ARBORICULTURAL REPORT FOR INSURANCE PURPOSES

1 Belsize Park
London
NW3 4ET

290507-MD-02

June 2009

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As instructed, we visited the above site on 9 June 2009 to assess the trees growing within influencing distance of the main property, in relation to:

(i) Structural integrity of main structure
(ii) Health and Safety

Our survey of the trees, the soils and any other factors is of a preliminary nature, soils information is taken from British Geological Survey published data. We have not taken soil/root samples for analysis and the trees were not climbed, but inspected from ground level. Please refer to our TERMS & CONDITIONS, a copy of which has been forwarded to you. Further copies are available on request.

We have only considered potential damage to the main structures and not to garden walls, patios, paths etc (light structures). However, the tree schedule accompanying this report may mention damage to light structures if noted on site.

We have no information as to the structural integrity of the drainage system. Drainage/water supply systems, if damaged, can allow roots to penetrate. If the system is sound or after repair, roots have little capacity to access and damage underground services. A drainage expert can give more advice.

Our report is preliminary in nature and assesses the current and potential threat of nearby trees and vegetation to the main property within the next three years. If you, or your advisors, have at your disposal any additional information which suggests that the property is currently suffering from subsidence damage attributed to the effects of vegetation, we would ask that you release the information to us.

All relevant data presented within this report together with any recommendations for further analysis have been provided as appropriate.

The Property

The property is semi-detached rendered residential building of four storeys. There is a semi-basement to the front of the property. It has been assumed that the building predates the 20th century. The ground floor extension (summer room) to the rear of the property is of more recent construction.

The surrounding area is residential and consists of a combination of terraced and semi-detached properties.

Site levels within and adjacent to the site are fairly consistent with the ground sloping generally from the front to the rear of the property

Damage from trees and vegetation can be caused by either direct action of tree roots (the incremental growth of tree roots causing lightly loaded structures to distort) or by indirect action (the removal of soil moisture by tree roots causing the bearing soil to shrink which can lead to movement to structures). Damage can also occur as a result of branches growing into contact with buildings.

We have been provided with no information to suggest that damage is occurring to the main property due to soil movement caused by desiccation. Any doubt as to the structural condition of the property would require the advice of a structural engineer.

The Soils

The soil on site was not assessed at depth but the geological map of the area (British Geological Survey Solid & Drift Map Sheet 256 1:50,000 edition) shows the property to be located on London Clay.

London Clay is shrinkable soil which is generally somewhat impermeable and is highly susceptible to soil moisture fluctuations which can be exacerbated by the desiccating effect of nearby vegetation.

The Trees

The trees inspected have been assessed from ground level and the information on them is contained in the schedule attached to this report. The trees in question are numbered T1-T9 are located on the sketch plan which is attached to this report.

All vegetation surveyed is located within the boundary of the property with the exception of T3, a lilac, which is growing in neighbouring property.

Potential risk of soil desiccation damage (subsidence) to the main property

Trees and shrubs, depending on species, have differing abilities to absorb moisture from clay sub soil and these differences will be further influenced by the size and condition of the individual trees concerned. In addition, the age class of the trees will inform the surveyor of the likelihood of individual trees increasing, maintaining or reducing their ability to influence built structures. Soil water availability (through rainfall) and summer temperatures will also influence the degree to which tree roots will desiccate the subsoil and the assessment of the risk of damage occurring must take some account of projections for changes in the climate over the short to medium term.

The table below states the percentage of that species implicated in subsidence on clay soil within a certain distance of a building. The information is taken from research published in *Tree Roots and Buildings by D F Cutler and I B K Richardson.*

Two trees have been identified as posing a potential risk to the main property:

- T1 London plane
- T6 Willow

<u>T1 London plane</u>
This established mature tree is growing within 2m of the main house and entrance steps. The tree has a history of crown reduction and has re-grown some 2m in both height and radial spread since last reduced. There is some concern about the soil volume available for the growth of structural roots but the tree appears to have established structural integrity at least in relation to the managed and reduced

crown form.

