Frank Parsons
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Arboricultural Report

Client: Mr David Walker

Site: 43 Croftdown Road, London, NW5 1EL

Survey undertaken: Trees in relation to design, demolition and construction – Recommendations.

Author: Frank Parsons
RFS certificate in Arboriculture
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Background:

This report is in relation to the tree survey attached, which has been undertaken to identify any trees within or affected by the proposed development at the site address that should be removed or retained and therefore protected during the proposed development. This report will outline tree categorization methodology with reference to BS 5837:2012.
The proposed site is within a conservation area. The local authority is the London Borough of Camden

Clients Brief:

- To undertake a tree survey within the rear gardens of affected properties. Plan supplied by Walker and Martin Architecture

- To provide an Arboricultural report identifying the trees to be retained, removed or worked on within the proposed development and outline and evaluate the constraints posed by the trees retained on site via:

- Root Protection Area (RPA) – Layout design tool indicating the area surrounding a tree that contains sufficient rooting volume to ensure the survival of a tree, shown in plan form.

- Construction Exclusion Zone – Area based on the RPA, identified by an arboriculturalist, to be protected during development, including demolition and construction work, by the use of barriers and or ground protection, fit for purpose to ensure the successful long term retention of a tree.

- Tree Protection Plan (TPP) – Scale drawing prepared by an arboriculturalist showing the finalized layout proposals, tree retention and tree landscape protection measures detailed within the arboricultural method statement (AMS), shown in plan form.

- Arboricultural Implications Assessment – Study undertaken by an arboriculturalist, to identify, evaluate and possibly mitigate the extent of direct and indirect impacts on existing trees that may arise as a result of the implementation of any site layout proposal.

- Arboricultural method statement (AMS) – Methodology for the implementation of any aspect of development that has the potential to result in loss or damage to a tree. N.B. The AMS is likely to include details of an on site tree protection monitoring regime and a tree pruning schedule.

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Scope:

The survey has been conducted in accordance with BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations.

The Site:

43 Croftdown Road is a residential terraced town house in the London borough of Camden. The property has a small front garden and a rear garden with an existing rear kitchen extension. The rear garden is northwest facing. There is no exterior access to the rear garden. Le Saint Union Science College is situated to the rear of no. 43. One cherry tree grows within the grounds of the college with the west canopy overhanging the rear garden of 43. A mature Himalayan Birch grows within the rear garden 2.7m away from the original rear elevation of the property. Existing basement is present within the footprint of 43 with windows and light well facing into the rear garden area. One mature Rowan grows in the south corner of the front garden and a young commemorative pear tree grows in the adjacent corner. Similar properties on the North side on Croftdown road have basement extensions and front garden light wells installed within the original footprints. The survey was undertaken on a cloudy day with light rain.

The Proposed Development:

The proposed development is a basement conversion within the existing footprint of number 43 Croftdown Road. The addition of a front garden light well to improve light and a rear garden door with steps leading up to ground level from the basement.

Tree Survey
Attached as a separate pdf documents: Reference - ***FP/TS/205***

Survey Map *- attached as a separate pdf document identifying tree numbers and BS Tree Categories: Reference –* ***TMS/43CroftdownRd***

Below: Table 1 – Cascade chart for tree quality assessment relating to the TMS.

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Table 1 **Cascade chart for tree quality assessment**

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• 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 category U trees (e.g. 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 or very low quality trees suppressing adjacent trees of better quality *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.*			See Table 2
Trees to be considered for retention	**1 Mainly arboricultural qualities**	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**	
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	See Table 2
Category C **Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	See Table 2

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Tree Constraints Plan:
Attached as a separate pdf drawing: Reference ***TCP/43CroftdownRd***

Tree Protection Plan:
Attached as a separate pdf drawing: Reference ***TPP/43CroftdownRd***

Construction Exclusion Zones (CEZ's):

Barriers and/or ground protection should protect trees that are being retained on site before any materials or machinery are brought onto the site, and before any demolition, development or stripping of soil commences. Where all activity can be excluded from the RPA, vertical barriers should be erected to create a construction exclusion zone. Erection and retention of a 2m high sturdy secure temporary fence, typically heras style, should be positioned along the CEZ calculated along side the RPA's of retained trees.
Barriers should be fit for the purpose of excluding construction activity and appropriate to the degree and proximity of work taking place around the retained tree. Barriers should be maintained to ensure that they remain rigid and complete. Pins can be driven in to the ground to ensure rigidity, or demarcation of barriers with spray will indicate whether or not the barriers have been moved. The mixing and storage of materials is prohibited within the construction exclusion zones, contractors and machinery are also prohibited within CEZ's to mitigate soil compaction. This should be communicated via the project manger at commencement of each stage of the development.

<u>Appropriate measures to eliminate or mitigate severance of roots for construction of a utility service:</u>

Mechanical trenching for the installation of underground apparatus and drainage severs any roots present and can change the local soil hydrology in a way that adversely affects the health of the tree. For this reason, particular care should be taken in the routing and methods of installation of all underground apparatus. Wherever possible, apparatus should be routed outside RPAs. Where this is not possible, it is preferable to keep apparatus together in common ducts. Inspection chambers should be sited outside the RPA.

Where underground apparatus is to pass within the RPA, detailed plans showing the proposed routing should be drawn up in conjunction with the project arboriculturalist. Trenchless insertion methods should be used with entry and retrieval pits being sited outside the RPA. Provided that roots can be retained and protected, excavation using hand-held tools might be acceptable for shallow service runs where applicable.

