

**Item 18, Pages 258-288**

**Cricket and Tennis Club, Frittenden Road, Staplehurst**

**Ref: 16/505598/full**

Further information received from the applicant received by email on the 17 August 2017 is provided below. The officer response is provided in bold.

**From:** John Swannick [mailto:john@swannick.com]

**Sent:** 17 August 2017 10:20

**To:** Tony Ryan

**Cc:** John Perry (Cllr); Louise Brice (Cllr); Richard Sonnex

**Subject:** Fw: Planning Application Ref: 16/505598/FULL - Staplehurst Cricket & Tennis Club  
Dear Mr Ryan

Please find below our response to the Officers' Report to Committee in respect of our application.

This has been emailed to Committee members and I should be grateful if you would consider as an urgent update for the meeting this evening.

Regards

John Swannick

[REDACTED]

Our application is again on the agenda for decision at tomorrow night's Planning Committee meeting after, as you will recall, being deferred from the meeting on July 6 when it became apparent that critical and material evidence submitted by the Club in April had been mislaid and not taken into consideration in the Planning Officers' report to Committee for that meeting.

That material evidence included a heritage statement as well as a viability statement although I understand that only the viability statement is being considered for further discussion. We intend to focus on the viability case in our presentation to committee and I set out a brief response to the latest Officers' report and its selective interpretation of that viability report here. But I think it also fair to reiterate our case against the spurious planning grounds on which the Officers' recommendation for refusal has been based and discussion of which was truncated at the July meeting given the move for deferral.

Planning issues were discussed in a site visit by the Planning Officer, Diane Chaplin, on February 22 (not March 28 as stated in the latest Officers' report) and formed the basis of the subsequent heritage statement submitted by us in early April. However, we have not seen any report from the Council on that site visit or receive any feedback on the evidence we submitted despite repeated attempts to contact Planning Officers by phone and email in the weeks after its submission. The first we heard of some of the planning issues raised at the meeting on July 6 was the original Officers' report for that meeting. That report did not reference the site visit and we can only conclude that there is no note of the site visit and those discussions, and the subsequent heritage statement, were not taken into consideration.

In short:

- It is disputed that the site is in a rural area. It is close to the A229 and surrounded to the west by a large council estate, to the north by large modern detached houses and to the south by a garage service station and motor vehicle dealership;  
**The site is outside the Staplehurst settlement boundary. Adopted and emerging planning policies direct new housing to within the settlements on the grounds of sustainability and in order to protect the character of the countryside.**
- The garage site has been approved for development for 8 houses by planning inspectors who stated it was not in a rural area;  
**In allowing the appeal on this petrol filling station, the inspector considered the precise location of this site and also the fact that this proposal involved the loss of the garage that was considered harmful to the character of the area. (Iden Park Service Station, APP/U2235/A/12/2184356). The site of the housing currently proposed is open land that was previously in use as an allotment.**
- The site is adjacent to but NOT in the conservation area. The two nearest properties in the conservation area to the north of Frittenden Road are of modern 1970s design and pay no regard to the local vernacular;  
**Planning decisions have to consider the potential harm to the setting of a conservation area. In this case the setting will be affected by the loss of the trees and the construction of two new houses that will be visible from the conservation area.**
- The impact on the so-called non-designated heritage asset, Cricket Lodge, which is also NOT in the conservation area, was dismissed in the original Officers' report (para 6.15) to the July 6 Planning Committee meeting yet, curiously, this featured significantly in the Officers' verbal presentation (and photographs) at that meeting;  
**The impact on amenity is discussed at paragraph 6.15, not the impact on the non-designated heritage asset.**
- The layout of the proposed site is designed to minimise the impact on neighbouring properties and, as far as possible, retain the current 'sylvan' street scene by the retention of a large amount of trees to the west main road end of the site. As per the Arboriculturist's report, these trees will not be removed although the Planning Officer erroneously stated they would be, at the July 6 meeting;  
**The information in the officer report is taken directly from the applicant's tree report. Para 7.1 advises "Of the 10 subject trees and the ash group, three and part of the group are to be retained. This may seem to be a large proportion in numerical terms, but the intention is to provide reasonable garden space for the houses".**
- There is no common street front scene in Frittenden Road and, where houses are aligned with the road, most are set well back and not visible from the road. Further along Frittenden Road, houses are oriented similarly to those in our proposal;  
**Whilst it is accepted that other properties in the area do not face the road, this is considered poor design due to the lack of an active frontage and not an approach that should be repeated.**
- The internal vehicle turning points were added to the design after consultation with KCC Highways. KCC Highways have no objection to the scheme;  
**It is accepted that the turning points meet highways requirements, however the excessive and over engineered access and turning area is only necessary due to the poor orientation of the dwellings.**

