ACS

ARBORICULTURAL IMPLICATIONS REPORT

for :

19 East Heath Road

Produced for: Peter Regis

Prepared by:
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Date: 20th August 2009

Reference: eb/ms1/eastheathrd

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Contents

Appendices

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Arboricultural Implications and Tree Protection Methods

Trees at 19 East Heath Road

Summary of Conclusions and Recommendations

Subject to the implementation of the proposed scheme in accordance with the recommendations set out in this report, the landscape and important trees will not be adversely affected either directly or resulting from the development of the proposed scheme.

As a consequence of the above, the scheme will have a negligible impact upon the visual character and appearance of the area.

Recommendations

1. **Undertake a pre-commencement site meeting**
2. **Agree the sequence of events**
3. **Adhere to the tree protection measures stipulated in this report**
4. **Monitor tree protection during construction period**

1.0 Introduction and Scope

1.1 This report has been commissioned by Peter Regis to; i) assess the trees in accordance with BS 5837:2005 'Trees in relation to construction- Recommendations' (The BS); ii) detail the arboricultural consequences of the proposed project and assess its visual impact upon trees and amenity; iii) provide recommendations for effective tree protection, which are commensurate and appropriate for the scale and type of development; iv) develop a tree protection strategy for the duration of the construction including any land preparation or demolition works.

1.2 Reference to 'the proposed scheme' below will mean either the approved scheme for which planning consent has been granted or the scheme under consideration by the Local Planning Authority (LPA).

1.3 The trees were inspected, in accordance with BS 5837:2005 'Trees in relation to construction- Recommendations' on 26th February 2008 and a total of 5 tree records are provided.

1.4 This report sets out the protection measures that will be adopted to ensure effective tree preservation. The basic principles are that; the established fenced and ground protected areas are exclusion zones for the duration of the construction (or as duly agreed) and; excavations within the BS root protection areas (RPA) will be subject to professional assessment (see Note 1).

1.5 A full hazard assessment of the trees (including for example the assessment of decay or defects and its implications), has not been undertaken as this information is considered beyond the scope of this report. Naturally, any obvious hazards have been identified in the schedule and, I recommend that these are acted upon as soon as practicable.

1.6 Any operational practices recommended in this report are to be undertaken by the appropriate specialist company. Operatives are to carry out the relevant risk assessment and record such information, prior to commencement of tasks and work in accordance with current Health and Safety standards, practices and legislation. Unless formally agreed, no contractors are assessed, appointed or monitored by ACS Consulting. Responsibility and liability of all actions, non-actions, products and services associated directly with this report will be limited to the relevant client and contractor.

General Site Description

1.7 The site comprises the rear parking area and garages of 19 East Heath Road. Geological records suggest that the local soil is London Clay. The site is predominantly flat and falls within a conservation area and affords legal protection to trees in excess of 75mm in diameter at 1.5m above ground level.

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2.0 Tree Appraisal & Implications

2.1 The tree details are presented at **Appendix 1**. These details conform to those recommended by BS 5837:2005 'Trees in relation to construction-Recommendations'. The position and status (TPO) of the trees is shown on the Tree Protection Plan (TPP) at **Appendix 2**.

2.2 The implications of the proposed scheme, in terms of tree pruning and other works are detailed in the table below. An assessment of the visual impact of the works resulting from the scheme OR as a consequence of sensible arboricultural husbandry is also provided.

Tree Works	Tree Nos	Visual Landscape Impact of Works*	Available Replacement Planting(Y/N)	Comments
Crown Lift 4m	1	None	N	To facilitate construction
Crown reduce 20%	2	Low	N	To facilitate construction
Crown lift 6m Cut back overhang by 2m	3	Low	N	To provide sufficient clearance to scheme building
Total		Low		

*This is a preliminary visual appraisal based upon the opinion of the author having inspected the trees in the context of their current surroundings. – None (no change or beneficial impact) Negligible or indiscernible difference to treed landscape; Low – Noticeable but mitigated by retention of other landscape trees and features; Medium – Obvious but temporary alteration to the treed landscape; High – Obvious and permanent alteration to the landscape.

Visual receptors include the public or community at large, residents, visitors or other groups of viewers together with the visual amenity of potentially affected people.

