Merewood
Arboricultural Consultancy Services

Arboricultural Implications Assessment for a proposed development at 42 Dene Road Northwood HA6 2DA

Client: Dr and Mrs Panniah
42 Dene Road
Northwood
HA6 2DA

Prepared by
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Date
27/06/2024



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1.0 Introduction

1.1 Instruction

1.1.1 I am instructed by Hawkins Eades Associates on behalf of Dr and Mrs. Panniah to undertake an Arboricultural Survey at 42 Dene Road Northwood HA6 2DA. 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 demolition of the existing and the erection of a new detached dwelling with associated parking and landscaping.

1.2 The Site

1.2.1 42 Dene Road is a detached dwelling positioned on the north side of Dene Road. The house is served by a single entrance driveway that leads off Dene Road. The property has a front and rear garden planted with mature trees and shrubs.

1.2.2 The site is located to the north-west of Northwood village centre in a residential area. Surrounding houses here are typically detached with front and rear gardens, with trees and shrubs featuring strongly in the local landscape.

1.2.3 The topography of the site is uneven, rising up from road level to a higher level where the house and parking are. Levels drop back down again in the rear garden.

1.2.4 It has been established at the time of the survey that the trees at the front of the property are covered by a Tree Preservation Order. 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.

1.2.5 It has also been established that part of the property is located within the Northwood 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 1m from ground level) not already protected by the tree preservation order, 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 42 Dene Road Northwood were surveyed on Thursday, June 13th, 2024.

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 2)
The plan of tree constraints (appendix 3)
Impact Assessment Plan (appendix 4)
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 recorded 15 trees of 0 are rated category 'A', 8 are rated category 'B'; 6 are rated category 'C' trees; and 1 is a category 'U' 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
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
Foundation excavation for the walls	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	Where excavation is within the root protection areas (RPA's), use a lintel to bridge over roots if possible. Limit incursion as far as possible.
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 development will include the removal of two trees ((T9 and T10). These are both category 'C' trees.

3.3 Changes to soil levels

3.3.1 There are no changes to soil levels proposed in the vicinity of the RPA's, so no trees will be affected by this.

3.4 The Impact of Demolition

3.4.1 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.

3.4.2 The tree protection plans show that there is enough space for machinery to be able to manoeuvre without coming into contact with the crown spreads of trees. Where it is not practicable to maintain tree protection measures for the demolition of a structure (in whole or in part), the protective fencing shall be temporarily dismantled and the demolition undertaken by hand as far as possible or using a machine working with a long arm to enable the machine to remain outside of the RPA of the trees.

Demolition procedures are outlined in the Arboricultural Method Statement – section 3.4

3.5 The Impact of Movement around the Site

3.5.1 The movement of machinery (and pedestrians) around a site has the potential to impact on soil.

3.5.2 Healthy soil is made up of different sized particles with air spaces between those particles. It is these air spaces that help with drainage of rainwater through the soil, removing carbon dioxide and replenishing oxygen thereby allowing roots to breathe. Fine roots are able to grow into these voids, gradually expanding over time as they grow larger, but where soil has become compacted growth is inhibited and roots can die.

3.5.3 Vehicles accessing the site could compact soil and destroy the layered structure, especially of topsoil. Other site activities including the movement of plant machinery (excavators) and pedestrian movements also contribute to soil erosion and compaction.

3.5.4 In order to ensure that trees which are to be retained maintain enough volume of soil around their roots to stay healthy (the calculated RPA), protective fence barriers must be erected.

3.5.5 Root Protection Areas should be considered Construction Exclusion Zones (CEZ's) which should be treated as sacrosanct. Activity within the CEZ is to be forbidden unless previously agreed with the Consulting Arboriculturist and in agreement with the Local Planning Authority.

3.5.6 The tree protection plan (see method statement) shows where fencing is to be erected prior to the commencement of works on the site, taking account of existing hard surfacing.

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

3.6 The Impact of Excavations

3.5.6 The foundations for the proposed house remain outside the RPA's of the retained trees and there is no impact from this.

3.6.1 Services and drains have not yet been detailed. It is expected that services will be connected internally to existing services, avoiding the need for any further excavation, especially anywhere near to trees.

3.6 The Impact of Construction Site Activities

3.6.6 Site facilities will be established at the front of the house away from the RPA's of the retained trees.

3.6.7 Soil excavated from the excavations for foundations and any other soil removed from or adjacent to the site or is to be removed from the site. There shall be no soil deposited around the RPA's of protected trees.

3.6.8 Deliveries will be made by means of the existing access to the site off Dene Road. Materials and are to be set down at the front of the house where they can remain in situ until needed or moved to a more appropriate area or be brought under cover if necessary.

3.6.9 An area is to be set aside, away from the trees, and 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 The Impact of Trees on the Development

3.6.2 The layout of the scheme has been designed so as to leave the new house unaffected by the proximity of trees, keeping issues such as excessive over shading out of the picture.

