



Merewood
Arboricultural Consultancy Services

**Arboricultural survey to British
Standard B.S. 5837: 2012 'Trees in
relation to design, demolition and
construction - Recommendations'
at
13 The Broadwalk
Northwood**

Prepared by
Simon Hawkins N.D Arbor M. Arbor. A.

11/08/2015



Merewood.
Gregory Road, Hedgerley, Bucks. SL2 3XW
M. 07784 915944 T. 01753 647236
E. simon.hawkins@hotmail.co.uk
VAT No: 990 9313 90

Table of Contents

Introduction	2
Summary	3
Site Description	3
Observations	4
Implications Assessment	5
Conclusions	5
Fig.2 Protective fencing detail	6
Appendix 1: Key to Tree Survey Data	8
Appendix 2: Tree Survey Data Sheets	11
Appendix 3: Tree Protection Plan	13
Appendix 4: Arboricultural Method Statement (AMS)	15
Appendix 5: Qualifications and Experience	19

1.0 Introduction

1.1 Brief

- 1.1.1. I am instructed by Deepak Khullar to carry out an arboricultural survey at 13 The Broadwalk Northwood. I am to assess the health and condition of the trees at the site, provide an estimate as to their longevity and to provide recommendations for tree work or other operation to ensure the trees are kept in safe a condition as can be reasonably expected.
- 1.1.2. I am to advise on the likely impact of development proposals to the trees. I am to provide recommendations for tree retention and protection, including appropriate measures that are to be undertaken in order to minimize the impact of development.
- 1.1.3. I have carried out the survey, collecting data in accordance with the recommendations of British Standard B.S. 5837: 2012 'Trees in relation to design, demolition and construction - Recommendations' and in line with best practice procedures.

1.2 Report Limitations

- 1.2.1 This survey assesses the condition of the trees based on a visual inspection made at ground level, including the use of binoculars. Typically, instruments such as a nylon hammer or a simple core sampler may be used if necessary. If further inspection of any specific tree is required, including the use of more sophisticated decay detection equipment, the recommendation to do so is made clear, both in the report and as a note to the tree survey sheets.
- 1.2.2 Trees are dynamic living organisms that are subjected constantly to external stresses and to biological and non-biological influences. As such the structure of trees can change at any given time and it is therefore recommended that trees are inspected regularly and assessed for risk. It is normally recommended that such inspections are undertaken every five years, unless otherwise advised.
- 1.2.3 The assessment of the trees made in this report may be considered valid for a period of twelve months, after which a further assessment is normally recommended.
- 1.2.4 This report is restricted to the trees shown on the plans and described in the schedule.

1.2.5 It has been established at the time of the survey that the trees are covered by a Tree Preservation Order (London Borough of Hillingdon Tree Preservation Order 395). If any works to these trees are proposed, other than the removal of dead wood or the implementation of operations agreed as part of a formal planning consent, an application must be submitted and approved by the Local Planning Authority before such works can be carried out.

1.2.6 The Wildlife and Countryside Act (1981) makes provision for the protection of wild birds, bats and other wildlife. Land owners have a duty of care to consider nesting birds and bats (and any other wildlife that may be affected) when proposing tree management, especially felling. In particular, it may be necessary to conduct a bat survey when considering trees with large cavities.

1.3 Survey Date

I surveyed the trees at 13 The Broadwalk Northwood on Wednesday, August 5, 2015. The weather was dry and visibility was good.

2.0 Summary

2.1 The significant trees to the rear of the house would not be impacted on by the construction of a new extension. One decaying silver birch needs to be removed and can be replaced with a new tree.

3.0 Site Description

3.1 13 The Broadwalk is a detached house on the south side of The Broadwalk on the Copsewood Estate in Northwood. The house has an in out driveway with integral garage and a garden extending to the rear of the property. The property is located to the south west of Northwood village centre.

3.2 The site is a more or less rectangular in shape and is bordered by the The Broadwalk to the north, Ruislip Woods to the south and by other residential properties to the east and west.

3.3 The topography of the site is more or less even. I have not formally assessed the soil at the site, although the National Soil Resources Institute 'soilscapes' viewer suggests that this is a seasonally wet, slow draining, slightly acidic but base rich loam and clay soil.

