

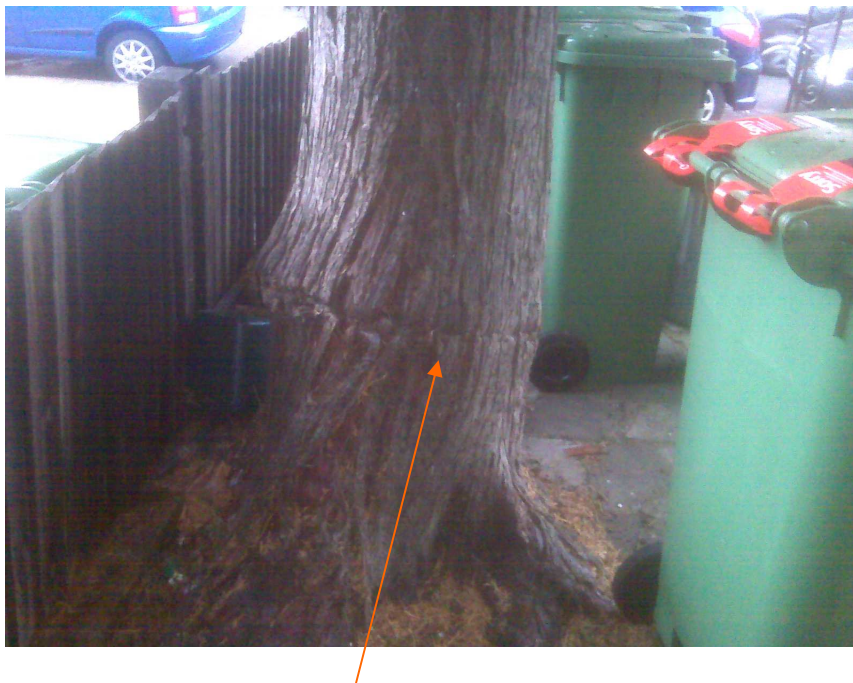
Lawsons Cypress at 67 Goldhurst Terrace, London. NW6. October 2014
Arboricultural Method Statement.

The new owners of no.67, Monavon Construction, have retained Matthew Cummings of Etch Design proposals to redevelop the house. This includes a basement extension to the front. These proposals are shown on the drawing ED/ 67GT/3001/a.

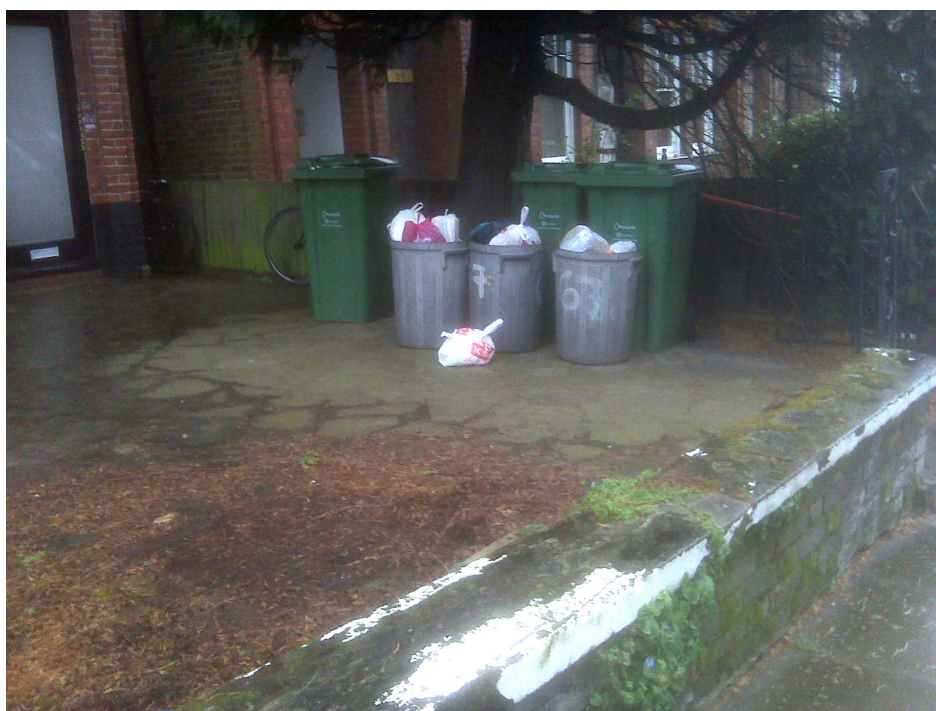


The Lawsons Cypress in the front yard is circa 16 metres tall.

It has a stem diameter of 470 mm at 1.5 metres from its base and a radial crown spread in the region of 2metres.



The base of the Lawsons is swept and has an unusual girdle mark at circa 0.5 metres from its base. .



The paved yard is cracking up and the boundary wall is bellied towards the pavement.

Basement Impact Assessment. (BIA)

Advice has been given by structural engineers JNPG ref. C82840/GOL/MPD/JP.001.

This advice is reproduced in paragraph 2.7 of Chelmer Consultancy Services BIA.

2.7 JNPG's letter of 24th October 2013 advises that, ideally, the large Cypress tree in the front garden of No.67 (see cover photo) should be removed in order to eliminate the potential risk of future subsidence problems. Large multi-trunked Plane trees are present near the rear boundary (and in adjoining properties).

The Chelmer BIA goes on to say

8.4.13 Removal of the large Cypress tree from the front garden of No.67 has been proposed by JNP Group (JNPG, see paragraph 1.5). Desiccation of the clays by this tree may have been responsible for, or at least contributed to, the damage which resulted in the front right corner of the house being re-built.