2.3 As a consequence of my assessment above, I believe the visual impact of the scheme to be low in the context of trees and their sustainable contribution to the landscape and local amenity.

2.4 It will be necessary for all tree work to conform to BS 3998:1989 'Tree Work' (with amendments) and to current arboricultural best practice. Tree works are to be undertaken by a professional and specialist arboricultural contractor, who has the appropriate experience and insurance cover. Commencement of all or some of the proposed works may be subject to written authorisation from the Local Planning Authority (LPA) should planning consent be obtained. We strongly advise that authorisation for any tree works is obtained from the LPA prior to commencement.

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2.5 In addition, prior to the commencement of any tree works, an ecological assessment of specific trees may be required to ascertain whether protected species (e.g. bats, badgers and invertebrates etc) may be affected.

2.5.0 Specific Comments on Tree Stock

2.5.1 There are two trees within the site boundary. Tree 1 is an early mature Honey Locus that will be incorporated into the scheme. The tree does not provide wider landscape benefit as it is secluded from public view but will continue to make a contribution to the internal landscape of the site. The proposed sliding gate will be located beneath the canopy of the tree but will not come into contact with the primary branch structure. Periodic pruning maybe required in the future to prevent obstruction.

2.5.2 Tree to is an over mature domestic Pear that is going along the eastern boundary of the site. The tree falls within BS retention category C and therefore is not considered to be a major constraint on the development of the site. It is however accommodated into the scheme to retain the current functional screening and softening effect the tree provides. Owing to the trees limited life expectancy, I anticipate that the tree will be replaced in the next 10 to 15 years with the sufficient rooting area for replacement tree(s) to be successfully established

2.5.3 Trees 1 and 2 are situated within the site boundary behind the existing building. As a consequence their landscape contribution and wider public amenity is limited. The proposed structure falls with the uniform RPA of both trees but trail pits dug to a dept of 1m along the foot print indicated that root development in this area was very limited. I believe this is a result of the highly compacted sub base to the driveway and upper soil layers. The footings of an old structure were also present in the trail pits. Two roots of approximately 20mm diameter, emanated from tree 1 but no significant roots from tree 2 were evident As a consequence I believe that the scheme will not adversely affect the heath and condition of either tree.

2.5.4 A trail pit to demonstrate the root morphology of tree 3 within the development area was commission by my client in 2004. This revealed only one root of significance due to the physical barrier created by the boundary wall and existing garage structure. With sympathetic construction methodology coupled with root pruning, the small diameter encroaching root(s) can be removed without prejudicing the health and condition of the tree.

2.5.5 The boundary wall to the east of the site will similarly act as a barrier to root development from trees 4 and 5. This is couple with the fact that the land levels are up to 2 metres higher in the neighbouring property. As such I do not consider that the trees will be impacted upon by the proposed development.

2.5.6 Crown lifting and trimming back the overhanging, pendulous growth of tree 3 is required to build out the scheme. This work will not aversely affect the health, and condition of the tree or it amenity contribution. Owing to the raised ground levels on the western boundary, the canopies of trees 4 and 5 will not come into conflict with the scheme layout.

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3.0 Tree Protection Measures

General

3.1 A tree's BS root protection area (RPA) is based upon a radius measurement taken from the trunk centre and is included with reference to Table 2 of the BS (See **Appendix 1**). Professional arboricultural judgement may identify modifications to the morphology of an RPA. Any work within a tree's RPA will be subject to professional advice and the guidance set out in this report, particularly where construction is required within this area but beyond the position of fixed tree protection fencing.

3.2 Effective tree protection will be afforded subject to following a logical sequence of events, which **will follow a pre-commencement site meeting** (see 4.0). Invitees will include LPA representatives and the site agents and any specialist supervisors:

('S' refers to the stage in order)

S1 Undertake any agreed and or necessary tree works.

S2 Erect protective fencing and install ground protection/site huts

S3 Carry out demolition works

S4 Carry out ground works including excavations for foundations and services

S5 Erect scaffolding and complete construction works

S6 Remove protective fencing and landscaping works

3.3 The protection fencing will be erected in the position indicated on the Tree Protection Plan (TPP) at **Appendix 2**.

3.4 The type of fencing and its recommended specification is attached at **Appendix 2** also. In this case both, hoarding or fixed Heras fencing will be effective.