4.0 Observations

- 4.1 The back garden of the property has retained a well wooded feel and this has been incorporated intelligently into a well thought out landscape scheme that augments the house and the small summer house on the east side of the back patio.
- 4.2 Close to the summer house and the patio is the oak (T1), one of several fine oak trees that create a feel of extending the woodlands to the south up into the garden (fig.1). The choice of shrubs and other perennials incorporated into the landscaping helps this transition.



Fig: 1 The oak tree (T1) is one of several oaks at the back of the house helping to create a natural looking transition from the woodland to the south into the garden

- 4.3 The silver birch (T3) is the cause for some concern. The tree has a lowered vitality, evident from the thin appearance of the foliage (about half the density one might expect to see on a healthy birch), and there is a large cavity at the base of the tree harbouring decay.

- 4.4 The tree survey has shown that of the 3 trees surveyed, 0 are category 'A'; 1 is category 'B'; 1 is category 'C'; and 1 is category 'U'.

5.0 Implications Assessment

- 5.1 I have been asked to provide an appraisal of the impact of a proposed development of the site. The development includes the construction of an extension to the rear of the existing house. I refer here to the proposed floor plans (ref 15.28 05) and to the tree protection plan (appendix 3) which has been based on this drawing.
- 5.2 The tree protection plan shows that the proposed extensions would remain clear of the oak (T1) and the birch (T2), and therefore of all the other trees in the garden beyond this.
- 5.3 The use of protective barriers as stipulated by the Standard will ensure adequate protection to these trees during construction, taking account of the working space between barriers and the building.
- 5.4 However the extensions come close to the silver birch (T3), suggesting that there could be some encroachment onto the root protection area of this tree
- 5.5 In my opinion this is largely academic. The tree has developed a significant cavity at the base, with active decay continuing to attack the tree. The tree has lowered vitality and in my opinion is at the end of its safe useful life expectancy. With less than 10 years to live, the tree attracts a category 'U' rating and should not stand in the way of the proposed development.
- 5.6 The tree is protected by the TPO covering the property. Under the legislation, if this tree is removed as part of the planning permission , a planning condition can be put into place requiring its replacement.
- 5.7 It is therefore proposed that another silver birch will be planted a little deeper to the south at the edge of the lawn. The new tree shall be 12-14 cm girth and shall be supported by a short stake to hold the roots in place whilst allowing natural stem movement in the wind.

6.0 Conclusions

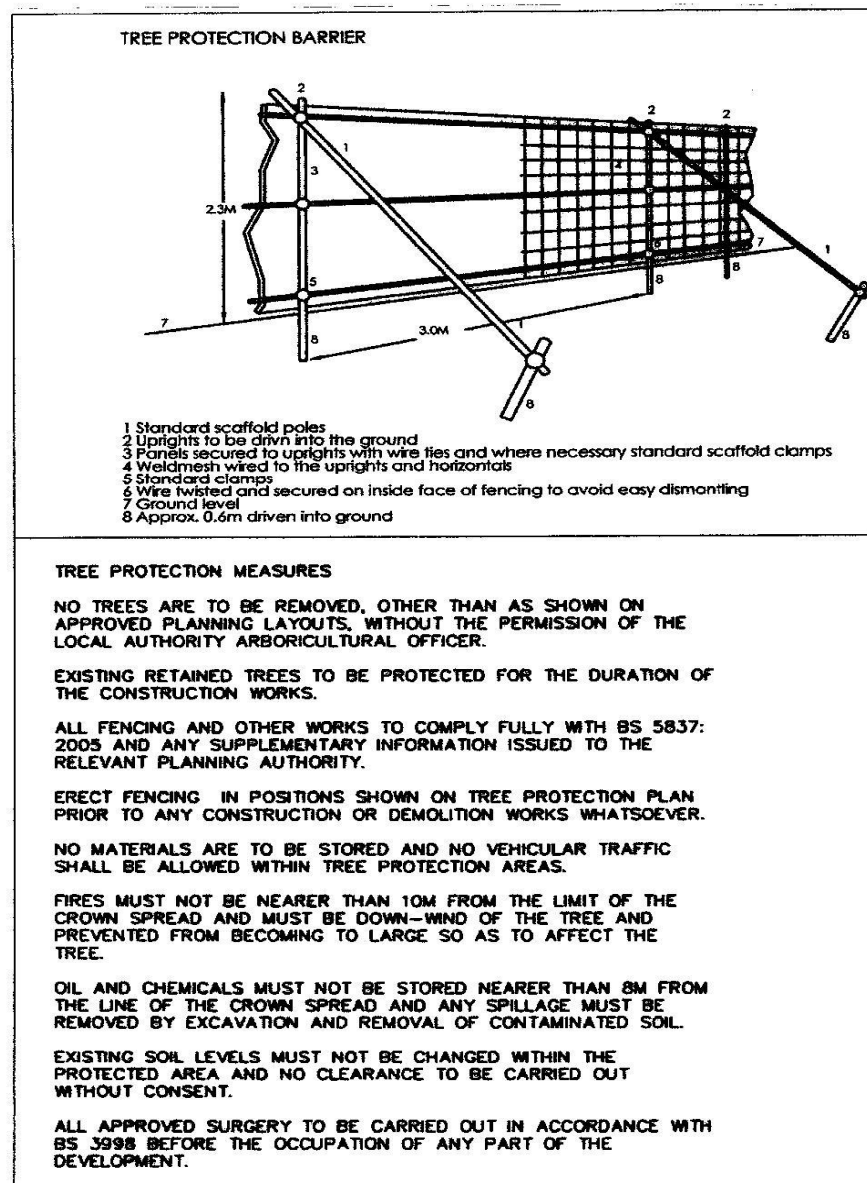
- 6.1 The trees at the rear of the property are valuable features maintaining a transition from the woodland to the garden.
- 6.2 The proposed development would allow for the retention and protection of the trees in the garden and this can be upheld with the use of protective fencing barriers as stipulated by the Standard.

