

Arboricultural Impact Assessment

BS5837:2012 Trees in Relation to Design, demolition and construction –
Recommendations



CLIENT:	Mrs H Toomey
SITE REFERENCE:	1 Fiveways, Brierlow Bar, Buxton, Derbyshire SK17 9PY
REFERENCE:	DEV04.DER.01GM Rev.00
CONSULTANT(S):	Giles Mercer BSc (Hons) M.Arbor.A
REPORT DATE:	18 th April 2016

Contents

1.0	Introduction
2.0	Scope and objectives
3.0	Site description
4.0	Development Proposal
5.0	BS 5837:2012 Tree Survey (TSS)
6.0	Arboricultural Impact Assessment (AIA)
7.0	Potential Incursions into the Root Protection Area (RPA)
8.0	Method Statement : Additional precautions to be observed outside the exclusion area (the RPA)
9.0	Conclusion and recommendations
10.0	Images

Tables

1	Tree Survey Schedule
---	----------------------

Plans

Arbor 001	Tree Survey
Arbor 002	Tree Constraints Plan

1.0 Introduction

- 1.1 We are instructed by Mrs Heather Toomey to undertake a tree survey in accordance with BS 5837:2012 'Trees in relation to design, demolition and construction- Recommendations'.
- 1.2 The application relates to a proposed development at 1 Fiveways, Brierlow Bar, Buxton, Derbyshire SK17 9PY
- 1.3 The proposed development consists of a two storey extension to the eastern side of the property.
- 1.4 The site survey was undertaken on the 23rd February 2016 and the following report is based upon the findings of that visit and the conditions found on that day.
- 1.5 We have been provided with .pdf plans showing the existing site and the proposed development. Tree location has been plotted by triangulation from known reference points (the corners of the existing building).

2.0 Scope & Objectives

- 2.1 This report has been commissioned by Mrs Heather Toomey and the scope of the report reflects her instructions.
- 2.2 The scope of this report is limited to an appraisal of the existing trees on (and/or adjoining) the site and identification of the implications of development on retained trees.
- 2.3 The brief is to appraise the trees in relation to the proposed development of the site in accordance with British Standard 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'.
- 2.4 To prepare clear recommendations supported by relevant plans and data in order to facilitate consideration of the Arboricultural implications by the Local Planning Authority.
- 2.5 To consider the development proposals, identify areas where there are arboricultural issues and to recommend possible solutions.
- 2.6 To consider additional information supplied, to identify arboricultural issues arising from this information and to recommend possible solutions.
- 2.7 This report is not a Tree Risk Management Report or a Hazard Analysis Report and its use as such is invalid.
- 2.8 The trees have been assessed from ground level only. Assessment of condition is based on a visual tree assessment (VTA). No detailed inspection of the upper crown has been carried out.

- 2.9 No decay detection equipment (destructive or non-destructive) has been used to further assess the condition of the trees, which is beyond the scope of the survey. Any dangerous trees requiring further assessment on safety grounds will be identified.
- 2.10 Due to the changing nature of trees and other site circumstances this report and any recommendations made are limited to a 5-year period. Any alteration to the application site or any development proposals could change the current circumstances and may invalidate this report and any recommendations made. Should this be the case this report will require revision to reflect the development Proposals.
- 2.11 Trees are dynamic structures that can never be guaranteed 100% safe; even those in good condition can suffer damage under average conditions. Regular inspections can help to identify potential problems before they become acute.
- 2.12 A lack of recommended work does not imply that a tree is safe and likewise it should not be implied that a tree will be made safe following the completion of any recommended work.
- 2.13 Tree dimensions were measured using a combination of a Trupulse 200 Laser Range Finder, a Leica Disto Laser Rangefinder and a Richter Diameter tape. All instruments were used in accordance with appropriate user guides.
- 2.14 No soil samples were taken and no soils analysis was undertaken.
- 2.15 Any legal description or information given to Arbor Consultancy Limited is believed to be accurate.
- 2.16 Where solutions to arboricultural issues are specified which require the usage of a third party product or specialist design e.g. pile and beam foundations, no dig roadway construction etc. No liability is assumed for the performance or suitability of the product and specialist advice as to the suitability or installation of the product should be sought from the manufacturer or other specialist.
- 2.17 No responsibility is assumed by Arbor Consultancy Limited for legal matters that may arise from this report, and the consultant shall not be required to give testimony or to attend court unless additional contractual arrangements are made.
- 2.18 Any alteration or deletion from this report shall invalidate it as a whole.