3.5 The protection fencing will remain in position for the duration of the construction phases, including the removal of the existing structures and land preparation. Clear signs will be attached to the fencing once erected – suggested wording will be **'Protected Trees – No Access and Do Note Move this Fence'**.

3.6 Where, for construction purposes, it is necessary to position tree protection fencing within the RPA of tree No 1 and 2, suitable ground protection will be installed to prevent undue soil/root compaction from pedestrian and/or vehicular traffic. At **Appendix 3** are recommended examples of effective ground protection suited for this location. Included in the Appendix also is a diagrammatic indication of how ground protection or hard surfacing offers effective root/soil protection. The type of ground protection will be suitable for the type of proposed traffic e.g. scaffold boards over compressible material will be suitable for pedestrian and light machinery such as wheel barrows but polyethylene or steel ground plates will be used for heavier machinery and temporary re-enforced concrete may be suitable by agreement.

3.8 Hand excavations are required within the RPA of tree No 1 and 3 may encounter roots. Although soil excavation near trees and root pruning is outlined in **Appendix 5**, specifically in this case however the treatment of roots will be undertaken in the following ways:

i) Clearly mark out the area for hand dig (using biodegradable marker paint) (see TPP)
ii) Use hand tools (forks and spades) to remove the spoil and deposit beyond RPA.
iii) Identify roots to be retained by brushing or the use of compressed air
iv) Roots <25mm Ø will be pruned using sharp pruning tools. Roots will be pruned back to a side shoot or suitable position, ensuring the exposed face is kept to a minimum.
v) Roots >25mm Ø will be retained (unless pruning is agreed) by specific construction design. Retention of roots 50mm Ø or more will be by the use of void-formers (see **Appendix 5**).

4.0 Underground Services & Foundations

4.1 The location of suggested new services is indicated (as a preliminary guide and subject to engineers' advice) on the TPP.

4.2 The foundations of the structures located within the BS RPA of tree No will be constructed by adopting the following methods (subject to confirmation by the consulting engineers):

Traditional strip (trench) foundations

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5.0 Soil Grade Level Changes

5.2 The scheme requires soil grade alterations within and the following process will be adopted to minimise the impact upon the tree:

i) Agree the method of soil grade change and the design of any retaining structure with the appointed engineer.
ii) Ensure all tree protection is positioned, by agreement, in the appropriate location
iii) Accurately mark out the area of soil grade change.
iv) With hand tools, excavate the identified area depositing any spoil away from protected areas. Roots to be pruned and treated in accordance with the processes set out in **Appendix 5**.

6.0 Site Supervision - Arboricultural Specialist

6.1 It is important to recognize that the Local Planning Authority Officers (Enforcement Departments) have stringent powers to serve a **Temporary Stop Notice** through recent changes in the legislation governing planning and development. Circular 02/2005 (see Note 2). It is therefore important that works, which may impact upon trees and amenity, are suitably controlled by competent personnel. Identified below are details of a site monitoring process designed to minimize potential risks to retained trees on or off site.

6.2 A **pre-commencement** site meeting, involving invited representatives from the developer, contractors and engineers (as appropriate) and relevant LPA officers, will be undertaken to establish the principal timings and actions.

6.3 So as to ensure that the tree protection measures are implemented, an arboricultural specialist will be appointed to record the condition of the trees to be retained and the position and type of tree protection erected and or installed. The specialist will make a record of visits and which will be retained by the contractor/developer and or left on site for inspection (see **Appendix 5**).

6.4 Key times for site supervision include:

1. Completion of agreed/necessary tree works
2. Erection of tree protection fencing
3. Installation of ground protection
4. Works within RPAs of retained trees
5. Landscaping

6.5 Site monitoring will be at regular intervals, (beyond that stated above) and at minimum three-week intervals (subject to development scale).

Contact List (to be completed **PRIOR** to commencement)

Interested Party	Name	Company/LPA	Contact Number(s)	Comment
Site Agent	TBA	TBA		
Arb. Supervisor	Edward Buckton	ACS Consulting	020 8687 1214	Arb. Consultant
LPA Tree Officer	Kevin Fisher	London Borough of Camden	020-7278 4444	
Site Engineers	TBA	TBA	TBA	

TBA – to be advised

7.0 General Site Care

7.1 No fires will be lit on site.

7.2 No access will be permitted to within the fenced or otherwise protected areas (unless for site accommodation or Authorised agreement) at any stage during construction.

