Merewood
Arboricultural Consultancy Services

Arboricultural survey to British Standard B.S. 5837: 2005 'Trees in Relation to Construction - Recommendations'
at
ACSI Vine Lane
Hillingdon

Prepared by
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1.0 Introduction

1.1 Brief

1.1.1. I am instructed by Wakelin Associates to carry out an arboricultural survey on trees at the front entrance of ACSI Vine Lane Hillingdon. I am to assess the health and condition of the trees, 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 on and adjacent to the site.

1.1.3. I have carried out the survey, collecting data in accordance with the recommendations of British Standard B.S. 5837: 2005 'Trees in Relation to Construction' 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 those 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 to the front of ACSI Vine Lane Hillingdon are covered by a Tree Preservation Order (London Borough of Hillingdon Tree Preservation Order 7 dated 1967). If any works to 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.

1.3 Survey Date

I surveyed the trees at ACSI Vine Lane Hillingdon on Tuesday, June 22, 2010. The weather was dry and visibility was good.

2.0 Summary

2.1 The site is well landscaped with trees providing a backdrop to mature shrub planting.

3.0 Site Description

3.1 The site in question is located at the front of ACSI Vine Lane Hillingdon and comprises the front entrance to the school leading directly off Vine Lane. The entrance leads up a slope to a junction, serving the gated entrance to the main drive of the school and a turning area.

3.2 The school is located to the east side of Vine Lane, bordering the west of Hillingdon Court Park. Vine Lane runs in a north south direction and connects with the Uxbridge Road to the south.

3.3 The topography of the site is sloping, with the gated entrance on a higher level than the main road. The soils at the site have not been formally tested.

4.0 Observations

4.1 The trees to the north side of the entrance are mostly self seeded trees that have sprung up amongst the shrubs and hedges and that have been allowed to grow to add to the screening to the houses at Sylvana Close that have been built to the north of the plot.

4.2 The trees include a number of sycamore trees (T2, T3 and T4) that are middle aged and of average form and condition. These are not especially outstanding trees, although they have some value in the landscape. I estimate their age to be between 30-50 years old so it is questionable whether or not they would have been growing at the time of the preservation order being made.

4.3 The size of the sycamore (T2) suggests that this tree was not growing at the time of the order being made. The sycamores (T3 and T4) may have been in existence, but it should be taken into account that sycamore grow vigorously when young and are competitive trees. T4 appears to have grown alongside the horse chestnut (T5) which I would estimate to be about 40 years old.

4.4 The ash tree (T1) is a small self sown tree that is clearly a good deal younger than the preservation order and is thus not covered by the order. This is a tree of no real significance.

4.5 The purple leaved plum (T6) is a good specimen that stands alone as a feature. The tree has a good form and is prominent at the entrance of the school. This is a tree in scale with its surrounds and well suited to this position adjacent to the footpath (fig.1).

4.6 The tree survey has shown that of the 12 trees surveyed, 5 are category 'B'; 6 are category 'C' and 1 is a category 'R' tree. Several of these are off site.

Fig: 1 The Purple leaved plum (T6) is a good tree,well suited to the location

5.0 Appraisal

5.1 I am asked to comment on a retrospective planning application being made in respect of works that have been carried out to improve the layout of the front entrance. Further works, including the widening of the road are also being proposed.

5.2 The widening of the road is sited within the root protection areas of a couple of the trees to be retained including T2 (a marginal encroachment and T6 (pathway already constructed).

5.3 Part of the widening on the north side follows the original kerb line that was covered by topsoil and replanted several years ago. It appears that the original surface is still present beneath the soil, and so it is not anticipated that the widening will have any significant impact on those trees to be retained.

5.4 Where the road is to be widened on the north side, the existing ground cover is to be retained as far as possible. Some loss at the edges may occur, but the small area of loss here will be restored either by allowing the existing ground cover to grow into the space or by planting with similar material as needed.

5.5 The tree survey has identified one tree (the sycamore T3) that is likely to be adversely affected by the proposed road widening. It is therefore necessary to fell this tree prior to any other works commencing on site.

