



**Blackhurst Park Walled Garden
Tennis Court and Greenhouse,
Tunbridge Wells**

**Arboricultural Impact Assessment and
Method Statement**

December 2023



Client	Nurgush Ltd		
Job name	Blackhurst Park Walled Garden Tennis Court and Greenhouse, Tunbridge Wells		
Report title	Arboricultural Impact Assessment and Method Statement		
File reference	20-1013-Report-03		
	Name	Position	Date
Author	Neil Taylor	Arboricultural Consultant	December 2023

Report Contents

1 Introduction.....	1
1.1 Site Description.....	1
1.2 Proposed Works.....	1
1.3 Aims of Study.....	1
2 Methodology.....	2
3 Assessment.....	3
3.1 Tree Character Groups.....	3
4 Arboricultural Impact Assessment (AIA).....	4
4.1 Methodology.....	4
4.2 Assessment.....	4
5 Arboricultural Method Statement (AMS).....	6
5.1 Methodology.....	6
5.2 Demolition within the RPA of Retained Trees.....	6
5.3 Construction within the RPA of Retained Trees.....	6
5.4 Services.....	7
5.5 Tree Protection.....	7
5.6 Site Monitoring and Supervision.....	7
6 Conclusion.....	8
7 Appendices.....	9

1 Introduction

1.1 Site Description

Blackhurst Park Walled Garden, Tunbridge Wells (the "site") is situated approximately a mile and a half east of the centre of Tunbridge Wells. The site currently comprises an area of woodland that is bound to the north by Pembury Road, to the east by further woodland, to the south by The Walled Garden and to the west by residential dwellings.

There are no Tree Preservation Orders (TPOs) on the site, however the site is within a conservation area.

1.2 Proposed Works

The construction of a tennis court to the northeast of the walled garden and a greenhouse within the walled garden are proposed. Works that are likely to affect retained trees include the construction of new hard surfaces and the movement of construction vehicles.

1.3 Aims of Study

To inform a planning application, Canopy Consultancy has been commissioned by Nurgush Ltd 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 23rd November 2023 and measurements 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 good condition and provide a degree of amenity to the wider landscape. The trees can be divided into three distinct character groups as follows:

1. The first character group includes the large mature trees found growing across site. The majority of the trees in this character group are in a good condition and provide significant amenity in the context of the wider landscape.
2. The second character group includes the medium sized, middle aged to mature trees found growing across the site. Though smaller in size, the majority of the trees in this character group are ash and suffering from ash die back caused by the fungus *Hymenoscyphus fraxineus*. As such, these trees have a limited life expectancy.
3. The third character group includes the small, younger trees found growing across the site as understory. The majority of the trees in this character group are in a reasonable condition but due to their size, are of limited amenity value in the context of the wider 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 20-1013-TPP-03). 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 20-1013-TPP-03.

The AIA considers existing site conditions and the effect that they may have on the development of the surveyed trees 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 20-1013-TPP-03, for the relationship between the proposed development and the trees on and adjacent to the site.

- The following trees will be removed to enable the proposed development:

T2	to enable the construction of a tennis court
T3	to enable the construction of a tennis court
T4	to enable the construction of a tennis court
T5	to enable the construction of a tennis court
T6	to enable the construction of a tennis court
T7	to enable the construction of a tennis court
T16	to enable the construction of a tennis court
T23	to allow construction access
T24	to enable the construction of a tennis court
Part of G3	to enable the construction of a tennis court

- There will be no demolition within the RPA of a retained tree.
- The following trees will be affected by the construction of the tennis court within the RPA:

T11, T12 and T21

The proposed hard surface will be porous and will be constructed in accordance with the 'no dig' principles outlined in Arboricultural Association's Guidance Note 12 and utilise a cellular confinement system such as Cell Web as a sub base. 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 demolition and construction machinery in close proximity to trees 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 be protected by a tree protection barrier as described in paragraph 5.5 below and shown on the accompanying TPP, drawing number 20-1013-TPP-03.

5.2 Demolition within the RPA of Retained Trees

There will be no demolition within the RPA of a retained tree.

5.3 Construction within the RPA of Retained Trees

Construction of Hard Surfaces

Construction of the tennis court that is within the RPA of T11, T12 and T21 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:

- Remove vegetation and fill hollows with sharp sand
- 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 asphalt wearing course

No materials or spoil is to be stored within the RPA of a retained tree.

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

No new underground services are required.

5.5 Tree Protection

All trees that are to be retained on the site will be protected by the use of a tree protection barrier erected in the location shown on the accompanying TPP, drawing number 20-1013-TPP-03. 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 demolition contractor and will only be removed once the construction phase is complete.

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. Site monitoring is to be at a frequency agreed and approved by the LPA. It will involve a site visit by the arboriculturist at selected intervals to ensure that the appropriate tree protection measures, as detailed in the approved drawings and method statements, are continually adhered to.

