Merewood
Arboricultural Consultancy Services

Arboricultural ASSOCIATION
Professional Member
No. PRO 1047

Arboricultural Implications Assessment for a proposed development at 10 -14 The Green West Drayton Middx HP9 2DG Rev A

Client: M E Rumble and Sons Ltd.

Prepared by
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1.0 Introduction

1.1 Instruction

1.1.1 I am instructed by M E Rumble and Sons Ltd to undertake an Arboricultural Survey at 10 -14 The Green West Drayton. 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 are for the development of the site including the erection of a two storey building containing two houses and conversion of the existing two storey Bakehouse building No.14B.

1.2 The Site

1.2.1 10 -14 The Green includes a terrace of houses fronting The Green on the north-west side with further outbuildings to the rear which are accessed by way of a private road leading down the side of the buildings. The plot is roughly rectangular in shape.

1.2.2 The site is located to the south of West Drayton town centre. The site is bordered by The Green to the east side, a medical centre to the north, a church to the south and by other adjacent residential properties on all other sides. The topography of the site is more or less level.

1.2.3 It has been established that the property is situated within a designated Conservation Area. Under the provisions of the Town and Country Planning Act 1990 (Tree Regulations 2012) Section 211, any tree in excess of 75mm diameter (measured 1.5m from ground level), is protected. Prior to working any such tree in a Conservation Area (including pruning or felling), it is necessary to give a six week notice of intent to carry out the work to the Local Planning Authority.

1.3 Survey date

1.3.1 The trees at 10 -14 The Green West Drayton were surveyed on September 8th, 2022.

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 proposed site layout plan
The schedule of tree constraints (appendix 1)
The plan of tree constraints (appendix 2)
Impact Assessment Plan (appendix 3)
The Arboricultural Method Statement

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 root protection areas (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 that of the 4 trees surveyed, 0 are category 'A'3 are category 'B'; 0 are category 'C' and 1 is category 'U'.

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 Provide viable ground protection to prevent compaction and erosion of soil
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	Ensure protective fencing takes account of the crown spreads of trees. Preventative pruning of low branches
Foundation excavations Provision of services requiring excavation	Severing of roots	Root damage and die back limiting the ability of the tree to take up water and nutrients. Crown die back Death of the tree	Use specialized foundation techniques that minimise soil disturbance and leaching of chemicals into the surrounding soil.
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 contaminating the surrounding soil 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 Cover the ground with suitable ground protection mats to distribute weight

3.2 Proposed tree works

3.2.1 The proposals do not require the removal of any trees, nor is any tree surgery needed in order to implement the scheme.

3.3 Changes to soil levels

3.3.1 There are no changes to soil levels proposed within the RPA's of trees to be retained.

3.4 The Impact of Movement around the Site

3.4.1 The tree protection plan (see method statement) shows where fencing is to be erected prior to the commencement of works on the site. The fencing in places is distal to the RPA's, exceeding the requirements of B.S. 5837.

The erection of protective fencing barriers and the recommended type of barrier is addressed in the Arboricultural Method Statement – section 3.2.

3.4.2 The tree protection plan (see method statement) shows that there is ample space for the delivery and temporary storage of materials about the site.

3.4.3 Where the working areas overlap the RPA's and protective barriers cannot be used to their full extent, ground protection will be used to provide a protective layer for plant machinery to be able to cross over.

The installation of ground protection is addressed in the Arboricultural Method Statement – section 3.3.

3.4.4 Where the proposed pathways overlap root protection areas a 'no dig' system will be installed as a means to protect the upper layers of soil and to minimise the impact of such activity. The 'no dig' system is to be installed at the end of the development once all, other work has been concluded and fencing and ground protection measures are removed.

The installation of the no-dig system is addressed in the Arboricultural Method Statement – section 4.2.

3.5 The Impact of Excavations

3.5.1 The layout results in some minor infringements onto the RPA's of the trees. For example there is a very slight infringement onto the RPA of T1, amounting to 0.25m^2, or 5% of the total RPA.

