



Hampton Wick Cricket Club, Bushy Park

Arboricultural Implications Assessment and Method Statement - Replacement Clubhouse

May 2024



Client	Hampton Wick Cricket Club
Job name	Hampton Wick Cricket Club
Report title	Arboricultural Implications Assessment and Method Statement – Replacement Clubhouse
File reference	24-1711-Report-03-Replacement Clubhouse

	Name	Position	Date
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1 Introduction

1.1 Site Description

Hampton Wick Cricket Club, Bushy Park (the "site") is situated in the southeast corner of Bushy Park, approximately half a kilometre west of the centre of Hampton Wick. The site currently comprises the burnt-out shell of the former pavilion, informal car parking, amenity grassland and an access drive. The site is recreational in nature.

There are no Tree Preservation Orders (TPOs) on site. The site is within the Bushy Park conservation area.

1.2 Proposed Works

The construction of a replacement clubhouse on the footprint of the existing are proposed. Works that are likely to affect retained trees include the movement of construction and delivery vehicles.

1.3 Aims of Study

To inform a planning application, Canopy Consultancy has been commissioned by Hampton Wick Cricket Club to undertake a tree survey of the site, in accordance with British Standard (BS) 5837:2012 "Trees in Relation to Design, Demolition and Construction - Recommendations".

The aim of this report is to present the results of the survey, including a Tree Survey Schedule (TSS), an Arboricultural Implications Assessment (AIA), and an Arboricultural Method Statement (AMS). A Tree Protection Plan (TPP) has also been produced and accompanies this report as a separate drawing.

This report in no way constitutes a health and safety survey report. Where concerns for tree health and safety exist, the necessary and appropriate tree inspections should be carried out.

2 Methodology

The trees were inspected from ground level by consultant arboriculturist Neil Taylor on the 6th of March 2024. Measurements were taken in accordance with the recommendations set out in the BS 5837:2012. Canopy spreads were measured and plotted to the four compass points. Where direct access was not possible measurements have been estimated. The surveyed trees are colour coded on the accompanying tree survey drawing according to their relevant BS category.

The tree data collected is used to enable the current canopy spread of the surveyed trees and the Root Protection Area (RPA) to be plotted on the accompanying TPP. The RPA is defined by the formula in paragraph 4.6 from the BS 5837:2012 and may be refined by taking into account current on-site constraints to root activity such as buildings, earthworks and hard paving. This forms part of the design process for the proposed development.

3 Assessment

3.1 Tree Character Groups

The detailed results of the tree survey are provided in the TSS, in Appendix 1. In summary, the trees on the site are in a reasonable condition and vary in terms of amenity value provided to the wider landscape. The trees can be divided into two distinct character groups as follows:

1. The first character group includes the large, mature trees found growing adjacent to the site's eastern boundary. In the main, the trees in this character group are in a good condition and provide significant arboricultural amenity to the local area.
2. The second character group includes the smaller, young trees found growing adjacent to the site's eastern boundary and to the west of the access drive. The trees in this character group are in a good condition but due to their size are of limited amenity value to the local area.

4 Arboricultural Impact Assessment (AIA)

4.1 Methodology

The AIA uses the information obtained in the tree survey to identify areas where the proposed construction may be at odds with accepted standards, in terms of a tree's requirements for space in which to maintain existing roots and shoots, and space for future growth.

The quality and relative importance of each tree is illustrated as a coloured polygon. The colour used relates to the BS categories as follows: A - green, B - blue, C - grey and U - red (see accompanying drawing reference 24-1711-TPP-03-Prop). In general, the design process will try to retain A and B category trees. Proposed construction will therefore normally be excluded from the RPA of A and B category trees. Red trees are discounted as they are recommended for removal.

Details of the trees surveyed are given in the TSS (Appendix 1). The juxtaposition of the proposed development in relation to existing tree locations are shown on the accompanying TPP drawing, reference 24-1711-TPP-03-Prop.

The AIA considers existing site conditions and the effect that they may have on the development of the surveyed tree's root systems. Hard structures such as building and paved roads and paths can influence the root activity of trees by reducing the availability of both moisture and nutrients.

4.2 Assessment

Refer to the accompanying TPP drawing, reference 24-1711-TPP-03-Prop for the relationship between the proposed development and the trees on and adjacent to the site.

