

AMENDED PLAN

Application No

Date Received

Sarah Venners M.Arbor.A MSc For (Oxon) MICFor
Forestry & Arboricultural Consultant

Arboricultural Report

REVISED TREE SURVEY INFORMATION FOR
FALCON ROWING AND CANOEING CLUB
DONNINGTON BRIDGE
OXFORD

February 2010

101 Papist Way, Cholsey, Wallingford, Oxon, OX10 9QJ
svenners@tiscali.co.uk
tel: 07922 087 671

Arboricultural Report

1.0 INTRODUCTION

- 1.1 This report has been compiled in response to Mr Chris Leyland of Oxfordshire City Council who requested further details of trees not included within the original survey and for the trees within the wooded area to be tagged to aid identification. As such, additional trees have now been surveyed and their positions area shown on the topographical survey attached at **Appendix 1**.
- 1.2 In accordance with guidance as set out in BS5837:2005, an arboricultural impact assessment of all trees within a 15m radius of the proposed development has been provided. Basic survey information for trees at a greater distance than 15m has been provided for information purposes.
- 1.3 The data gathered from this tree survey can be used to assess the likely tree constraints on this site and to assist the site layout design and planning process.

2.0 SITE VISIT

- 2.1 The site was visited on 19 October 2009. The trees were tagged and surveyed visually, externally and from ground level only. No samples or internal decay detection readings were taken for further analysis. All dimensions have been measured unless stated otherwise. Weather conditions at the time of the survey were overcast and wet. No documents were provided at the time of survey.

3.0 SITE DESCRIPTION

- 3.1 The site is located on the banks of the River Thames as it runs through the city of Oxford. Donnington Bridge overlooks the site carrying traffic through this part of Oxford and river meadows exist on the opposite side of the bank. The residential road 'Meadow Lane' bounds the proposed development site to the east, other boat clubs are adjacent to the site to the north and south and the river Thames is to the west. The site accommodates the existing boathouse and a large area of green space. There is a strip of scrubby woodland (believed to be under the ownership of Oxford City Council) between the car park and the site which was originally allotments, but has not been managed as such since circa 1960's.

4.0 TREE ASSESSMENT

In accordance with BS 5837:2005 'Trees in Relation to Construction – Recommendations', the characteristics of trees over 75mm stem diameter measured at 1.5m above ground level (or immediately above root flare if multi-stemmed) have been recorded and they have been categorised in accordance with Table 1 of BS5837: 2005. The trees have been tagged with an aluminium tag and commence with the number 0801. The following tree data table should be read in conjunction with the annotated plan shown at **Appendix 1**.

Table 1 Tree Survey data

Tree No & species	Height (m)	Diameter at breast height (mm)	Branch spread (m)	Height (m) above ground level of crown clearance	Age Class	Estimated remaining contribution (years)	Comments and management recommendations	BS5837:2005 category and Arboricultural works necessary for proposed development
T0801 Hawthorn <i>Crataegus monogyna</i>	3.8	150	N – 2.0 S – 2.9 W – 3.5 E – 1.4	1.8	Semi mature	+40	A semi mature self set tree of moderate form and vigour. The base and main stem appeared sound with no obvious signs of decay, swelling or buckling. The canopy is being suppressed by T2 giving it a lopsided appearance. No work required	C2 Remove
T0802 Hawthorn <i>Crataegus monogyna</i>	7.5	270	N – 2.6 S – 2.8 W – 3.6 E – 2.9	2.0	Semi mature	+40	A semi mature self set tree of good form and vigour. The base and main stem appeared sound with no obvious signs of decay, swelling or buckling. Ivy should be severed and removed, otherwise, no work required	B2 Remove

Tree No & species	Height (m)	Diameter at breast height (mm)	Branch spread (m)	Height (m) above ground level of crown clearance	Age Class	Estimated remaining contribution (years)	Comments and management recommendations	BSS337:2005 category and Arboricultural works necessary for proposed development
T0803 Alder <i>Alnus glutinosa</i>	9	320	N – 3.1 S – 3.4 W – 3.6 E – 2.6	3	Semi mature	+40	A semi mature tree of good form and moderate vigour. Dense ivy prevented a detailed inspection of the base and main stem and its canopy is lopsided from the possible suppression by an adjacent tree now removed. Sever ivy.	B2 Remove
T0804 Hawthorn	7	280*		1	Early mature	+40	A semi mature self set tree of moderate form and vigour. The base and main stem appeared sound with no obvious signs of decay, swelling or buckling. The canopy is being suppressed by adjacent trees and ivy. Sever ivy	B2 Retain
T0805 Hawthorn	6	150	N – 2.9 S – 1.6 W – 3.7 E – 1.2	1.8	Semi mature	+40	A semi mature self set tree of moderate form and vigour. The base and main stem appeared sound with no obvious signs of decay, swelling or buckling. The canopy is being suppressed by adjacent trees. No work required	C2 Retain
Group 1 0806, 0807, 0808 and 0811 x4 Hawthorn	Average – 6	Average - 250	N-S = 9.3 E-W = 10.6	1	Semi mature	+40	A group of five semi mature self set hawthorn trees. Situated on the edge of the wooded area and mainly internal to the site. Smothered in ivy and creeper and with deadwood typical of age and species. Sever ivy, crown clean to remove deadwood and hung up branches.	B2 Retain

Tree No & species	Height (m)	Diameter at breast height (mm)	Branch spread (m)	Height (m) above ground level of crown clearance	Age Class	Estimated remaining contribution (years)	Comments and management recommendations	BS5337:2005 category and Arboricultural works necessary for proposed development
Group 2 0809 & 0810 x2 stems of hawthorn	Average 6	Average 180	N - 3.2 S - 3.1 E - 3.5 W - 3.5	1	Semi mature	40+	A group of two semi mature self set hawthorn trees. Situated on the edge of the wooded area and mainly internal to the site. Smothered in ivy and creeper and with deadwood typical of age and species. No immediate work required.	B2 Retain
T0812 Willow <i>Salix sp</i>	20	1050	N - 5.4 S - 3.5 E - 5.3 W - 2.8	0.5	Mature	20 - 40	A mature tree of good vigour. Recently managed following a branch collapse on the southern side recently which was typical of species and age. Vigorous regrowth now from approximately 8m above ground level The base and main stem appeared sound and free from defects. No immediate works required.	A2 Retain
T0813 Hawthorn <i>Crataegus monogyna</i>	7.5	280 Immediately above root flare	N - 2.0 S - 2.6 W - 2.7 E - 2.5	1	Early mature	40+	An early mature twin stemmed tree that bifurcates at 1m from ground level - union appears sound. Minor deadwood. Good form and vigour. No immediate work required	B2 Retain
T0814 Sycamore <i>Acer pseudoplatanus</i>	14	480	N - 6.0* S - 6.2 W - 4.8 E - 4.7	1.5	Semi mature	40+	A semi mature tree of moderate form and good vigour. The base and main stem appear sound and free from defects. There is an old branch stub at the base on the southern side with good wound wood formation. The main stem bifurcates at 2m from ground level and the union here appears sound. Minor deadwood throughout crown typical of species. No works required	A2 Retain

