

Shahriar Nasser
Belsize Architects
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JOHN CROMAR'S
ARBORICULTURAL
COMPANY
LIMITED

Your ref:

Our ref: 1-38-2894

21st February, 2012

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Dear Mr. Nasser,

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Re: 5, Nutley Terrace, London, NW3

I am instructed by Shahriar Nasser of Belsize Architects to provide a brief report on the impact on trees of proposals for a retaining wall at the rear of the above. I have been requested to determine the constraints imposed by the trees on a new retaining wall proposed to the rear of the above site, and effectively to determine an appropriate position for the retaining wall, with due consideration for the minimum necessary intended-use width of the opening proposed.

1) I made an inspection on 11th January, 2012. I have to hand drawing (s) 12720-TCL Existing and 12720-TCL Proposed. I have checked the position of the trees on site to the best of my ability.

2) The plan attached / appended gives a quick reference assessment of value as per section 4 (table 1) of BS 5837:2005. In this case both trees 2 and 3 facilitate some screening of the rear of the existing flats as viewed from the rear elevations of the flats in Fitzjohns Avenue, but this screening is related in large part to the thick growth of ivy on the trunks of the trees, not the branches of the trees. The environs –multi-storey buildings in close proximity, and the presence of other trees- have promoted an etiolated tree-form.

3) British Standard 5837:2005 'Trees in relation to construction - Recommendations' recommends a way of classifying trees when assessing their potential value in relation to proposed development. Table 1 suggests categories 'R', 'C', 'B' and 'A', in ascending merit. Assessment of value in this case is based solely on the criterion of visual value to the general public. The trees are visible to the residents of the adjacent flats but are not prominent in the landscape. A 'B2' category is probably a

Registered Consultant of the Arboricultural Association
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little on the generous side, but seeks to recognise the local contribution to amenity made mainly by the trees' epiphytes.

4) The standard also provides a way of determining an area (the root protection area or RPA) around the trunk of the tree in which protective measures should be used in order to prevent significant damage to trees. A simple way is to use exclusion fencing. Please see plan 1-38-2894/P1 appended.

5) The RPAs in this case have been prevented from forming a circular area in plan around the trunks by the existing retaining wall. As per BS 5837:2005, section 5.2.4, recommends, the RPAs have been assessed, taking full account of local features and have been plotted on the plan – **orange** lines. In this case any reduction (in plan) of the retained land (some 4m above site level) will to some degree impinge upon the RPA of the trees. However, it is reasonable to consider that in this case the sycamore trees, growing as they do as a group, have almost certainly formed multiple root grafts – an often-observed tendency. This means that the trees probably have access to a network of other roots which supports the trees systemically and mechanically.

6) It is necessary to consider whether the proposals entail any significant cutting into the SRP (static root plate – after *Mattheck*) of the trees. The SRPs have been plotted as **brown** lines on the plan. One tree, tree 2 is relevant :

No.	Tree	RPA in sq.m.	Area sq.m affected	Percentage affected	Notes
2	sycamore	87.583	2.301	2.63	Encroachment on RPA
		SRP in sq.m.	Area sq.m affected	Percentage affected	Notes
2	sycamore	33.18	2.301	6.94	Encroachment on SRP

To put this in context, trials made by the Morton Arboretum found that up to 30% of the root system of mature trees could be cut without any difference in shoot elongation or vitality resulting. As noted above, the trees have developed an etiolated crown form but are largely sheltered from prevailing winds by reason of the buildings to S and W. In view of all the above, I conclude that a small degree of cutting into the SRP (less than 7%) is unlikely to result in instability of the tree. The encroachment on the RPA is negligible.

7) TREE PROTECTION - GENERAL

It is highly important to tree health and vitality that construction activities are carried out strictly in accordance with the tree protection methods specified. A single traverse of a root protection area by a mechanical excavator can cause SIGNIFICANT and PERMANENT (albeit temporarily invisible) damage to trees. Such machinery, including piling rigs, shall be kept at ALL times outside the root protection areas as indicated in the tree details table appended, and/or shall be subject to SPECIAL METHODS below. Fences to protect trees shall be respected as TOTAL EXCLUSION fences. Hence, before any site activity, including demolition, the fence lines shall be complete. Protective fencing and any temporary protection of ground surfaces will have to be removed in due course to allow any finishing of landscaping, paving, etc., but this shall not take place until all need for vehicular access to the site has passed, and shall be agreed with arboriculturist / planners on site during progress of works.