- The site will be screened from the road, as now, by retained trees and hedging. The overall hedging – traditional hawthorn and hornbeam – will be increased by 75% and not removed as stated in the Planning Officers' report for July 6 meeting;  
**Refer to paragraph 7.2 of the applicant's tree report which states "A section of the hedge on the Frittenden Road frontage will be removed to create the new entrance and to facilitate the required highway sight lines".**
- The only trees that will be removed are self-seeded and of no value according to the Arboricultural report. The group of Ash trees referred to at the July 6 meeting as being lost are actually in the main being retained and will screen the site from the road;  
**The information in the officer report is taken directly from the applicant's tree report. Para 7.1 says "Of the 10 subject trees and the ash group, three and part of the group are to be retained. This may seem to be a large proportion in numerical terms, but the intention is to provide reasonable garden space for the houses".**
- The proposed properties have been designed sympathetically to be high quality small family homes in the local vernacular using traditional materials including bay windows, red tile hung gables, under a traditional plain tiled roof with barn hips to reduce bulking;  
**It is considered by officers that the proposal fails to provide high quality design for the reasons set out in the original report.**
- No reference, in either of the Planning Officers' reports, has been made to the Club's offer made at the site visit and reiterated in the heritage statement, to remove two sizeable buildings in close proximity to the proposed site in order to offset/mitigate bulking;  
**The current proposal is for two new two storey houses on open land, it is not considered that the removal of other redundant single storey buildings associated with the sports use will significantly reduce the negative impact**
- Staplehurst Parish Council's planning committee recommended the application for approval, noting the high quality of the design;  
**Officers do not agree with the views of the parish council.**
- Staplehurst Parish Councillor Riordan noted in a written submission prior to the July meeting that our proposal was consistent with the Staplehurst Neighbourhood Plan's accommodation of small scale development and provision of local amenity;  
**Officers consider that the proposal is contrary to policy PW2 of the neighbourhood plan which states that "Proposals for new development in the countryside beyond the extended village envelope will be assessed in terms of the potential impact of the development upon the visual setting and landscape features of the site and its surroundings..."**
- Importantly, the Neighbourhood Plan was not in force, or even subject to referendum, at the time our application was submitted or even at the due determination date - August 31, 2016.  
**Whilst not in place, the neighbourhood plan was in the process of being prepared at the time the application was submitted; notwithstanding this a recommendation or decision is based on the policy position at the time this is made and not when an application is submitted.**

So, in our respectful opinion, the planning case against our proposal is flawed in most of its substance and detail. But whatever planning loss it constitutes, and we vigorously oppose that view, it is significantly outweighed by the social and community gain of the Club's

development plans for improved facilities and increased activity partially afforded by the proceeds from any subsequent sale of the approved site. There is also the economic gain, as pointed out by Mrs Chaplin during the site visit, from the substantial leveraged investment in sporting facilities agreed in principle by the two sports' governing bodies.

But with reference to the precise of the viability statement given in the latest Officers' report I would offer this simplified analysis for clarification and Members' consideration:

- The Club's current net income is around £40,000. This includes bar profits of £12,000 (on turnover of c£50,000), subscriptions £9,000, playing fees £5,000, sponsorship/donations of £5,000 and other events/fundraising of £5,000;
- In a good year, we will make a surplus of £2,000. In a bad year, we may lose £1,000. That is after setting aside £5,000 each year for capital replacement (depreciation);
- So our annual net expenditure is around £40,000. This includes £10,000 club operating costs, £5,000 utilities and insurance, £20,000 ground and property costs and £3,000 investment in junior sports programmes including local state schools outreach;
- Over the last 10 years we have doubled bar turnover and increased profits from £1,500 to £12,000. Subscription income has increased from £6,000 to £9,000 despite a significant reduction in subscription rates (particularly for families) over this period;
- The £5,000 capital depreciation charge is not adequate given the current £600,000 value of building, plant and machinery. We need to increase this by £5,000 per year;
- Most significantly, our reliance on a 72-year-old volunteer groundsman cannot go on forever. We anticipate having to employ contractors to do this work in 1-2 years' time at a cost of £15-18,000 per year;
- Our Development Plan focuses both on much needed capital investment to make up for past years' underinvestment AND to generate additional income to meet these future needs;
- Our business plans underpinning funding applications to LTA and ECB identify potential growth in bar turnover of 50-60 % in the short term and a 100-200% increase in tennis subscription income. This will drive the bulk of the £20,000 additional income required;
- The recent growth in bar turnover has largely been delivered by use of the Clubhouse for activity in the winter. Winter bar turnover was close to zero 10 years ago but is now around 50%. We have significant member event hire which we believe we can grow commensurately in the summer, alongside sporting activity, which will only be enabled by investment in the Clubhouse reconfiguration and refurbishment.
- The growth in tennis membership is based on the renewal of facilities and growth from two to four hard courts. This is fully supported by LTA evidence and our own market research which shows waiting lists at other local tennis clubs with better facilities as well as growth from the anticipated new local population;
- There are no other realistic sources of this major leveraged capital investment unless there is likely to be a significant change in the funding environment in local or national government;
- We are continually applying for grants and other funding from national and local organisations. We have obtained around £20,000 this way in the past 5 years to pay for new ground equipment and junior coaching equipment/programmes;
- We also seek longer-term sponsor partnerships. We recently obtained £2,000 from Homeleigh to fund schools outreach, primarily ongoing in-curriculum and after school coaching at Staplehurst School, and a new dedicated girls cricket programme;
- But all of the major investment sources we identified – including Sport England and National Lottery – are predicated on matched funding on less advantageous terms than that offered by the sports' governing bodies;
- With the amount of capital investment required to keep the club viable and supporting our membership and the local community, the only realistic route is to utilise a small piece of unused waste land on our estate to generate the required matched funding;

- We hope to translate this into an estimated £150-180,000 although market conditions have deteriorated in the 12 months since our application was submitted. This should leverage £150,000 grant funding from LTA and ECB, possibly more when taking into account the ECB interest-free loan option.

Without approval of this planning application, we cannot access the matched funding open to us that will deliver the much-needed investment in facilities AND underpin the generation of required additional income into the foreseeable future. Without the enabled funding there will be an inevitable spiral of decline in facilities, followed by a decline in playing membership and income.