3.0 Site Description

- 3.1 The site is an existing residential plot with front and rear gardens, there is a separate vehicular access to the rear garden.
- 3.2 To the east of the site at a slightly lower elevation is a small block of woodland which is owned by the nearby quarry. The woodland is young to early mature and I believe that it was planted (presumably as a screen) while the nearest part of the quarry was being actively worked.
- 3.3 The property is separated from the wooded area by a stone wall.
- 3.4 As the trees have developed the Quarry have removed trees in close proximity to the dwelling.

4.0 Development Proposal

- 4.1 The proposal involves building of a two storey side extension along the eastern side of the existing house. This will involve the demolition of the existing side porch.

5.0 Tree Survey

- 5.1 The survey of the trees was carried out on the 23rd February 2016. Tree data is recorded in Table 1 with locations indicated on plans Arbor 001 (Tree Survey), Arbor 002 (Tree Constraints Plan) and Arbor 003 (Tree Protection Plan). A total of six individual trees were assessed.

TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT ASSESSMENT						
Site:	27 Shaw Lane, Stoke Prior, Bromsgrove, Worcestershire					
Client:	Mr r Meredith					

Surveyor:	Giles Mercer
Assessment Date:	7 th April 2016
Job Reference:	DEV012.SHW.01GM REV.00

PAGE
1

No.	Species	Height (m)	Stem Diam (mm)	Branch Spread (m)	Crown height (m)	Age	Comments on Structural Condition, etc.	Management Recommendations	ERC	Cat	RPA Radius (m)	RPA Area (m ²)
T1	Sycamore	20.5	320	N E S W 2.6 4.0 3.0 3.0	n/a	EM	▪ Individual tree within and early mature stand	▪ None	40+	B	3.8	4.6
T2	Sycamore	16.5	270	N E S W 2.6 2.6 2.6 2.6	n/a	EM	▪ Individual tree within and early mature stand	▪ None	20-40	B	3.2	33
T3	Ash	20.9	400	N E S W 3.5 3.5 5.4 5.0	n/a	EM	▪ Individual tree within and early mature stand	▪ None	10-20	B	4.8	72
T4	Sycamore	9	260	N E S W 2.5 2.5 2.5 2.5	n/a	EM	Individual tree within and early mature stand	▪ None	10-20	B	3.1	31
T5	Sycamore	16.8	270	N E S W 1.5 2.5 4.0 3.9	n/a	EM	▪ Individual tree within and early mature stand	▪ None	10-20	B	3.2	33
T6	Sycamore	10.3	170 160 110 70 x 4	N E S W 2.7 1.0 3.0 4.0	n/a	EM	▪ Individual tree within and early mature stand ▪ Poor historic pruning / topping	▪ None	10-20	C	3.3	33

6.0 Arboricultural Impact Assessment

6.1 BS5837 (2012) requires that the root protection area is calculated for each of the retained trees on the development. The root protection area is the minimum area in m² which should be left undisturbed around each retained tree. The standard calculated RPA's and the protection zone radii are detailed in the Tree Survey Schedule (Table 1) above.

6.2 For single stem trees, the RPA has been calculated as an area equivalent to a circle with a radius 12 times the stem diameter. For trees with more than one stem, one of the two calculation methods below has been used.

