Merewood
Arboricultural Consultancy Services

Arboricultural ASSOCIATION
Professional Member
No. PRO 1047

Arboricultural Implications Assessment for a proposed development at Downside Kewferry Drive Northwood HA6 2NU Rev A

Client: Sujeevan Sugumar
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Prepared by
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1.0 Introduction

1.1 Instruction

1.1.1 I am instructed by Sujeevan Sugumar to undertake an Arboricultural Survey at Downside Kewferry Drive 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 are for the erection of part single part double storey side and rear extensions following demolition of existing detached garage, conversion of roof space into habitable use to include 1x rear dormer, 2x rear facing roof lights, and 2x front facing dormer windows, and amendments to fenestrations.

1.2 The Site

1.2.1 Downside Kewferry Drive Northwood is a detached house on the north side of Kewferry Drive, with a dual entrance driveway leading to a parking/turning area at the front of the house and a detached garage. The property has a front garden partly given over to the driveway entrances and parking and a rear garden. The plot is rectangular in shape.

1.2.2 The site is located to the northwest of Northwood village centre. Kewferry Drive is a private residential road that links Kewferry Road with Rickmansworth Road. The property is bordered by Kewferry Drive to the south side, a public footpath to the west and by other residential properties on all other sides. The surrounding area is suburban, characterized by residential properties and small businesses.

1.2.3 The topography of the site rises up from the south (Kewferry Drive) to the north at the rear of the garden. The house has a walled terrace to the rear and steps climbing to the back lawn.

1.2.4 It has been established at the time of the survey that the property is covered by two Tree Preservation Orders (TPO 12 and TPO 638). 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 Downside Kewferry Drive Northwood were surveyed on Friday, September 20th, 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 existing site plan
The proposed site layout plan
The schedule of tree constraints (appendix 1)
The plan of tree constraints
The Arboricultural Method Statement dated 30/09/24 (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 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 of the 10 trees and 2 groups of trees surveyed, 0 are category 'A'; 1 is category 'B' plus 2 groups of category 'B' trees; 5 are category 'C' and 3 are category 'U'.

3.0 Arboricultural Impact Assessment

3.1 Overview of typical construction site activity

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 proposed development will result in the loss of 1 category 'C' tree, the Lawson cypress (T3) in order to implement the proposed design.

3.2.2 The category 'U' trees are either dead or dying and will be exempt from the tree preservation order.

3.2.3 There is no pruning work needed to facilitate the development.

3.3 Changes to soil levels

3.3.1 There are no changes to soil levels proposed that would affect retained trees. The proposed works in proximity to the willow (T1) are examined under 'Impact of Excavations'

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 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 existing in-out driveway will provide a suitable means for vehicles to enter the site and make deliveries to the area of front lawn, from where materials can be distributed about the site (see method statement).

3.4.3 The existing pathways provide a suitable ground cover for pedestrian traffic and wheelbarrows down the east side of the house. For machines to access the rear of the site, the west side shall be used following the demolition of the garage. There are no trees that are affected down the west side.

3.5 The Impact of Demolition

3.5.1 The proposals require the demolition of the garage before other works can begin on the site. The movement of plant machinery 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 tree protection plan (see method statement) shows that there is plenty of working space to the front of the site well away from any RPA's for machinery to operate and for materials to be stored ready for disposal or upcycling as needed.

3.6 The Impact of Excavations

3.6.1 The excavation of the proposed foundations for the new extensions are to take place outside the RPA's of the retained trees and will not affect any trees. There is a small encroachment onto the RPA of the willow (T1) created by the widening of the patio.

3.6.2 The extent of this encroachment amounts to 9.7m^2 out of a total RPA of 152m^2, or 6.3%. It is considered that such a small encroachment is acceptable in this instance, as the roots of this tree are uninhibited in their growth in all other directions, so that the minimum volume of soil required to sustain the tree in normal health is not only maintained but also exceeded.

3.6.3 The excavation of service trenches is another site activity that can cause harm to root systems. However, in this instance, the existing infrastructure is to be connected to the new extensions within the building and away from any RPA's, thereby avoiding any issues.

3.7 The Impact of Construction Site Activities

3.7.1 The site working area will be established to the front of the property away from the RPA's of the retained trees. There is enough space about the site for this to be possible.

3.7.2 The Construction Method Statement acknowledges the need to respect the protection of trees and confirms that construction site activity will be undertaken in a manner that maintains the integrity of the protective fencing and ground protection measures.

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

3.7.4 The driveway area at the front of the site 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 3.5

3.8 Issues to be addressed by the Method Statement

3.8.1 The Method Statement will address the following issues

- Installation of protective fencing and ground protection
- Building site activities
- Cement mixing

3.9 Summary

3.9.1 The proposed demolition and construction works can be undertaken with no impact to the retained trees. Provided the trees are protected in accordance with the tree protection plan (see method statement) there is no reason the proposals would affect the 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.

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.