Tree No & species	Height (m)	Diameter at breast height (mm)	Branch spread (m)	Height (m) above ground level of crown clearance	Age Class	Estimated remaining contribution (years)	Comments and management recommendations	BS5837:2005 category and Arboricultural works necessary for proposed development
T0815 Ash <i>Fraxinus excelsior</i>	14	330	N – 3.5 S – 5.8 W – 2.9 E – 1.0*	3	Semi mature	+40	A semi mature tree of poor form but good vigour. The base and main stem appeared sound. The canopy is lop sided due to suppression and significant deadwood due to this suppression. Recommend a crown clean to remove deadwood and sever ivy on main stem.	B2 Retain
T0816 Hawthorn <i>Crataegus monogyna</i>	7	260 immediately above root flare	N – 2.3 S – 3.5 W – 0.7 E – 1.5	1	Early mature	+40	An early mature tree of poor form but moderate vigour. It is twin stemmed from ground level with the remains of two further stems at the base. The stems are ivy clad, although appeared sound. The crown is uneven due to suppression by adjacent trees. Most likely a remnant hedgerow tree.	C2 Retain
T0817 Hawthorn <i>Crataegus monogyna</i>	7	370 Immediately above root flare	N – 2.2 S – 3.0 W – 2.7 E – 2.1	1	Mature	+40	A mature tree of moderate form and vigour. Multi stemmed from 0.5m above ground level with four main stems, but the unions appeared sound. No immediate work required other than to remove the ivy from the main stems	B2 Retain

	Height (m)	Diameter at breast height (mm)	Branch spread (m)	Height (m) above ground level of crown clearance	Age Class	Estimated remaining contribution (years)	Comments and management recommendations	BS5837:2005 category and Arboricultural works necessary for proposed development
T0818 Sycamore <i>Acer pseudoplatanus</i>	13	400	N – 3.6 S – 7.2 W – 4.1 E – 4.8	3	Semi mature	+40	A semi mature tree of moderate form and good vigour. The base and main stem appear sound although there is evidence of a lost leader branch at 2.3m from ground level. Good wound wood formation here though, so not currently of any concern. Squirrel damage evident throughout main crown with significant deadwood as a result. Recommend crown clean to remove this deadwood.	A2 Retain
T0819 Willow <i>Salix spp</i>	5	350*	N/A	1.5	Mature	20	A mature tree managed as a riparian willow. Previously cut at 3m above ground level with vigorous regrowth from this point. No work required.	B2 Retain
T0820 Willow <i>Salix spp</i>	6	N/A	N/A	N/A	Over Mature	10 – 20	An over mature tree managed as a riparian willow. The main stem has collapsed, but the main crown appears vigorous with significant regrowth from cut point. No immediate work required.	B2 Retain
T821 Ash <i>Fraxinus excelsior</i>	9	Average 220	N/M	3	Semi mature	40+	A twin stemmed tree situated right on the river bank. Base and stem appear sound. No work required	B2 Retain

Tree No & species	Height (m)	Diameter at breast height (mm)	Branch spread (m)	Height (m) above ground level of crown clearance	Age Class	Estimated remaining contribution (years)	Comments and management recommendations	BS5837:2003 category and Arboricultural works necessary for proposed development
T822 Willow <i>Salix sp</i>	18	1010	N – 10.3 S – 9.9 E – 9.9 W – 11.8	1.8	Over mature	20	An old pollard that has been unmanaged as such for many years. Minor bark damage at base on northern side with good wound wood formation around the damaged areas. Limb previously lost on north west side at 2m from ground level – now appears sound. Sound unions at crown break (3m). Recommend a crown clean	A2 Retain
T0823 Sycamore <i>Acer pseudoplatanus</i>	16	Multi stemmed – average 200*	N – 8.0* S – 7.6 W – 5.7 E – 6.8	2 *	Semi mature	+40	A multi stemmed tree of good form and vigour. Detailed assessment impossible as within a locked compound. Appeared healthy and sound. No immediate work required. Monitor stem's unions as appear included.	A2 Retain
T0824 Hawthorn <i>Crataegus monogyna</i>	6.5	300	N – 2.3 S – 3.1 W – 1.6 E – 4.0	1	Mature	10	A mature tree of poor form and vigour. Ground work recently carried out around its base which may have harmed its root system. Internal decay pocket 1m up main stem from ground level with a 45 degree lean to the east. Dieback evident within canopy. Consider removal and replacing.	C1 Retain
0825 Willow	5q	280*	Not measured	1	Semi mature	40	A managed willow growing within the fenced boat compound. Significant deadwood, moderate vigour.	C2 Retain
0826 Ash	10	370	N-S = 11.5 E-W = 10.4	2.5	Semi mature	40+	A sound tree situated within the wooded area. Deadwood typical of species and age.	A2 Retain

Tree No & species	Height (m)	Diameter at breast height (mm)	Branch spread (m)	Height (m) above ground level of crown clearance	Age Class	Estimated remaining contribution (years)	Comments and management recommendations	BS5837:2005 category and Arboricultural works necessary for proposed development
0827 Hawthorn	8	150	N-S = 4.6 E- 0 W - 5.5	1	Early mature	40	Sound base and stem. Lean but not structurally significant.	B2 Retain
0828 Hawthorn	7	150	N - 2 S - 2 E - 2 W - 2	1	Semi mature	40+	Historical removal of stem at base with occluded growth. On set of ivy.	A2 Retain
0829 Ash	16	390	N - 6.0 S - 6.4 E - 6.0 W - 5.2	6	Semi mature	40+	Sound base and stem. Significant deadwood, but good form and vigour.	A2 Retain
0830 Ash	16	420	N - 5.8 S - 6.8 W - 4.7 E - 6.1	2	Semi mature	+40	A semi mature self set tree of good form and vigour. Its base appeared sound but the included union at 2m has weakened and caused splitting down each side of the stem. Structurally this tree is unsound and should be removed.	R Remove
0831 Hawthorn	4	120	N - 2 S - 3 E - 1 W - 2.5	2	Semi mature	+40	A semi mature tree that appeared healthy and sound. Suppressed but ok.	B2 Retain
0832 Hawthorn	5	250 immediately above root flare	N - 1 S - 3.2 E - 2.2 W - 3.1	2	Semi mature	+40	A semi mature tree, multi stemmed from ground level and all stems appeared healthy and sound. No immediate work required	B2 Retain