- No trees will be removed to enable the construction of the replacement clubhouse.
- The following tree will be affected by the construction of new hard surfaces within the RPA:

T9

The new hard surface within the RPA will be constructed in accordance with the 'no dig' principles outlined in The Arboricultural Association's Guidance Note 12 and utilise a cellular confinement system such as Cell Web as a subbase. Refer to Section 5.3 below for details.

5 Arboricultural Method Statement (AMS)

5.1 Methodology

The AMS provides the means by which retained trees and hedges can be protected throughout the development.

The movement of delivery vehicles and construction machinery in close proximity to trees and outside of the existing driveway and carpark may cause compaction of the soil which affects the tree's ability to absorb moisture and nutrients. The RPAs of retained trees and hedges will therefore be protected by a tree protection barrier as described in paragraph 5.5 below and shown on the accompanying TPP, drawing number 24-1711-TPP-02-Temp Buildings.

5.2 Demolition within the RPA of Retained Trees

The proposed development requires no demolition. The demolition of the existing pavilion and its potential impacts are assessed in report 24-1711-Report-01-Demo-A.

5.3 Construction within the RPA of Retained Trees

Construction of Hard Surfaces

Construction of the new hard surface that is within the RPA of T9 will utilise a cellular confinement system such as Cell Web in order to minimise the excavations required. The new hard surface will be constructed on top of the existing ground level and no excavations will take place to level the ground. Guidance on the form of construction necessary to avoid root damage and loss is provided in the form of an extract of the Cell Web Product brochure for their cellular confinement system at Appendix 2. The installation of the hard surface should proceed in the following order:

- Lay geotextile membrane over the soil and pin into place
- Lay cellular confinement system (such as Cell Web) as specified by engineer and pin into place.
- Fill the cellular confinement system with a 'no fines' aggregate to engineer's specification. Work must be carried out progressively so that any machinery used only moves on the laid surface.
- Install timber edging (if required) as specified by engineer.
- Lay geotextile membrane over filled cellular confinement system.
- Lay wearing course as specified by landscape architect.

No materials or spoil is to be stored within the RPA of a retained tree, unless on an existing hard surface.

In order to avoid damage to the retained trees the tree surgery and felling work identified in the accompanying tree survey schedule will be carried out prior to the occupation of the site by the building contractor. The work will be carried out in accordance with BS 3998:2010.

5.4 Services

The existing services are to be utilised.

5.5 Tree Protection

All trees on the site will be protected using a tree protection barrier erected in the location shown on the accompanying TPP, drawing number 24-1711-TPP-03-Prop. The fence will consist of "Heras" type panels or similar braced at appropriate intervals and secured to keep in place. The tree protection barrier will be erected prior to the occupation of the site by the building contractor and will only be removed once the construction phase is complete.

Where specified on the accompanying TPP drawing, reference 24-1711-TPP-03-Prop, the ground between the new building and tree protection barrier will be protected by geotextile fabric and side butting scaffold boards or thick plywood fit for purpose, on a compressible layer (e.g. 100mm layer of woodchip over a geotextile membrane). A single thickness of boarding will provide sufficient protection for pedestrian load, a double thickness for vehicles. The ground protection will be left in place until the building works are complete.

The existing hard surfaces that are within the RPA's of trees will act as ground protection.

5.6 Site Monitoring and Supervision

The process of reporting to the client and LPA/Tree Officer will be by emailing the checklist form at Appendix 3. After the pre-commencement meeting with the site manager, site monitoring is to be when the supervision of specialist construction activities are required. It will involve a site visit by the arboriculturist to ensure that the appropriate tree protection measures, as detailed in the approved drawings and method statements, are continually adhered to. The completed checklist will be sent to the LPA within 5 working days of the site visit.

6 Conclusion

Canopy Consultancy was commissioned by Aros Architects to carry out a tree survey at the site. The results of the survey indicate that the trees within the survey area vary considerably in terms of condition and contribution to the amenity of the wider landscape.


No trees, groups or hedges will be removed to facilitate the proposed development.


Through the specified tree protection measures and construction methodology, it will be possible to minimise the impact of the proposed development on the retained trees.


Overall, there are no known overriding arboricultural constraints which would prevent the proposed development from going ahead, subject to the protection measures specified within this report being correctly implemented.


