Tree Survey &

Arboricultural Implication Assessment

Site Address:

St Edward the Confessor Church, Grange Road, Netley, SO31, 5FF

Ref: KTML-05212

Date: 02.06.2012 (V2)

Kiss
Tree
Management
Limited



Compiled by **Sarah Kiss** ***PD Arb (RFS); M. Arbor.A***

Contents

Paragraph	Paragraph Title	BS5837 reference	Page Number
1	Summary		2
2	Instructions: purpose, client & site		3
3	Report limitations		3
4	Tree Survey	4.4	4-7
5	Tree Protection Plan	5.4	8
6	Designations relating to trees	Annex B	8
7	Conclusion		8
8	Contacts		8
9	Validation & qualifications		8
	Appendix 1: Photographs		One Page
	Appendix 2: Tree protection Plan	7.1	One Page
	Appendix 3: Arboricultural method statement	7.0	Four pages

Abbreviations & definitions	RPA = Root Protection Area. The minimum area to be protected from damage. Usually described as a radius centred around the tree stem centre TPP = Tree protection Plan: shows the position of protective fencing and ground protection etc. AIA = Arboricultural Impact Assessment – this report, designed to identify impact of proposal on trees, and to propose ways of mitigating damage or loss. AMS = Arboricultural Method Statement. How to carry out the protection and mitigation proposed on the site. Can only be finalised when the agreed design is finalised, often with arboricultural input.

1. Summary. The proposal does not seek to significantly alter the usage or footprint of the existing site. Therefore the key issues are to protect the retained trees during the alteration of parking, access and minor demolition & rebuild activities.

There is one significant veteran beech tree on site which requires particular care and attention throughout the process. The proposal may be designed so that it serves to protect the RPA of T9 into the future, as at present there is nothing to prevent informal parking very close to the tree during busy periods.

Overall the impact of this proposal on trees is minimal: the underlying Selsey sand & gravel deposits minimise the potential for soil compaction leading to root damage on this site.

The plans have been altered to remove any need for excavation within the root protection area on advice. Although there will be incursion into the RPA, laying out the parking in a more formal way and keeping vehicles away from a portion of the RPA and the improved protection for the stem itself should improve the overall conditions for T9.

The client has taken on board the constraints posed by the most valuable tree on site (T9) and considerably altered (reduced) the impact of the development to an acceptable level. (Para 4.4.1.2 and see report para 4.7)

The removal of the self-set trees is felt to be an acceptable management of gradual encroachment in this instance.

2. Instructions: purpose, client and site

1.1. Purpose of report. This report is compiled as an aid to the planning process . It was originally written in line with the 2005 version of the British Standard 5837 'Trees in Relation to Construction' and has since been updated to reflect the changes in the new version (BS5837:2012 Trees in relation to design, demolition and construction) published during the compilation of this report. The paragraph references throughout the report related to the new 2012 BS.

1.2. I was instructed by Peter Hoadley, member of the Building committee for the Church to undertake a tree survey and associated plans in consideration of proposals to formalise parking, improve access visibility & security and replace an existing asbestos roofed lean-to with a more secure storage shed.

1.3. I was instructed to carry out this survey as part of a reiterative process informing the design stages (BS Figure 1: first footnote)

1.4. The site is located at Grange Road, Netley Abbey, and was visited on by the author on 4th April 2012 during poor weather conditions and again on 21st April during finer weather conditions. A further meeting to discuss design & tree protection requirements with the Building committee was held on 21st May.

3. Report Limitations

a. Trees are living organisms and can alter in condition and vitality very quickly. This report is based on findings of a two site visits and some desk research, and assume that prevailing conditions will remain relatively constant.

b. No topographical survey was done for this site (Para 4.2) but this proposal is small scale & no changes in soil level are proposed.

c. Insurance. Kiss Tree Management Limited (hereafter KTML) is insured to the sum of £500,000 Professional Indemnity through Catlin via Angel Underwriting Limited for the author to carry out tree inspections and reports. I meet the criteria demanded by this insurance policy.

d. The survey was done from the ground and used existing access points: no trees were climbed, and if the base was inaccessible without the removal of bramble etc. estimated measurements have been used and noted.

e. Canopy spreads have been estimated from the ground, and are judged to be sufficiently accurate for purposes of this report.