I hope this assists in judging the merits of our cases and I thank you in advance for your consideration.

With kind regards.

John Swannick

**From the above information the club has to raise £40,000 per annum (not £30,000 as previously mentioned - second page original viability statement) for day to day running costs of the club.**

**It is accepted from the above information shows that the financial position of the club is finely balanced with the need for an additional £20,000-£23,000 per year required to fund extra needs such as the capital depreciation fund and the work of the existing volunteer groundsman.**

**As set out in both committee reports it is also accepted by officers that investment is needed in the club. Planning judgment is required to assess whether the negative impact from the submitted proposal outweighs the harm that will be caused. It is the officer view that the benefit of the funding does not outweigh the harm that is set out in the committee reports.**

**Officer recommendation remains unchanged.**





# Arboricultural Survey and Planning Integration Report

at

Staplehurst Cricket and Tennis Club,  
Frittenden Road,  
Staplehurst,  
Kent.  
TN12 0DH

26th October, 2016



# C O N T E N T S

Section	Subject	Page
	Instructions	1
	Summary	1
	Documents Supplied	2
1	Scope of Survey	2
2	Survey Method	2
3	Bat Informative	3
4	The Site	3
5	Subject Trees	4
6	The Proposal	4
7	Arboricultural Landscape Integration	4
8	Post Development Pressure	5
9	Tree Protection Measures	6
10	Conclusions	8
11	Recommendations	8

Appendix A	Site Plan – Existing Layout with Schedule of Subject Trees
Appendix B	Site Plan – Proposed Layout
Appendix C	RPA Radii Table
Appendix D	BS5837 Extract – Tree Protection Fencing



# Quaife Woodlands

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## ARBORICULTURAL REPORT

<b>LOCATION</b>	Staplehurst Cricket and Tennis Club, Frittenden Road, Staplehurst, Kent TN12 0DH	<b>REF:</b> AR/3614/jq
<b>CLIENT</b>	Staplehurst Cricket and Tennis Club,	<b>DATE OF REPORT</b> 26 <sup>th</sup> October, 2016
<b>REPORT PREPARED BY</b>	J. Quaife, AA Registered Consultant Dip.Arb.(RFS), F.Arbor.A, CEnv.	<b>DATE(S) OF INSPECTION</b> 20 <sup>th</sup> October, 2016
<b>SURVEY INSPECTOR(S)</b>	J. Quaife, AA Registered Consultant Dip.Arb.(RFS), F.Arbor.A, CEnv.	<b>SHEET No.</b> 1 of 9

<b>LOCAL AUTHORITY</b>	Maidstone Borough Council    Application Reference 16/505598/FULL
<b>CONTACT</b>	Arboricultural Officer

*Please note that abbreviations introduced in [square brackets] are used throughout the report.*

### INSTRUCTIONS

**Issued by – Mr John Swannick of Staplehurst Cricket and Tennis Club, address as above.**

**TERMS OF REFERENCE – To survey the subject trees to assess their general condition and to provide a planning integration statement for the proposed development that safeguards the long term well being of the retained trees in a sustainable manner.**

The content and format of this Report as written are for the exclusive use of the Client. It may not be sold, lent, hired out or divulged to any third party not directly involved in the subject matter without our written consent.

### **Summary**

The application proposal is to develop the north-western part of the Club grounds for a pair of semi-detached houses with a new access off Frittenden Road. The major part of this subject site is outside the playing area and has been used as allotment gardens, but with trees at the north-western end.

There are 10 individual subject trees and a group of semi-mature ash. Only one tree is individually significant, an oak, and that is retained, along with the trees in the north-western tip for a length of approximately 14 metres. The peripheral road- and path-side hedging is to be retained and enhanced (other than the gap and sightlines to be created for the new entrance, and as a consequence the proposal will have a low landscape impact.

The protection of retained trees can be effected in accordance with current standards and guidance, and there are no matters of post development pressure upon trees that could not be managed with routine maintenance.

The proposal is sustainable in arboricultural terms.



### Documents Supplied

- Documents available on the Maidstone Borough Council Planning Portal

### Scope of Survey

- 1.1 The survey is concerned with the arboricultural aspects of the site only.
- 1.2 Quaife Woodlands was not instructed to investigate the statutory protection status of trees on or adjacent to the subject site.
- 1.3 I have liaised with Mr R Sonnex of Sonnex Surveying, 33 High Street, Sevenoaks, Kent, TN13 1JD, and I met Mr Swannick at my site visit.
- 1.4 The trees were inspected on the basis of the Visual Tree Assessment method expounded by Mattheck and Breloer (The body language of trees, DoE booklet Research for Amenity Trees No. 4, 1994).
- 1.5 The survey was undertaken in accordance with British Standard 5837:2012 Trees in relation to design, demolition and construction – Recommendations [BS5837] with modification.
- 1.6 This report sets out the Root Protection Area [RPA], described by the RPA radius [RPR] derived from Section 4.6 of BS5837.
- 1.7 Pruning works will be required to be in accordance with British Standard 3998:2010 Tree work - Recommendations [BS3998].
- 1.8 Reference is made to the National House Building Council Standards, 2016, chapter 4.2, Building near trees [NHBC].
- 1.9 This report does not cover the arrangements that may be required in connection with the laying or removal of underground services.
- 1.10 This report does not set out the working specifications of tree protection measures and engineering and design features, but provides enough detail in principle to demonstrate the feasibility of the scheme.