I understand that there was an unresolved occurrence of internal cracking within the building after the very dry summer of 2003 and that this was managed without the need for structural repairs and has not recurred.

In view of the potential for further growth of this large tree, its restricted rooting area and the risk of further dry summers it is recommended that it be reduced immediately to the previously established crown volume and that this reduction be maintained every 2 years. It is recommended that subsequent crown reductions should take place during the summer months before August on each occasion.

T6 Willow

This is a fast growing tree in middle age with significant future growth potential. The tree is growing 10m from the single storey rear extension to the property and has been crown reduced within the past 2 years. Due to the known ability of this species to influence clay soil at depth and the potential future size of the tree it is recommended that it be maintained at a reduced size. The recommendation is for the tree to be reduced again this year to the previously established crown volume and that the reduction should be maintained by subsequent pruning every 2 years in the summer before August.

Although trees respond quite quickly to crown reduction by producing prolific new growth, the maintenance of the reduction on a regular and frequent cycle can reduce the risk of excessive soil desiccation. The practice of thinning tree crowns has not been found to reduce water absorption by trees.

In addition to the works listed above, the schedule of trees contains recommendations for other tree works to avoid nuisance.

Conclusions

Some of the trees surveyed are within influencing distance of the main building and the soil in this area is likely to be London clay which is susceptible to volumetric change which can lead to subsidence damage in buildings.

There has been no evidence supplied to indicate that the trees have caused any damage any part of the building. Therefore the assumption is that the trees in their current condition are not causing any damage to the property.

Two of the trees have a history of crown reduction and it is recommended that this management should be maintained on a more regular cycle.

When appointing a Tree Surgeon, please employ only properly qualified and experienced companies and always check that they carry Public and Products Liability Insurance with a minimum of £1 million cover and the relevant Employers Liability Insurance.

Trees are dynamic living structures, which can change enormously over time. The observations and recommendations in this report should be considered valid for a maximum period of three years after which all significant trees should be reassessed by a qualified arboriculturist.

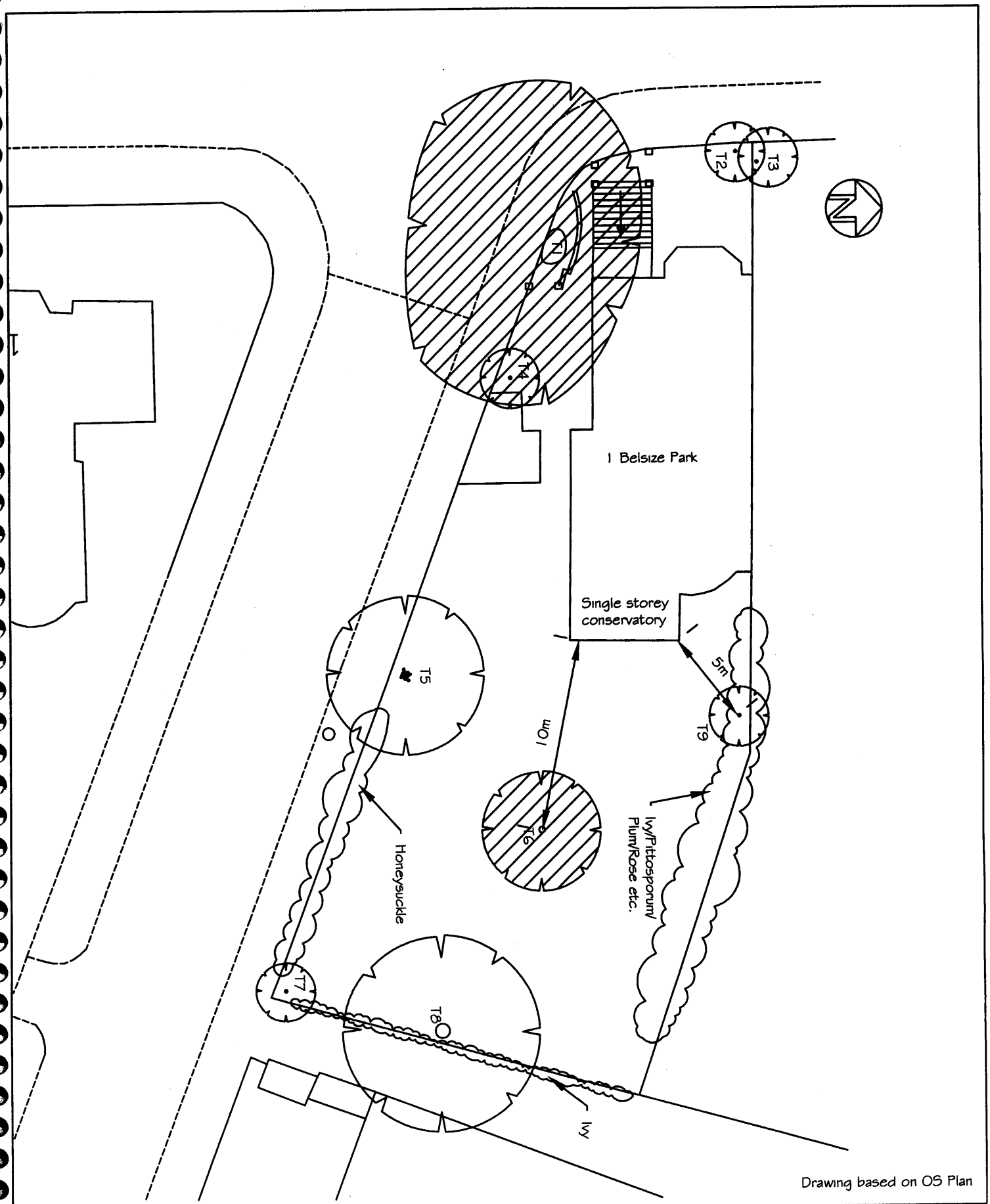
The recommendations made within this report are based on the information received.
The appearance of any building defect should always be investigated promptly. If vegetation is implicated then often, effective early removal of trees will stabilise the situation at little cost. Always contact a qualified structural engineer or arboriculturist before considering tree removal.

