



Merewood
Arboricultural Consultancy Services

**Arboricultural Implications
Assessment
for a proposed development
at
64 Copsewood Way
Northwood
HA6 2TZ**

**Client: Rajesh Shah
64 Copsewood Way
Northwood
HA6 2TZ**

Prepared by
Simon Hawkins Dip Arb L6 (ABC) N.D Arbor M. Arbor. A.

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Merewood.
Gregory Road, Hedgerley, Bucks. SL2 3XW
M. 07784 915944 T. 01753 647236
E. simon.hawkins@hotmail.co.uk
VAT No: 990 9313 9

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1.0 Introduction

1.1 Instruction

- 1.1.1 I am instructed by Rajesh Shah to undertake an Arboricultural Survey at 64 Copsewood Way, Northwood. I am also instructed to assess the likely impact of development proposals and produce an Arboricultural Method Statement detailing how trees shall be protected from the proposed construction activity.
- 1.1.2 The proposals seek to develop the site, including the demolition of the existing house and the erection of a replacement detached dwelling.

1.2 The Site

- 1.2.1 64 Copsewood Way Northwood is a detached dwelling positioned on the west side of Copsewood Way. The house is served by a single entrance driveway that leads off Copsewood Way. The property has a front and rear garden planted with mature trees and shrubs.
- 1.2.2 The property is located to the south-west of Northwood village centre. Copsewood Way forms part of the Copsewood Estate to the south-west of Northwood village centre and to the east of Ducks Hill Road. The surrounding area has a residential feel about it with detached houses, gardens and established landscaping.
- 1.2.3 The topography of the site is more or less level.
- 1.2.4 It has been established at the time of the survey that the property is covered by an area Tree Preservation Order (TPO 399). If any works to protected trees are proposed, other than the removal of dead wood or the implementation of operations agreed as part of a formal planning consent, a formal application must be submitted and approved by the Local Planning Authority before such works can be carried out.

1.3 Survey date

- 1.3.1 The trees at 64 Copsewood Way, Northwood. were surveyed on Thursday, June 2, 2021.

1.4 Scope and Purpose of the report

- 1.4.1 The tree survey and assessment of existing trees has been carried out in accordance with guidance contained within British Standard B.S. 5837:2012 'Trees in relation to design, demolition and construction - Recommendations' (hereafter referred to as B.S. 5837). The guidelines set out a structured assessment methodology to assist in determining which trees would be deemed either as being suitable or unsuitable for retention.

1.4.2 The purpose of this report therefore is therefore to firstly, present the results of an assessment of the existing trees' arboricultural value, based on their current condition and quality and to secondly, provide an assessment of impact arising from the development of the site.

1.4.3 The report is designed to support a planning application for development proposals at the above site. The survey has therefore focused on any trees present within or bordering the site that may potentially be affected by the future proposals or will pose a constraint to any proposed development

1.5 Documents referred to

1.5.1 The tree survey and this report have been prepared with reference to the following documents:
The site topographical survey
The proposed site layout plan
The schedule of tree constraints (appendix 1)
The plan of tree constraints
The Arboricultural Method Statement prepared by MACS dated 01/08/22 (see separate document)

2.0 Results

2.1 Results summary

2.1.1 Appendix 1 presents details of the individual trees and groups found during the assessment including heights, stem diameters and rpa's, crown spread (normally measured to cardinal points unless otherwise indicated), an indication of physiological and structural condition, age class, any appropriate management recommendations, estimated life expectancy and a BS5837 category of quality.

2.1.2 The survey has revealed that of the 3 trees surveyed, two are category B and one is a category 'C' tree.

3.0 Arboricultural Impact Assessment

3.1 Overview

Development activity	Potential impact	Consequence	Mitigation
Delivery of materials to the site Plant machinery accessing the site	Soil compaction and erosion	Root damage and die back limiting the ability of the tree to take up water and nutrients	Create construction exclusion zones (CEZ's) by the erection of barrier fencing Establish a cellular confinement system above ground level to form a 'no—dig' driveway
Storage of materials on the site	Leachate from chemical based products contaminating soil	Roots die back and soil becomes contaminated inhibiting future root recovery	Provide a dedicated area for the storage of materials following delivery away from root protection areas.