- 6.3 The birch (T3) has reached the end of its safe useful life expectancy and the new development provides an opportunity to remove and replace this tree.

Simon Hawkins BTec ND Arbor M. Arbor A.

Fig:2

Tree Protection Measures



Appendix 1

Key to Tree Survey Data

Tree number:

Sequential reference number corresponding to the tree survey plan. Trees are recorded either as individuals (T1, T2, etc.) or as groups (G1, G2, etc.)

Species:

These are listed in the schedule by their common name. The botanical name of the species present is as follows:

- Oak (*Quercus robur*)
- Silver birch (*Betula pendula*)

Height

The height of the tree is measured using a 'Suunto' Height Meter or estimated to the nearest metre.

Stem diameter

Stem diameter as measured at 1.5m above ground level, or otherwise in accordance with Annex 'C' of the British Standard and expressed in millimetres to the nearest 10mm. Where access to the stem for measurement purposes was not possible, an estimated size is given with (est.) shown.

Crown spread (m):

Crown radius measured in metres (shown est. if estimated) to cardinal points

Height to 1st main branch:

The height from ground level of the first significant branch growth of the tree, with an indication of direction of that branch to inform on ground clearance, crown/stem ratio and shading

Height of canopy:

The height from ground level of the lowest part of the main canopy to inform on ground clearance, crown/stem ratio and shading

General observations:

A brief description summarising the form and condition of the tree, including physiological and structural defects (e.g. the presence of any decay) and preliminary management recommendations.

Life expectancy

Estimated safe useful life expectancy based on species, condition & context. The following age class bands are used: <10; 10-20; 20-40; 40+.

Category

A summary of the British Standard classification:

Trees for Removal

Category U = 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.

Trees to be considered for retention where

Subcategory 1 concerns mainly arboricultural values

Subcategory 2 concerns mainly landscape values

Subcategory 3 concerns mainly cultural values including conservation

Category A = **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 = **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 = **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