Tree No & species	Height (m)	Diameter at breast height (mm)	Branch spread (m)	Height (m) above ground level of crown clearance	Age Class	Estimated remaining contribution (years)	Comments and management recommendations	BS5837:2005 category and Arboricultural works necessary for proposed development
0833 Hawthorn	8	430 immediately above root flare	N - 3.2 S - 4.4 E - 2.5 W - 4.4	1.5	Early mature	40	Sound base and stem. Crown break at 3 m approximately with twisted and fused branches. On set of ivy. No immediate work required.	B2 Retain
0834 Willow	20	520	N - 5 S - 6 E - 9.1 W - 8.6	4	Semi mature	40+	Sound base and stem. Good form and vigour. No immediate work required.	A2 Retain
0835 Ash	15	340	N - 2.4 S - 5 E - 2.6 W - 4.9	4	Semi mature	40+	Sound base and stem. Good form and vigour. No work required	A2 Remove
0836 Goat Willow	9	410	N - 2.4 S - 8.4 E - 0.5 W - 6.6	2	Semi mature	40+	Sound base and stem. Stem leans and bifurcates at 1.5. No immediate work required	B2 Remove
0837 Hawthorn	8	320	N-S = 5.4 E-W = 7	2	Early mature	40	Multi stemmed from 1.5m. Base and main stem appeared sound. On set of ivy. No immediate work required.	B2 Retain
0838 Hawthorn	8	350 Immediately above root flare	N-S = 6.4 E-W = 7	3	Mature	20 - 40	Multi stemmed from 1.5. Sound base and stem. Some minor deadwood throughout canopy. On set of ivy. No immediate work required	B2 Retain

Tree No & species	Height (m)	Diameter at breast height (mm)	Branch spread (m)	Height (m) above ground level of crown clearance	Age Class	Estimated remaining contribution (years)	Comments and management recommendations	BS5337:2005 category and Arboricultural works necessary for proposed development
0839 Hawthorn	8	450 Immediately above root flare	N-S = 9 E-W = 10	2.5	Mature	20 - 40	Multi stemmed. Sound base and stem. Some minor deadwood throughout canopy. On set of ivy. No immediate work required	B2 Retain
0840 Ash	15	320	N-S = 9 E-W - 9	2	Semi mature	40+	Sound base and stem. Good form and vigour. On set of ivy. No work required.	A2 Retain
0841 Hawthorn	6.5	550* Immediately above root flare	N-S = 9.5 E - W = 8	1.8	Mature	20 - 40	Multi stemmed. Sound base and stem. Some minor deadwood throughout canopy. On set of ivy. No immediate work required	B2 Retain
0842 Field Maple	9	300	N - 5.4 S - 2.2 E - 4.3 W - 4.6	2	Mature	40+	Situated on edge of site. Previous management evident throughout crown. Significant squirrel damage to many branches. Moderate vigour and form. No immediate work required.	A2 Retain
0843 Hawthorn	9	180	N/M	4	Early mature	40+	Sound base and stem. Good form and vigour. On set of ivy. No work required.	B2 Retain
0844 Field Maple	6	480 @ 0.5m	N - 2.8 S - 1.8 E - 1.7 W - 7.7	3	Mature	40+	Situated on edge of site. Previous management evident throughout crown. Significant squirrel damage to many branches. Moderate vigour and form. No immediate work required	A2 Retain

Tree No & species	Height (m)	Diameter at breast height (mm)	Branch spread (m)	Height (m) above ground level of crown clearance	Age Class	Estimated remaining contribution (years)	Comments and management recommendations	BS5837:2005 category and Arboricultural works necessary for proposed development
0845 Field Maple	11	250	N/M.	5	Mature	40+	Situated on edge of site. Previous management evident throughout crown. Significant squirrel damage to many branches. Moderate vigour and form. No immediate work required	A2 Retain
0846 Hawthorn	9	340	N/M	2.5	Early mature	40+	Sound base and stem. Significant deadwood throughout crown, but ok. Ivy clad. Sever ivy	B2 Retain
0847 Hawthorn	12	240	N/M	3	Early mature	40+	Sound base and stem. Significant deadwood throughout crown, but ok. Ivy clad. Sever ivy	B2 Retain
0848 Field Maple	9	340	N - 3.0 S - 2.4 E - 0 W - 6.1	3	Mature	40+	Major limb previously removed at ground level, but healing well. On set of ivy and significant squirrel damage. No work required.	B2 Retain
0849 x3 Hawthorn	12	Average 200	N/M	1	Early mature	40+	Group of three stems. Suppressed but sound. No work required.	B2 Retain
0850 Hawthorn	12	250	N/M	2	Early mature	40+	Sound base and stem. Ivy clad and suppressed, but ok. Sever ivy.	B2 Retain

Tree No & species	Height (m)	Diameter at breast height (mm)	Branch spread (m)	Height (m) above ground level of crown clearance	Age Class	Estimated remaining contribution (years)	Comments and management recommendations	BS5837:2005 category and Arboricultural works necessary for proposed development
0851 Goat Willow	12	350	N/M	4	Early mature	20 – 40	Sound base and stem. Suppressed by 0852 with significant deadwood. No immediate work required	B2 Retain
0852 Ash	17	360	N/M	4	Early mature	40+	Sound base and stem. Light drawn and suppressed by 0858 with an asymmetrical, very high crown, but ok. Significant deadwood. Crown clean to remove deadwood.	B2 Retain
0853 Ash	16	250	N/M	4	Semi mature	40+	Light drawn. Sound base and stem. On set of ivy. Very high canopy. Good vigour. No immediate work required	B2 Retain
0854 Hawthorn	9	380	N – 2.6 S – 3.1 E – 2.5 W – 3.0	2	Early mature	40	Dense ivy smothering the whole tree. Limited inspection carried out. Sever ivy	C2 Retain
0855 Hawthorn and Willow	10	500* Immediately above root flare	N – 3.0 S – 3.2 E – 3.8 W – 3.1	2	Semi mature	40*	Twin stemmed group from ground level. Ivy clad. Appear sound. Sever ivy	B2 Retain
0856 Hawthorn	8	380	N – 3.6 S – 2.5 E – 3.2 W – 3.5	2	Early mature	40+	Ivy clad, but appears sound. Sever ivy	A2 Retain

Tree No & species	Height (m)	Diameter at breast height (mm)	Branch spread (m)	Height (m) above ground level of crown clearance	Age Class	Estimated remaining contribution (years)	Comments and management recommendations	BS5837:2005 category and Arboricultural works necessary for proposed development
0857 Willow	20	480	N - 4.3 S - 6.6* E - 4.3 W - 0.3	7	Mature	40+	Light drawn with an asymmetrical crown. But appears sound and healthy. No work required	A2 Retain
0858 Poplar	25	490	N - 4 S - 3.7 E - 4 W - 4	7	Early mature	20	Light drawn but base and stem appear sound. Early leaf fall and ivy clad with significant deadwood. Monitor and sever ivy.	B2 Retain
0859 x 4 Hawthorn	8	Average 280*	N - 2 S - 5 E - 2 W - 4*	1.8	Early mature	40	Suppressed but all appear healthy and sound. Ivy clad - sever ivy.	B2 Retain
0860 Hawthorn	9	380	N/M	1	Early mature	40+	Base and stem appear sound. Ivy clad. Sever ivy.	B2 Retain
0861 Ash	12	240	N - 3 S - 3 E - 2 W - 4	4.5	Semi mature	40+	Light drawn but appears healthy and sound. No immediate work required.	A2. Retain