5.6 Following the removal of T3, the stump of the tree is to be removed using stump grinding machinery in order to facilitate the planting of a replacement tree.

5.7 Landscaping of the site is to be kept relatively simple and will include the planting of two new trees (including the replacement for T3) to augment the appearance of the entrance to the school.

5.8 The layout of the landscaping is shown on the tree protection and landscaping plan (appendix 3). The specification for planting and general landscaping operations is given below.

6.0 Landscape specification

6.1 SITE PREPARATION AND EARTHWORKS

6.1.1 Programme of Operation: The exterior planting shall be installed over the minimum period to complete the whole of the works. Dates are subject to discussing and agreement with suitable environmental conditions prevailing. The Contractor must verify this programme of works before commencing on site.

6.1.2 Existing Vegetation: No existing trees, shrubs or other plants shall be removed or cut without specific instructions from the Architect. Existing trees are to be retained, protected and undisturbed throughout the contract in accordance with BS 5837 sections 4.2-4.1. No branches are to be cut or damaged and no roots larger than 75mm in diameter are to be cut or damaged. No fires are to be lit under or anywhere near the trees. No debris, fuel, or building material of any sort to be stacked against or piled around the trunks.

6.1.3 Sub-Soil Preparation: All stone, brick, concrete, wood, wire, pipes debris, rubbish, weed roots and foreign matter of any kind above a maximum dimension of 150mm shall be removed from the sub-soil formation layer to a depth of 225mm.

6.1.4 Removal of surplus excavated material: Remove all surplus excavated material from the site.

6.2 PLANTS AND PLANTING

6.2.1 Planting Operations: Planting operations shall be carried out in general accordance with the requirements of Sections 7, 8 and 9 of B.S. 4428: 1989 "Recommendations for General Landscape Operations (Excluding Hard Surfaces)".

6.2.2 Damage: All plants shall be adequately and carefully packed and protected to survive transport, by whatever means, to the site without damage in loading, transit or un-loading.

6.2.3 If in spite of these precautions, roots, branches or shoots suffer slight damage, they shall be carefully pruned. If major damage has occurred, the plant shall be rejected and replaced.

6.2.4 Container and Pot Grown plants: Container and pot grown shrubs must have grown in weed free containers of the sizes specified for at least one complete growing season and must be healthy, bushy, vigorous and well-rooted but not pot bound and equal to all clauses of this specification.

6.2.5 Species and Varieties: All plants are to be of the species and variety indicated on the schedules and drawings. If however, any plants are unobtainable at the time of ordering, the contractor is to inform the Employer immediately and submit a list of alternatives for consideration.

6.2.6 Container and pot grown plants which are not planted on arrival on site must be watered frequently to prevent drying out. Plants which have been allowed to dry out to the extent where their health is affected will be replaced at the Contractor's expense. Immediately before planting, all container and pot grown plants

will be well watered. Where plants have become pot bound, the roots on the outside of the ball will be gently eased out before planting.

6.2.7 Shrubs: Shrubs shall comply, at least, with the requirements of B.S. 3936: Nursery Stock, Part 1 Trees and Shrubs or Part 2 Roses and the JCLI Standard Form for Tender for the Supply and Delivery of Plants (4th Edition 1982). Shrubs shall be to the minimum height or spread as specified and shall have at least 5 branches developed. Cutting back shall occur if necessary for the normal development of the plant.

6.2.8 Planting shrubs: Dig out holes large enough to receive the roots of the plant fully extended and well spread out. Carefully work top-soil among roots and backfill. Plants to be well firmed by heeling and the surface left neat and even. Planting must be to the same depth as in the nursery. Care must be taken not to disturb the root balls of pot grown plants and not let any roots dry out at any time.

6.2.9 Watering: Shrubs and trees shall be well watered in immediately after planting.

6.2.10 Mulch: Apply 75mm mulch over whole of planting bed immediately after watering in.

6.3 TREES

6.3.1 Tree Pits: Tree pits shall be of a diameter 600mm greater than the root ball. The depth of the pit shall be 225mm deeper than the root ball and not less than 600mm deep. The base of the tree pit shall be forked over to a depth of 225mm.