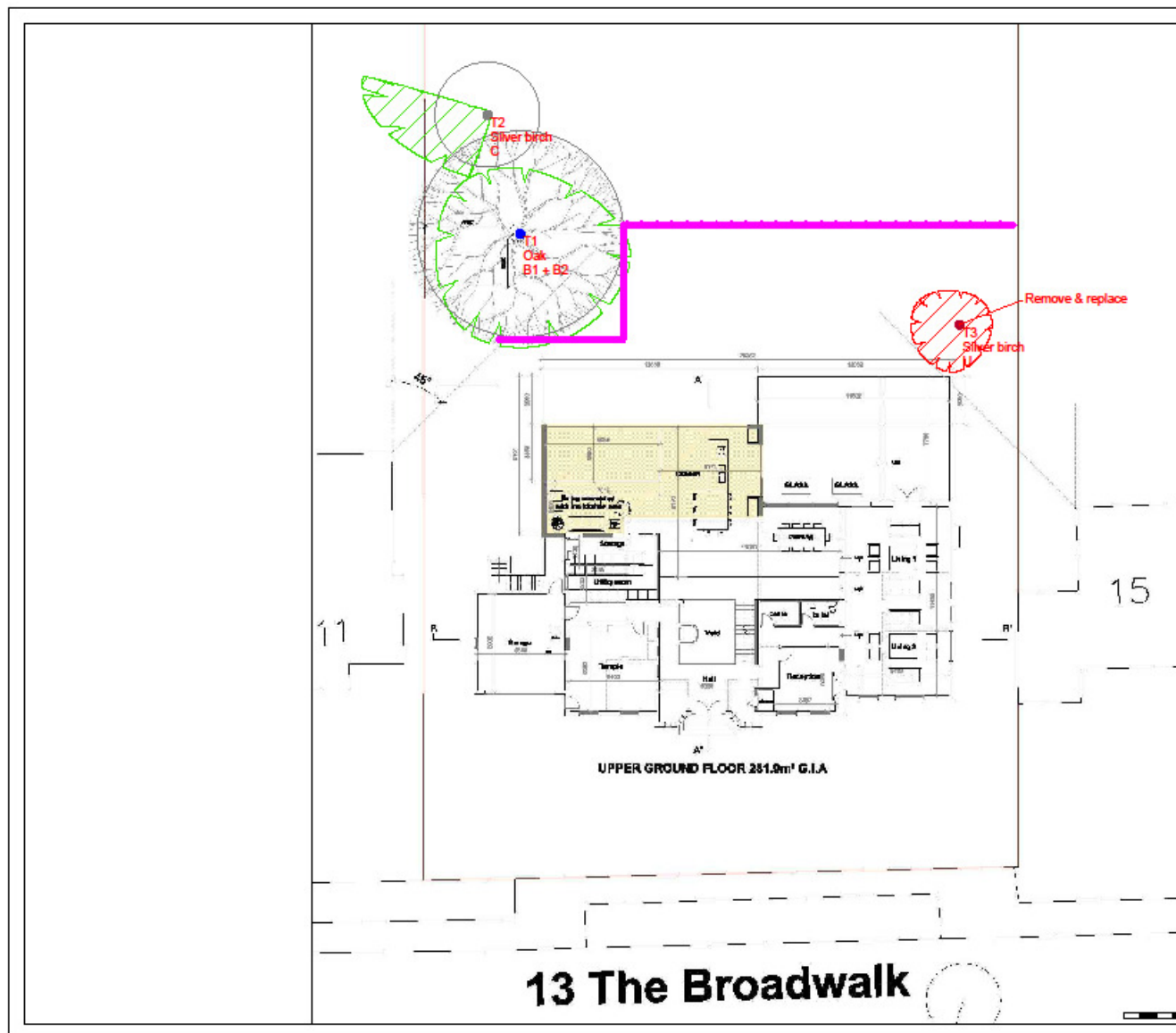
Appendix 2

Tree survey data sheets

Tree no	Species	Height	Stem diameter	Crown spread				Height to 1st main branch	Height of canopy	Age	General observations	Life expectancy	Category
				North	South	East	West						
T1	Oak	16	530	7	4	5	7			M		40+	B1 + B2
T2	Silver birch	16	200 180	4	0	8	0			M		20 - 40	C
T3	Silver birch	16	370	3	2	3	2			M		<10	U

Appendix 3

Tree protection plan



Appendix 4

Arboricultural Method Statement (AMS)

1.0 Pre development works

- 1.1 The tree survey has indicated that the silver birch tree (T3) will need to be removed to allow the development of the site to take place.