Tree No & species	Height (m)	Diameter at breast height (mm)	Branch spread (m)	Height (m) above ground level of crown clearance	Age Class	Estimated remaining contribution (years)	Comments and management recommendations	BS5837:2005 category and Arboricultural works necessary for proposed development
0862 Ash	9	210	N - 3 S - 3 E - 3 W - 3	1	Semi mature	40+	Young and appears healthy and sound. No immediate work required	A2 Retain
0863 Hawthorn	7	300*	N/M	2	Early mature	40	Suppressed and sparse but appears sound.	C2 Retain
0864 Hawthorn	6	280*	N/M	6	Semi mature	40+	Ivy clad, sparse and suppressed, but appears healthy and sound. Sever ivy.	C2 Retain
0865 Hawthorn	7	280*	N/M	3	Semi mature	40+	Ivy clad, sparse and suppressed, but appears healthy and sound. Sever ivy.	C2 Retain
0866 Hawthorn	8	180*	N/M	4	Semi mature	40+	Ivy clad, sparse and suppressed, but appears healthy and sound. Sever ivy.	C2 Retain
0867 Ash	11	220	N-S = 8.6 E-W = 6.9	5	Semi mature	40+	Sound base and stem. Suppressed crown but good vigour. No immediate work required.	B2 Retain
0868 Ash	10	300*	N-S = 8.5 E-W = 7.8	2	Semi mature	40+	Sound base and stem. On set of ivy. No immediate work required.	A2 Retain

Tree No & species	Height (m)	Diameter at breast height (mm)	Branch spread (m)	Height (m) above ground level of crown clearance	Age Class	Estimated remaining contribution (years)	Comments and management recommendations	BS5837:2005 category and Arboricultural works necessary for proposed development
0869, 0870, 0871 and 0872 Hawthorn	9	Each stem 180*	N/M	2	Semi mature	40+	Ivy clad suppressed trees of poor form and vigour. Appear healthy. Sever ivy.	C2 Retain
0873 X4 Willow	19	Each stem 340*	N/M	7	Early mature	40+	Group of four stems of willow. All appear healthy and sound, with the on set of ivy growth. Sever ivy	A2 Retain
0874 Ash	8	230	N/M	6	Semi mature	40+	Suppressed crown and ivy clad. Appears healthy and sound. Sever ivy	B2 Retain
0875 x 4 Hawthorn	10	Each stem 150*	N/M	Upright growth habit	Semi mature	40+	Poor, sparse crown and ivy clad. Sever ivy.	C2 Retain
0876 Hawthorn	9	380	N/M	N/A	Early mature	40+	Suppressed tree with some deadwood. Appears sound. Crown clean	B2 Retain
0877 Multi stemmed Hawthorn	7	Each 150*	N/M	N/A	Semi mature	40+	Suppressed crowns and ivy clad. Appear healthy and sound. Sever ivy	B2 Retain

Tree No & species	Height (m)	Diameter at breast height (mm)	Branch spread (m)	Height (m) above ground level of crown clearance	Age Class	Estimated remaining contribution (years)	Comments and management recommendations	BS5837:2005 category and Arboricultural works necessary for proposed development
0878 Hawthorn	9	450 Immediately above root flare	N/M	2	Early mature	40	Ivy clad but appears healthy and sound. Sever ivy	B2 Retain
0879 Alder	15	220	N/M	6	Semi mature	40+	Light drawn but appears sound and healthy.	B2 Retain
0880 x 6 Willow	17	Average 400*	N/M	2	Early mature	40+	Large spreading tree comprising 6 stems – possibly an old coppice stool. Lean in all directions. Consider re-coppicing.	A2 Retain
TG1 Field Maple and sycamore	Strip of site boundary planting of a mix of field maple and sycamore. All semi mature and thriving. All appeared sound with no obvious signs of disease. The largest edge tree had a diameter of 320mm							A2 Retain

Key to terms.

- Identification numbers have been used and correspond to the site plan shown at **Appendix 1**.
- Vegetation type has been categorized as one of the following: Individual Tree (T), Hedge (H), Tree Group (TG), Woodland (W) or Belt (Belt)
- Species are listed by common and botanical name where appropriate.
- Where possible, measurements have been made in accordance with the conventions detailed below.
Where this was not possible, due to site conditions or the vegetation being in third party ownership, dimensions have been estimated. When this is the case it will be stated.
- Height has been estimated to the nearest metre.
- * denotes an estimated measurement
- Stem diameter has been measured at 1.5m and recorded in millimetres. Where this was not possible the actual height where the diameter was measure is recorded.
- Age class has been recorded as follows:
 - Young: Recently planted or establishing tree that could be transplanted without specialist equipment, i.e. up to 12 14cms stem girth.
 - Semi mature: An established tree but one which has not reached its potential ultimate height and has significant growth potential. Tree having attained 1/3 to 2/3 full stature and 1/3 to 1/2 estimated lifespan.
 - Early mature: A tree reaching its ultimate potential height, whose growth rate is slowing down but will still increase in stem diameter and crown spread and has a safe life expectancy. Tree at 3/4 to virtually full size.
 - Mature: A mature specimen with limited potential for any significant increase in size but with a reasonable safe life expectancy.
 - Over mature: A senescent or moribund specimen with a limited safe life expectancy. Possibly also containing significant structural defects with attendant safety and/or duty of care implications.
- Recommendations for tree management have been based on current Arboricultural Best Practice as set out by the Arboricultural profession and all relevant publications.

5.0 ARBORICULTURAL IMPLICATION ASSESSMENT

5.1 Tree Quality Assessment

The trees have been categorized according to BS5837: 2005 as a guide to their condition and value in terms of visual amenity.

Category and definition

- 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).
- 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).
- 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 150mm.
- 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.

The full tree quality assessment chart, which gives a more detailed explanation of the definition of the subcategories, has been attached at **Appendix 3**.

6.0 TREE CONSTRAINTS

- 6.1 In accordance with BS5837:2005, the root protection area (RPA) of the trees nearest the development site have been calculated and shown in the following table. This is the minimum area in m², which if being retained, must be left undisturbed around each tree to ensure its safe retention during the development process. It is calculated as an area equivalent to a circle with a radius 12 x stem diameter or 10 x base diameter for multi-stem trees. Where the tree is in an open grown situation, the RPA can be shown as a circle. In some circumstances (such as paths, car parking) the incorporation of hard surfaces and other construction can take place within the RPA. Where the tree is in an 'open grown' situation, the RPA can also be moved by 20% in any direction if proposed construction work is on one side only. Where the trees are growing next to structures such as buildings, roads, walls etc, the shape of the root protection area will be altered according to site conditions and likely root spread or the species.