6.3 For trees with multiple stems the following rules apply.

a) For trees with two to five stems, the combined stem diameter has been calculated as follows:

$$\sqrt{(\text{stem diameter } 1)^2 + (\text{stem diameter } 2)^2 \dots + (\text{stem diameter } 5)^2}$$

b) For trees with more than five stems, the combined stem diameter is calculated as follows:

$$\sqrt{(\text{mean stem diameter})^2 \times \text{number of stems}}$$

6.4 The RPA for each tree is plotted as a circle centred on the base of the stem.

6.5 The calculated RPA for each tree has been capped to 707 m².

6.6 Where pre-existing site conditions or other factors suggest that rooting has occurred asymmetrically, a polygon of equivalent area has been produced.

6.7 Where modifications to the shape of the RPA have been specified they reflect a soundly based arboricultural assessment of likely root distribution. Any deviation in the RPA from the original circular plot takes account of the following factors whilst still providing adequate protection for the root system:

- a) the morphology and disposition of the roots, when influenced by past or existing site conditions (e.g. the presence of roads, structures and underground apparatus);
- b) topography and drainage;
- c) the soil type and structure;
- d) the likely tolerance of the tree to root disturbance or damage, based on factors such as species, age, condition and past management.'

7.0 Incursions in to the RPA (Root Protection Area)

- 7.1 The Tree Constraints Plan shows that there is **no impact** on retained trees the proposed works are outside the RPA of retained trees.

8.0 Arboricultural Method Statement - Additional precautions outside the exclusion zone

- 8.1 Planning of site operations should take sufficient account of wide loads, tall loads and plant with booms, jibs and counterweights (including drilling rigs), in order that they can operate without coming into contact with retained trees.
- 8.2 Such contact can result in serious damage to the trees and might make their safe retention impossible. Consequently, any transit or traverse of plant in proximity to trees should be conducted under the supervision of a banksman, to ensure that adequate clearance from trees is maintained at all times. Access facilitation pruning should be undertaken where necessary to maintain this clearance. NOTE In some instances, local planning authority consent for pruning might be required.
- 8.3 Fires on sites should be avoided if possible. Where they are unavoidable, they should not be lit in a position where heat could affect foliage or branches. The potential size of a fire and the wind direction should be taken into account when determining its location, and it should be attended at all times until safe enough to leave. NOTE Local environmental health authorities might have specific restrictions.
- 8.4 Any materials whose accidental spillage would cause damage to a tree should be stored and handled well away from the outer edge of its RPA. It is essential that allowance should be made for the slope of the ground so that damaging materials such as concrete washings, mortar or diesel oil cannot run towards trees.

9.0 Conclusion and recommendations

- 9.1 Six individual trees (located on adjacent third party land) were assessed in response to a proposed development.
- 9.2 It is not proposed to remove any trees as part of the development.
- 9.3 The proposed development does not encroach into the Root Protection Area (RPA) of the retained trees.
- 9.4 The impact of the proposed development has been assessed and in our professional opinion it is concluded that the works proposed will not be detrimental to the retained trees.

- 9.5 No work shall commence on site until such time as this method statement has been submitted to and approved in writing by the Local Planning Authority. All retained trees on and trees immediately adjoining the site shall be protected from damage as a result of the works on site, to the satisfaction of the Local Planning Authority in accordance with its guidance notes and relevant British Standards (e.g. BS5837:2012) for the duration of the development. In the event that trees become damaged during construction, the Local Planning Authority shall be notified and remedial action agreed and implemented. In the event that any tree(s) dies or is removed without the prior consent of the Local Planning Authority, it shall be replaced within the first available planting season, in accordance with details agreed with the Local Planning Authority.
- 9.6 All technical issues relating to arboriculture should be addressed to Arbor Consultancy Ltd in the first instance. Arbor Consultancy Ltd will liaise between the Local Planning Authority and any interested parties.

10.0 Images



View of side of house showing side porch to be demolished



View of the woodland

10.0 Images (Continued)



View of existing dwelling and woodland



View of the site

10.0 Images (Continued)



View of site



View of site