



ARBORICULTURAL REPORT

**Hampshire House Courtyard
Hampshire Corporate Park
Chandlers Ford
SO53 3YX**

Date – 3rd June 2022

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AS 1	Existing Courtyard Plan (provided by client)
AS2	Photographs of the trees
AS3	Qualifications and Experience

1.0 INTRODUCTION

- 1.1 Arborsphere Ltd have been instructed to visually assess three trees within the courtyard of Hampshire House, Hampshire Corporate Park, Chancellors Ford.
- 1.2 In line with our written quotation and verbal instructions, information has been compiled in accordance with current best practice advice:
- To attend site and carry out a health and safety visual tree assessment from ground level only of the three trees indicated on the plan provided by email.
 - Giving our opinion on the impact/effect the proposed work (detailed on the plan provided) with recommendations on the future management of the retained tree and the likelihood of heave occurring due to the removal of two trees based on the information provided.
- 1.3 The data collected, and advice provided within this report are supplied in the interests of sound arboricultural management and provided to set out a possible course of tree management to avoid foreseeable tree issues in terms of potential conflicts with trees, for example having the ability to outgrow their locations. As such it should be clearly understood that we are arboricultural experts and therefore not qualified to provide detailed comment on structural matters or geotechnical matters. In the event that the advice received does not allow you to evaluate the risks for your purposes then we strongly advise that you contact a Structural or Geotechnical expert for further comment on buildings, structures, or soils.
- 1.4 This report is a best assessment of the trees and their setting at the time of inspection, as such any subsequent building works or changes to landform in the proximity of the trees could invalidate the advice given.

Figure 1: Showing the site location



Hampshire House Courtyard

- 1.5 The visual assessment of trees was completed from ground level only with the aid of binoculars, plastic headed mallet, and metal probe (as appropriate) to aid in the assessment. Whilst it is usually possible to assess a tree adequately from ground level there may be problems that are hidden or not visible from ground level in the tree canopy.
- 1.6 This assessment is valid for a period of 2 years from the date on the front cover of this report. Trees are dynamic living organisms and should be surveyed regularly especially where the public (third party), visitors or where property of value is present should part or the whole the tree fail. It should be noted that the tree would need a visual survey after periods of extreme weather or any significant change in their environment. It is recommended that tree detailed within this report is resurveyed by an appropriate expert within a 2-year time frame if it is retained.
- 1.7 The statements made in this report do not take account of the effects of extreme weather, or when there is any significant change in site conditions, pruning or other unspecified works, vandalism, or accident, whether physical, chemical or fire. Arborsphere Ltd cannot therefore accept any liability in connection with these factors, nor where prescribed work is not carried out in a correct and professional manner in accordance with current good practice. The authority of this report ceases at any stated time limit within or after one of the above events; whichever occurs first.
- 1.8 Arborsphere Ltd cannot therefore accept any liability in connection with these factors, nor where prescribed work is not carried out in a correct and professional manner in accordance with current good practice. The authority of this report ceases at any stated time limit within or after one of the above events; whichever occurs first.

2.0 SITE DESCRIPTION

- 2.1 Hampshire House is located within the Hampshire Corporate Park. It is the eastern most of the three buildings.
- 2.2 The corporate park as a whole is surrounded by trees or has many trees and soft landscaping breaking up the hardstanding areas of internal driveways, car parking and footpaths. The soft landscaping on the whole is understood to have been planted as part of the park when it was built in the 1980s.
- 2.3 The area of the site subject to this report is the internal courtyard to Hampshire House. There are two dominate trees (Weeping Willows), one self-set Holly and a number of coniferous species growing within the shrubs that form the courtyard soft landscaping.
- 2.4 As with the majority of the park, the courtyard is formed on a slope and there is a distinct level change. Immediately around the perimeter of the courtyard is a concrete path, block paver footpaths provide crossing areas that are separated by a mix of lawn and shrub beds with latter being dominated by ground covering Ivy.

- 2.5 As you enter the courtyard directly from the reception, there is already a level change internally, then as you enter the courtyard the ground level increases again towards the southeast.
- 2.6 The tree subject to this is located towards the northwest corner of the courtyard.
- 2.7 The online British Geological Map (1:50,000) indicates that Hampshire House and the rest of the Corporate Park is located on:
- 1:50 000 scale bedrock geology description:** Wittering Formation - Sand, Silt and Clay. Sedimentary Bedrock formed approximately 41 to 56 million years ago in the Palaeogene Period. Local environment previously dominated by shallow seas.
- 2.8 This would suggest that soils on site may have a limited volumetric change capacity, but this would need to be clarified by on site testing and appropriate geotechnical consultant. It should also be noted that London Clay is noted near to the site, this soil has the capacity for large volumetric change.