Table 2 Tree constraints cont...

Tree No and Species	RPA in m ²	Recommended radial distances for RPA's (in metres from the centre of the tree to protective fencing)
801 Hawthorn	9.62	1.75
802 Hawthorn	33.18	3.25
803 Alder	50.27	4.0
804 Hawthorn	9.62	1.75

Tree No and Species	RPA in m ²	Recommended radial distances for RPA's (in metres from the centre of the tree to protective fencing)
805 Hawthorn	9.62	1.75
806, 807, 808, 8011 Hawthorn	28.27 for each stem	3.0 from each stem
809 and 810 Hawthorn	12.56	2.0
812 Willow	490.93	12.5
813 Hawthorn	28.27	3.0
814 Sycamore	103.88	5.75
815 Ash	50.27	4.0
816 Hawthorn	19.63	2.5
817 Hawthorn	69.25	4.5
818 Sycamore	78.55	5.0
819 Willow	50.27	4.0
820 Willow		N/A
821 Ash	19.63	2.5
822 Willow	452.44	12.0
823 Sycamore	50.27	Approx 4.0
824 Hawthorn	38.48	3.5
826 Ash	78.55	5.0
832 Hawthorn	12.56	2.5
833 Hawthorn	78.55	5.0
834 Willow	122.73	6.25
835 Ash	50.27	4.0
836 Goat Willow	78.55	5.0
842 Field Maple	38.48	3.5

Tree No and Species	RPA in m ²	Recommended radial distances for RPA's (in metres from the centre of the tree to protective fencing)
843 Hawthorn	15.90	2.25
846 Hawthorn	50.27	4.0
854 Hawthorn	63.62	4.5
855 Hawthorn and willow	78.55	5.0
856 Hawthorn	63.62	4.5
857 Willow	103.88	5.75
858 Poplar	103.88	5.75
859 Hawthorn x 4	38.48 around each stem	3.5 from each stem
860 Hawthorn	63.62	4.5
861 Ash	23.76	2.75
862 Ash	19.63	2.5
863 Hawthorn	38.48	3.5
864 Hawthorn	38.48	3.5
865 Hawthorn	38.48	3.5
866 Hawthorn	12.56	2.0

- *Note 1.* RPA radii are shown in ¼ metre graduations

6.2 Many of the trees across the site have actually grown immediately adjacent to other trees, so it is possible that their root spread is not evenly developed through the soil, However it is considered that a circle shape would show the maximum protection necessary in accordance with industry guidance.

7.0 LEGAL CONSTRAINTS

7.1 There are no legal constraints covering the trees on this site.

8.0 ROOT PROTECTION AREAS (RPAS) AND THE PROPOSED NEW BOATHOUSE

8.1 The proposed new boathouse is outside of the root protection areas of all trees to be retained. The previous (withdrawn) scheme showed a fenced compound to the rear of the proposed boathouse. This has now been removed from the scheme, thereby ensuring greater tree retention across the site. The proposed compound to the rear of the existing boathouse will be a container, placed so that it will be clear of the canopy of T0823.

9.0 THE EXISTING WOODED AREA ACROSS THE CENTRE OF THE SITE AND THE PROPOSED UPGRADING OF THE ACCESS TO THE SITE.

9.1 The existing access to the site is via a 'desire line' footpath created through the wooded area between the car park and the riverside site. The proposed scheme will not have an impact on the treescape in this area as no trees need to be removed in order for the scheme to be implemented. The wooded area is owned by Oxford City Council and the management of it is currently negligible with ground cover clearance and periodic crown lifting to enable a clear view for security of the users of the existing clubhouse.

9.2 The surface of this access through this wooded area to the existing boat house is to be upgraded in order to provide disabled access and a safe entrance (in terms of deterring unwelcome visitors) to the new boathouse. As the new walkway will be within the root protection areas of the semi mature trees to be retained, the surface treatment of the path will be sympathetic to the roots of the existing trees in that it will not cause root loss due to excavation and it will continue to allow the soil/atmosphere exchange, essential to tree function. It is likely to be made by wet rolling scalplings and limestone dust on top of the existing ground layer to create a suitable surface for wheelchair use. This will be edged by wooden boards staked with wooden posts which can be placed to avoid any major roots and tree trunks. It is considered that the trees near to where this upgrading will occur are vigorous and will be able to successfully adapt to and withstand this minor change in their rooting environment.

9.3 It is suggested that this access be upgraded prior to commencement of any other development works on the site so that pedestrian construction workers can utilize this access if necessary.

10.0 TREE PROTECTION

10.1 Protective fencing and ground protection in accordance with section 9 of BS 5837:2005 will be erected around all trees to be retained and will remain in place for the duration of the construction phase. The positions of these fences are shown on the plan attached at **Appendix 2**. The contractor and all site personnel would be made fully aware of procedures to be followed in respect of the protection of trees throughout the site.

11.0 ABOVE GROUND CONSTRAINTS.

11.1 It is possible that the overhanging canopies of trees within group 1, T814 and T815 may need to be cut back in order to provide construction space. It is not considered that this will be detrimental to the trees health or amenity value and all tree works would be carried out to a minimum standard of BS3998: 1989 'Tree Work' and in accordance with good arboricultural practice.

12.0 TREES TO BE REMOVED

- 12.1 A total of just four trees are preferred for removal. Three would pose a significant constraint to the development of the site and one is recommended for removal on safety grounds. These are T801, T802, T803 and T830.

13.0 CONCLUSION

- 13.1 The majority of the trees on site will be retained as part of the proposed development.
- 13.2 Any tree which has not been included within this survey, has been excluded because either they are below 75mm stem diameter measured at 1.5m above ground level (therefore making little visual contribution to the wider locality) or they are off site and positioned well away from the proposed development site.
- 13.3 A total of just four trees are preferred for removal as they would pose a constraint to the development of the site.
- 13.4 Access for construction traffic will be via the existing route by the Sea Cadet Corp Club (to the left of the site as you look through to the river). This route is already regularly used by vehicles driving boats to the river etc and as such, the ground is compacted and T821 and T822 are tolerating this successfully. However, given that it is likely that site traffic will increase during the build process, it is proposed to lay a reinforced track system such as 'DuraDeck' on the ground where vehicles may need to travel to reach the site of the build. This ground protection is very durable and enables access for heavy equipment across sites where the land must be protected and the loads spread to avoid compaction. Sections of this track can be connected in either direction and on all sides, to form large work pads and extended roadways. The site layout proposals allow adequate space for storage of materials, site huts, fires etc, away from the RPA's of the trees to be retained. The existing car park will be used for storage etc.
- 13.5 It is considered that this is an opportunity to improve the ecological merits of this site by carrying out clearance of the significant bindweed within the woodland area which is suppressing the ground flora and additional tree planting and ground flora planting within the wooded area between the car park and the development area. This will be beneficial as newly planted shrubs and trees will ultimately soften the impact of the new boathouse, will ensure continuity of tree cover for future generations, enhance the ecological value of the area and will adapt successfully to the inevitable change of site conditions.
- 13.6 Given these conclusions the following section 'Arboricultural Method Statement' details the recommendations/ methodology for the construction of the proposed works in terms of the effect on trees on the site.