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Arboricultural Implications Assessment:

The proposed development will impact the RPA of T1. T2 will be transplanted prior to the proposed development commencing due to its amenity and commemorative value. T3 is to be removed. T4 will not be affected by the proposed development.

Photo 1: Depicts the Rowan growing on the front boundary of no.43. The mature tree is well established in its location and has been crown reduced approximately 3 years ago. The installation of a front garden light well will compromise approximately 25% RPA of T1 due to excavation around the front bay window of no.43. Methodology to protect the stem, canopy and roots of T1 can be found in the following arboricultural method statement (AMS).

Photo 2: illustrates the planting pit of T1, its size, establishment and proximity to the front boundary wall.

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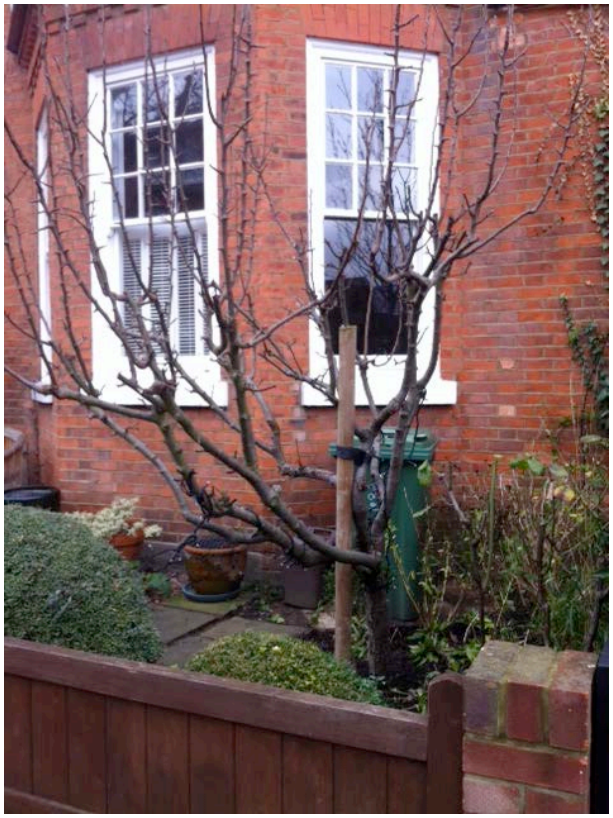

Photo 3: T3 can be transplanted and containerized prior to the proposed development to ensure roots and canopy are not compromised. See AMS

Photo 4: Illustrates T4 in adjacent college grounds. Neither roots nor canopy should be affected during the proposed development.

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Arboricultural Method Statement:

To retain T1, a construction exclusion zone must be installed prior to excavation, deliveries and construction work commencing. Barriers should be fit for purpose and I recommend WPB hoarding to be installed in the front garden to protect the stem of T1 along the CEZ marked out in *TPP/43CroftdownRd*. Root loss of T1 is inevitable during excavation however the remaining 75% RPA is adequate to maintain tree health and vigor during and post construction.

T2 is to be removed by hand dig method only, preserving 0.5m radial rootstock and 0.5m rootstock in depth. A suitable 100ltr container with drainage holes and fresh topsoil will be a sufficient re planting solution during the proposed development.

T3 is to be removed prior to the proposed development. The Birch has outgrown its location and has a limited safe useful life expectancy. Although T3 has been reduced in the past the canopy now reaches the rear elevations of 43 and 45 and in heavy winds could cause significant damage to windows and gutters.

T4 will not be impacted in any way by the proposed development and the installation of the CEZ within the rear garden outlined in *TPP/43CroftdownRd* will eliminate potential damage to the canopy and roots during works.

Construction exclusion zone barriers should be fit for purpose. In this instance Heras fencing in the rear garden and WPB hoarding in the front garden will be suitable for the protection of trees on site. Fencing must be secured in the marked locations within the plan – as per *TPP/43CroftdownRd*. Signage to communicate the purpose of fencing should be erected and read:

Tree Protection Fencing – KEEP OUT

Recommended tree pruning schedule prior to the proposed development:

T1 – RPA partially incorporated within CEZ. Reduce canopy height by approximately 3m and lateral spread by 2m to contain spread and lessen sail effect of existing canopy. Remove sucker growth from stem.
T2 – Transplant into a 100-120ltr container maintaining primary and fibrous root stock as per AMS recommendation.
T3 – Fell to ground level and remove stump.
T4 – RPA fully incorporated within CEZ. No work required.

All tree work should be undertaken in accordance with British Standards 3998:2010. Felling work should be carried out prior to construction regardless of time of year.

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Conclusion:

The site and proposed development posses restrictions in terms of impacting the RPA of T1, however with the retention of approximately 75% of a well established rooting area in an urban environment, T1 is highly likely to withstand the proposed excavation and installation of a front garden light well. Recommendations within the AMS will ensure a more stable biodynamic structure as well as the installation of protective hoarding along the CEZ's.
The remaining retained trees should not be compromised in any way during the proposed development and the justification to remove T3 is solely due to the proximity it grows on the rear elevations of 43 and 45.
Prior to works commencing I would recommend a site visit from the project arboriculturalist to oversee the tree protection plan and the transplanting of T2.

This report is to be submitted in conjunction with ***Tree Survey*** *FP_TS_205* ***Site Plans*** *– TMS 43CroftdownRd, TCP 43CroftdownRd, and TPP 43CroftdownRd.*

References:

- BS 5837:2012 – Trees in relation to design, demolition and construction – Recommendations
- Original scale site survey supplied by Walker and Martin Architecture and interior design.