M), Over-mature (OM) and Veteran (V). BS5837 uses the class "semi-mature" but this appears too similar to early-mature for me to make a meaningful distinction. 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.* (NB. Many thoughtful Arborists are avoiding the term "over-mature." Late mature is a better term.)
5. **Category.** The retention category as detailed above.
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.** As detailed above. Taken from Annex D. (NB. The RPA is 'capped' at 707m², i.e. a circle with 15m radius or a square with 26m sides.)

BS5837 contains a suggestion of information that might be gathered for a tree survey. This includes information such as the height of a tree's first branch, and the crown spread to the

four cardinal points. I note that the Government's guidance on Tree Preservation Orders contains the very useful advice that local planning authorities should not ask for any more information than is necessary to decide an application (to work on a protected tree). This is a sensible approach and one that I apply to all matters related to planning and trees. I note that the recently revised National Planning Policy Framework (NPPF) contains similar advice (at paragraph 44).

If something is particularly notable about a tree, say the crown spread is particularly broad or lop-sided, I shall mention it and expand upon the characteristic and its relevance in the discussion section of the report.

The previous version of BS5837 contained the instructions for preparing a "Tree Constraints Plan." While this was a sensible idea it was probably over complicated. It was intended to be a tool to inform the designer of a site layout more than an essential component of a planning application. It was meant to show the various retention categories of each tree or group, the tree positions and the heights and accurate spreads of each tree. It was also supposed to show the areas likely to be affected by shade. Shade would clearly differ from June to December and on slopes of different orientations, so this would be a complicated drawing. In fact I think it would be likely to be so convoluted as to be unusable.

Experienced designers are fully capable of working with different levels, neighbouring buildings, slopes of differing orientation, and interpreting where shade might be a problem, so the tree constraints plan could be seen as unnecessary. It is our intention that the tree schedule should provide sufficient information for a suitably experienced and skilled designer to prepare some sort of Tree Constraints Plan should he or she consider it necessary.

"An iterative process."

BS5837's Figure 1 is a flow chart illustrating the processes in developing a site. It emphasises that a development project should be an "iterative" process, meaning that advice from the Arboriculturist should be ongoing. This might mean that a sketch of a proposal should be discussed with the Arboriculturist, and the impact on trees appraised before preparing more detailed plans.

On large spacious sites it might be feasible to simply position structures and services outside of the RPAs, but on more typical sites it might be necessary to sacrifice a poor quality tree in order to give a better quality tree more space.

If these matters are addressed before a planning application is submitted it ought to speed up the decision-making process for the local planning authority. Figure 1 anticipates that the planning application will be accompanied by a Tree Protection Plan, which shows the positions of RPA protection fencing, and an Impact Assessment. This should be a summary of tree work that the project will require. This will include trees that are to be removed as well as those that might need pruning. It will also include an appraisal of the benefits of any tree planting and the likelihood of improved tree management upon the project's completion. By definition the impact assessment will take into account the surrounding area's tree population and the condition and management (or lack of) currently in operation.

The Trees.

A tree location plan is appended to the rear of this report.

Tree No.	Species.	Ht	TD	Age class	Category	Comments.	RPA
1.	Ash	9	350	M	C1	Has suffered some fairly major damage to the trunk in the past. Possibly from a bonfire on the neighbouring site. Crown rather one-sided, possibly due to some ill-considered past-pruning. Compost heap at the base.	55
2.	Ash	9	300E	M	C1	Rather slender, and also with a damaged trunk, probably from the same bonfire. Compost heap at the base.	41
3.	Silver Birch group.	10	350 max	M	C2	Also rather slender, but OK. Could be coppice growth from a previously cut stump.	55
4.	Beech	7	120E	Y	C1	A rather slender sapling, suppressed by companion trees.	7
5.	Sycamore.	9	300E	EM	C1	Also rather slender but OK despite suppression from trees either side.	41
6.	Ash	12	600E	M	C1	Three stems, could be coppice growth. Some epicormic growths have been infected with Chalara. Some ill-advised pruning seems to have been undertaken in the past and one stem appears to be hollow in some places. Crown rather one-sided	163
7.	Group	8 max	250E max	M	C2	This is the overgrown hedgerow at the opposite side of the property's "back lane." There are Hazel, Hawthorn, Elderberry and Ash growing there. It is unkempt and damaged by livestock and poor management. Its management could be improved.	28
8.	Ash	13	450E	M	C1	In the neighbouring garden at 72 Church Street. OK.	102

Discussion.