### Survey Method

- 2.1 The survey was conducted from ground level with the aid of binoculars.
- 2.2 No tissue samples were taken nor was any internal investigation of the subject trees undertaken.
- 2.3 No soil samples were taken.
- 2.4 The stem diameters [SD] were measured in centimetres at 1.5 metres above ground level and otherwise in accordance with Annex C of BS5837.
- 2.5 The height of each subject tree was estimated with a clinometer.

- 2.6 The crown diameters were estimated by pacing or visually where access was restricted.
- 2.7 The positions of the subject trees are plotted at Appendix B derived from the supplied plan. Please note that the attached plan is for indicative purposes only.

### Bat Informative

- 3.1 I completed the Bat Conservation Trust's three-day residential course in July 2008. Whilst I am not a licensed bat handler and do not regard my knowledge of bats as being equivalent to an ecology professional, with successive experience I am very familiar with the observational requirements of bat habitats and cognisant of British Standard 8596:2015 Surveying for bats in trees and woodland, and more particularly the introduction, Micro guide to surveying for bats in trees and woodland, issued in respect of non-professional ecologists.
- 3.2 Bats are protected under the Wildlife & Countryside Act 1981 and subsequent legislation and The Conservation of Habitats and Species Regulations 2010 and it is an offence to deliberately or recklessly disturb them or damage their roosts. Trees should be inspected before any works commence and if the presence of bats is suspected advice will need to be sought from the Natural England Bat Line on 0845 1300228. Further advice on bats is available from The Bat Conservation Trust (020 7627 2629).
- 3.3 In my estimation there are no significant potential bat roosts in the trees to be removed and the pruning work to them will be carried out by competent arborists who will be aware of bat legislation, although they will be advised of my observations.

### The Site

- 4.1 The subject site is the north-western part of the Club grounds bounded by Frittenden Road to the north, and a public right of way to the south. The north-western tip of the site is at the junction between Frittenden Road and Cranbrook Road. The grounds comprise a cricket field at the eastern end, a central clubhouse with car parking and the access onto Frittenden Road. West of the parking are two hard tennis courts and beyond those three grass courts.
- 4.2 The eastern part of the subject site has been used as allotment gardens, and the western part has various trees.
- 4.3 The land is level with a very slight gradient down from west to east.
- 4.4 The site is ringed in blue on this extract reproduced from the Geological Survey Drift Map, Sheet 288, Maidstone (by permission of the British Geological Survey ©NERC. All rights reserved). The indicated soil parent material shown tan is Weald clay.

C08/105-CSL British Geological Survey.  
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- 4.5 The clay soil is compactable which is detrimental to tree roots. Accordingly care will need to be taken with all construction activities to ensure that the soil over protected roots is not compacted. shallow.
- 4.6 I am not an expert on soils and although I have some working knowledge of them, if accurate soil analysis is required then a soil specialist should be contacted.

### Subject Trees

- 5.1 The 10 subject trees are listed in the table at Appendix A and the group of semi-mature ash is wide-hatched in green on the plan at Appendix A.
- 5.2 The trees are generally unremarkable as individual specimens and the only BS5837<sup>1</sup> grade B tree is the oak T1. The group of ash is self-sown.
- 5.3 The Frittenden Road frontage has a mixed species hedge of hawthorn, holly, elder and ivy, with some clumps of hazel on the inner side north of the allotment garden. There is a similar hedge along the frontage to the public right of way for approximately 25 metres from the north-western end.
- 5.4 Overall the subject trees are in reasonable condition but many have prolific ivy growth.
- 5.5 None of the subject trees presents any significant risk.

### The Proposal

- 6.1 The proposal as set out at Appendix B is to build a pair of semi-detached houses with a new access off Frittenden Road. The subject site boundary extends approximately 7 metres east of the existing chain link fence.
- 6.2 The new entrance is to a drive across the width of the site with parking space for each dwelling.

### Arboricultural Landscape Integration

- 7.1 Of the 10 subject trees and the ash group, three and part of the group are to be retained. This may seem to be a large proportion in numerical terms, but the intention is to provide reasonable garden space for the houses. This will provide scope for garden planting which will include new trees, but of species of modest mature height so as to retain the open aspect to the south and west.

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<sup>1</sup> BS5837 Tree Category Classes

U – Existing condition is such that any existing value would be lost within 10 years and should therefore be removed for reasons of sound arboricultural management.

A – High quality and value (40+ yrs).

1) Mainly arboricultural values      2) Mainly landscape values      3) Mainly Cultural values including conservation.

B – Of moderate quality and value (20+ years).

1) Mainly arboricultural values      2) Mainly landscape values      3) Mainly Cultural values including conservation.

C – Those of low quality and value (10+ years).

Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a SD of less than 15cm could be considered for relocation.

- 7.2 The peripheral hedging is also to be retained and enhanced where necessary. A section of the hedge on the Frittenden Road frontage will be removed to create the new entrance and to facilitate the required highway sight lines. It may be that the hedge's ends need thickening up with new planting if the sight lines require significant reduction.
- 7.3 The stunted oak T2 and sycamore T3 are both to be removed to the benefit of the oak T1. The removal of the 4 conifers T4, T5, T8 and T9 is to create adequate garden space and the semi-mature ash group is to be reduced in size for the same reason. The remainder of the ashes along with the beech T6 and cypress T7 are retained so that the arboreal appearance of the site from the main road is conserved.
- 7.4 I do not anticipate the need for very much pruning, but should any become necessary it is likely to be light and would not cause any physiological harm or adverse visual impact. In this event as a matter of course the pruning specification will be the subject of a condition which would require prior agreement from the Council.
- 7.5 In summary, the landscape impact of those trees to be removed will be commensurate with the scale and appearance of the proposed development will not have a detrimental visual impact upon the character and appearance of the area.