3.5.2 The proposed block will impact onto the Lawson cypress (T2) which has an RPA that totals 268.2m^2. The encroachment would amount to 23.5m^2 or 9% of the overall RPA.

3.5.3 The proposed block will also impact onto the sycamore (T3) which has an RPA that totals 446.3m^2. The encroachment would amount to 29m^2 or 6.5% of the overall RPA.

3.5.4 In order to minimise the potential harm that might be caused to the trees, the use of a mini pile foundation is proposed, one that has been designed to keep the structure above ground level, minimising the actual volume of the soil affected by the foundation.

3.5.5 The use of piles is condoned in the British Standard 5837:2012 which states at 7.5.1 that '*The use of traditional strip foundations can result in extensive root loss and should be avoided. The insertion of specially engineered structures within RPA's may be justified if this enables retention of a good quality tree that would otherwise be lost (usually categories A or B). Designs for foundations that would minimize adverse impact on trees should include particular attention to existing level, proposed finished levels and cross sectional details. In order to arrive at a suitable solution, site specific and specialist advice regarding foundation design should be sought from the project arboriculturist and an engineer.'*

3.5.6 The Standard goes on to state at 7.5.2 that '*Root damage may be minimised by using:*

- *piles, with site investigation used to determine their optimal location whilst*

avoiding damage to roots important for the stability of the tree, by means of hand tools or compressed air soil displacement, to a minimum depth of 600mm;

3.5.7 Service routes currently connecting to the existing buildings can be reused for the existing building. There will therefore not be any impact on surrounding trees arising from this.

3.5.8 However, where new service runs are needed to serve the new block, these will travel through the RPA's of the retained trees. In order to overcome the issue of potential damage caused by this, it is recommended that a trenchless boring technique is used to install the service trenches.

The installation of services is addressed in the Arboricultural Method Statement – section 3.4.

3.6 The Impact of Construction Site Activities

3.6.1 Site facilities will be established away from the RPA's of the retained trees. There is plenty of space at the side of the site for this to be possible particularly where the existing hard surfaced areas are utilized.

3.6.2 Deliveries will be made by means of the driveway off The Green. Materials are to be set down in a designated area where they can either remain in situ until needed, moved to a more appropriate area or be brought under cover if necessary.

3.6.3 A specifically designated area 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 3.7.

3.7 Issues to be addressed by the Method Statement

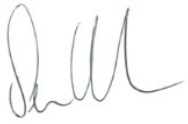
3.7.1 The Method Statement will address the following issues

- Tree removal
- Installation of protective fencing
- Building site activities
- Cement mixing

3.8 Summary

3.8.1 The proposed new building can be built with minimal impact to the surrounds, including the small incursion onto the RPA's of the cypress (T2) and the sycamore (T3). Provision can be made for the protection of the significant

trees to remain in order to ensure their continued viability following the completion of construction.



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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.