6 Conclusion

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


A total of nine individual trees and part of one group of trees will be removed to enable the proposed development. The trees to be removed are considered to be of low amenity value in the context of the wider area or have a limited life expectancy.


Through the specified construction methodologies and tree protection measures, 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 and construction methodologies specified within this report being correctly implemented.

7 Appendices

Appendix 1: Tree Survey Schedule


Project:				Blackhurst Park Walled Garden Environs							BS 5837 2012 Trees in relation to design, demolition and construction- recommendations			Surveyed by		NAT				
Ref:				20-1013-TSS-03							Weather		Clear							
Date:				23.11.23							Tagged		No							
Client:				Nurgush Ltd																
				Canopy Spread																
Tree No.	Species	Height (m)	DBH (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	Quercus cerris (Turkey Oak)	8	250	3	4	3	3	1	2	Y	Good	Good	None	40+	B2					
T2	Fraxinus excelsior (Ash)	14	400	0	5	7	1	1	8	MA	Good	Fair - Crown distorted due to group pressure.	None	20-40	C1					
T3	Fraxinus excelsior (Ash)	16	737	6	5	5	7	2	5	M	Fair - ash die back	Good	None	10-20	C1					
T4	Quercus robur (Common Oak)	10	340	4	1	5	5	1	1	MA	Good	Fair - Crown distorted due to group pressure.	None	20-40	C1					
T5	Malus (Apple)	4	250	1	0	4	5	1	0	MA	Fair	Poor - failed at root	None	10-20	C1					
T6	Salix caprea (Goat Willow)	10	366	4	2	4	5	4	3	MA	Good	Fair - Multiple stems below 1.5m.	None	10-20	C1					
T7	Salix caprea (Goat Willow)	10	200	3	1	2	4	1	4	MA	Good	Fair	None	10-20	C1					
T8	Ilex aquifolium (Holly)	8	320	3	3	3	3	1	0	MA	Good	Fair - Poor shape & form.	None	20-40	C1					
T9	Tilia X europaea (Common Lime)	16	500	4	4	4	4	1	2	M	Good - basal growth	Good	None	40+	B2					
T10	Ilex aquifolium (Holly)	7	273	2	2	2	2	3	1	MA	Good	Good	None	20-40	C1					
T11	Salix caprea (Goat Willow)	9	269	4	4	2	2	2	4	MA	Good	Fair - Stem divides at ground level.	None	10-20	C1					
T12	Salix caprea (Goat Willow)	10	310	5	4	0	0	1	1	MA	Good	Fair - partial root failure	None	10-20	C1					

Project:		Blackhurst Park Walled Garden Environs						BS 5837 2012 Trees in relation to design, demolition and construction- recommendations			Surveyed by		NAT				
Ref:		20-1013-TSS-03									Weather		Clear				
Date:		23.11.23									Tagged		No				
Client:		Nurgush Ltd															
				Canopy Spread													
Tree No.	Species	Height (m)	DBH (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		
T13	Fraxinus excelsior (Ash)	15	520	7	0	0	8	1	6	M	Good	Fair - Crown distorted due to group pressure.	None	20-40	C1		
T14	Fraxinus excelsior (Ash)	15	320	3	3	3	3	1	7	MA	Fair - Die back.	Fair - dead wood	None	10-20	C1		
T15	Quercus robur (Common Oak)	7	200	5	4	3	4	1	3	Y	Good	Good	None	40+	B2		
T16	Quercus robur (Common Oak)	12	350	5	1	1	4	1	4	MA	Good - poor form	Fair - Crown distorted due to group pressure.	None	20-40	C1		
T17	Fraxinus excelsior (Ash)	12	350	8	0	1	5	1	3	MA	Fair - Die back.	Fair - Poor shape & form.	None	10-20	C1		
T18	Fagus sylvatica (Beech)	18	940	5	5	5	4	1	4	M	Good	Good	None	40+	A2		
T19	Fagus sylvatica (Beech)	18	700	5	4	5	5	1	6	M	Good	Good	None	40+	A2		
T20	Tilia X europaea (Common Lime)	15	450	4	4	4	4	1	4	MA	Good - basal growth	Good	None	40+	B2		
T21	Quercus robur (Common Oak)	16	1100	7	7	9	7	1	4	M	Good	Good	None	40+	A2		
T22	Quercus robur (Common Oak)	14	570	7	7	6	6	1	5	MA	Good	Good	None	40+	A2		
T23	420+J77:V77	5	446	5	6	2	1	2	0	MA	Fair - Low vitality.	Poor - failed at root	None	10-20	C1		
T24	Malus (Apple)	5	360	4	5	3	3	1	3	M	Good	Good	None	10-20	C1		