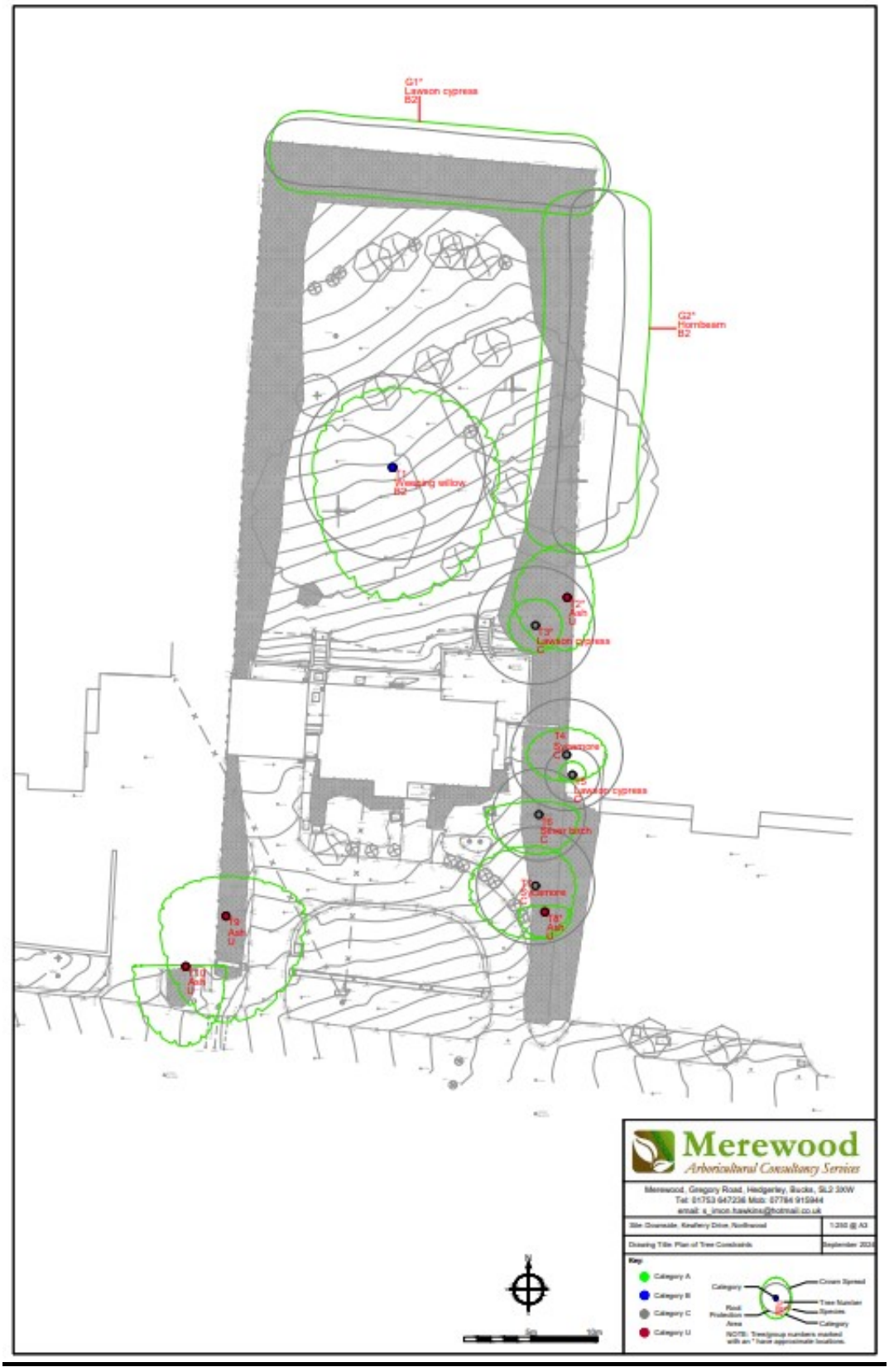
Category U - Red	Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.
Category A - Green	**Those trees of the highest quality and value**: in such a condition as to be able to make a substantial contribution (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	Weeping willow	15	580	6	10	8	6	F	F	M	Tree shows lowered vitality. Moderate volume of deadwood present in crown	20 - 40	B2
T2	Ash	17	450	4	4	2	4	F	F	M	Early signs of Chalara die back of ash	<10	U
T3	Lawson cypress	15	250 270	2	2	2	2	G	G	M		40+	C
T4	Sycamore	17	350	2	2	3	3	G	P	M	Twin stemmed tree with a tightly forked stem (weak structure)	20 - 40	C
T5	Lawson cypress	13	170	1	0.5	1	1	P	F	M		10 - 20	C
T6	Silver birch	17	290	1	3	3	4	F	G	M		20 - 40	C
T7	Sycamore	17	260 260	3	4	3	5	G	F	M	Twin stemmed tree with a tightly forked stem (weak structure)	20 - 40	C
T8	Ash	15	150 150	0.5	2	2	2	P	F	M/A	Affected by Chalara die back of ash	<10	U
T9	Ash	19	700	3	8	6	5	P	F	M	Affected by Chalara die back of ash	<10	U
T10	Ash	17	360	0	6	3	4	P	F	M	Affected by Chalara die back of ash	<10	U
G1	Lawson cypress	12	200	3	3	2	2	G	G	M	Hedge not formally managed	40+	B2
G2	Hornbeam	10	170	2	2	4	4	G	G	M	Hedge not formally managed	40+	B2

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 40 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.