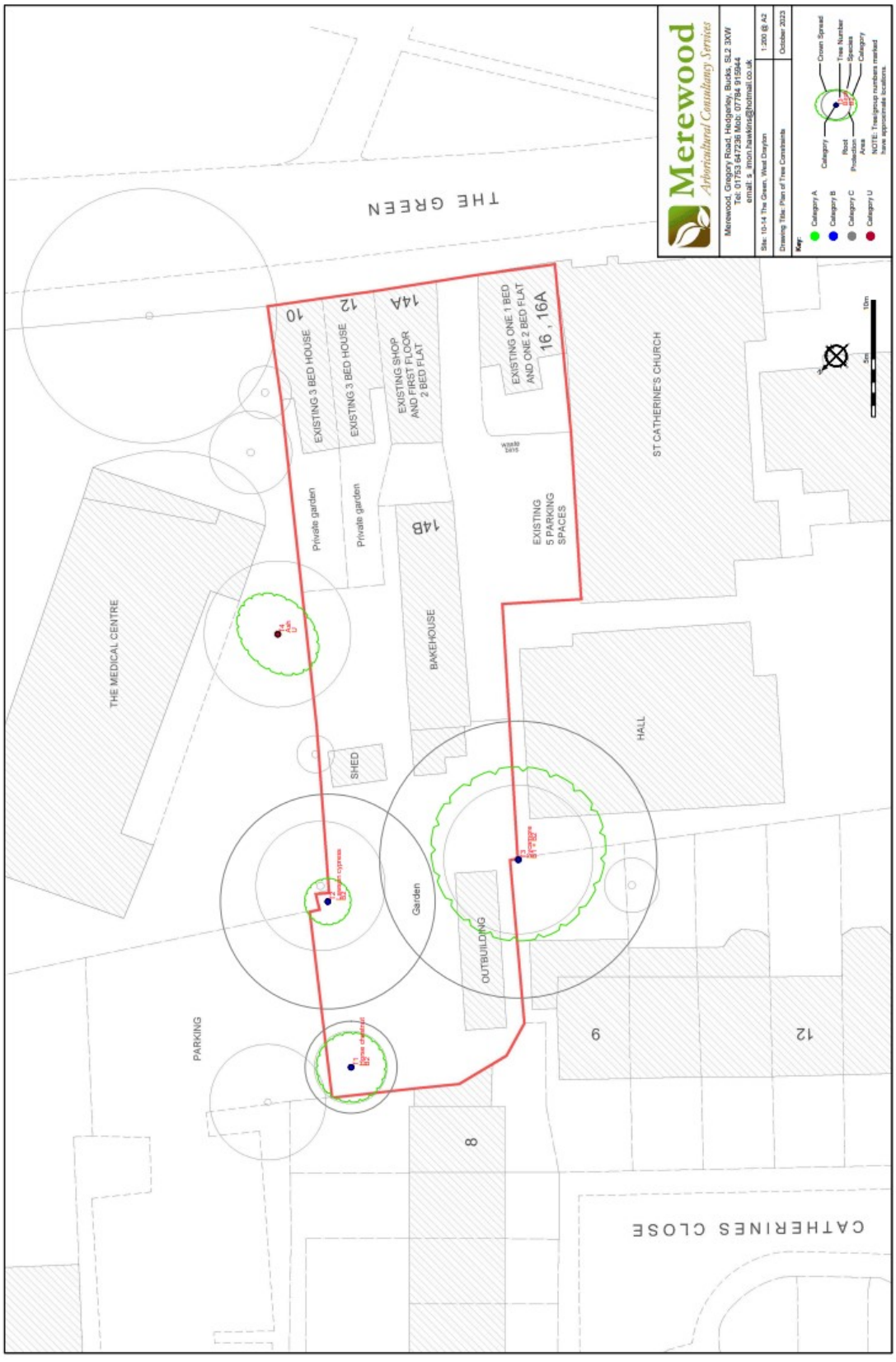
Category U - Red	Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.
Category A - Green	**Those trees of the highest quality and value**: in such a condition as to be able to make a substantial contribution (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.