3.0 VISUAL TREE ASSESSMENT

- 3.1 A ground level visual tree survey was undertaken on 24th June 2022. The visual tree assessment exercise confirmed that there are 3 (three) trees growing in the courtyard.
- 3.2 An online check using the interactive mapping facility available on Eastleigh Borough Council's website indicates that the site is not in a Conservation Area and tree is not protected by a Tree Preservation Order (TPO) at the enquiry was made and the report issued.
- 3.3 Formal checks can be made with Eastleigh Borough Council to confirm the legal protection of the trees as required due to the Council being able to serve a TPO at any time.
- 3.4 **Tree 1 Weeping Willow – *Salix babylonica***
The tree is considered to be an early mature age class tree with a height of approximately 10m and a trunk diameter of 420mm at 1.5m above ground level.

The tree grows on a bank with a relatively straight trunk.

Ivy grows on the trunk.

There are numerous old pruning wounds throughout the crown which has been reduced in the past at a height of approximately 7m above ground level. The crown appeared to be in a good physiological state with typical minor deadwood throughout the crown.

This tree has the potential to significantly grow in both height and spread.

- 3.5 **Tree 2 Weeping Willow – *Salix babylonica***
The tree is considered to be an early mature age class tree with a height of approximately 9m and a trunk diameter of 370mm at 1.5m above ground level.

Several areas of the block paver paths are becoming dislodged which is likely to be as a result of the roots of the tree.

The tree grows towards the centre of the courtyard on the flat ground of the courtyard.

Ivy grows on the trunk.

There are numerous old pruning wounds throughout the crown which has been reduced in the past at a height of approximately 7m above ground level. The crown appeared to be in a good physiological state with typical minor deadwood throughout the crown, however the crown is weighted to the western side.

This tree has the potential to significantly grow in both height and spread.

3.6 **Tree 3 Common Holly – *Ilex Aquafolia***

The tree is considered to be a semi mature age class tree with a height of approximately 6m and a trunk diameter of 20, 60, 70 and 70mm at 1.5m above ground level.

This tree appears to be of natural self-set regeneration and not part of the original landscaping scheme.

The tree is multi stemmed at ground level.

The crown appeared to be in a good physiological state.

This tree has the potential to significantly grow in both height and spread.

4.0 **TREE REMOVAL AND POTENTIAL FOR HEAVE TO OCCUR**

4.1 Concern for the vegetation to have a causative effect in the heave of structures can result following the removal of vegetative material if certain conditions are present and this should be investigated further by the appropriate consultants. It is our understanding that for heave to occur:

- The soil into which the structure is founded must have the ability to shrink and swell depending on moisture content properties.
- The soil must have been built upon when the soil had already shown a persistent moisture deficit.
- The soil must be of a clay content with high plasticity.
- A tree (or another woody vegetation) was there long before the structure was built to provide the persistent moisture deficit in the soil.

4.2 With the above conditions, when the soil re wets due to woody vegetation being removed (which can take many years, the soils will swell back to its original state which would be above the foundation/floor level of the structure.

4.3 Without knowing what the site-specific soils are, what the plasticity index of the soil is, when the structure was constructed, what the foundations are it is impossible to state whether heave is a concern or not.