f. Appropriate equipment was used to take measurements felt to be accurate enough for the purpose of this report: heights and canopy spreads are accurate to nearest 0.5m, stem diameters to nearest 5mm. Pear Technology TreeMapper pro v2.6 software has been used to plot tree stems, canopy spreads, shadow patterns and root protection areas and has been designed specifically for the production of such surveys.

g. The plans produced for this survey have been based on an OS extract and plans supplied by the architect and permission has been given for this use.

h. Details of construction for storage facility are contained in the Design Statement supplied by the client.

i. Soil type (BS Para 5.2.4 c) has not been tested on this site for the purposes of this report, but the British Geological Survey maps the local soils as Selsey Sand Formation - Sand, Silt And Clay. Significant levels of gravel are found on site which is consistent with this formation and location.

j. Recommendations and conclusions are based on own observations, qualifications and experience in arboriculture.

4. Tree Survey (para 5.4.3 a) Data sheet Follows on next page

Key to species used in tree survey (para 4.4.2.5 b)

Common name	**Binomial classification**
Ash	*Fraxinus excelsior*
Bay	*Laurus nobilis*
Beech	*Fagus sylvatica*
Cedar	*Binomal name*
Cherry	*Prunus species*
Bird Cherry	*Prunus padus*
Blue Cedar	*Cedrus atlantica 'Galuca'*
Bird Cherry	*Prunus padus*
English Oak	*Quercus robur*
Holly	*Ilex aquifolium*
Sycamore	*Acer pseudoplatanus*
Yew	*Taxus baccata*

Site: St Edward the Confessor Church, Netley																Surveyor: Sarah Kiss, Kiss Tree Management Limited		Survey date: 4thApr &21 Apr 2012
Client	Peter Hoadley													Age class: S=sapling, Y=first 1/4 of life expectancy, Mi=middle aged - second quarter of life expectancy, Ma=Mature - Third 1/4 of life expectancy, OM=final 1/4 of life expectancy,V=Veteran - beyond normal life expectancy & displaying certain characteristics. Based on life expectancy for species.				
Reference: proposed extension to existing property																Condition key: D= Dead or unstable, P=poor, F=Fair, G=Good, E=Excellent		
Tree no	Species	Ht (m)	Dia mms(@1.5)	RPA radius in m*	Crown Spread N	E	S	W	Canopy Height N	E	S	W	Age Class	Retention class - see key	Remaining life contribution	Physiological condition	Structural condition	Preliminary Management Recommendations
T1	Sycamore* 1 x 540, 1 x 400	14	688	8.26	2	3	6	2	8	8	8	8	Mi	C1,2	40+	Fair:larger stem forks at 2m	Fair: etoliated	Remove basal suckers, prune away from building to clear 3m
T2	Sycamore	14	260	3.12	1	2	4	2	9	9	9	9	Y	R	20-40	Fair	Fair: etoliated	
T3	Sycamore	13	670	8.04	3	5	8	3	7	7	7	7	Mi	C1,2	40+	Fair	Poor: fork union showing reaction growth indicating lack of fusion between stems & ongoing movement.	
T4	Ash	15	420	5.04	4	6	6.5	6	5	5	5	5	Mi	C1,2	40+	Fair	Fair. Fork at 2.2m shows some included bark	
T5	Holly* 2x 120	4	169	2.03	1.5	1.5	1.5	1.5	0	0	0	0	Y	C1,2	20-40	Fair	Fair: previsouly reduced to c. 1.2m	
T6	Hawthorn	4	100	1.20	0	0.5	1	2	1	1	1	1	Y	C1,2	Oct-20	Fair. Undergrowing T7	Fair	
T7	Sycamore	11	250	3.00	1	3	4	4	1.5	1.5	1.5	1.5	Mi	C1,2	40+	Fair	Fair: three way fork from 1.2m	
G8	Group of similar age 2 x Sycamore, 1 x	10	200	2.40	2	3	6	3	3.5	3.5	3.5	3.5	Y	C1,2	20-40	Fair	Fair: single straight stem	
T9	Beech ○	23	1690	15.00	12	10	12	8	2.5	4	6	6	V	A1,2,3	40+	Good. Full canopy with no visible dieback from tips, good extention growth and bud density, starting to flush. Old pruning wounds have total or partial occlusion with evident decay behind & some hollowing.	Fair: characterisitcs of veteran tree in evidence -rot holes, internal cavities, deadwood stubs: no visible signs to indicate structure is compromised and soundings indicate better than espected residual wall at base, even near cavity. Probing incicates decay extends c.20cm down & 30cm radially.	Ivy has been carefully removed - continue with this to enable full visual assessment. Valuable veteran tree in appropriate setting.
T10	Blue Cedar	8	350	4.20	3	3	3	3	0.5	0.5	1	0.5	Y	C1,2	40+	Good	Good	Remove one lower limb extgending to East to pre-empt need to clear access.
T11	Group of one small english oak & shrub	4	110	1.32	1.5	1.5	1.5	1.5	0	0	0	0	Y	B1,2	20-40	Fair	Fair	Consider removing oak to location further from building.
T12	Bay 7x220 +	4	300	3.60	2.5	2	3	2	0	0	0	0	Mi	R	10-20	Fair	Fair. Has been pruned to miantain height at several points and the RPA has been adjusted to reflect this.	Remove due to proximity to building
Note: The root protection zone suggested by BS5837 is twelve times the stem diameter measured radially from the centre of the stem. The RPA is capped at 15.0m, indicated by ○.																		
Note: Minor deadwood is taken as less than 50mm in diameter. Major deadwood is taken as 50mm or more in diameter.																		
* Denotes a multiple stem tree where the stem diamater is calculated as the √(sum of the dia² of each stem for trees with 1-5 stems), or the √ (average dia² of each stem x no of stems) for trees with > 5 stems. Numbers following species are stem diameters for 2-5 stem trees																		

