

## **MIKE MILLS CONTRACTS**

We require regular 'tool box talks' to be undertaken by the Principal Contractor and also all subcontractors to site operatives outlining a variety of relevant Health and Safety issues.

### **Health and Safety**

To minimise risk and control exposure, our Health, Safety and Environmental Department will give advice at planning stages on all activities and all H&S requirements. H&S is diligently monitored throughout our projects and reported to the main board.

Mike Mills Contracts treats safety as a highest priority and has developed a successful programme of initiatives in order to improve Health and Safety awareness and performance on all of our projects. These work by actively encouraging site operatives to think in a manner that assesses personal safety and the safety of others, not only on site but also throughout their lives.

The layout of the site accommodation ensures that all staff, visitors and operatives will have the ability to store and retrieve the correct PPE before entering the construction area.

### **First Aid**

The majority of Mike Mills Contracts site management are qualified First Aiders and as a company, we strive to increase the percentage of competently trained site staff. The site will have First Aid attendance at all times.

### **Noise and Hearing Protection zones**

A sound / noise meter will be kept on site at all times to check noise levels at the site boundaries during certain operations. Inside the site, and closer to noise sources, hearing protection zones, where hearing protection must be provided and worn if noise levels reach 80 – 85 Db, will be set up.

Careful planning and use of appropriate plant and equipment normally keeps these requirements to few and very short periods.

### **Construction Activities**

The demolition and construction of the development will be carried out in accordance with detailed method statements and risk assessments approved by Mike Mills Contracts Site Management and in accordance with this construction management plan and Mike Mills Contracts Health, Safety and Environmental Procedures

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## RENEWABLE ENERGY STATEMENT

FOR

42/42A PHOENIX ROAD

CAMDEN

LONDON

NW1 1TA

FOR

FINDLAY ESTATE COMPANY

Date: 17<sup>th</sup> May 2010

710D2HY10

*Mechanical & Electrical Engineering Services: Energy Consultants*  
*D W Jones*

Co. Reg. No. 4924893

VAT Reg. No. 541 0534 83

## **1.0 INTRODUCTION**

This preliminary renewable energy statement is intended to outline the proposed on-site energy generation from renewable resources.

A more detailed assessment of the predictive energy consumption and measures to provide at least 20% from renewable sources will be submitted in due course.

## **2.0 THE PREMISES**

The premises is a mix of offices and student housing.

The lower ground floor, ground floor and first floor will be developed for use and occupation by the charity 'Hopscotch'.

The second, third and fourth floors will be developed to provide student housing in nine flats. Each flat will have 3, 4 or 5 bedrooms and communal kitchen, lounge and sanitary facilities.

## **3.0 RENEWABLES**

The renewable energy sources being considered for the development are:-

- Photovoltaic Solar Panels
- Solar Thermal Panels
- Combined Heat and Power CHP
- Heat Pumps
- Heat Recovery Ventilation

## **4. ENERGY EFFICIENCY**

The premises will also be designed to utilise the latest developments in efficient use of energy;

- Energy efficient light sources
- Occupancy detectors to control lighting and ventilation
- Optimum start and weather compensated heating controls
- Photocell control of external lighting.

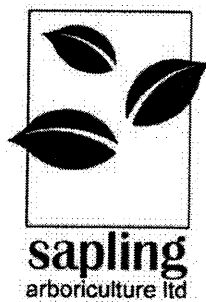
# **BS5837 Tree Survey**

**at**

**42 Phoenix Road  
London**

**for**

**Findlay Estate Co Ltd**



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November 2009



Institute of  
Chartered Foresters



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## Appendix 2 BS5837 tree survey

No	Species	Legal	Height (m)	Stem Ø (mm)	Branch spread (m)		Height of crown (m)		Age class	ERC (years)	Category grading	RPA	Future height (m)	Future branch spread Ø (m)
1	London Plane	~	>20	932	N	8	N	5	Mature	>20	B	Radius (m)	>20	>20
					E	10	E	5				11.2		
					S	10	S	5				Area (m²)		
					W	8	W	5				393		
					Condition							Preliminary management recommendations		
Fair  Normal twig and leaf density and size. Branches in low canopy and adjacent to buildings have been repeatedly tip reduced with moderate regrowth. Single straight stem touching wall to the west and 3m to wall to the north. Damage to wall to the north; cracks are wider at the base.					Maintain cyclic tip reduction works to clear adjacent properties by 2m. Crown lift to 4m to allow vehicles beneath the canopy.					Removal of 1st single branch low canopy on north side.				

### General notes

Instruction: To inspect the trees on the site in relation to British Standard 5837:2005 Trees in relation to construction.

The survey of the tree was of a preliminary nature carried out from ground level. Detailed investigations were not carried out and no tree climbed. The conclusions are based on my own observations, qualifications and experience in arboriculture. All dimensions recorded are estimated. No soil assessments have been undertaken.