7 Appendices


Appendix 1: Tree Survey Schedule


Project:		Hampton Wick Cricket Club								BS 5837 2012 Trees in relation to design, demolition and construction- recommendations		Surveyed by		NT				
Ref:		24-1711-TSS								Weather		Clear						
Date:		06.03.24								Tagged		No						
Client:		Aros Architects																
				Canopy Spread														
Tree No.	Species	Height (m)	Stem Dia. (mm)	N	E	S	W	Stems	Height of crown clearance	Age class	Physiological condition problems/comments	Structural condition	Preliminary management recommendations	Estimated remaining contribution years	BS category			
T1	Tilia X europaea (Common Lime)	5	120	1	2	2	1	1	2	Y	Good	Good	None	40+	C1			
T2	Tilia X europaea (Common Lime)	19	870	5	4	6	6	1	2	M	Good	Good	None	40+	A2			
T3	Tilia X europaea (Common Lime)	4	90	1	1	1	1	1	2	Y	Good	Good	None	40+	C1			
T4	Aesculus hippocastanum (Horse Chestnut)	3	550	1	1	1	1	1	1	M	Dead monolith	Fair	None	0	U			
T5	Tilia X europaea (Common Lime)	5	190	1	1	2	2	1	2	Y	Good	Good	None	40+	C1			
T6	Tilia X europaea (Common Lime)	9	372	2	4	3	3	4	2	MA	Good	Fair - Major bark wounding on stem. Stem divides at ground level.	None	20-40	C1			
T7	Tilia X europaea (Common Lime)	9	335	3	2	3	3	3	2	MA	Good	Fair - Major bark wounding on stem. Stem divides at	None	20-40	C1			
T8	Tilia X europaea (Common Lime)	6	160	2	1	2	2	1	2	Y	Good	Good	None	40+	C1			
T9	Robinia pseudoacacia (Locust Tree)	9	1323	6	7	6	5	2	2	OM	Good - Ivy on tree.	Fair - Decay present on stem. Cavity on stem. Multiple stems above 1.5m.	None	20-40	A3			
T10	Robinia pseudoacacia (Locust Tree)	12	600	2	4	4	4	1	2	MA	Fair - Low vitality. Die back.	Good	None	20-40	B2			
T11	Sambucus nigra (Elder)	4	112	1	1	2	1	2	1	Y	Good	Good	None	20-40	C1			

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Tree No.	Species	Height (m)	Stem Dia. (mm)	N	E	S	W	Stems	Height of crown clearance	Age class	Physiological condition problems/comments	Structural condition	Preliminary management recommendations	Estimated remaining contribution years	BS category			
T12	Robinia pseudoacacia (Locust Tree)	5	110	2	1	2	1	1	2	Y	Good	Good	None	40+	C1			
T13	Robinia pseudoacacia (Locust Tree)	5	80	1	1	1	2	1	2	Y	Good	Good	None	40+	C1			
T14	Robinia pseudoacacia (Locust Tree)	7	190	2	2	2	1	1	3	Y	Good	Good	None	40+	C1			
T15	Tilia X europaea (Common Lime)	15	730	5	6	5	4	1	3	MA	Fair - Low vitality. Major deadwood in crown. Basal growth	Good	None	40+	B2			
T16	Tilia X europaea (Common Lime)	19	830	6	7	6	4	1	3	M	Good - basal growth	Good	None	40+	A2			
T17	Aesculus hippocastanum (Horse Chestnut)	3	800	0	0	0	0	1	0	OM	Dead monolith	Fair	None	0	U			
T18	Quercus robur (Common Oak)	7	310	4	3	4	4	1	2	Y	Good	Good	None	40+	B2			
T19	Quercus ilex (Holm Oak)	4	80	1.5	2	2	2	1	1	Y	Good	Good	None	40+	C1			
T20	Tilia X europaea (Common Lime)	22	950	6	7	6	8	1	3	M	Good	Good	None	40+	A2			
T21	Quercus cerris (Turkey Oak)	7	120	2	1	2	1	1	1	Y	Good	Good	None	40+	C1			
T22	Quercus robur (Common Oak)	8	240	3	3	3	2	1	2	Y	Good	Fair	None	40+	B2			