2.0 Protective fencing

- 2.1 The tree survey has established the stem diameters of the trees closest to the proposed extension. Based upon this information, I have prepared the tree protection plan (appendix 1) that shows the footprint of the proposed extensions.
- 2.2 The tree protection plan (appendix 1) shows the line and position of the root protection fencing and ground protection to be erected prior to any other works taking place on site. The root protection fencing and ground protection installation shall be approached from within the central working zone to avoid damage within the root protection area itself, in accordance with the recommendations of BS 5837/2012, as illustrated by Fig. 2.
- 2.3 The fencing for the root protection zones shall be constructed of scaffold tube uprights (set at 3m intervals with diagonal braces driven securely into the ground). Thereafter 'Heras' type fencing shall be attached to the scaffold framework using either steel strapping or scaffold clamps. The fencing shall comply with the requirements of the British Standard B.S. 5837: 2012 'Trees in relation to design, demolition and construction - Recommendations'
- 2.4 The fencing shall completely exclude access during the demolition and construction process. The protected areas shall not be used either for the storage of materials or spoil nor for the mixing of substances or the disposal of any residues nor shall be allowed to be contaminated by the run-off from activities from beyond the protection zone.
- 2.5 There is to be no burning of any materials or substances within 10m of the root protection barriers.
- 2.6 At this stage it is recommended that the retained arboricultural consultant visits the site to confirm the correct installation of the fencing and ground protection.

3.0 During development

- 3.1.1 Once protective fencing is in position, the works can formally commence.
- 3.1.2 Any plant machinery or other equipment, and all materials will have to be transported from the front to the rear either round the side of the house or through the ground floor rooms (if possible and practical).
- 3.1.3 Access to the site is thus clearly limited, so material storage will be largely confined to the front area including the driveway. There is no need to move the fencing once in place and the root protection areas are under little further threat as a result of the building works being undertaken.
- 3.1.4 Excavated soil is to be removed from the site entirely. There is to be no deposition of excess soil at the site.
- 3.1.5 It is considered that other than maintaining the protective fencing, there are no other special considerations needed for this site.

4.0 After development

- 4.1 The completion of the main construction period is typically marked by the removal of scaffolding from around the exterior walls, the conclusion of mortar mixing associated with bricklaying and other hard surfacing (i.e. patios) and the finishing of the primary interior works (i.e. plumbing, wiring, plastering and flooring).
- 4.2 Secondary activities such as decorating, carpeting and so forth do not constitute a threat to the well being of trees and so it is at this stage that protective fencing can be removed. Landscaping can normally be undertaken at this time.
- 4.3 The only specific landscaping needed in this instance will be the planting of a replacement tree for (T3). It is proposed that a replacement silver birch is planted roughly along the same line (in line with the new extension) as the existing tree, but further back in the garden, on the back lawn.
- 4.4 The new tree shall be 12-14 cm girth and shall be supported by a short stake to hold the roots in place whilst allowing natural stem movement in the wind.

5.0 Site monitoring

- 5.1 The success of any method statement is dependent upon effective monitoring and good communication between the contractors and the Local Authority tree officer.
- 5.2 It is therefore necessary to have an initial meeting between the main contractor and the consultant arboriculturist to ensure that protective fencing has been installed correctly.
- 5.3 At this time the Arboricultural consultant will photograph the fencing in place and report this to the LA tree officer, normally by email.
- 5.4 Thereafter further monitoring visits can be arranged if it is felt necessary. The purpose of the visits is to confirm that the relevant stages of the operation are being conducted with the tree protection fencing properly in place. Where tree protection has been neglected or has gotten into poor condition, appropriate advice and remedial measures can be taken to correct this.
- 5.5 Monitoring is to take place throughout the development, although specific times are not necessarily given, as contractors on site should not have advanced warning of visits taking place. Site visits are naturally going to be more frequent at the start of the works when there is more potential for damage to take place.
- 5.6 The following outlines specific times when monitoring will record site operations
 - Initial visit to establish the position of protective fencing to be erected.
 - Confirmation visits following start up activities as necessary to ensure that protective fencing and ground protection are kept in agreed positions and that site activities are satisfactorily confined to the designated areas
 - Random monitoring throughout the development as needed to maintain a watching brief and to continue to advise as needed. Final visits at time of completion to ensure landscaping is satisfactorily implemented and at the same time implement any corrective tree surgery or other measures that may have become necessary during the construction.

Appendix 5

Qualifications and experience

- I am Simon Hawkins, proprietor of Merewood Arboricultural Consultancy Services.
- I hold the National Diploma in Arboriculture which I attained in 1987. I have studied and practised Arboriculture for 30 years, during which time I have been involved with both the private and public sector.
- 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 hold the LANTRA award for professional tree inspections
- I have run a successful tree surgery business in which I was involved with the hands-on aspect of organising and running the day to day operations and carrying out contract work, including Local Authority contract work to a high professional standard.
- 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 Tree Preservations Orders.
- 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 Tree Preservations Orders.