3.6.3 The house is far enough away from trees for there to be no other issues arising from this perspective.

3.8 Issues to be addressed by the Method Statement

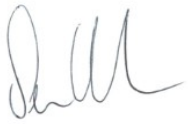
3.8.6 The Method Statement will address the following issues

- Tree removal
- Installation of protective fencing
- Installation of ground protection
- Installation of screw piles

- Building site activities

3.9 Summary

3.9.6 The construction of the proposed house can be undertaken with minimal impact to the retained trees. 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.



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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.	

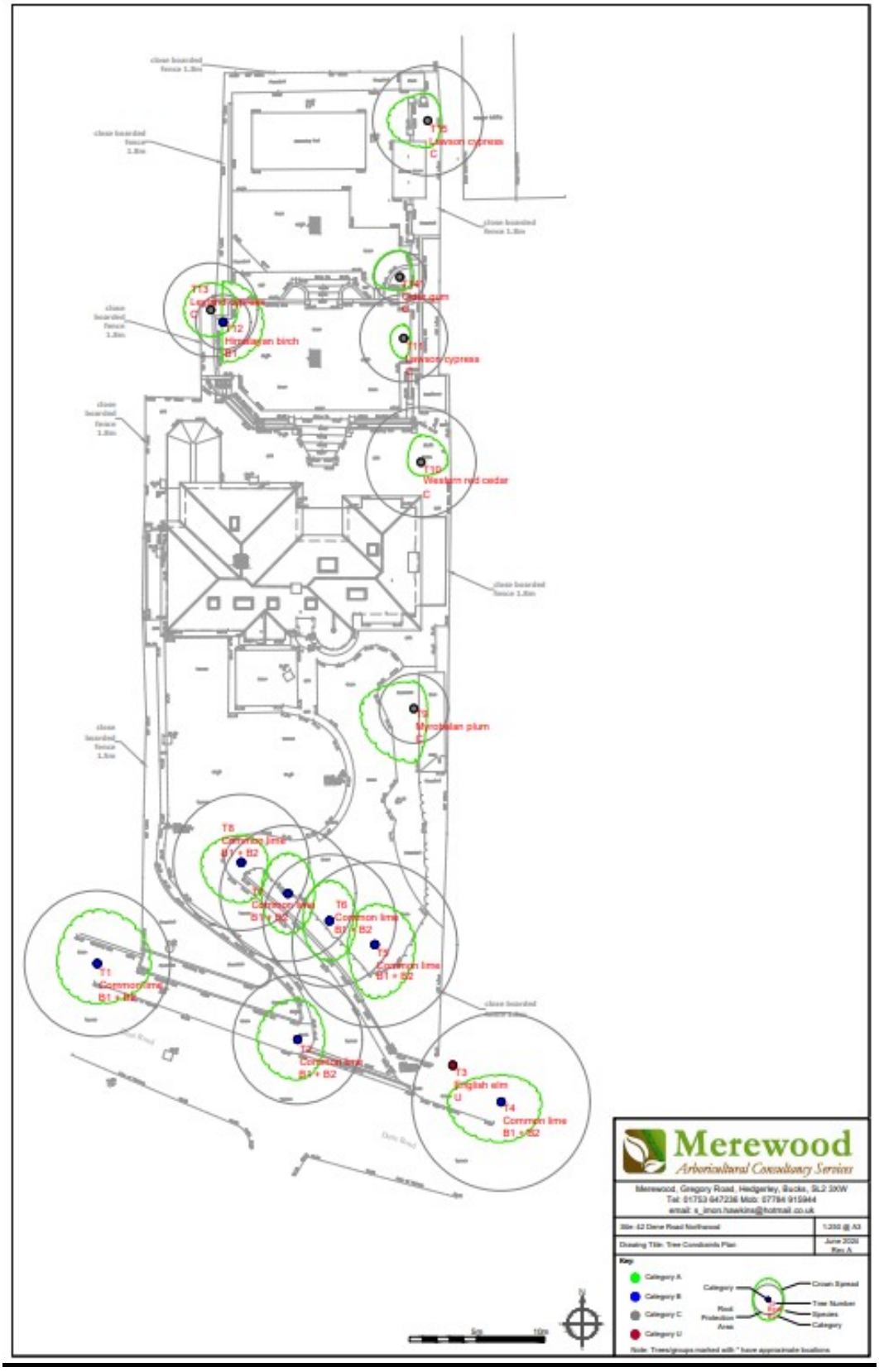
5. RPA's of single stemmed trees are calculated according to the following formula:
   RPA radius = 12 x stem diameter (measured at 1.5m above ground level)
6. Where a tree has more than one stem, the equivalent single stem diameter is usually recorded. This is calculated by adding the squares of the 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