Trees 1 to 6, which are the only trees within the site, could all be described as “unkempt.” They might be looked upon as a boundary planting scheme that was established and then ignored. Some proactive management, pruning and perhaps removal of some trees to allow others more space, might have resulted in better specimens.



Photograph 1.

Photograph 1 is a view of the site's trees as seen from the village hall car park. Tree 6 is possible the most well-established tree, the others all seem to be more slender than tree 6, which might be because they managed to grow from what was once a boundary hedge.



Photograph 3.



Photograph 2.

Photograph 2 shows the compost tipped at the base of trees 1 & 2, while photo 3 shows the bonfire damage to tree 1's trunk.

Compost heaps are not always benign; piles of grass clippings can get warm and damage the growing environment, or even a tree's bark, and the liquor that piles of grass clippings often generate can lead to anaerobic conditions, which can in turn lead to root death. Ideally compost heaps should be kept away from trees and bonfires should be kept well-away.



Photograph 4.

Photograph 4 shows the trunk of tree 2. As with tree 1, the damage is on the north side and suggests that both trees were scorched by a bonfire at some time in the past. Unfortunately trees scorched by bonfires are a fairly common sight as it's easy to assume that a tree will tolerate what might not seem like very much heat at all. Some tree species (from fire climax landscapes) have of course evolved to tolerate periodic fires, unfortunately native British trees are not amongst them.

I don't think this damage to these trees is terminal but such damage is invariably worrying as decay fungi can colonise a tree's heartwood when bark is lost. I found only a small jelly (ear) fungus on tree 2's heartwood, which is not a concern.

Photograph 5 is a view of trees 1 to 5 taken from the front of the house looking roughly north. That's the village hall in the background.

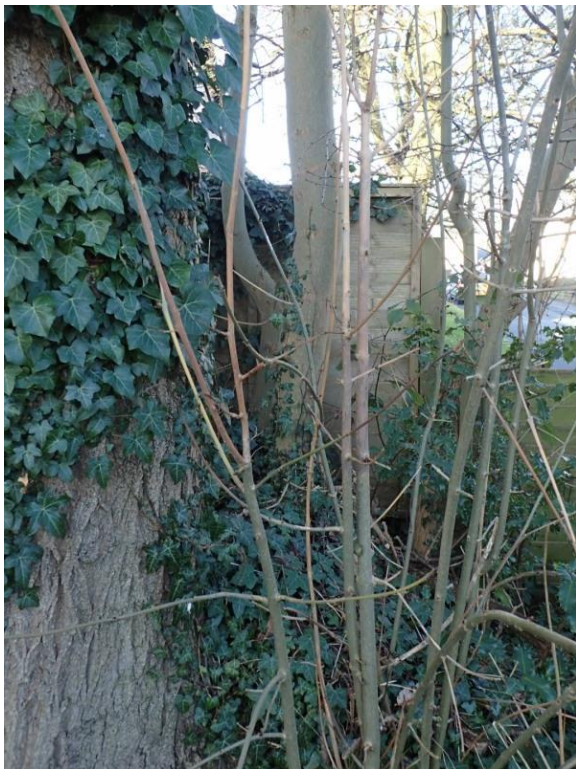


Photograph 5.



Photograph 6 is a view of Ash tree 6, taken from the same position as photo 5.

Photograph 6.



Photograph 7.