7.3 No materials, equipment or debris will be stored within the fenced areas unless agreed with the arboricultural supervisor.

7.4 Areas for mixing are to be located beyond RPAs of trees and contained to prevent leaching into the soil.

7.4 A copy of this report and the Tree Protection Plan is to remain on site at all times.

Note 1. RPA to be assessed by an arboriculturalist. BS 5837:2005 'Trees in Relation to Construction - Recommendations' paras. 5.2.4 and 11.1.1.

Re-building of existing structures located within the protection distances, such as retaining walls, may require soil excavation and root treatment.

Note 2. The Circular 02/2005 gives guidance on the temporary stop notice provisions in Part 4 of the Planning and Compulsory Purchase Act 2004 which inserted sections 171E to 171H to the Town and Country Planning Act 1990.

APPENDIX 1

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TREE SURVEY SCHEDULE

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Site:19 East Heath Road
Date:26th Feb 2008

Surveyor:EB
Ref:

Tree No.	English Name	Height	Crown Spread	Ground Clearance	Age Class	Stem Diameter	Protection Multiplier	Protection Radius	Growth Vitality	Structural Condition	Landscape Contribution	B.S. Cat	Sub Cat	Useful Life	Observations
1	Honey Locust	12	n4e4s3 .5w5	2	Middle Aged	250	12	3.0	Normal	Good	Low	B	1	20-40	Drawn habit Deadwood thoughout crown forks at 3.5m / densly compacted rooting area to west
2	Pear, Domestic	11	n4e4.5 s6w3	2.5	Over-Mature	490	12	5.9	Poor	Poor	Low	C	1	10-20	Deadwood thoughout crown Poor specimen, low vitality entry wounds on trunk / trenching around roots
3	Lime, Common	17	6	3	Mature	700	12	8.4	Normal	Fair	Medium	B	1	20-40	Twin stem ? overhanging boundary
4	Sycamore	15	n3e5.5 s6w5	8	Mature	530	12	6.4	Moderate	Good	Medium	B	2	20-40	A sparser than normal canopy Storm damaged tree deadwood
5	Sycamore	15	n6.5e5 s4w5	8	Mature	540	10	5.4	Moderate	Good	Medium	C	2	10-20	A sparser than normal canopy Die-back (minor)

Notes:

1. Height describes the approximate height of the tree measured in meters from ground level.
2. The Crown Spread refers to the crown radius in meters from the stem centre and is expressed as an average of NSEW aspect if symmetrical.
3. Ground Clearance is the height in metres of crown clearance above adjacent ground level.
4. Stem Diameter is the diameter of the stem measured in millimetres at 1.5m from ground level for single stemmed trees or at ground level for multi-stemmed trees. Stem Diameter may be estimated where access is restricted.
5. Protection Multiplier is 12 for single stemmed and 10 for multi-stemmed trees and is the number used to calculate the trees' protection radius and area.
6. Protection Radius is a radial distance measured from the trunk centre.
7. Growth Vitality - Normal growth; Moderate (below normal); Poor (sparse/weak) Dead (dead or dying tree)
8. Structural Condition - Good (no or only minor defects); Fair (remediable defects); Poor - Major defects present.
9. Landscape Contribution High(Prominent landscape feature); Medium(visible in landscape); Low(secluded/among other trees)
10. B.S. Cat refers to (BS 5837 :2005 Table 1) and refers to tree/group quality and value; 'A' - High; 'B' - Moderate; 'C' - Low; 'R' - Remove.
11. Sub Cat refers to the retention criteria values where 1 is arboricultural, 2 is landscape and 3 is cultural including conservational, historic and commemorative.
12. Useful Life is the tree's estimated remaining contribution in years.

Table 1 — Cascade chart for tree quality assessment

TREES FOR REMOVAL				
Category and definition	**Criteria**			**Identification on plan**
Category R Those 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 that have a serious, irremediable, structural defect, such 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) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • 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 NOTE Habitat reinstatement may be appropriate (e.g. R category tree used as a bat roost: installation of bat box in nearby tree).			DARK RED
TREES TO BE CONSIDERED FOR RETENTION				
Category and definition	**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 as 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 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 150 mm	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 150 mm should be considered for relocation.			