Schedule of trees at: 1 Belsize Park NW3
Date: 09/06/2009

Tree No	Species	Height (m)	Crown Spread (m)	Stem diameter (mm)	Condition (A, B, C or D)	Vigour (Low or Normal)	Maturity	Distance from Building (m)	Comments
T1	London plane	17	16	950	B	N	M	2	Retaining wall within 1m. Distorted root plate. Clearing roof by <1m. Distorted light structures. Reduce to previously established reduction points (by about 2m) and maintain reduction every 2 years.
T2	Plum	5	6	M/S 250	C	N	M	4.5	<1 from front and side walls.
T3	Lilac	5	5	300	C	L	M	<1m from boundary wall	Wall is distorted.
T4	Lilac	3	4	M/S	C	N	MA	<1m from wall	
T5	Orange Blossom	4	8	M/S	B	N	M	<1m from wall	Lift over pavement to 2.5m.
T6	Weeping willow	7	8	350	B	N	MA	10	Nearest part of building is conservatory. Tree reduced within last 2 years. Maintain reduction.
T7	Elder	6	4	M/S 150	C	N	M	-	<1m from cracked wall.
T8	Lime	19	12	700	B	N	M	-	<1m from wall, ivy covers wall.
T9	Apple	6	6	300	B	N	M	5	Very close to boundary wall

Key-
Condition A-Good, B-Fair, C-Poor, D-Dead
Vigour L-Low, N-Normal
Maturity Y-Young, MA-Middle Aged, M-Mature, OM-Over mature
Tree No. S-Shrub, T-Tree, C-Climber
Stem diameter M/S-Multi-stem, T/S-Twin-stem

All dimensions are approximate



Drawing based on OS Plan

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Drawing No 290507-01	**Title** Tree Survey
Date June 2009	**Client** Jason Shenai
Scale Not to scale Use figured dimensions	**Project** 1 Belsize Park, London NW3 4ET

Trees implicated in current damage

Work recommended for precautionary reasons