Table 1 Tree selected for retention (para 5.4.3 b)

Tree no	Species	Class
T1	Sycamore	C1
T2	Sycamore	R – not due to development
T3	Sycamore	C1, 2
T9	Beech	A1,2,3
T10	Blue Cedar	B1
T11	Shrub group	C1

Table 2: Summary of works to trees as a **direct** result of development (Para 5.4.3 c)

Tree no	Species	Class	Works required
T4	Ash	C1,2	Fell due to development
T5	Holly* 2 x 120	C1	Fell due to development
T6	Hawthorn	C1	Fell due to development
T7	Sycamore	C1	Fell due to development
G8	Group of 2 x Sycamore, 1 x Ash self set, young	C1	Fell due to development
T12	Bay	R	Fell due to proximity to building
Front Hedge	Beech	B2	Remove up to 2 linear metres to improve sight lines & access

It is proposed to remove 8 trees to allow development of the site. These are shown on the plan as tree numbers 4 through 8 and T11 and detail is given in table 1 below.

It is expected that the impact from the loss of this tree/these trees is low and no mitigation is recommended.

Table 3: Summary of suggested works unrelated to development (Para 5.4.3 d)

Tree no	Species	Class	Works required
T10	Blue Cedar	B1	Crown lift one branch East side back to stem union - formative pruning to minimise impact of future pruning to clear drive

No areas are designated for structural landscaping (5.4.3 e)

The impact of the proposed tree losses is **low** and in line with management of encroachment. (5.4.3 f)

Tree constraints are minimal due to underlying soil type, low impact of proposal, lack of excavation and changes to proposal to accommodate retained trees (5.4.3 g)

The Arboricultural Method Statement (AMS) lays out the protection method for retained trees and describes those minor works that are to take place within the RPA.

5. Tree protection plan. (Para 5.5) Read with plan KTML05212 TPP (para 5.5.1)

The position of the CEZ is marked on the plan named above. Fencing must be erected to protect this area at least.

Tree protective barriers (5.5.2)

a. Tree Protection Barriers .Protective barriers will be erected to enforce the RPA and shall be constructed as per appendix "Tree Protection Fencing - Construction and Maintenance". This recommends a fence constructed on scaffold poles and weld mesh panels braced to withstand impact from construction vehicles etc. (Braced Heras fencing may be used)

   The fencing shall be erected at a distance from the trees at least equivalent to the Root Protection Areas or the retained canopy spread, whichever is the greater as s

   TREE PROTECTION FENCING

   DO NOT CROSS OR MOVE.

   NO PEDESTRIANS, VEHICLES, MACHINERY,

   NO LOADS, MATERIALS, SPILLAGES or OVERSPRAY, or ANY PART of MACHINERY INCLUDING BOOMS & JIBS MUST CROSS THIS BARRIER.