#### **Post Development Pressure**

- 8.1 The concept of post development pressure is not that routine maintenance work to maintain clearances and the proportionality of trees is unacceptable. The term should more accurately be one of irresistible post development pressure where the spatial or physical relationship of a retained tree to a structure or feature demands pruning or removal that is inappropriate, but to which the local planning authority could not reasonably refuse consent.
- 8.2 The spatial relationship of the proposed new houses with the trees has been a matter of careful consideration. The orientation of the site is helpful, as there is good direct sunlight and ambient light.
- 8.3 No trees will be close enough to the houses to require rainwater furniture to be filtered for leaf and detritus fall.
- 8.4 In consideration of these matters, there will be no appreciable post development pressure, and certainly none that would oblige the Council to give consent to inappropriate tree works.

### Tree Protection Measures

- 9.1 The BS5837 gives a Root Protection Area [RPA] for each retained tree by reference to Section 4.6 in the BS. The RPA is an estimation of the area of the root system that would need to be retained to sustain the condition of the tree if all the other roots outside it were to be severed. The RPA represents a smaller proportion, (on average only a third), of a tree's root system and consequently whilst the RPA is particularly important to ensure that there are no adverse effects upon stability, if an encroachment does not reduce the overall assimilative function of the root system significantly it is unlikely to cause harm. However, as with any factor relating to trees each individual situation must be justified in site-specific terms.
- 9.2 The RPA is usually described as a circle with a radius (Root Protection Area Radius [RPAR]) of the prescribed distance within which no unspecified activity should occur, though the shape and position of the RPA can be modified by an arboriculturist to meet individual site conditions according to the probable distribution of the tree roots. Intrusion into the RPA can take place only where the ground is adequately protected in accordance with the requirements of Section 6.2.3 of BS5837 or where work is carried out to an agreed design and working method.
- 9.3 Quaife Woodlands uses a tabular method to derive rounded-up RPA radii in half-metre graduations (Appendix C). The RPA of the oak T1 extends under the public right of way which I imagine has been in existence for a considerable time, probably longer than the age of the tree. I regard it as likely that the roots have grown into the adjoining land to the south, and that a circular RPA is appropriate.
- 9.4 **RPA Encroachment** The only RPA encroachment is with oak T1 which I discuss at paragraph 9.8 below.
- 9.5 **Tree Protection Fencing** The north-western zone of the subject site will be protected by a Tree Protection Fence [TPF] comprising steel mesh panels of 1.8 metres in height ('Heras') to enclose the retained trees, as will the land to the south of the new drive. These panels can be mounted on a scaffolding frame as shown at Figure 2 of BS5837 (Appendix E) and the fence lines are shown dashed in blue at Appendix B. The areas within the TPF are Construction Exclusion Zones [CEZ] (cross-hatched in blue at Appendix B) in which no access is allowed until the final landscaping is carried out.
- 9.6 The TPF is to be erected before any work commences on site, is to remain in situ undamaged for the duration of all work or each phase, and only to be removed once all work is completed. The only exception is the completion of soft landscaping, but if any excavations however minor, are to be carried out as part of soft landscaping within RPAs, an arboricultural assessment must be carried out beforehand and any additional arboricultural protection measures incorporated. The TPFs are to carry waterproof warning notices denying access within the CEZ.
- 9.7 **Ground Protection** There are no zones requiring ground protection.



- 9.8 **New Surfacing** The RPA of oak T1 is encroached upon by the southern tip of the new drive. Much of this area will be occupied by the roots of T3 and to a lesser extent by T2, and consequently the oak's roots will be at a reduced density. I have indicated this arc of RPA encroachment at Appendix B, which is approximately 75°. In the context of the entire root system this is about 21% of it (the same proportion of the RPA). Given that BS5837 advocates the removal of at least one-third of a tree's root system, this is comfortably within the limit. There is considerable compensatory rooting area in the other directions. I appreciate that this is based on a theoretically circular root system but I regard this as appropriate in these circumstances as there are no compelling indications that the root system is significantly eccentric. Accordingly I do not consider there to be any special construction method needed for the drive.
- 9.9 **Foundations** The nearest distance from the oak T1 to the southern house is about 14.5 metres. The oak is therefore within range of root influence and the soil is likely to have a high plasticity index (high shrinkage potential). Accordingly the foundation design will need to take account of Table 11 in NHBC. I am not an engineer but as an arboriculturist I am obliged to point this out, although clearly I have no involvement with the design.
- 9.10 **General Matters** The surface water run-off and soil drainage have not been studied. However, due to the site topography and soil type, I do not foresee any detrimental effects on the trees in hydrological terms as a result of this development.
- 9.11 I have not been advised of the underground service routes, but it seems logical to suppose that they will connect to existing service runs in Frittenden Road. This being the case they can be routed out through the new entrance and avoid any RPAs.
- 9.12 Where existing or proposed drains pass within the root system of a tree (not just the RPA), technical advice must be sought to assess the root-tightness of joints. Modern compression joints do not reliably prevent root ingress and it may be necessary to upgrade them.
- 9.13 The hard landscaping operations are part of the construction works and will be planned and carried out within the construction phase tree protection measures.
- 9.14 The protection of the trees will also include recognition of other types of potentially damaging activities, such as the storage of materials (and other substances likely to be toxic to plants), parking, site-building requirements, and the use and parking of plant. Particular care and planning is necessary to accommodate the operational arcs of excavation and lifting machinery, including their loads, especially large building components such as beams and roof trusses. Operations like these have the potential to cause incidental damage and logistical planning is essential to avoid conflicts, although in view of the site layout this refers principally to the oak T1.
- 9.15 One of the main tree protection considerations the oak T1 will be the logistical management of the site. The access to the elevations of buildings that face trees will be restricted and careful materials handling and storage, vehicle and plant access, and personnel accommodation will need attentive planning.