Photograph 8.

Photograph 7 shows some epicormic growths at the base of Ash tree 6. These have died back which is almost certainly due to infection with Chalara Ash Dieback, the fungal disease

which is unfortunately spreading rapidly through the area. Photograph 8 shows one of the holes on the main trunk of Ash 6. I don't know how extensive this cavity is but this is not the only hole in that trunk.



Photograph 9.

Photograph 9 shows group 7, which is another decrepit hedgerow, at the side of the paddock to the west of the back lane. Unfortunately it's fairly commonplace for such hedges to be browsed by the livestock in a paddock, which leaves them ineffective as a barrier.

It's also fairly commonplace for trees in hedgerows like group 7 to be strangled by fencing wire, as can be seen in photo 10.

In an ideal world hedgerows like this would be restored but as this probably doesn't belong to this house it's hard to see how this might be brought about.

Hedgerows are of course extremely valuable to biodiversity but there are currently no Laws that can oblige hedge-owners to manage them in any certain way. The 1997 Hedgerow Regulations might have been intended to empower Councils to require proactive management, but if that was the intention behind the legislation, it failed.



Photograph 10



Photograph 11.

Photograph 11 is a view looking south along the house's front elevation. The tree is tree 8, another Ash, but in the front garden of the next door property. There's nothing much wrong with the tree other than it's quite large and not far from the neighbouring house. It seems to have had some lower branches removed in a manner that would not meet current best-practice.

This concludes my tree related observations at this site.

Further discussion.

The planning application invalidation notice from the Council, which was the reason you've requested this report, wanted a tree impact assessment. For this we need to appraise whether the proposed building work is going to intrude into a "root protection area." The only part of the proposed extension that is towards the tree group is going to be approximately 7 metres from the closest tree, tree 1. This tree is the closest tree and BS5837 requires a RPA of 4.2 metres radius, so I think it's fair to say that the proposal should not trouble the tree.

We also have to try and guess how the project might be undertaken and whether this is likely to mean site operations extend beyond the building's footprint. This is a very small project so the largest machine on site is likely to be a mini-excavator. So it seems fair to say that there is not much opportunity for accidental damage to trees.

I also note that the plans suggest that trees 1 & 2 are pruned to reduce their height and spread. However I would suggest that as they are Ash, in not particularly good condition, and because they're at risk of infection from the Chalara¹ pandemic, it might be best to remove them and replant with a different species. This course of action could be looked upon as a positive outcome; an improvement to the neighbourhood tree population and biodiversity.

¹ See <https://www.forestresearch.gov.uk/tools-and-resources/fthr/pest-and-disease-resources/ash-dieback-hymenoscyphus-fraxineus/>

I do note that the proposal drawing shows a new parking area to be created between the house and trees 1 & 2. This will be approximately 4 metres from the trees so not have a major impact on them. Whether this is a factor that might encourage removal and replacement and thus a factor in the planning approval I do not know. Ultimately if the local planning authority want a tree owner to retain a tree the only way they can enforce that is with the TPO system. And under the current TPO-guidance none of the trees in this report are TPO worthy.

If this was my site and project then my inclination would be to prune all the trees along the northern boundary, and approach the owner of the hedge at the opposite side of the lane to offer some incentive to restore the hedge. However this is very much a personal choice and I would consider such matters to be beyond the scope of the planning system.

Conclusion.

1. This project, as proposed in the supplied drawings is unlikely to have any impact on the trees on or adjacent to the site.
2. None of the trees on the site are specimens that should stand in the way of a development of this sort.
3. The Tree Officer may require you to take steps to protect the trees from accidental damage during the build-period, if so the following photograph shows suitable fencing which could be erected 4 metres from the northern boundary to create a construction exclusion zone:



Photograph 12; tree protection fencing.

NORTH



TREE LOCATION PLAN
70 CHURCH STREET, BRIERLEY
NOT-TO-SCALE
JANUARY 2023