The re-built front section of the flank wall alongside the porch may also have had relatively shallow footings because the front wall of the cellar is beneath the front door, at the back of this porch. It is not known whether this front end of the flank wall was underpinned before the front corner of the house was re-built.

The proposed basement will be sufficiently deep that it is likely to extend below the maximum depth of root growth from this tree and the associated desiccation. No.67 should therefore be isolated from any vertical heave resulting from removal of this tree, although the front wall of the basement and lightwell would need to be protected from lateral heave with a compressible material such as Claymaster.

8.4.14 The nearest parts of Nos 65, 69 & 71 are respectively 8m, 4m and 8m from the Cypress tree which has been estimated to be 15m high. Cypress trees are a High water demand species so NHBC Standards Chapter 4.2 gives required foundation depths of 1.25m and 2.3m at these distances.

Borehole BH2 was drilled near to the closest point of No.65 to the Cypress tree and recorded no roots, no desiccation relative to the Plastic Limit values, and only slight desiccation relative to BH1.

The steps in the „lightwell“ in front of No.65's bay window lead to a cellar. The precise extent of the cellar is unknown, although TP2 indicated that it is not alongside the 65/67 party wall, so the section of No.65's front wall closest to the Cypress tree may be founded above the NHBC's recommended 1.25m depth for this part of No.65. However, if the tree is younger than these houses, which seems likely, then any heave resulting from its removal would be largely corrective and should have the effect of returning the ground to the state it was in before the tree was planted.

For No.69 the position of the cellar is assumed to mirror that in No.67, so the closest part of this house is almost certainly supported on foundations above the NHBC's recommended 1.8m depth (= 2.3m less the 0.5m drop in ground levels).

As part of the Party Wall Agreement negotiations, it is recommended that trial pits should be dug alongside the closest parts of Nos 65 and 69 (their SW and NW corners respectively) to check the depth of the footings and the state of desiccation in the soils below the footings

8.4.15 Normal good practice in foundation construction requires progressive stepping up between foundations of different depths beneath a single structure. If the trial pit recommended above shows the southern end of No.65's front wall and bay window to be founded at shallow depth, then a single underpin block constructed from within the excavations below No.67 may be sufficient to protect the wall from any heave movements. Slightly more extensive underpinning might be required to provide stepping up in accordance with Building Regulations between the basement and No.65's cellar.

Transitional underpins should also be considered for the other walls in No.65 which adjoin No.67, subject to agreement under the Party Wall Award negotiations.

For the adjacent No.69 the need for any precautions to protect the house from heave, should the Cypress tree be removed, should be reviewed once the findings of the trial pit at the front left (NW) corner of the house are known.

8.4.16 The construction sequence will be covered in the structural engineer's Construction Method Statement.

9.10 The implications of removing the large Cypress tree from the front garden of No.67 as proposed/endorsed by JNP Group have been reviewed. Subject to agreement of the owners (during Party Wall Agreement negotiations), trial pits should be dug alongside the closest parts of Nos 65 and 69 to check the depth of the footings and the state of desiccation in the underlying soils; the need for local underpinning to protect these buildings from heave should then be reviewed.

Transitional underpins should also be considered, subject to the Party Wall Agreement negotiations, for all load-bearing walls in No.65 which adjoin No.67 (8.4.13 to 8.4.15).

The BIA suggests that the rebuilding of the front right hand corner of the house may have been the result of shrinkage caused by the Cypress.

As the BIA states it is most likely that the Cypress post dates the construction of the Victorian house and therefore any heave associated with removal of the tree will be equal to the shrinkage caused by it.

It was originally proposed to remove the Cypress and replant when the proposal had been built.

Negotiations with the LB of Camdens Arboricultural Officer, Nick Bell, identified that the Borough have taken the view that the tree is worth retaining.

The tree can be retained within the building proposal and outlined below is a method for protecting it from significant harm during the construction process and for improving its growing conditions.

In the absence of adopted local supplementary planning guidance specific to trees British Standard 5837 (2012)

"Trees in relation to design, demolition and construction -recommendations" **(BS)**. is used as the benchmark for submissions to the LB of Camden the Local Planning Authority **(LPA)**.

Arboricultural impact assesment

The BS describes "Root Protection Area" **(RPA)** for retained trees. RPA is an area in square metres centered on a tree. The area is proportionate to the stem diameter of the tree.

Normative RPA is shown as a circle on a plan, arboriculturalists assess whether there are any obstructions to rooting within the circle and whether the RPA should be offset in any particular direction.

It is normally a given that underpinning of house can take place if there is a risk or evidence of subsidence. This will involve cutting back of any roots which may be underneath buildings.

Lawsons Cypress are known to be tolerant of root pruning and are able to exploit new areas for root growth when made available to them.

Basement excavations will enable wherever possible the introduction of permeable backfilling to improve water transport to the underlying clay.

The plans show the intention to create a more permeable area to the front of the house, this will aid infiltration of rain water.

Arboricultural Method Statement.

1. A 1.8 metre high plywood hoarding will be placed on the existing concrete yard at the the edge of the crown of the Cypress. This will remain in place until all major building works are completed.
2. The front boundary wall will be taken down to the level of the front yard.
3. The basement light well will be excavated to the level where the front elevation can be propped. Machinery will stand on the existing concrete yard. Any roots which may be exposed will be pruned cleanly at 90 degrees to their axis at the edge of excavation.
4. The basement lightwell will be constructed.
5. All other construction works to the front of the house are internal to the footprint of the house.
6. When all other works are completed the Plywood hoarding will be removed.
The concrete of the yard will be fragmented and lifted by hand.
All voids will be filled with washed sand.
Porous pavers will be set on washed sand, the joints will be left un grouted.
The front wall will be rebuilt.
Topsoil will be introduced to the proposed new flower beds.

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