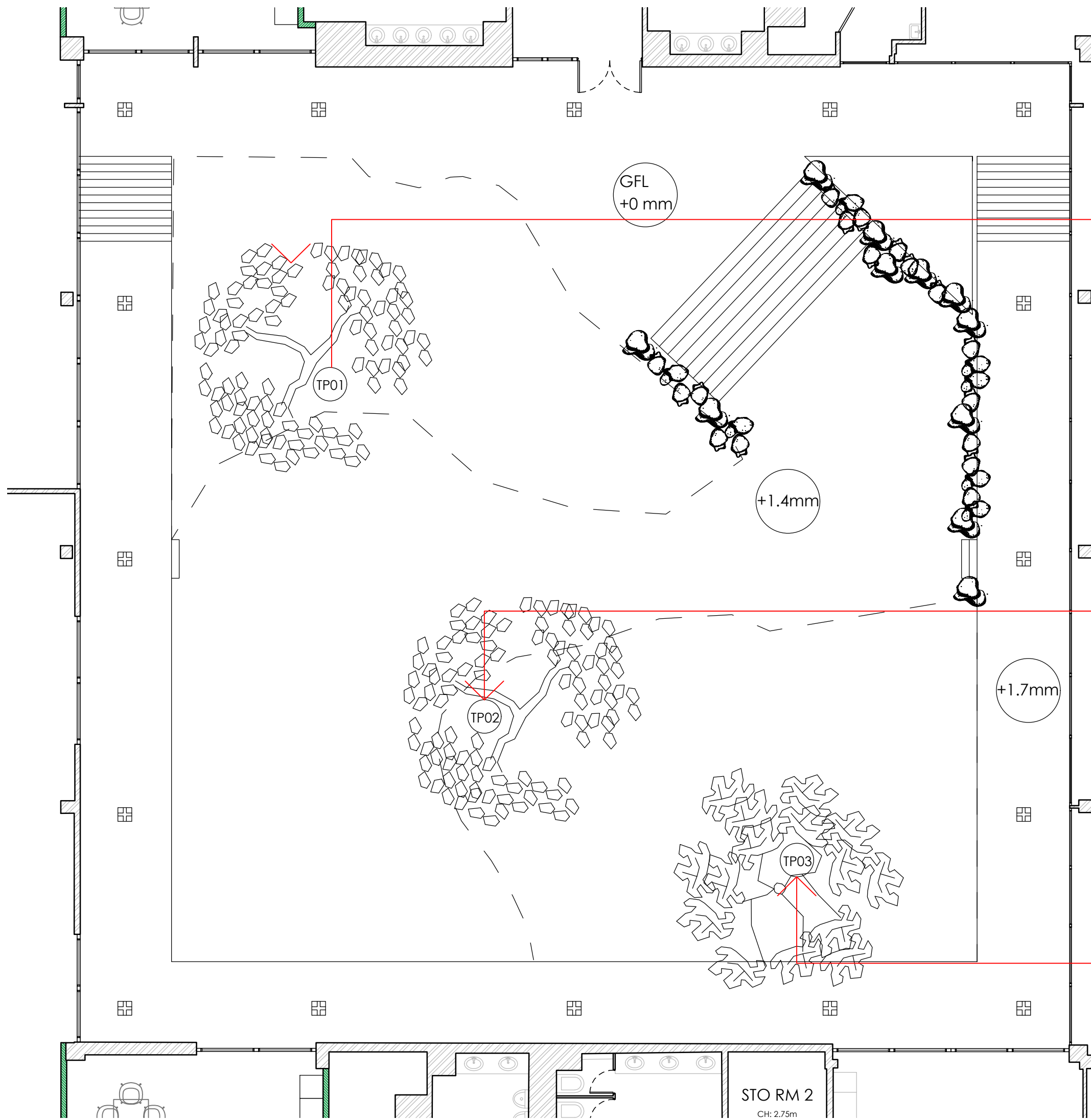
- 4.4 The foundation design and a structural engineer would need to confirm whether they were formed to account for the soil type, what was present on site before the corporate park was built and whether the foundation design accounts for tree and vegetative planting on site.
- 4.5 A desk-based assessment of publicly available geological records indicates that the site is likely to be on Wittering Formation - Sand, Silt and Clay, site specific investigations may be required to confirm this to further inform the potential impacts on site and to confirm the volumetric change capacity of the soils.
- 4.6 Willow are considered to be a high-water demanding tree species and Holly are considered to be a low water demanding tree species as defined by NHBC Standards Chapter 4.2.

5.0 CONCLUSION

- 5.1 Following a ground level Visual Tree Assessment of the three trees and all appear to be of sound physiological and structural condition, with no overtly evident significant defects or disorders noted. The two Willows have been reduced in the past and this would appear to have been repeated on a cyclical basis.
- 5.2 At this time it would seem reasonable to assume that the two Willows were planted as part of the courtyard landscaping works at the time the corporate park was built i.e., the trees are 30-40years old.
- 5.3 All three trees are within influencing distance of the walls of the building. Future growth of the trees means that on-going management of the trees would be required.
- 5.4 Due to the slope and the way the building has been constructed (the western side of the building has a ground floor level lower than the tree level; it is thought that the foundation would be deeper than root growth butt this would need to be confirmed.
- 5.5 Removing the Willow T1 is unlikely to cause heave with the known information to date, the soil type is of a reasonably low clay content and the tree would appear to have been planted as part of the landscaping of the corporate park rather than being present before the park was built although it is unknown what was present on site prior to the park being built.
- 5.6 If the Willow T2 is retained, it is our opinion that the tree will need to be cyclically pruned as has occurred historically to maintain and retain a relatively small crown.
- 5.7 The removal of the Holly T3, will not be a cause for concern as this tree is small and younger than the building.
- 5.8 It is our understanding that heave can only happen if the structure was built after the tree had the capacity to create a persistent moisture deficit, i.e., the building is younger than the tree. It takes a number of years for a persistent soil moisture deficit to develop, and it usually takes a number of years for that deficit to reduce through natural re-wetting and for the soil to expand back to its original condition at field capacity (its maximum water content). For that