Distribution of materials about the site	Damage to branches or bark due to careless handling	Wounding of the bark can lead to infection from wood decay pathogens	Erect barrier fencing that takes account of branch spread as well as roots
Creation of parking spaces	Severing of roots	Root damage and die back limiting the ability of the tree to take up water and nutrients	Use a cellular confinement product to form a 'no—dig' driveway
Mixing of cement, plaster, etc.	Leachate from chemical based products contaminating soil	Roots die back and soil becomes contaminated inhibiting future root recovery	Provide a dedicated area for mortar mixing (etc.) with a suitably thick plastic (impermeable) membrane to prevent chemicals leaching. Provide a spare reservoir of water close by to wash away spillages
Contractor parking	Soil compaction and erosion	Root damage and die back limiting the ability of the tree to take up water and nutrients	Provide dedicated area for contractor parking away from RPA's

3.2 Proposed tree works

- 3.2.1 The proposed development does not require the removal of any trees in order to facilitate the development.

3.3 Changes to soil levels

- 3.3.1 Soil stripping (the removal of the topsoil layer) is a pre-commencement activity that has the potential to impact on retained trees. Topsoil within RPA's is to remain undisturbed as far as possible to maintain the health of the trees. Removed topsoil is to be held temporarily near to the entrance of the site where it can be collected and removed, unless being re-used for the backfill of the swimming pool (see 3.5). No topsoil storage is to be allowed within the fenced off root protection areas.

3.4 The Impact of Movement around the Site

- 3.4.1 The movement of plant machinery, materials and pedestrians has the potential to cause soil compaction and erosion, which can be damaging to surface roots.
- 3.4.2 To ensure the trees are protected from any potential damage, they will be fenced off to prevent any movement within the fenced off area.
- 3.4.3 The tree protection plan (see method statement) shows where fencing is to be erected prior to the commencement of works on the site.

The installation of protective fencing shall be addressed by the Arboricultural Method Statement section 3.3

3.5 The Impact of Demolition

- 3.5.1 The proposals require the demolition of the existing house before other works can begin on the site. The movement of plant machinery around the building and the movement of hardcore arisings to a suitable holding area has the potential to cause soil compaction and branch damage.
- 3.5.2 The existing swimming pool is to be removed and backfilled. It will be possible to remove the existing structure without needing to bring machinery any closer to trees, so the impact of this will not affect the nearby oak tree (T1).
- 3.5.3 The backfilling of the pool needs to be undertaken with an approach that recreates the surrounding soil profiles. Subsoil from the excavation of the new house foundation (normally too anaerobic for tree root growth) is to be placed in the bottom of the pit created by the removal of the pool.
- 3.5.4 The upper 600mm of soil placed in the pool pit is to be topsoil. This can include the upper layers of topsoil stripped as part of the foundation excavation, provided the soil has been put to one side, separate from the lower soil layers.

The excavation and backfilling of the swimming pool is addressed in the Arboricultural Method Statement – section 3.4.

- 3.5.5 The tree protection plan shows that there is enough space for machinery to be able to manoeuvre around the trees without coming into contact with the crown spreads of trees.

3.6 The Impact of Excavations

- 3.6.1 The footprint of the new house marginally overlaps the RPA of the oak (T1) at the south west corner of the house. Excavating the foundation for the house will have a very marginal effect on the tree, so small as to be insignificant.
- 3.6.2 The proposed patio is sited more substantially within the RPA of the oak (T1). Taking account of the existing layout, the swimming pool accounts for at least some of this area, as the swimming pool would have prevented the development of roots in this direction, so the actual impact of building a patio would be reduced to a small extent
- 3.6.3 The creation of hard surfacing for the patio at the rear would cause the severing of roots as a result of excavations, meaning that these roots would no longer serve the trees. Water percolation is also affected, reducing water availability to roots which could result in the decline and reduced life long term for the oak tree (T1).
- 3.6.4 To mitigate this a cellular confinement system is to be installed in order to leave roots intact. The surface of the patio is to be permeable to allow water to

continue to be made available to the roots.

The installation of the cellular confinement system is addressed in the Arboricultural Method Statement – section 4.2

3.7 The Impact of Construction Site Activities

- 3.7.1 The site working area will be established on the proposed hard surfacing areas to the front of the new house.
- 3.7.2 Deliveries will be made by means of the new driveway. Materials are to be set down at the front of the site where they can either remain in situ until needed, moved to a more appropriate area or be brought under cover if necessary.
- 3.7.3 The hard standing area at the front of the new house is to be used for the storage of cement and plaster bags hazardous chemicals and petrochemical products and will also provide a suitable area for mortar mixing in line with COSHH regulations to ensure there is no detrimental effect on trees.