Project:		Blackhurst Park Walled Garden Environs						BS 5837 2012 Trees in relation to design, demolition and construction- recommendations			Surveyed by		NAT				
Ref:		20-1013-TSS-03									Weather		Clear				
Date:		23.11.23									Tagged		No				
Client:		Nurgush Ltd															
				Canopy Spread													
Tree No.	Species	Height (m)	DBH (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		
T25	Fagus sylvatica (Beech)	14	635	4	6	5	5	5	2	MA	Fair - Squirrel damage in crown.	Fair - Multiple stems at ground level.	None	20-40	C1		
T26	oak (Quercus robur)	8	420	5	4	5	5		1	2	MA	Good - off site	Good	None	B2		
G1	Thuja plicata (Western Red Cedar)	14		Varied						MA	Good - group of close grown individuals forming colletive group	Fair - leggy stems	None	20-40	C1		
G2	Taxus baccata (Yew)	8		Varied						MA	Good - former hedge	Good	None	40+	C1		
G3	Acer pseudoplatanus (Sycamore), Ilex aquifolium (Holly), Salix caprea (Goat Willow), Prunus laurocerasus (Cherry Laurel), Sambucus nigra (Elder), Fraxinus excelsior (Ash)	10		Varied						Y	Good - woodland understorey group	Good	None	40+	C1		
G4	Fraxinus excelsior (Ash), Fagus sylvatica (Beech), Corylus avellana (Hazel)	18		Varied						MA	Fair - Die back. Squirrel damage in crown.	Good	None	10-20	C1		

Nurgush Ltd

Blackhurst Park Walled Garden Tennis Court and
Greenhouse, Tunbridge Wells

Project:	Blackhurst Park Walled Garden Environs				BS 5837 2012 Trees in relation to design, demolition and construction- recommendations			Surveyed by	NAT						
Ref:	20-1013-TSS-03							Weather	Clear						
Date:	23.11.23							Tagged	No						
Client:	Nurgush Ltd														
				Canopy Spread											
Tree No.	Species	Height (m)	DBH (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
G5	Taxus baccata Fastigiata (Yew)	5		Varied						MA	Good	Good	None	20-40	C1
G6	Taxus baccata Fastigiata (Yew)	5		Varied						MA	Good	Good	None	20-40	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:

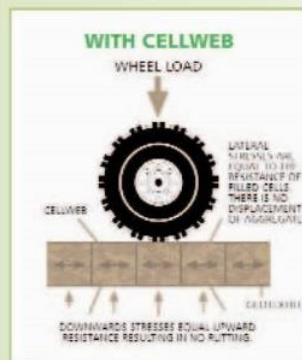
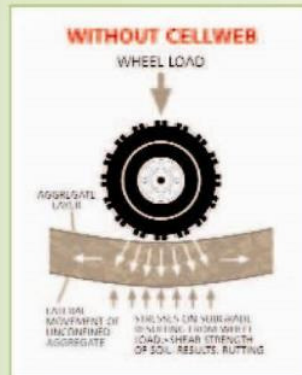
Problems:

- 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.

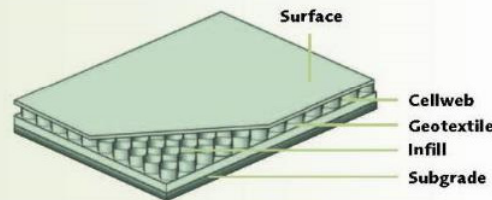
Product features



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.



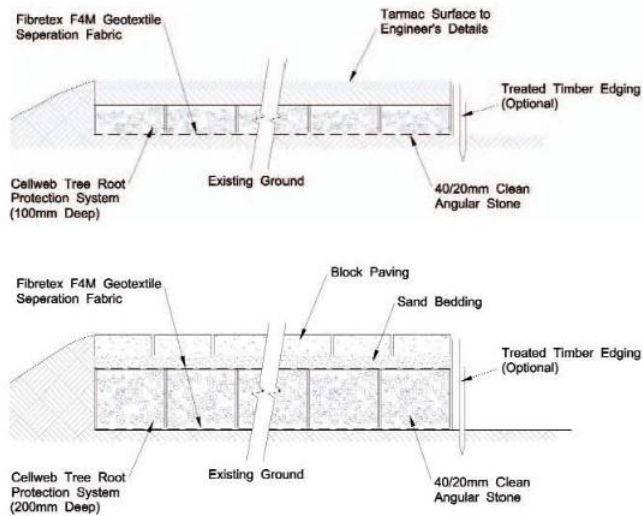
Final surfacing.

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

Blackhurst Park Walled Garden Tennis Court and Greenhouse,
Tunbridge Wells
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		
Spot check of protective fencing	Before construction begins		
Spot check of no dig construction within the RPA of T11, T12 and T21	During construction		
Completion of development	Once all construction activity has been completed		