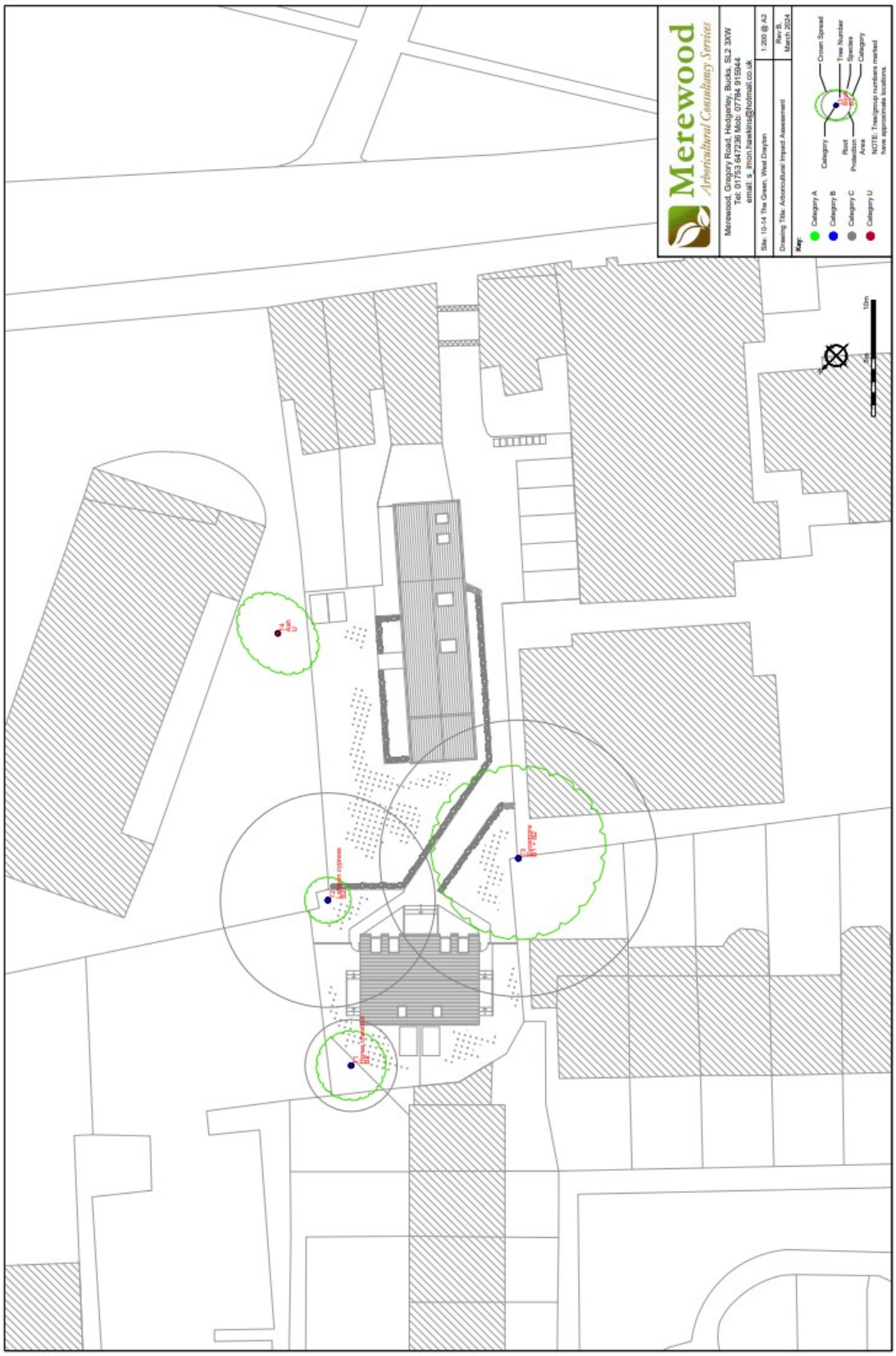
Appendix 2
Schedule of Tree Constraints

Tree no	Species	Height	Stem diameter	Crown spread				Height to1st main branch	Height of canopy	Age	General observations	Life expectancy	Category
				North	South	East	West						
T1	Horse chestnut	9	180 210 180	3	3	3	3	F	G	M	Mildly affected by leaf miner	40+	B2
T2	Lawson cypress	13	770	2	2	2	2	G	G	M		40+	B2
T3	Sycamore	19	740 370 550 (est)	7	8	8	7	G	G	M	Neighbour's tree	40+	B1 + B2
T4	Ash	10	690 (est)	3	3	4	4	P	F	M	Neighbour's tree. Chalara die back of ash establishing	<10	U

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.