The mixing of cement and cleaning of tools is addressed in the Arboricultural Method Statement – section 3.6.

- 3.7.4 The tree protection plan (TPP) shows where materials storage can be located as well as spaces for contractor parking. There is clearly ample space for this in the area to the side of the site.
- 3.7.5 The cellular confinement system will also provide a protective surface to use during the construction period. In order to preserve the integrity of the driveway at this time, additional ground protection mats will need to be paced over the cellular confinement product.

3.8 The Impact of Trees on the Development

- 3.8.1 The new houses are not affected by the existing mature trees and will be set back far enough to allow high light levels, no overshadowing and a good interface with those trees.

3.9 Issues to be addressed by the Method Statement

- 3.9.1 The Method Statement will address the following issues
 - Installation of protective fencing
 - Installation of the cellular confinement system
 - Building site activities
 - Cement mixing

3.10 Summary

- 3.10.1 The proposed house can be built with minimal impact to the surrounds. The

building work does not require the removal of any trees and full provision can be made for the protection of all trees to remain in order to ensure their continued viability following the completion of construction.

A handwritten signature in black ink, appearing to read 'SH', located below the text paragraph.

Simon Hawkins Dip Arb L6 (ABC), ND Arb, MArborA

Appendix 1 - Tree Survey Methodology

1. The ground level survey of the trees has been carried out in accordance with the criteria set out in Chapter 4 of B.S 5837. The survey has recorded information relating to all those trees within the site and those adjacent to the site which may be of influence on the proposals.
2. The purpose of this report is to modify the recommendation found in the tree constraints schedule for the future use of this site. Where applicable, trees with significant defects have been highlighted and appropriate remedial works have been recommended. However, this report should not be seen as a substitute for a full *Safety Survey* or *Management Plan* which are specifically designed to minimise risk and liability associated with the responsibility for trees. No climbed inspections or specialist decay detection were undertaken.
3. Evaluation of tree condition within the assessment applies to the date of survey and cannot be assumed to remain unchanged. It may be necessary to review these within 12 months in accordance with sound arboricultural practice as recommended by the National Trees Safety Group guidance 'Common Sense Risk Management for Trees'.
4. Trees have been divided into one of four categories based on Table 1 of B.S.5837, 'Cascade chart for tree quality assessment'. For a tree to qualify under any given category it should fall within the scope of that category's definition.

Category U - Red	Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.
Category A - Green	Those trees of the highest 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 - Blue	Trees of moderate to high quality and value: in such a condition as to be able to make a significant contribution (a minimum of 20 years is suggested).
Category C - Grey	Trees 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 of below 150mm
Subcategory 1 concerns mainly arboricultural values, how good a specimen is in terms of form and physiological condition; the value of a tree as a component in a group or in a formal or semi-formal arboricultural feature such as an avenue.	
Subcategory 2 concerns mainly landscape values and considers the importance of a tree or group of trees as an arboricultural or landscape feature. Trees present in larger numbers, such as woodlands for example may attract a higher rating than they would as individuals because of their collective value.	
Subcategory 3 concerns mainly cultural values including conservation, historical, commemorative, or other value such as veteran or wood pasture.	

5. RPA's of single stemmed trees are calculated according to the following formula:
RPA radius = 12 x stem diameter (measured at 1.5m above ground level)
6. Where a tree has more than one stem, the equivalent single stem diameter is usually recorded. This is calculated by adding the squares of the stems and then finding the square root of the total. The radius of the RPA is then calculated by multiplying the equivalent stem diameter by 12 (ref B.S. 5837:2012 para 4.6.1). Where access is restricted an estimate of the stem diameter is provided and this is indicated in the appropriate column.