ARBORICULTURAL METHOD STATEMENT

1.0 CONTACT DETAILS

Developer	Not known at this stage	
Architect	Mr James Cauwood	CWD Architects 2 Victoria Cottages Broad Street Bampton Oxon OX18 2LT 07867 817 132 info@cwdarchitects.co.uk
Arboricultural Consultant	Sarah Venners	Sarah Venners Forestry & Arboricultural Consultant 101 Papist Way, Cholsey, Oxfordshire, OX10 9LA 07922 087671 svenners@tiscali.co.uk
Local Authority Case Officer	Not known	Oxford City Council
Local Authority Arboriculturalist	Mr Chris Leyland	Planning Services Oxford City Council Ramsey House 10 St. Ebbes Street Oxford OX1 1PT Tel: 01865 252149 Fax: 01865 252144

2.0 INTRODUCTION

- 2.1 This Arboricultural Method Statement (AMS) has been produced in line with BS 5837 2005 Trees in Relation to Construction-Recommendations to aid the successful retention of trees on and adjacent to the proposed development site at Falcon Rowing Club, Oxford. No demolition or development shall take place on the site until this document has been submitted to and approved in writing by the Oxford City Council.
- 2.2 This document sets out the methodology for all proposed works that affect trees on and adjacent to the site. Compliance with this method statement will be a requirement of all relevant contracts associated with the development proposals. Copies of this document will be available on site for inspection.
- 2.3 For details of trees to be retained and location and types of special protection methods, reference should be made to the Tree Protection Plan (TTP) appended to this document at **Appendix 2**. A copy of which should be displayed prominently on site.

3.0 PHASING OF DEVELOPMENT

3.1 Phase 1 – Pre Development Phase

- The client and project Arboriculturalist meet on site to discuss all aspects of the development that affects the trees on or adjacent to the site and to ensure understanding of this document. Following discussion any clarifications or amendments to be copied to all site personnel.
- Tree works to be undertaken by a qualified Arborist in line with BS 3998 Tree Work. See Table below for Schedule of Work and TPP for location.

Tree Number & Species	Schedule of Work
T801 Hawthorn	Remove to ground level
T802 Hawthorn	Remove to ground level
T803 Alder	Remove to ground level
T830 Ash	Remove to ground level

- Tree protection measures to be installed under the supervision of the named Arboriculturalist for all other trees to be retained.
- The protective fencing and ground protection will be in accordance with Section 9 Figure 2 of BS 5837 2005. The positions of the fencing would be based on a distance equivalent to the radius of each tree's RPA. Once erected all weather signage should be displayed stating 'Tree Protection Area Keep Out'.
- The existing 'desire line' access through the woodland to be upgraded and used only by pedestrian traffic.
- Other than works detailed within this Method Statement and approved in writing by the LPA, no works shall take place within the RPAs of the retained trees. The named Arboriculturalist must supervise any such works.

3.2 Phase 2 – Construction Phase

Access

Vehicular access to the construction site will be via an existing route by the Sea Cadet Corp Club (to the left of the site as you look through to the river). A reinforced track system such as 'DuraDeck' will be laid down to spread the load which will minimize soil disturbance and therefore root damage to T822 and T821.

A 'no dig' method of construction will be used to upgrade the surface of the footpath through from the car park to the site.

Services

The routing and installation of all services (including soakaways) shall be determined at an early stage and routed so as to avoid all root protection areas. Trenches for lighting cable in the wooded area and in the car park will be dug using hand held tools only and in accordance with the National Joint Utilities Group Publication Number 10 Volume 4 – 'Guidelines for the Planning, Installation and maintenance of Utility Services in Proximity to Trees' and under the supervision of the retained Arboriculturalist.

Scaffolding within the RPA

This activity is to be supervised by the named Arboriculturalist within the RPAs of the retained trees.

- T814 will require scaffolding at the edge of its RPA and which will conform to Figure 2 of BS 5837 2005.
- Ground protection measures will be in line with Figure 3 – Scaffolding within the RPA, BS 5837 2005 and comprise the undisturbed ground protected by geo-textile fabric, and side butting scaffold boards on a compressible layer.
- Installation and removal of the scaffolding within the RPA will be carried out under the supervision of the named Arboriculturalist.

Foundations

Foundations for the proposed boathouse are outside the RPA's of all trees to be retained. Therefore there is no conflict between tree root systems and the proposed siting of the proposed building.

3.3 Phase 3 - Demolition

- The demolition of the existing boathouse will be inwards within the buildings footprint (top down demolition) and pulled back outside the RPAs to prevent any mechanical damage to the trees.
- Once demolition and site clearance is complete, the removal of the foundations and hard standing will be carefully carried out in order not to disturb tree roots that may be present below them. Hand tools or appropriate lightweight machinery will be used for this. All surfacing should be pulled tangentially away from the RPA's. Any exposed tree roots will be wrapped in dry, clean Hessian cloth to prevent desiccation and to protect from rapid temperature changes. Any necessary root pruning, to side branches will be carried out using proprietary cutting tools.

3.4 Phase 4 - Landscaping Phase

Further detail will be provided once a landscaping scheme has been provided.

- Replacement planting will be in line with BS 3936 Nursery stock – Specifications for trees and shrubs. Species and aftercare management plan approved by LPA.

4.0 GENERAL ARBORICULTURAL CONSIDERATIONS

- 4.1 Tree work may only be undertaken by a qualified Arborist and must be undertaken under the supervision of the named Arboriculturalist
- 4.2 Protective fencing must be regarded as sacrosanct, and must only be moved under direct supervision of the LPA or named Arboriculturalist to enable the undertaking of works within the RPAs of trees as set out in this AMS and approved in writing by the LPA. It is of paramount importance the fencing is repositioned correctly after any agreed operations.
- 4.3 No materials, chemicals, machinery or vehicles must be stored within the RPAs as defined on the TPP and identified on site by protective fencing and aboveground root protection. The existing car park area will be a designated storage area away from all trees to be retained.
- 4.4 Ground protection must not be lifted or removed without prior consultation with the LPA or named Arboriculturalist.
- 4.5 Damage caused to protective fencing or ground protection must be reported to the site supervisor and the named Arboriculturalist to ensure appropriate repair.

- 4.6 Any damage to retained trees must be reported without delay to the site supervisor and the named Arboriculturalist so appropriate remedial work can take place without delay.
- 4.7 No materials that are likely to have an adverse effect on tree health such as oil, bitumen or cement will be stored or discharged within 5 metres of the trunk of the retained tree.
- 4.8 No fires will be lit within 10m of the trunk of the retained tree.
- 4.9 Notice boards, telephone cables or any other signage or services are not to be attached to any part of the retained trees.
- 4.10 Site huts, toilets etc can define part of the protective fencing where adequate space allows.