## Conclusions

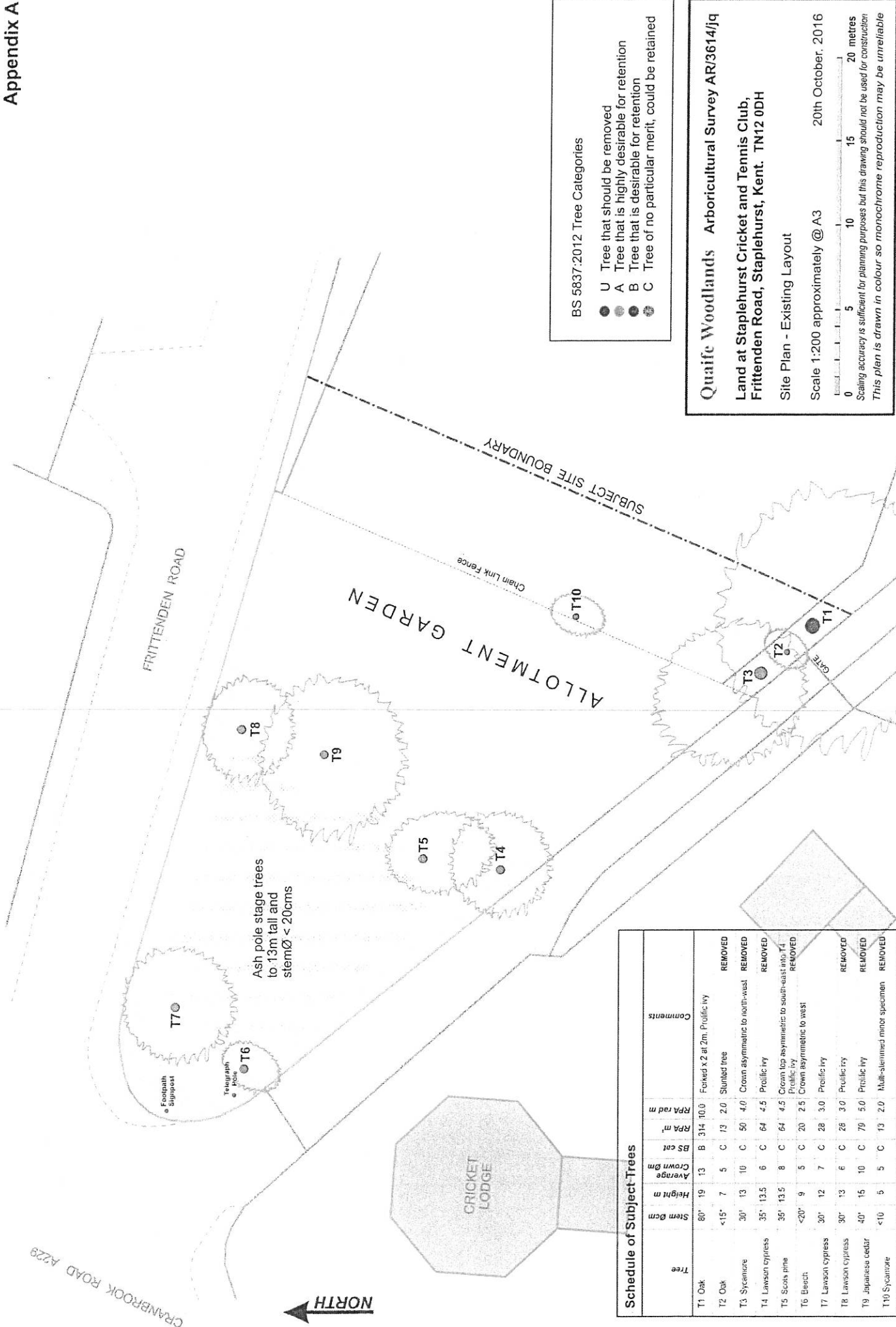
- 10.1 Of the 10 subject trees and the group, only three trees and half the group are to be retained, but this is to provide an appropriate proportion of ground for amenity gardens and for good general light availability. The trees at the north-western end of the subject site will conserve the site's appearance from the main road. The peripheral hedging is retained and there is scope for new tree planting, and with these matters in consideration the arboricultural landscape impact of the proposal will be neutral.
- 10.2 The retained trees do not cause any significant conflicts in terms of construction activities, nor will any significant issues of post development pressure be likely to emerge that could not be managed with routine maintenance.
- 10.3 The retained trees will all be protected in accordance with current standards and guidance, particularly with logistical planning.
- 10.4 For trees to be sustainable within a development proposal they must be compatible with their surroundings, not just in terms of long-term spatial relationship but also in respect of minimising any potential conflicts to matters of routine maintenance. This proposal achieves this objective.
- 10.5 I have taken account of the information given to me and my own observations on site and I am satisfied that this scheme is arboriculturally sound and that the long-term well-being of the retained trees will be safeguarded in a sustainable manner.