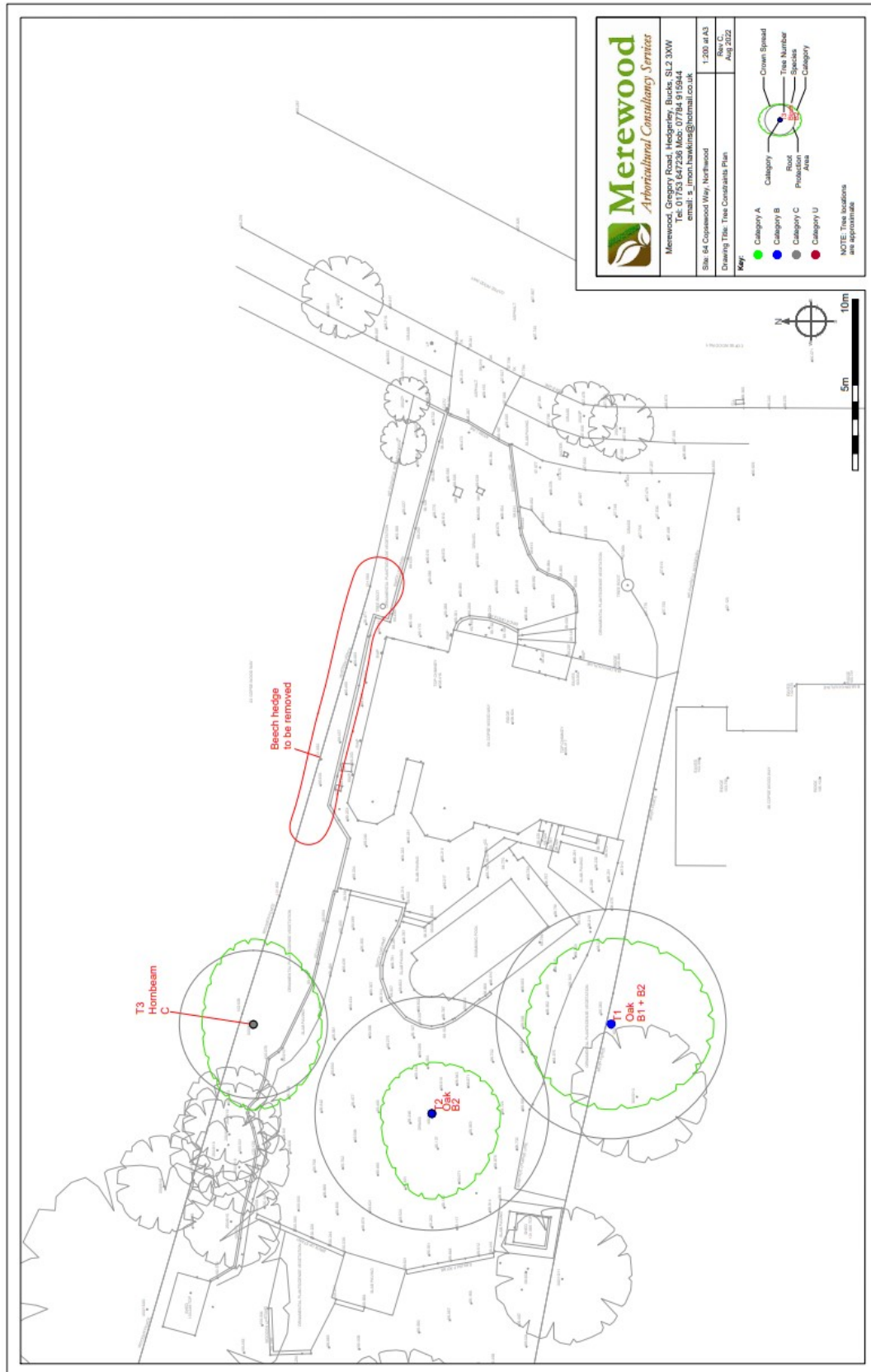
Appendix 2

Schedule of tree constraints

Tree no	Species	Height	Stem diameter	Crown spread				Physiological condition	Structural condition	Age	Observations/ Management recommendations	Life expectancy	Category
				North	South	East	West						
T1	Oak	17	560	5	6	5	5	G	G	M		40+	B1 + B2
T2	Oak	17	570	3	4	3	5	G	G	M	Tree previously reduced with dense epicormic sprouts resulting	40+	B2
T3	Hornbeam	10	260 250	3	4	5	5	G	G	M	Tree is to be coppiced	40+	C