I have not checked whether the site is within a Conservation Area or whether the trees are under Tree Preservation Order (TPO). Prior to any tree works confirmation of whether these legal restrictions apply to the site or trees ought to be sought from the Local Planning Authority (LPA). No details have been sought from the Local Planning Authority (LPA) on whether the trees on or adjacent to the site are protected by Tree Preservation Order (TPO) or within a Conservation Area. This impact assessment has been carried out to assess which trees are worthy of retention and how the proposed scheme may affect them. Where trees are found to be worthy of retention they are treated as if they are legally protected.

If the trees stand within a Conservation Area designated under the Town and Country Planning Act the LPA will normally require 6 weeks notice of intention to carry out any tree works as detailed in the survey.

If the trees are under TPO then the LPA will normally require an application for any tree works. Some tree works are exempt, for instance if the trees are dead, dying or dangerous, and certain works can be carried out without application. It is prudent to give the LPA at least five days notice prior to carrying out any of these tree works under these exemptions. This survey, with recommendations, can be used to support any such application or notice.

Wildlife issues are of significant concern to the general public. A balance has to be found between the protection of wildlife and the need for safety when managing trees. The Wildlife and Countryside Act (1980) and Countryside Rights of Way Act (2000) give statutory protection to wild birds, bats, mammals, some invertebrates and plants. It is important to ensure that this legislation is properly considered when carrying out any works to trees.

Bird nests were not identified whilst on site. However, any Arborist carrying out the tree works should ensure that there is no disturbance to nesting birds prior to the works being carried out. Further guidance upon the appropriate timing of the works can be sought from DEFRA, if necessary.

In this instance, considering the size of the tree, its location and features I believe that there is a low probability of bats using the tree as a roost site. A bat survey prior to tree works is not recommended as it would be difficult to determine the location of any exit point from the roost within the tree by a bat survey and also confusion may also arise from bats travelling from other roosts. Any such exit could more easily identified by a competent tree worker. During the tree works the contractor should carry out the tree works with bats as an active consideration and follow the current industry best practice, e.g. Arboricultural Association Guidance Note 1 Trees and Bats 2003, which a competent tree contractor should be familiar with.

Typical significant defects that are to be identified can be referred to in "Hazards from Trees, a general guide", "Principles of tree hazard assessment and management" both by David Lonsdale and "The body language of trees" by Claus Mattheck published by the Forestry Commission and the Department of the Environment respectively.

Trees are dynamic structures and as such their condition and health may change in a short period of time, particularly in relation to changes in their immediate environment and circumstances. As such the inspection is valid for a period of 1 year from the date of the survey providing the environment and circumstances do not significantly alter.



### Appendix 3 Key to BS5837 tree survey

<b>No</b>	Tree number.	
<b>Species</b>	Species of tree.	
<b>Legal</b>	<b>TPO</b>	Tree Preservation Order.
	<b>CA</b>	Conservation Area.
	<b>U</b>	Unknown.
	<b>N</b>	No Tree Preservation Order or Conservation Area.
<b>Height</b>	Height measured in metres.	
<b>Stem Ø</b>	Stem diameter at 1.5metres following normal Forestry conventions or immediately above the root flare for multiple stemmed trees, in millimetres.	
<b>abf</b>	Above basal or root flare.	
<b>Branch Spread</b>	Branch spread in metres taken at the four cardinal points to derive an accurate representation of the crown.	
<b>Height of crown</b>	Height in metres of crown clearance above adjacent ground level.	
<b>Age Class (Age)</b>	<b>Y</b>	Young (i.e. a tree in the first third of its lifespan).
	<b>Mi</b>	Middle aged (i.e. a tree in the second third of its lifespan).
	<b>Ma</b>	Mature (i.e. a tree in the final third of its lifespan).
	<b>Ov</b>	Over mature (i.e. a tree in the final third of its lifespan that is showing symptoms of decline). (i.e. a tree that is mature, provides visual and ecological amenity and of considerable age for a tree of its species).
	<b>V</b>	Veteran
<b>Condition</b> (Physiological and Structural)	<b>Good</b>	<ul style="list-style-type: none"> <li>Full healthy canopy; but possibly including some suppressed branches or physical damage. A tree that requires little or no tree works and it is anticipated to be retained for over 10 years.</li> </ul>
	<b>Fair</b>	<ul style="list-style-type: none"> <li>Slightly reduced leaf cover, minor dead wood, or isolated major deadwood. A tree that requires tree works to remove defects and/or improve the form so that it may be anticipated to be retained for over 5 years.</li> </ul>
	<b>Poor</b>	<ul style="list-style-type: none"> <li>Overall sparse leafing or extensive dead wood. A tree that has a significant proportion of defects and/or requires considerable tree works to aid its retention and/or where the retention of the tree is not anticipated beyond 5 years.</li> </ul>
	<b>Very poor</b>	<ul style="list-style-type: none"> <li>Large areas of crown dead. A tree that has a significant proportion of defects and/or requires considerable tree works to aid its retention.</li> </ul>
	As per BS3998: 1989 Recommendations for Tree Works.	
<b>Preliminary management recommendations</b>		
<b>Estimated remaining contribution</b>	Estimated remaining contribution in years (e.g. less than 10, 10-20, 20-40, more than 40).	
<b>Category grading</b>	See below Table 1.	
<b>Root protection area</b>	See below Table 2.	
<b>Future height</b>	Estimated <b>future height</b> of the tree at maturity. Measured in meters (m).	
<b>Future branch spread</b>	Estimated <b>future branch spread</b> of the tree at maturity. Measured in meters (m).	
<b>OI</b>	Over ivy	
<b>INAC</b>	Inaccessible	
<b>LS</b>	Land survey, i.e. data provided by the land survey.	
	All measurements are approximate.	