## Recommendations

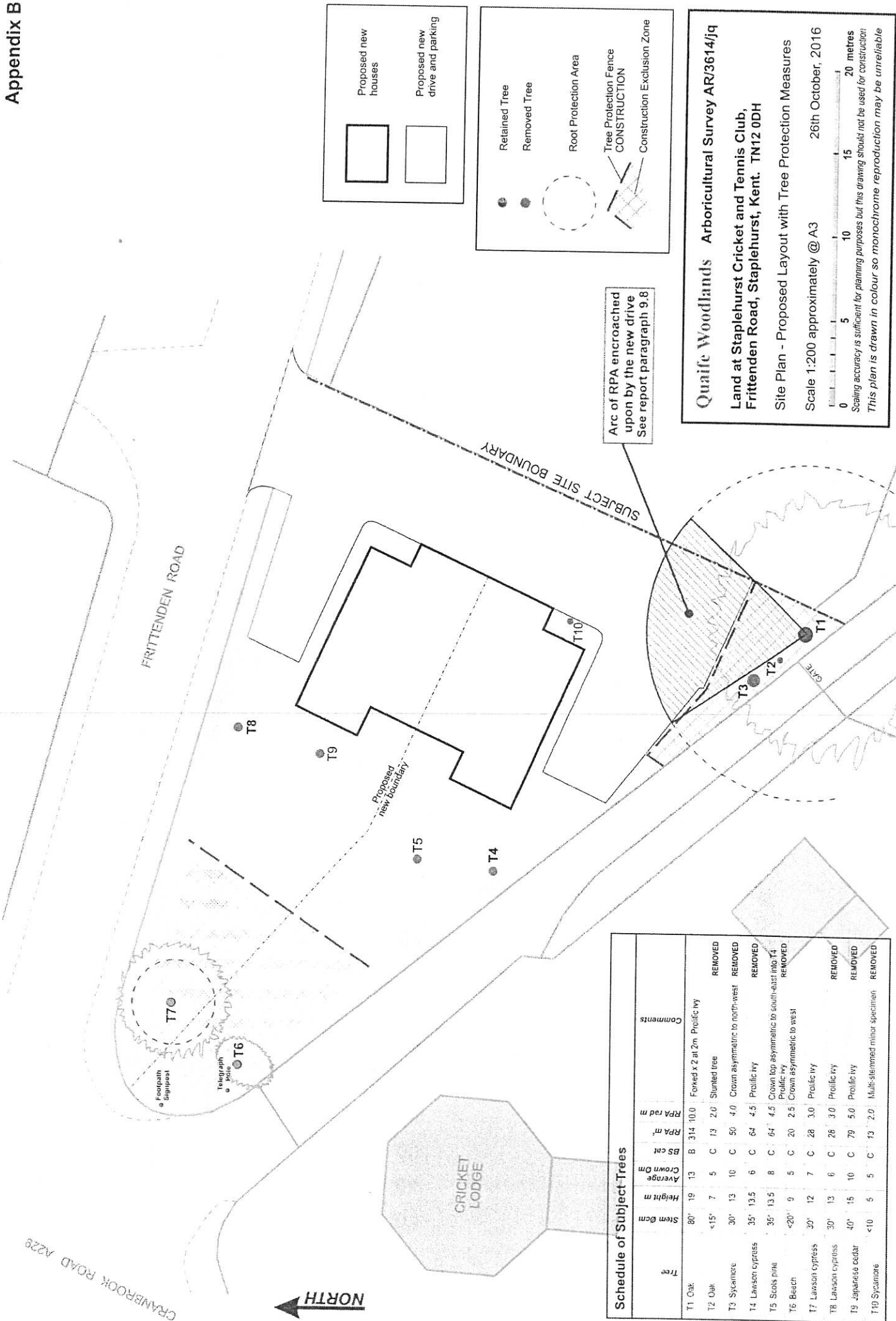
- 11.1 The successful integration of the proposal with retained trees will need to take account of the following points:
  - i) Plan of underground service routes.
  - ii) Implementation of the tree protection measures and methods set out in this Report.
  - iii) Site logistics plan to include storage, plant parking/stationing, materials handling.
  - iv) Site supervision – Following an induction meeting conducted by the project arboriculturist with all those involved in attendance, an individual, e.g. the Site Agent, will be nominated to be responsible for all arboricultural matters on site. This person must:
    - a) be present on site for the majority of the time,
    - b) be aware of the arboricultural responsibilities,
    - c) have the authority to stop any work that is causing, or has the potential to cause harm to any tree,
    - d) be responsible for ensuring that all site operatives are aware of their responsibilities toward trees on site and the consequences of any failure to observe those responsibilities,

- e) make immediate contact with the local authority and/or the project arboriculturist in the event of any tree related problems occurring, whether actual or potential.
- 11.2 As the physical tree protection measures are static the site agent will only be required to ensure that it is not altered in any way. The site agent will also heed the requirements of paragraphs 9.14 and 9.15 above.
- 11.3 The sequence of works should be as follows:
  - i) initial tree works – tree removal and pruning (if necessary)
  - ii) installation of TPF
  - iii) site preparation
  - iv) installation of underground services
  - v) construction of new drive and other hard surfaces
  - vi) main construction, including hard landscaping
  - vii) removal of TPF
  - viii) soft landscaping including tree planting

The statements made in this Report do not take account of the effects of extremes of climate, vandalism or accident, whether physical, chemical or fire. Quaife Woodlands cannot therefore accept any liability in connection with these factors, nor where prescribed work is not carried out in a correct and professional manner in accordance with current good practice. The authority of this Report ceases at any stated time limit within it, or if none stated after two years from the date of the survey or when any site conditions change, or pruning or other works unspecified in the Report are carried out to, or affecting, the Subject Trees, whichever is the sooner.