5.0 SUPERVISION AND MONITORING

- 5.1 The named Arboriculturalist shall be responsible for supervising the following works.
- Establishment of installation of protective fencing and ground protection
 - Establishment of scaffolding including ground protection outside scaffolding area.
- 5.2 The named Arboricultural consultant will be responsible for periodical monitoring and they will inspect the protective fencing and monitor any works necessary within the exclusion zones. A record of site visits will be maintained for inspection on site and copies forwarded to the agent and planning authority when requested.

Important notes

Recommendations for management have been made with regard to good arboricultural practice as well as current British Standards and guidance notes. It should be recognized that trees are dynamic structures that can never be completely predictable and may become unstable or partially unstable even in average weather conditions. Stability or safety cannot be construed from any lack of recommended works. Comments regarding the health and safety of the trees are valid for no more than one year from the date of this report.

- Appendix 1** Tree survey plan showing tree quality categories and root protection areas
- Appendix 2** Tree survey plan showing protective fencing and area of ground protection
- Appendix 3** Extract from BS5837:2005 - Tree Quality Assessment chart
- Appendix 4** Extract from BS 5837:2005 showing protective fencing and ground protection specification.

CREDENTIALS OF THE AUTHOR

Sarah Venners has worked in the arboricultural profession for twelve years. Her experience has been gained from both the public and private sector. She was the Tree Officer for Tunbridge Wells Borough Council and for South Oxfordshire District Council. She was a consultant for Marishal Thompson & Co of Alnwick Northumberland until March 2006. In addition to her experience, she holds the following qualifications:

Masters Degree in Forestry from The Oxford Forestry Institute, Oxford University. (MSc For.Oxon)

BSc (Hons) Degree in Agriculture and The Environment, Wye College, London.University. (BSc Hons Agric)

She is also a Professional Member of the Institute of Chartered Foresters (MICFor) and the Arboricultural Association (M.Arbor.A.).

APPENDIX 1.

Tree quality and Root Protection Areas (m²)



- KEY**
- Category A
 - Category B
 - Category C
 - Category R
 - Collecting and individual RWAs
 - Individual RWAs water or collectors



Address	FALCON ROWING CLUB MEADOW LANE, OXFORD
Title	TREE SURVEY DETAILS WITH PROPOSED NEW LAYOUT
Scale	1/200 (A1)
Drawn	STW
Rev	05-01-10
Drawing No.	J219-02

Steve Worralley
 15c St. John's Road
 Woodstock
 OX12 9JF
 01235 330221
 steve.worralley@btinternet.com

APPENDIX 2 Tree Protection Plan (TPP)



KEY

—•—•— Line of protective fencing

////// Area of ground protection

- KEY**
- Category A
 - Category B
 - Category C
 - Category R
- Collective and individual IPAs's
Individual IPAs within collective

Address	FALCON ROWING CLUB MEADOW LANE, OXFORD
Title	TREE SURVEY DETAILS WITH PROPOSED NEW LAYOUT
Scale	1/200 (A1)
Drawn	Steve Worsley
STW	05-01-10
Row	J219-02



Table 1 — Cascade chart for tree quality assessment

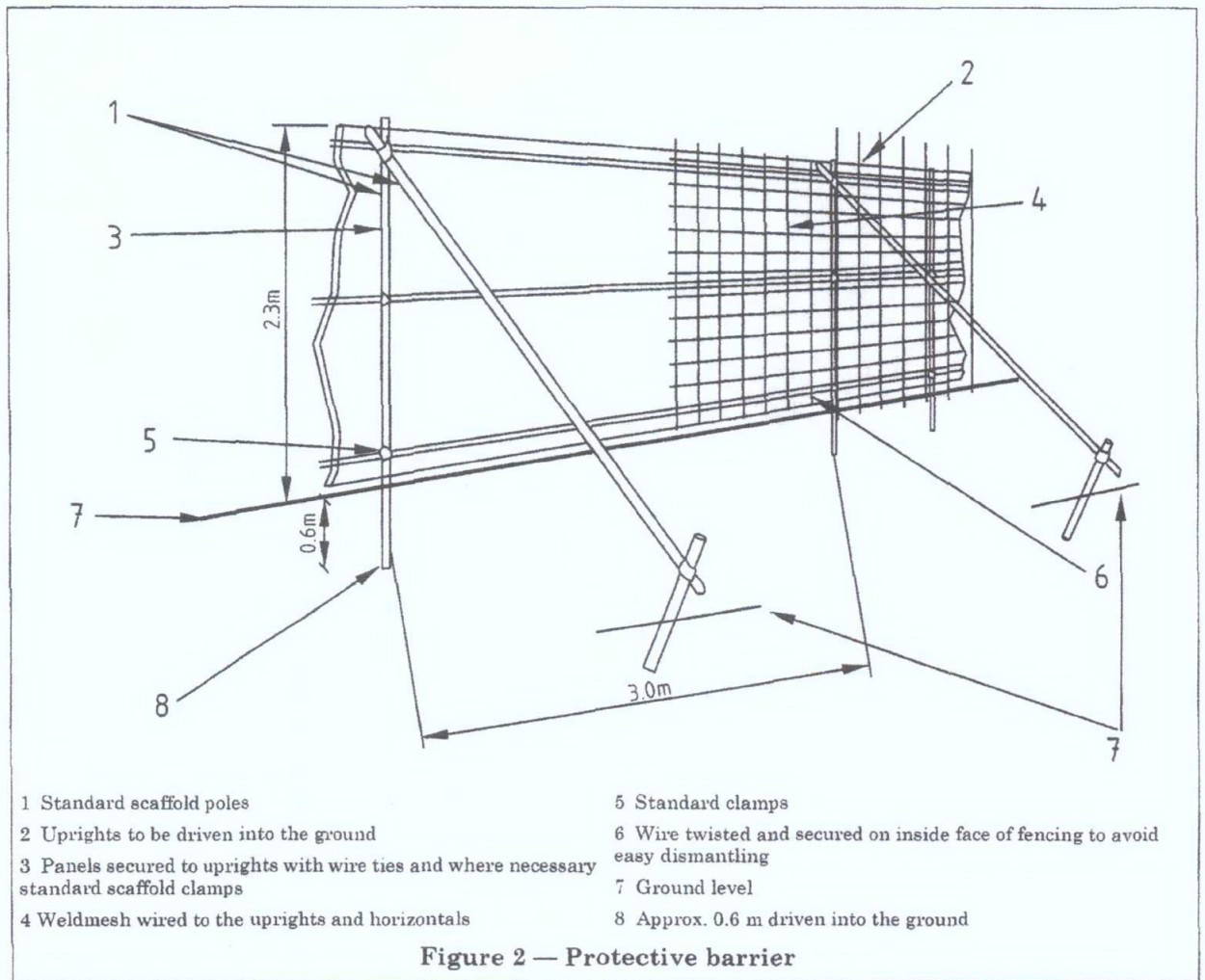
TREES FOR REMOVAL		Criteria		Identification on plan
Category and definition				
<p>Category R Those in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management</p>	<p>• Trees that have a 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)</p> <p>• Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline</p> <p>• 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</p> <p>NOTE: Habitat reinstatement may be appropriate (e.g. R category tree used as a bat roost; installation of bat box in nearby tree).</p>			DARK RED
TREES TO BE CONSIDERED FOR RETENTION				
Criteria — Subcategories				
Category and definition	1 Mainly arboricultural values	2 Mainly landscape values	3 Mainly cultural values, including conservation	Identification on plan
<p>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)</p>	<p>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)</p>	<p>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)</p>	<p>Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)</p>	LIGHT GREEN
<p>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)</p>	<p>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)</p>	<p>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</p>	<p>Trees with clearly identifiable conservation or other cultural benefits</p>	MID BLUE
<p>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</p>	<p>Trees not qualifying in higher categories</p>	<p>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</p>	<p>Trees with very limited conservation or other cultural benefits</p>	GREY
<p>NOTE: Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150 mm should be considered for relocation.</p>				