6.3.2 Tree Stock: All stock must comply in all respects with the current edition of B.S. 3936.

6.3.3 Trees shall be well grown nursery stock free from disease, true to type and of a size scheduled in accordance with the approved method of measurement.

6.3.4 Planting Trees: Spread a minimum 75mm thick layer of well rotted manure in the bottom of each pit and fork over. Lay 50mm minimum mixture of peat substitute/leaf mould/sharp sand 6:3:1 by volume; the peat being well moistened. All the manure is to be covered so that none comes in direct contact with the tree roots. Soak the roots of bare-rooted trees in water for at least an hour before planting.

6.3.5 Continue backfilling with top-soil into which 170gm of

bonemeal has been mixed (per tree). Firm down well by heeling as filling proceeds. The tree must be planted to the same depth as in the nursery, and to the same orientation.

6.3.6 Stakes: To be requisite length, pressure impregnated (with preservative non injurious to plants) de-barked softwood 100mm square or diameter.

6.3.7 Tree Ties: To be plastic ties "Toms" pattern, two per stake and nailed to stake with large head galvanised nails.

6.3.8 Planting Season: Unless otherwise specified all transplanting shall be carried out between the end of October and the end of March. Container grown trees may be transplanted at times other than these at the discretion of the Landscape Architect.

6.3.9 Watering: At the time of planting, each tree shall be well watered in. If there is a risk of frost within 24 hours the watering shall be delayed until such risk has passed.

7.0 Conclusions

7.1 The proposed works have either already been carried out, or are a small addition to those works already in place.

7.2 Because of the presence of the original kerb line where the road widening is to take place is concluded that the development of the site could take place without harm to the significant trees on and adjacent to the site.

7.3 The sycamore tree (T3) is to be removed as part of the proposed widening of the road. The loss of this tree will not have a particularly profound effect upon the local landscape. The tree will be replaced as part of the landscaping scheme.

Simon Hawkins BTec ND Arbor M. Arbor A.

Schedule of plants (see landscape drawing)

Trees

(Standard size to B.S. 3936)

A Mountain ash (Sorbus aucuparia)

B Silver birch (Betula pendula)

Shrubs

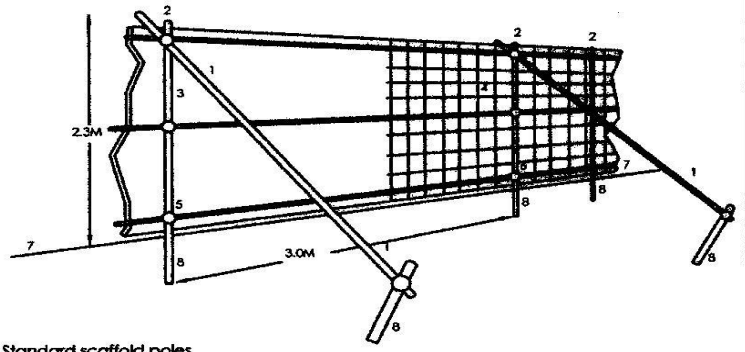
Planting Size 3ltr container grown stock

10 no. Viburnum davidii
10 no. Skimmia japonica
10 no. Lavendula spica

Fig. 1

Tree Protection Measures

TREE PROTECTION BARRIER



1 Standard scaffold poles
2 Uprights to be drivn into the ground
3 Panels secured to uprights with wire ties and where necessary standard scaffold clamps
4 Weldmesh wired to the uprights and horizontals
5 Standard clamps
6 Wire twisted and secured on inside face of fencing to avoid easy dismantling
7 Ground level
8 Approx. 0.6m driven into ground

TREE PROTECTION MEASURES

NO TREES ARE TO BE REMOVED, OTHER THAN AS SHOWN ON APPROVED PLANNING LAYOUTS, WITHOUT THE PERMISSION OF THE LOCAL AUTHORITY ARBORICULTURAL OFFICER.