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T23	Quercus cerris (Turkey Oak)	5	90	0	1	3	1	1	1	Y	Good	Fair - Poor shape & form.	None	20-40	C1		
T24	Quercus robur (Common Oak)	15	710	8	3	6	9	1	4	MA	Good	Good	None	40+	A2		
T25	Tilia X europaea (Common Lime)	13	665	3	5	4	3	2	2	MA	Good - basal growth	Fair - Stem divides below 1.5m	None	20-40	B2		
T26	Tilia X europaea (Common Lime)	22	800	5	5	6	6	1	2	M	Good - basal growth	Good	None	40+	A2		
T27	Tilia X europaea (Common Lime)	18	690	5	5	4	5	1	2	M	Fair - Low vitality. Major deadwood in crown. Basal growth	Good	None	20-40	B2		
T28	Tilia X europaea (Common Lime)	22	910	5	5	5	7	1	2	M	Good - Major deadwood in crown. Basal growth	Good	None	40+	A2		
T29	Tilia X europaea (Common Lime)	13	610	4	4	5	4	1	2	MA	Good - basal growth	Good	None	40+	A2		
T30	Tilia X europaea (Common Lime)	22	880	6	7	7	6	1	2	M	Good - Major deadwood in crown. Basal growth	Good	None	40+	A2		
T31	Fraxinus excelsior (Ash)	6	80	1	1	1	1	1	1	Y	Good	Good	None	40+	C1		
T32	Tilia petiolaris (Silver Pendent Lime)	14	670	6	5	6	4	1	3	MA	Good	Fair - Decay and cavity present on stem	None	40+	B2		
T33	Tilia X europaea (Common Lime)	18	770	5	5	4	4	1	2	M	Good - Previously reduced. Major deadwood in crown. Basal growth	Good	None	40+	A2		

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Date:		06.03.24									Tagged		No				
Client:		Aros Architects															
				Canopy Spread													
Tree No.	Species	Height (m)	Stem Dia. (mm)	N	E	S	W	Stems	Height of crown clearance	Age class	Physiological condition problems/comments	Structural condition	Preliminary management recommendations	Estimated remaining contribution years	BS category		
T34	Tilia X europaea (Common Lime)	17	660	5	5	5	5	1	3	MA	Good - basal growth	Good	None	40+	A2		
T35	Tilia petiolaris (Silver Pendent Lime)	14	620	4	5	6	4	1	2	MA	Good - basal growth	Good	None	20-40	B2		
T36	Fraxinus excelsior (Ash)	9	220	3	3	3	3	1	3	Y	Good	Good	None	40+	B2		
T37	Ulmus procera (English Elm)	7	250	4	2	1	4	1	3	MA	Good	Fair - Poor shape & form.	None	10-20	C1		
T38	Tilia X europaea (Common Lime)	18	650	6	6	6	5	1	3	M	Good	Good	None	40+	A2		
T39	Tilia X europaea (Common Lime)	3	40	1	1	1	1	1	1	Y	Good - street tree.	Good	None	40+	C1		
T40	Tilia X europaea (Common Lime)	12	650	4	3	4	4	1	3	MA	Good - street tree.	Good	None	40+	B2		
T41	Quercus robur (Common Oak)	12	460	5	6	5	3	1	1	MA	Good	Good	None	40+	A2		
T42	Quercus robur (Common Oak)	12	570	6	5	6	6	1	2	MA	Good	Good	None	40+	A2		
G1	Sambucus nigra (Elder)	4	Varied						Y	Fair - group of self-sown young trees		Good	None	10-20	C1		

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Tree No.	Species	Height (m)	Stem Dia. (mm)	N	E	S	W	Stems	Height of crown clearance	Age class	Physiological condition problems/comments	Structural condition	Preliminary management recommendations	Estimated remaining contribution years	BS category
G2	Quercus robur (Common Oak), Crataegus monogyna (Hawthorn)	3				Varied				Y	Good - group of self-sown young trees	Good	None	40+	C1
G3	Quercus ilex (Holm Oak), Fraxinus excelsior (Ash), Sambucus nigra (Elder)	4				Varied				Y	Good - group of self-sown young trees	Good	None	40+	C1
G4	Quercus robur (Common Oak), Quercus ilex (Holm Oak)	3				Varied				Y	Good - group of self-sown young trees	Good	None	40+	C1
G5	Quercus ilex (Holm Oak), Quercus robur (Common Oak), Fraxinus excelsior (Ash)	5				Varied				Y	Good - group of self-sown young trees	Good	None	40+	C1
G6	Fraxinus excelsior (Ash), Ulmus procera (English Elm), Quercus ilex (Holm Oak)	5				Varied				Y	Good - group of self-sown young trees	Good	None	40+	C1
G7	Quercus robur (Common Oak), Fraxinus excelsior (Ash), Crataegus monogyna (Hawthorn)	5				Varied				Y	Good - group of self-sown young trees	Good	None	40+	C1