reason, heave usually occurs over a number of years, it is progressive, and, for all practical purposes, it is beyond control once it begins unless anti-heave precautions have been designed into the structure. In this regard, Building Research Establishment Digest 412 Desiccation in clay soils (1996) details a number of methods for estimating ground heave following tree removal (www.bre.co.uk). Using this guidance, a structural engineer should be able to clarify the risk of heave through further analysis, such calculations are beyond the expertise of arboriculturists.

AS1



EXISTING COURTYARD TREE PLAN
1:100



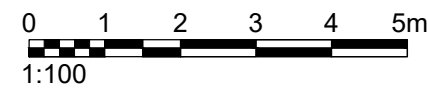
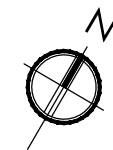
TP01



TP02



TP03



NOTES

TP01
This tree is located on your immediate right when you enter the courtyard space. It dominates the bottom right region of the site. We believe that disposing of the tree will increase the sunlight potential of the area and provide the user with more freedom within the space.

TP02
This tree is located near the centre of the courtyard's first level. We believe that preserving this tree is the best option - this tree should be kept as it is on the most level part of the courtyard. It does not interfere too much with the direct sunlight to the space as it is not as imposing as the first tree. The tree is more manageable and in effect will provide for a more aesthetic and natural symbiosis with the proposed designs within the space

TP03
This tree is located by the top left of the courtyard's first level. We believe that this tree should be removed because it is too close to the building and prevents natural light from permeating to the office spaces behind it. The vegetation species is not of inkeeping.

X EXISTING COURTYARD TREE PLAN 31.01.22 TA

Rev	Revision	Date	By
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NOTES

All setting out dimensions and points will be found on the construction issue drawings.

All dimensions to be checked on site prior to commencement of works. Do not scale this drawing.

Issue **PRELIMINARY**

Project
HAMPSHIRE HOUSE, TEMPLAR WAY, SO53 3RY

Detail
EXISTING COURTYARD TREE PLAN

Scale
1:100 @ A2

Date
31.01.22

Drawing N°
GD587/GA/140

Revision
X



Photograph 1: Showing tree 1



Photograph 2: Showing tree 2



Photograph 3: Showing tree 3

Mr Stefan Rose
Arboricultural Consultant of Arborsphere Ltd
Bsc (Hons), Tech Cert (Arbor.A), TechArborA



Stefan Rose is an Arboricultural Consultant based in Hampshire and Director of Arborsphere Ltd. He holds the following qualifications relevant to arboriculture:

- Technicians Certificate in Arboriculture (Arboricultural Association)
- Professional Tree Inspection Certificate (Lantra Awards Ltd)
- Tree Surgery for Craftsmen (City and Guilds)

Professional Memberships:

- Technical member of the Arboricultural Association
- Member of the Royal Forestry Society

Stefan started Arborsphere Ltd in December 2011 and has been running the consultancy practice successfully for 8 years now with over 20yrs within the arboricultural industry, working with many Clients across the South of England carrying out a range of arboricultural services from development site tree surveys and site supervision to health and safety tree inspections.

Prior to starting his own company he was working as a Senior Consultant for CBA Trees based in West End Hampshire from 1998 to 2011 assessing a wide range of arboricultural issues for projects across the UK and maintains a directorate level of working with them currently. The main focus related to carrying out tree surveys in accordance with the recommendations within BS5837:2005/12, looking at and advising on development sites in preparation for planning as well as the extensive involvement with major projects carrying out site monitoring and providing on going arboricultural advice. Work for smaller/private client was also an important part of his work enabling them to extend and improve homes in close proximity to trees.

Within his time at CBA Trees Stefan also undertook work as a locum Tree Officer for Eastleigh Borough Council, Fareham Borough Council, Havant Borough Council, Southampton City Council, Rushmoor Borough Council and most recently Hart District Council where he undertook the task of reviewing the status of Tree Preservation Orders, assessing tree work and planning applications. This provided him with a wide range of experience in respect of trees, the law and planning issues surrounding trees.

Stefan trained whilst in the position of Tree Surveyor with CBA Trees at both Merrist Wood (1998 and 2001 – 2002) and with Tree Life Training to continue this professional development. He holds the Professional Tree Inspectors Certificate.

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