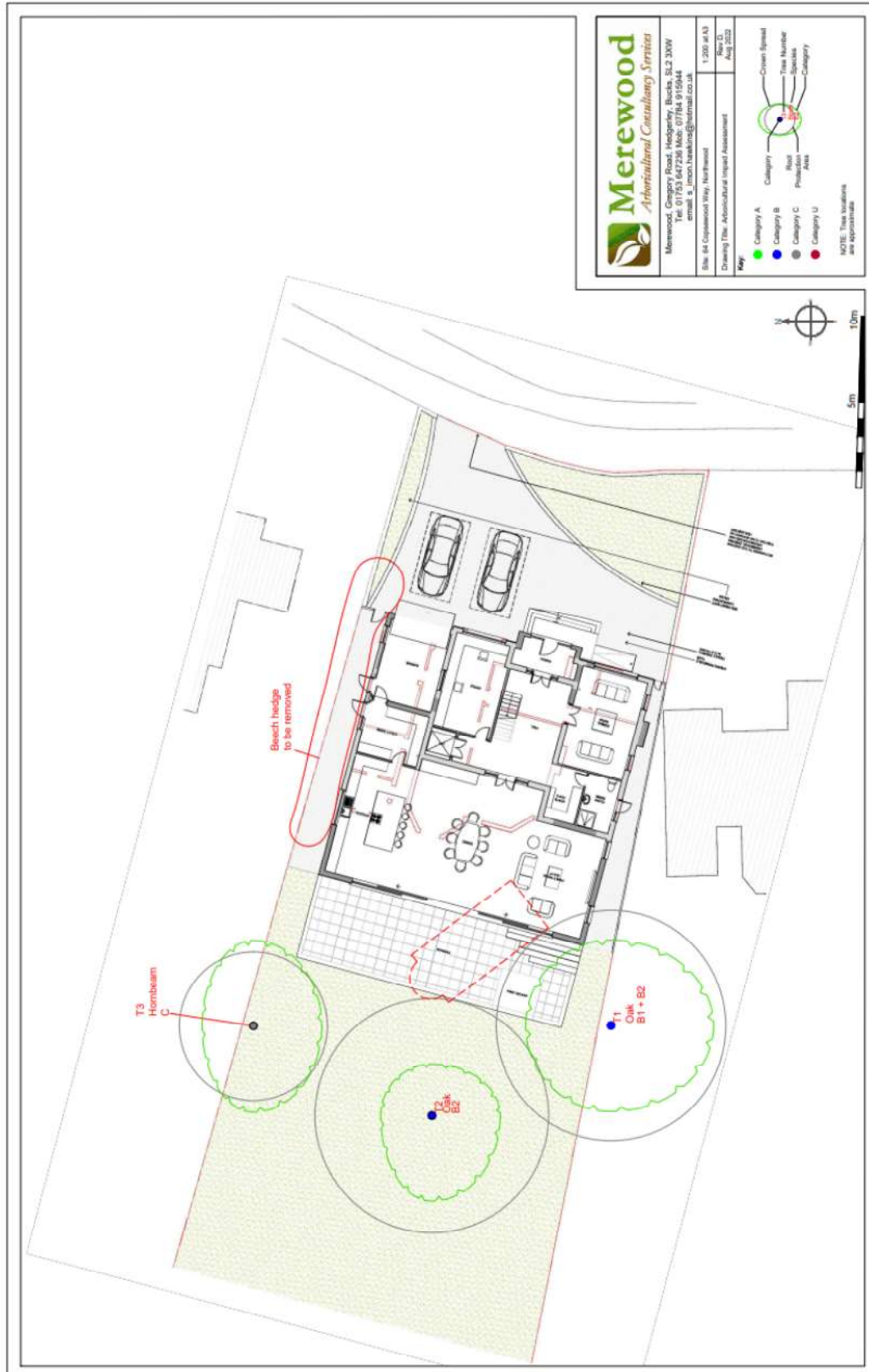
Appendix 3

Plan of Tree Constraints



Appendix 4

Impact Assessment Plan



Appendix 5

Qualifications and experience

- I am Simon Hawkins, proprietor of Merewood Arboricultural Consultancy Services.
- I hold the Level 6 Professional Diploma in Arboriculture. This is the highest level of award in the industry.
- I hold the National Diploma in Arboriculture which I attained in 1987. I have studied and practised Arboriculture for over 30 years, during which time I have been involved with both the private and public sector.
- I hold the LANTRA award for professional tree inspections
- I hold professional member status of the Arboricultural Association (M. Arbor A.), recognised as a higher vocational level within the industry.
- I have undertaken an intensive course in the principles and application of VTA Visual Tree Assessment. I have been assessed and found to have attained the advanced level of technical competence of a VTA Practitioner with Elite Training.
- I have over 18 years' experience working in the public sector, during which time I have dealt with all aspects of trees and development in the town planning context, within the inner city; in a greater London Borough; and in the Green Belt. Typically, I have worked with planners, developers, architects and other professionals in the construction industry in which I provide advice and assistance in dealing with arboricultural matters.
- I have appeared at numerous appeals, informal hearings and public enquiries to make formal representations. I have also appeared as an expert witness in court with regard to breaches of a Tree Preservations Order.