Project:		Hampton Wick Cricket Club				BS 5837 2012 Trees in relation to design, demolition and construction-recommendations			Surveyed by		NT				
Ref:		24-1711-TSS							Weather		Clear				
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Client:		Aros Architects													
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Tree No.	Species	Height (m)	Stem Dia. (mm)	N	E	S	W	Stems	Height of crown clearance	Age class	Physiological condition problems/comments	Structural condition	Preliminary management recommendations	Estimated remaining contribution years	BS category
G8	Ulmus procera (English Elm), Fraxinus excelsior (Ash)	10		Varied						Y	Good - group of self-sown young trees	Good	None	20-40	C1
G9	Crataegus monogyna (Hawthorn), Quercus ilex (Holm Oak), Fraxinus excelsior (Ash)	5		Varied						Y	Good - group of self-sown young trees	Good	None	40+	C1
G10	Quercus robur (Common Oak)	4		Varied						Y	Good - group of self-sown young trees	Good	None	40+	C1
G11	Sambucus nigra (Elder), Quercus ilex (Holm Oak)	3		Varied						Y	Good - group of self-sown young trees	Good	None	40+	C1
G12	Sambucus nigra (Elder), Quercus ilex (Holm Oak)	3		Varied						Y	Good - group of self-sown young trees	Good	None	40+	C1
G13	Sambucus nigra (Elder), Quercus ilex (Holm Oak)	3		Varied						Y	Good - group of self-sown young trees	Good	None	40+	C1

Appendix 2: Extract from the Cell Web product brochure

CellWeb

Tree Root Protection System



CellWeb Tree Root Protection System provides a flexible and permeable solution for protecting tree roots while creating a strong stable surface for traffic.



With increased urbanisation and more redevelopments of existing properties, the need to be mindful of the impact on the surrounding environment is more important than ever.

The demand for building site access, driveways and parking around existing trees can have a potentially fatal impact on the tree if carried out incorrectly. Tree preservation orders (TPO's) ensure that trees are not wilfully damaged. However the need for vehicle access over and around tree roots can still cause the following problems:

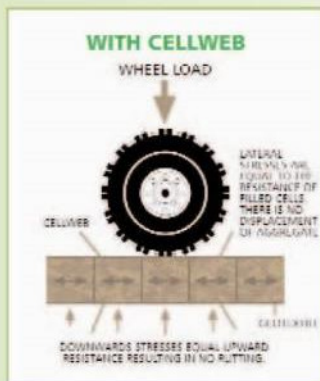
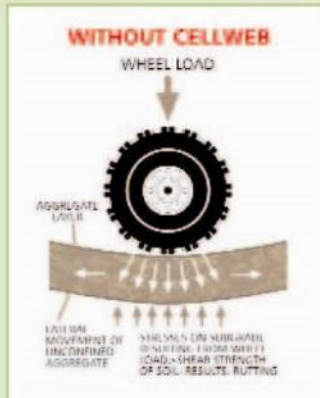


Problems:

- Compaction of subsoils (especially by construction traffic) causing oxygen and nutrient depletion
- Creating an impermeable surface that prevents water reaching the roots
- Changes in ground level and water table
- Damage caused during excavation
- Contamination of the subsoil

By using CellWeb Tree Root Protection System you can avoid these problems and ensure the tree's long-term future. BS 5837:1991 (revised 2005) and APN 1 provide information for the protection of trees during the construction process, and CellWeb is a well-established solution that conforms to these guidelines.