TREE PROTECTION – SPECIAL METHODS

PLEASE READ WITH PLAN REFERENCE 1-38-2894/P1, APPENDED.

PRE-CONSTRUCTION / DEMOLITION

Method 1 : Supervision by an arboriculturist shall take place at key points in the construction process, and additionally whenever required by the architect or LPA. These key stages are :

- 1) At site possession by contractor, outline all tree protection measures with site agent and resolve any issues arising. Ensure protective fencing is erected and completed as proposed.
- 2) Approve timing of removal of protective fencing (post main phase) and sign off.

Method 2 : Tree protection fencing shall be erected, consisting of 'Heras' type fencing (weld-mesh panels), each section securely attached to uprights driven at least 0.6m into ground, as per the layout as shown on the plan (pink lines). The standard rubber supports ('elephant's feet') shall not be used.

Method 3 : This method shall apply in the zone hatched brown on plan. Roots exposed in the excavation shall be cut by sharp hand tools only at right angles to the long axis. No wound paint shall be used on the cuts.

CONSTRUCTION PHASE

Method 4 : This method shall apply in the zone hatched brown on plan. Heavy duty polythene or other impermeable membrane shall be laid so as to form a barrier between any wet concrete to be poured and exposed soil.

Method 5 : In addition to the above, careful general operation and site handling shall be observed as outlined below.

GENERAL TREE PROTECTION METHODS

- A) No fires shall be made on any part of the site, or within 20m of any tree to be retained.
- B) No spilling or pouring of fuels, oils, solvents, tar shall be made on any part of the site.
- C) No spillage or discharge of wet mortar or concrete shall be made on any part of the site.
- D) No storage of materials shall be made within the protective fences.
- E) No breaching or moving of the protective fences without the approval of an arboriculturist.

- F) Services, if planned to be laid in the root protection areas, (and which notionally appears unnecessary in this case) shall be laid using trenchless 'no dig' methods or by hand dug trenches to avoid cutting major roots.
- G) Alterations in levels within the tree protection fence areas shall be avoided.

8) It is recommended that acceptance of the recommendations in this report is demonstrated by, for example, the architect specifying in writing to the building contractor that tree care conditions apply in execution of the contract, and by an estimate or written undertaking from the contractor to the architect demonstrating that the practical aspects of observation of such recommendations have been priced in.

CONCLUSION

9) I conclude that the construction proposed, subject to precautionary measures as outlined above and as per the recommendations outlined below, will not be injurious to the trees to be retained, nor will require any trees to be removed.

If I can be of further assistance, or any point needs clarification, please do not hesitate to contact me. For a brief overview of our small company please visit www.treescan.co.uk

Yours sincerely,

A handwritten signature in black ink, appearing to read 'John Cromar', with a stylized flourish extending from the end.

John C. M. Cromar

Enc

TREE DATA, PLAN 1-38-2894/P1

TREE DATA

No.	Tree	Height range (m)	Multi-stem (MS)?	Trunk / stem count dia. (mm)	Radius of RPA if circle	Root Protection Area (RPA) (m ²)	Comments	Life Expectancy	Assessed BS 5837 Value Cat.
1	2	3	4	5	6	7	8	9	10
1	sycamore	20		300	3.60	40.72		40+	C2
2	sycamore	20		470*	5.64	99.93	*N.B. Over ivy - estimated actual dia. - 440mm.	40+	B2
				440	5.28	87.58			
3	sycamore	20		460*	5.52	95.73	*N.B. Over ivy - estimated actual dia. - 430mm.	40+	B2
				430	5.16	83.65			



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TREE VALUE ASSESSMENT
as per BS5837:2005
and
**TREE RETENTION &
PROTECTION MEASURES**

for full details see report
reference TC/1-38-2894

**5, Nutley Terrace,
London**

based on drg. 12720_TCL supplied

ref: 1-38-2894/P1
1:100 scale @ A3
Feb 2012