9.3 Ground protection

9.3.1 Where it has been agreed during the design stage, and shown on the tree protection plan, that vehicular or pedestrian access for the construction operation may take place within the root protection area (RPA), the possible effects of construction activity should be addressed by a combination of barriers and ground protection. The position of the barrier may be shown within the RPA at the edge of the agreed working zone but the soil structure beyond the barrier to the edge of the RPA should be protected with ground protection.

9.3.2 For pedestrian movements within the RPA the installation of ground protection in the form of a single thickness of scaffold boards on top of a compressible layer laid onto a geotextile, or supported by scaffold, may be acceptable (see Figure 3).

9.3.3 For wheeled or tracked construction traffic movements within the RPA the ground protection should be designed by an engineer to accommodate the likely loading and may involve the use of proprietary systems or reinforced concrete slabs (see 11.8 and 11.9).



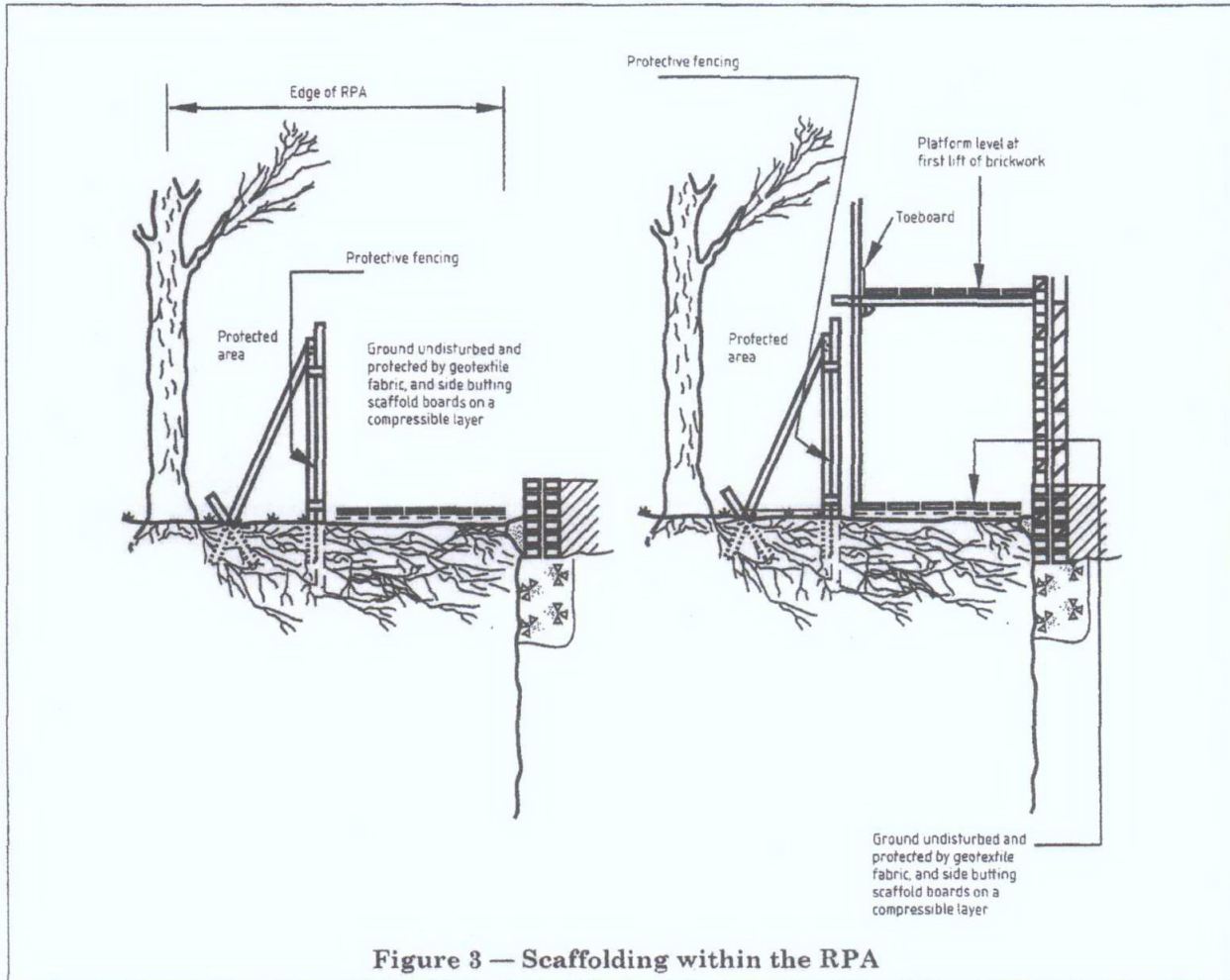


Figure 3 — Scaffolding within the RPA

9.4 Additional precautions outside the exclusion zone

9.4.1 Once the exclusion zone has been protected by barriers and/or ground protection, construction work can commence. All weather notices should be erected on the barrier with words such as:

“Construction exclusion zone — Keep out”.

9.4.2 In addition the following should be addressed or avoided.

- a) Care should be taken when planning site operations to ensure that wide or tall loads, or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact can result in serious damage to them and might make their safe retention impossible. Consequently, any transit or traverse of plant in close proximity to trees should be conducted under the supervision of a banksman to ensure that adequate clearance from trees is maintained at all times. In some circumstances it may be impossible to maintain adequate clearance thus necessitating access facilitation pruning (see 11.2.1).
- b) Material which will contaminate the soil, e.g. concrete mixings, diesel oil and vehicle washings, should not be discharged within 10 m of the tree stem.
- c) Fires should not be lit in a position where their flames can extend to within 5 m of foliage, branches of trunk. This will depend on the size of the fire and the wind direction.
- d) Notice boards, telephone cables or other services should not be attached to any part of the tree.