   NO LIQUIDS OR CHEMICALS TO BE STORED ON UPHILL SIDE OF FENCING

   NO FIRES TO BE LIT IN PROXIMITY of FENCING or UNDER THE CANOPY OF ANY TREE

   data sheet and on the arboricultural plans

   Clear signage must be affixed to the fence (rec. 5m intervals) stating the following information:

   It is NOT sufficient to use fences designed to deter pedestrians or to use panels held upright by concrete 'feet' and tied together with cable ties or clamps.

   The fencing shall be erected prior to any construction works starting, and prior to material deliveries arriving or machinery and plant arriving on site.

b. Ground protection. Due to the underlying soil type (Selsey sand) and the existence of surface gravel and the current location & use of the drive etc., ground protection is not specified for this site.

c. Access. All vehicles will used the existing access drive from Grange Road. To better protect the Beech T9 from damage during construction it is proposed that all delivery vehicles and construction vehicles enter and exit to the west of the hall, meaning no heavier vehicles move near T9. Protection fencing reflects this.

d. Storage and mixing facilities will also be placed to the west - see Tree Protection Plan.

e. Demolition. It is proposed to demolish an existing lightweight building and provision has been made for this is in the design statement.

f. NO servicing, trenching, overhead service installations etc are proposed. All other works are of low intensity.

g. Works within the Root Protection Area are all minor works – the most intense is the hammering in of steel pegs to secure the log edging. All this is outside the area (5m radius except where drive runs past) where large woody roots are unlikely to occur. Nearer the stem, advise will be given to test areas for pegs first, and if any 'bounce' is noted, indicating a woody root ahs been struck) to relocate the pegs. It is felt unnecessary to recommend arb supervision for this activity.

h. Modification of Design proposals in relation to retain/safeguard trees (BS para 6.2.3 e). The proposed design for this site has been amended in the following ways:

i) NO excavation is to take place within the RPA of T9

ii) Turf only will be stripped as necessary to lay gravel parking surface

iii) Wooden edging board held in place with steel or wooden pins will be used within the RPA, overlaid with the 150mm timber dividers.

iv) Bay indicator posts placed within the RPA will be a minimum of 5m from the stem and the final positions dug by hand or hand auger to ensure no roots larger than 25mm diameter are damaged.

v) A speed bump that was proposed between the stem on T9 and the hall wall (on the East side) has been dropped and instead log edging further from the stem to minimise impact potential and remove vehicle passage from close proximity to the tree is proposed.

6. Designations relating to trees (Annex B)

6.1 The area is covered by the Netley Abbey Conservation Area status. Permissions necessary must be granted prior to any works commencing: permission is taken as granted for those works necessary to the proposal ONLY when full or detailed planning consent is granted. Works outside the proposal will need consent in the usual way.

7. Conclusion.

7.1 The proposed scheme should not significantly affect the retained trees if proper care is taken during the pre-construction and construction phases. The underlying soil type is a bonus in terms of minimising effects of soil compaction to date and anticipated levels in future.

7.2 The removal of 8 trees is considered reasonable without specifying replacement planting due to the gradual encroachment that has taken place. None of the trees to be removed individually has particularly good form and several have poor structural form that would be undesirable in the long term for retention near a car park.

8. Contacts

8.1 Author: Sarah Kiss, Director, Kiss Tree Management Limited, 18, High Street West End, Hampshire. SO30 3AA Answerphone 02380 474287 Mobile: 07800 575552, www.sarahlkiss@gmail.com

8.2 Architect/Designer. Peter Hoadley

8.3 Contractor: TBC

8.4 Local Planning Authority: Eastleigh Borough Council: Leigh Road Eastleigh. Tree Officer Tim Holman.

9. Validation & qualifications

I confirm that the findings and opinions contained in this report are those based on my own judgement and experience and after careful inspection of the tree in person. I hold the following relevant qualifications:

Professional Diploma in Arboriculture (level 6 qualification)

Technician's Certificate in Arboriculture (level 4 qualification)

Certificate in Professional Tree Inspection awarded By Lantra Awards.

Licence holder for Quantified Tree Risk Assessment (QTRA)



Sarah Kiss, 2nd June 2012