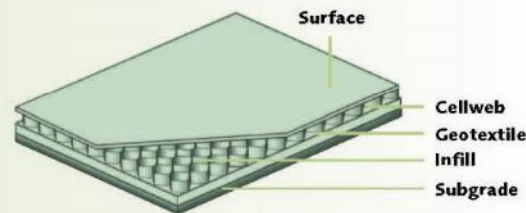
Product features



Cellweb's patented design with its unique cellular structure and perforated cell walls reduces the vertical load pressure on tree roots and prevents damage. With clean granular materials as infill, air and moisture can reach the roots to encourage healthy growth.

With no-dig solutions being the preferred option of most Arboricultural Consultants and Tree Officers, CellWeb is ideal as only the surface vegetation need be removed. As well as avoiding disruption to the roots this reduces installation time and saves money.

What's more CellWeb also cuts down the depth required for the sub base – in most cases by 50% for further cost savings. CellWeb also significantly reduces surface rutting, increasing the long-term performance of the finished surface.



Using CellWeb for tree root protection gives you these benefits:

- Reduced depth of excavation required
- Preventing the compaction of subsoils
- Preventing oxygen and nutrient depletion
- Environmentally sound
- Quick, easy and cost-effective installation
- Free technical support available

CellWeb gives you the cost-effectiveness you need at the same time as helping to preserve trees.

Geosynthetics Ltd is a leading dis

Please call
01455 617 139
or email sales@geosyn.co.uk
for further information.

Wide
product
range

Large
stock
holding

Next day
delivery



Access road for the National Lake District Parks Authority.
Site before construction pictured above.



CellWeb during installation.



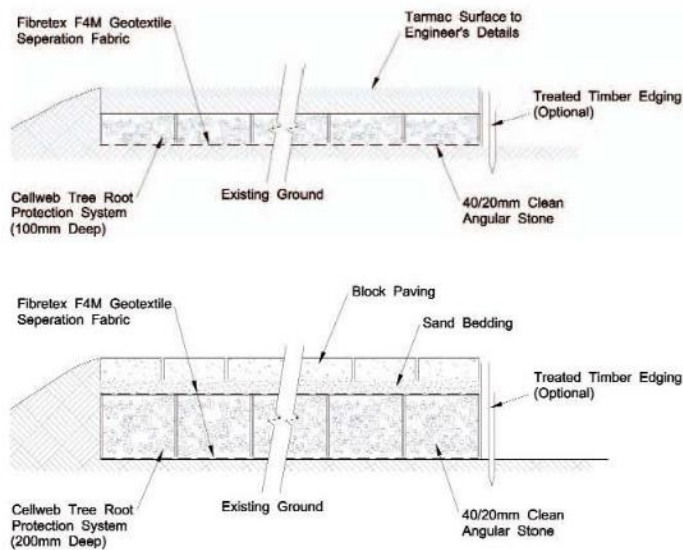
Final surfacing.

Final surfacing

The CellWeb Tree Root Protection is totally confined within the clean stone sub base, therefore you can choose whichever surface materials are most appropriate for your installation. Some materials are more suitable than others and serious consideration should be given to the porosity of the surface for continued healthy growth of the tree. An ideal surfacing are DuoBlocks: a grass reinforcement and gravel retention system. Geosynthetics can supply these systems for a visually attractive surface that also has the advantage of being fully porous.

Loose or bonded gravels can be used as an alternative hard landscaping and CellWeb can also be used with block paviors whose porous joints will permit moisture and air transfer to the roots. Where planning allows, porous asphalt is yet another possible surfacing treatment.

Call our sales office on 01455 617 139 for more information.



istributor of geosynthetic materials in the UK

Design service

Onsite support

See all products online at geosyn.co.uk



Geosynthetics

Appendix 3: Programme of Site Monitoring

Hampton Wick Cricket Club, Bushy Park Site Monitoring Form

To be completed by the named arboriculturist and emailed to the client and tree officer at the completion of each operation.

Arboriculturist.....

Client.....

Project Manager.....

Tree Officer.....

(The above to be filled in with names and contact numbers)

OPERATION	TIMING	DATE	COMMENTS
Pre-commencement meeting or contact with project/site manager.	Before any works or pre-works on site, including storage of materials		
Site visit to check tree protection barrier is as specified and in the correct location	Before construction begins		
Spot check of no dig hard surface within RPA of T9	During landscape phase		
Completion of construction	Once all building works are complete		