EXISTING RETAINED TREES TO BE PROTECTED FOR THE DURATION OF THE CONSTRUCTION WORKS.

ALL FENCING AND OTHER WORKS TO COMPLY FULLY WITH BS 5837: 2005 AND ANY SUPPLEMENTARY INFORMATION ISSUED TO THE RELEVANT PLANNING AUTHORITY.

ERECT FENCING IN POSITIONS SHOWN ON TREE PROTECTION PLAN PRIOR TO ANY CONSTRUCTION OR DEMOLITION WORKS WHATSOEVER.

NO MATERIALS ARE TO BE STORED AND NO VEHICULAR TRAFFIC SHALL BE ALLOWED WITHIN TREE PROTECTION AREAS.

FIRES MUST NOT BE NEARER THAN 10M FROM THE LIMIT OF THE CROWN SPREAD AND MUST BE DOWN-WIND OF THE TREE AND PREVENTED FROM BECOMING TO LARGE SO AS TO AFFECT THE TREE.

OIL AND CHEMICALS MUST NOT BE STORED NEARER THAN 8M FROM THE LINE OF THE CROWN SPREAD AND ANY SPILLAGE MUST BE REMOVED BY EXCAVATION AND REMOVAL OF CONTAMINATED SOIL.

EXISTING SOIL LEVELS MUST NOT BE CHANGED WITHIN THE PROTECTED AREA AND NO CLEARANCE TO BE CARRIED OUT WITHOUT CONSENT.

ALL APPROVED SURGERY TO BE CARRIED OUT IN ACCORDANCE WITH BS 3998 BEFORE THE OCCUPATION OF ANY PART OF THE DEVELOPMENT.

Appendix 1
Key to Tree Survey Data

Tree number:

Assigned reference number corresponding to the tree survey plan

Species:

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

- Ash (*Fraxinus excelsior*)
- Sycamore *(Acer pseudoplatanus)*
- Horse chestnut (*Aesculus hippocastanum*)
- Purple leaved plum *(Prunus cerasifera 'nigra')*

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, and expressed in millimetres. Where access to the stem for measurement purposes was not possible, an estimated size is given with (est.) shown. For multi-stemmed trees, stem diameter is taken immediately above root flare with the indication (at base).

Crown spread (m):

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

Condition and observations:

A brief description summarising the form and condition of the tree, including physiological and structural defects.

Preliminary management recommendations:

Works necessary to maintain the tree in a reasonably safe condition based on a risk assessment of the tree. This is normally restricted to works needed in the short term only. This may include recommendations for further inspection.

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 R = Trees in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management.

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				Age	Condition	Recommendations	Life expectancy	Category
				North	South	East	West					
T1	Ash	6	130	2	2	1	3	M/A	Poor	None	40+	C
T2	Sycamore	8	260	3	2	2	1	M/A	Fair	None	40+	C
T3	Sycamore	10	370	3	3	3	3	M/A	Fair	None	40+	C
T4	Sycamore	8	430	2	2	1	2	M/A	Fair	None	40+	C
T5	Horse chestnut	8	380	2	2	1	1	M/A	Fair	None	40+	C
T6	Purple leaved plum	6	390	3	3	3	3	M	Good	None	20 - 40	B2

Appendix 3
Tree Protection and Landscaping Plan


SYCAMORE
G 1.0
HT 12m
SYCAMORE
G 1.0
HT 12m
T1
Ash
C
T2
Sycamore
C
T3
Sycamore
C
T6
Purple leaved plum
B2
GATE LODGE
FL 49.82
VINE LANE
PAVING
GRASS
CONIFERS
AV.G 0.5
HT 7m
SILVER
BIRCH
G 0.4
HT 7m
AREA NOT SURVEYED

Appendix 4
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 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 studied and practised Arboriculture for more than 20 years, during which time I have been involved with both the private and public sector.

- I am a member of the Arboricultural Association and of the Royal Forestry Society.

- 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.