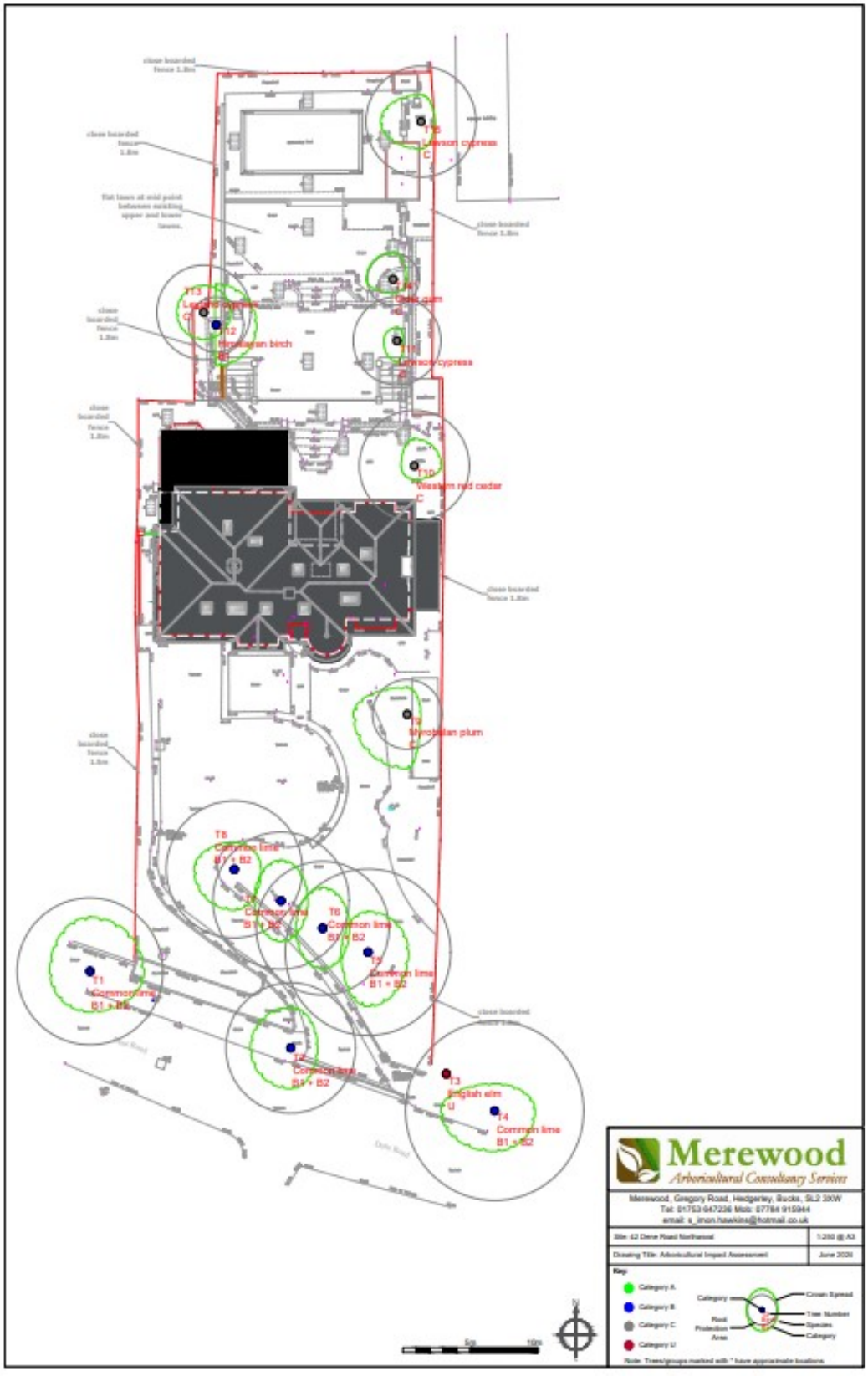
Tree no	Species	Height	Stem diameter	Crown spread				Physiological condition	Structural condition	Age	Observations/ Management recommendations	Life expectancy	Category
				North	South	East	West						
T1	Common lime	16	450	4	3	4	3	G	F	M	Cavity on main stem. Major deadwood present	40+	B1 + B2
T2	Common lime	15	400	3	3	2	3	G	G	M		40+	B1 + B2
T3	English elm	-	-	-	-	-	-	-	-	-	Dead	-	U
T4	Common lime	16	550	2	3	3	4	G	G	M	Minor deadwood present	40+	B1 + B2
T5	Common lime	16	510	3	4	3	2	G	G	M		40+	B1 + B2
T6	Common lime	16	410	3	3	2	2	G	G	M		40+	B1 + B2
T7	Common lime	16	420	3	3	2	2	G	G	M		40+	B1 + B2
T8	Common lime	15	420	2	3	2	3	G	G	M		40+	B1 + B2
T9	Myrobalan plum	9	170 130	2	4	1	4	G	G	M		20 - 40	C
T10	Western red cedar	7	340	2	1	2	1	G	G	M	Lopped and left one sided following loss of adjacent tree	20 - 40	C
T11	Lawson cypress	7	270	1	1.5	0.5	1	G	G	M		20 - 40	C
T12	Himalayan birch	12	170	3	3	3	0	G	G	M		40+	B1

Tree no	Species	Height	Stem diameter	Crown spread				Physiological condition	Structural condition	Age	Observations/ Management recommendations	Life expectancy	Category
				North	South	East	West						
T13	Leyland cypress	9	290	2	2	2	2	F	F	M		20 - 40	C
T14	Cider gum	10	160	2	1	1	2	G	F	M/A		40+	C
T15	Lawson cypress	6	340	2	2	1	3	G	G	M		20 - 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.