Schedule of Subject Trees										
Tree	Stem Decm	Height m	Average Crown Dm	BS cat	RPA m <sup>2</sup>	RPA rad m	Comments			
T1 Oak	80"	19	13	B	314	10.0	Forked x 2 at 2m. Prolific ivy			
T2 Oak	<15"	7	5	C	13	2.0	Stunted tree		REMOVED	
T3 Sycamore	30"	13	10	C	50	4.0	Crown asymmetric to north-west			REMOVED
T4 Lawson cypress	35"	13.5	6	C	64	4.5	Prolific ivy			REMOVED
T5 Scots pine	35"	13.5	8	C	64	4.5	Crown top asymmetric to south-east into T4			REMOVED
T6 Birch	<20"	9	5	C	20	2.5	Prolific ivy			REMOVED
T7 Lawson cypress	30"	12	7	C	28	3.0	Prolific ivy			REMOVED
T8 Lawson cypress	30"	13	6	C	28	3.0	Prolific ivy			REMOVED
T9 Japanese cedar	40"	15	10	C	79	5.0	Prolific ivy			REMOVED
T10 Sycamore	<10"	5	5	C	13	2.0	Multi-stemmed minor specimen			REMOVED



Schedule of Subject Trees									
Tree	Stem Dcm	Height m	Average Crown Dm	BS cnt	RPA m <sup>2</sup>	RPA rad m	Comments		
T1 Oak	80	19	13	B	314	10.0	Forced x 2 at 2m Prolific ivy		
T2 Oak	<15	7	5	C	13	2.0	Slanted tree	REMOVED	
T3 Sycamore	30	13	10	C	50	4.0	Crown asymmetric to north-west	REMOVED	
T4 Lawson cypress	35	13.5	6	C	64	4.5	Prolific ivy	REMOVED	
T5 Scots pine	35	13.5	8	C	64	4.5	Crown top asymmetric to south-east into T1	REMOVED	
T6 Birch	<20	9	5	C	20	2.5	Prolific ivy Crown asymmetric to west	REMOVED	
T7 Lawson cypress	30	12	7	C	28	3.0	Prolific ivy		
T8 Lawson cypress	30	13	6	C	26	3.0	Prolific ivy	REMOVED	
T9 Japanese cedar	40	15	10	C	79	5.0	Prolific ivy	REMOVED	
T10 Sycamore	<10	5	5	C	13	2.0	Multi-stemmed minor specimen	REMOVED	



**BS5837:2012 (Paragraph 4.6.1)**  
**Root Protection Area radii in ½ metre graduations**



*The ½ metre graduations of RPA radii have been calculated back to produce diameter dimensions, which in turn have been rounded down to the nearest centimetre. If the BS5837 multiplier factor is plotted on a graph it produces a straight gradient and if the ½ metre steps are plotted they are all above that line, thus ensuring that the RPA radii err on the generous side.*

<i>Single Stem up to diameter (mm)</i>	<i>RPA Radius (m)</i>	<i>RPA (m<sup>2</sup>)</i>
<b>1250</b>	<b>15.0</b>	<b>707</b>
<b>1210</b>	<b>14.5</b>	<b>660</b>
<b>1170</b>	<b>14.0</b>	<b>616</b>
<b>1120</b>	<b>13.5</b>	<b>573</b>
<b>1080</b>	<b>13.0</b>	<b>531</b>
<b>1040</b>	<b>12.5</b>	<b>491</b>
<b>1000</b>	<b>12.0</b>	<b>452</b>
<b>960</b>	<b>11.5</b>	<b>416</b>
<b>920</b>	<b>11.0</b>	<b>380</b>
<b>870</b>	<b>10.5</b>	<b>346</b>
<b>830</b>	<b>10.0</b>	<b>314</b>
<b>790</b>	<b>9.5</b>	<b>284</b>
<b>750</b>	<b>9.0</b>	<b>255</b>
<b>710</b>	<b>8.5</b>	<b>227</b>
<b>670</b>	<b>8.0</b>	<b>201</b>
<b>620</b>	<b>7.5</b>	<b>177</b>
<b>580</b>	<b>7.0</b>	<b>154</b>
<b>540</b>	<b>6.5</b>	<b>133</b>
<b>500</b>	<b>6.0</b>	<b>113</b>
<b>460</b>	<b>5.5</b>	<b>95</b>
<b>420</b>	<b>5.0</b>	<b>79</b>
<b>370</b>	<b>4.5</b>	<b>64</b>
<b>330</b>	<b>4.0</b>	<b>50</b>
<b>290</b>	<b>3.5</b>	<b>38</b>
<b>250</b>	<b>3.0</b>	<b>28</b>
<b>210</b>	<b>2.5</b>	<b>20</b>
<b>160</b>	<b>2.0</b>	<b>13</b>

**Extract from British Standard 5837: 2012**  
**Trees in relation to design, demolition and construction**  
**- Recommendations**

**Figure 2. Default specification for Tree Protection Barrier**

Indicated framework support as the usual method of support for steel mesh panels ('Heras'). Some variation can be employed if appropriate, such as support by wooden posts (75mm x 75mm x 2.75m) dug or concreted into the ground (dry mix concrete contained within a plastic bag), or if there is no pressure of access a lighter form of netting on driven stakes.