Table 1 - Cascade chart for tree quality assessment, BS5837: 2005 Trees in relation to construction - Recommendations

TREES FOR REMOVAL				
CATEGORY AND DEFINITIONS	CRITERIA			IDENTIFICATION ON PLAN
Category R Those in such 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.	<ul style="list-style-type: none"><li>Trees that have a serious, irremediable, structural defect, such as that their early loss is expected due to collapse, including those that will become unviable after removal of other R category trees (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning).</li><li>Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline.</li><li>Trees infected with pathogens of significance to the health and / or safety of other trees nearby (e.g. Dutch elm disease) or very low quality trees suppressing adjacent trees of better quality.</li></ul> <p>NOTE Habitat reinstatement may be appropriate (e.g. R category tree used as a bat roost: installation of bat box in nearby tree).</p>			RED
TREES TO BE CONSIDERED FOR RETENTION				
Category and definitions	Criteria – Subcategories			Identification on plan
	1 Mainly arboricultural values	2 Mainly landscape values	3 Mainly cultural values, including conservation	
Category A Those of high quality and value: in such a condition as to be able to make a substantial contribution (a minimum of 40 years is suggested)	Trees that are particularly good examples of their species, especially if rare or unusual, or essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dominant and / or principal trees within an avenue).	Trees, groups or woodlands which provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance (e.g. avenues or other arboricultural features assessed as groups).	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture).	LIGHT GREEN
Category B Those of moderate quality and value: those in such a condition to make a significant contribution (a minimum of 20 years is suggested)	Trees that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of remediable defects including unsympathetic past management and minor storm damage).	Trees present in numbers, usually as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals but which are not, individually, essential components of a formal or semi-formal arboricultural features (e.g. trees of moderate quality within an avenue that includes better, A category specimens), or trees situated mainly internally to the site, therefore individually having little visual impact on the wider locality.	Trees with clearly identifiable conservation or other cultural benefits	MID BLUE
Category C Those 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 below 150mm.	Trees not qualifying in higher categories.	Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value, and / or trees offering low or only temporary screening benefit.	Trees with very limited conservation or other cultural benefits	GREY
	NOTE: Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150mm should be considered for relocation.			

Table 2 - Calculating the Root Protection Area (RPA), BS5837: 2005 Trees in relation to construction - Recommendations

Number of stems	Calculation
Single stem tree	$RPA(m^2) = ((\text{stem diameter}(mm) \text{ at } 1.5m \times 12) / 1000)^2 \times 3.142$
Tree with more than one stem arising below 1.5m above ground level	$RPA(m^2) = ((\text{Basal diameter}(\text{measured immediately above root flare})(mm) \times 10) / 1000) \times 3.142$
NOTE The 12 x multiplier is based upon NJUG 10 [9] and published works by Metheny and Clark [10].	

5.2.3 The calculated RPA should be capped to 707m<sup>2</sup>, e.g. which is equivalent to a circle with a radius of 15m or a square with approximately 26m sides.

5.2.4 The RPA, for each tree as determined in Table 2, should be plotted on the TCP taking full account of the following factors, as assessed by an arboriculturalist, which may change its shape but not its area whilst still providing adequate protection for the root system.

a) The likely tolerance of the tree to root disturbance, based on factors such as species, age and condition and presence of other trees. (For individual open grown trees only, it may be acceptable to offset the distance by up to 20% in one direction.) (See Note 1 of 11.3.5)

b) The morphology and disposition of the roots, when known to be influenced by past or existing site conditions (e.g. presence of roads, structures and underground services).

c) The soil type and structure.

d) Topography and drainage.

e) Where any significant part of a tree's crown overhangs the provisional position of tree protection barriers, these parts may sustain damage during the construction period. In such cases, it may be necessary to increase the extent of tree protection barriers to contain and thereby protect the spread of the crown. Protection may also be achieved by access facilitation pruning (see 11.2.1). The need for such measures, including the precise extent of pruning, should be assessed by an arboriculturalist.