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5b Prince Arthur Road, Hampstead, NW3 6AX

Tree survey and arboricutural method statement. November 2020.

The owners of number 5b have commissioned TR Studios to draw up plans to demolish the existing house and build a new dwelling with basement.
The proposal includes a new vehicle crossover.

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 criterion for tree submissions to the Local Planning Authority **(LPA),** the London Borough of Camden.

Please refer to the tree protection plan which shows:

- Existing building footprints.
- Existing built garden features, garden room and boundary walls.
- Existing fences.
- Catalogued trees.
- The normative root protection area as described in the BS of a category A Copper Beech
- North point.
- Scale bar.
- Spot levels.
- Drainage covers including invert levels and direction of flow.
- Service covers
- The position of a tree protection fence as per figure 2 of the BS.

Please refer to the TR studios site layout plans GA-000-GA and GA-001-GA.
000 shows the ground floor and landscape. It shows an air source heat pump and associated garden building to the rear of the house and the new crossover.

Tree catalogue

No	Common name of tree	Height estimated in metres	Stem Diameter in mm at 1.5 metres from base	Branch spread towards compass points estimated in metres	Height of crown clearance.	Estimated remaining contribution in years. Category grading as per table 1 of the BS
1	Copper Beech	18	970	N 9 E 7 S 8 W 4	4	40 A Small area of exposed wood at northern base .
2	Lime	14	470	N 3 E 4 S 4 W 1	2	40 C Lean to east. Failure and associated decay in western crown
3	Lawsons x 2	6	2x 130	N 1 E 1 S 1 W 1	0	20 C
4	Magnolia	4	3x 80	N 1 E 2 S 0 W 1	0	20 C
5	Sweet Chestnut	6	190 @ 50cm	N 3 E 2 S 2 W 2	2	20 C
6	Alder	18	510	N 4 E 3 S 3 W 5	4	40 A Street tree.
7	Rowan	7	multi stem to 150 est	N 2 E 2 S 2 W2	3	10 C In front garden of no 5.

Arboricultural Impact Assessment.

The rear garden contains a Copper Beech, T1. This tree has a small area of exposed wood at the base otherwise on the day of survey the Beech has all of the characteristics of a category A tree.
Beech is a tree naturally occurring on free draining soils.
It is diffuse porous and relies on regular supplies of water passing down through the ground ie rainwater. Copper Beech is a more resilient tree than green Beech.

During its lifetime the Beech at 5b has had a substantial garden room built adjacent to it. The building is founded on concrete and is serviced. Presently it represents a significant rain shadow.
Investigations have revealed that paths, paving and raised beds are also laid on concrete.

Inspection pits have shown a greater depth of anthropogenic material than would normally be expected and the underlying sub base to be conducive to root growth. Roots have been found to a depth of 1 metre.

The tree protection plan shows that the distal part of the normative root protection area of the Beech will be built on. Part of this however is already paved over.

The building proposal removes the built features in the rear garden and introduces topsoil to make permeable area conducive to root growth.

The rear garden works will be carried out prior to any other building works so that the Beech can adapt to the new conditions immediately.

The rear garden lawn should be turfed with rhizomatous tall fescue (or similar) which will put roots down to a depth of 1.5 metres. This will significantly aid drainage and porosity. This type of "waterwise" grass should never need irrigation.

Garden building and lifted paver to show extent of concreting. Present drainage increases the rain shadow effect of the pavers.

Detail of garden building foundations and associated built garden features.

Most structural supporting roots of the Beech will be within 2 metres of the base of the tree which is at distance from the piling line.
Fibrous roots will be severed sheet piling operations however it is anticipated that the Beech will have already exploited improved conditions in the rear garden by the time the existing house has been demolished and piling begun.

The basement will be dug to air and propped.

Building contractors will appoint a site monitoring arboriculturalist to ensure that the correct sequence of events as laid out in the arboricultural method statement are adhered to.

Arboricultural method statement

1. Prior to any building works the street Alder T6 will be protected.

Access for heavy vehicles (eg fire engines) is not required due to proximity of the house to the adjacent road.
Contractors will be responsible for any necessary pavement licences.

The majority of the trees normative root protection area (as described in the BS) is protected by pavers, granite kerbs and road tarmac. It is a reasonable assumption that the existing garden wall is founded at depth and is a partial root barrier.

The street tree will be enclosed with a plywood box fixed to the pavement and kerbs.

The box will be made from 18mm shuttering ply fixed to an 80 x 80 mm timber frame.
The frame will be fixed to the pavement and kerb using expansion bolts.
It will be 1.8 metres high.

The plywood enclosure will remain in place until all building and landscaping works are complete.

When disassembled the expansion bolt holes will be blinded with epoxy cement.

2. Prior to any other demolition works the built features in the rear garden will be removed and the new garden building will be assembled.

This work will be done using hand held tools only.
A rubber tracked power barrow can be used.

- Cover lawned area with shuttering ply.
- Strip out and dismantle garden building roof and elevations within its own footprint.
- Fragment and remove raised beds. Fragment foundations and remove by hand.
- Remove shrubbery.
- Repair all rear garden fences.
- Fragment and remove garden building slab from south west to north west.
- Lift pavers and fragment concrete footings.

The concrete pad on which the air source heat pump and lightweight garden building sits is constructed using guidance in section 7.5 of the BS.

Method

Set micro piles (eg helifix) as specified by the project structural engineer.
Fix shuttering to the outside of the pile caps.
Make good any hollows with washed sand.
Place a 25mm layer of cardboard on to the ground within the shuttering.
Place a grout check membrane on top of the cardboard (eg dpc polythene).
Wire rebar in place.
Pour concrete.
Remove shuttering.

Install building sound insulation panels and air source heat pump.

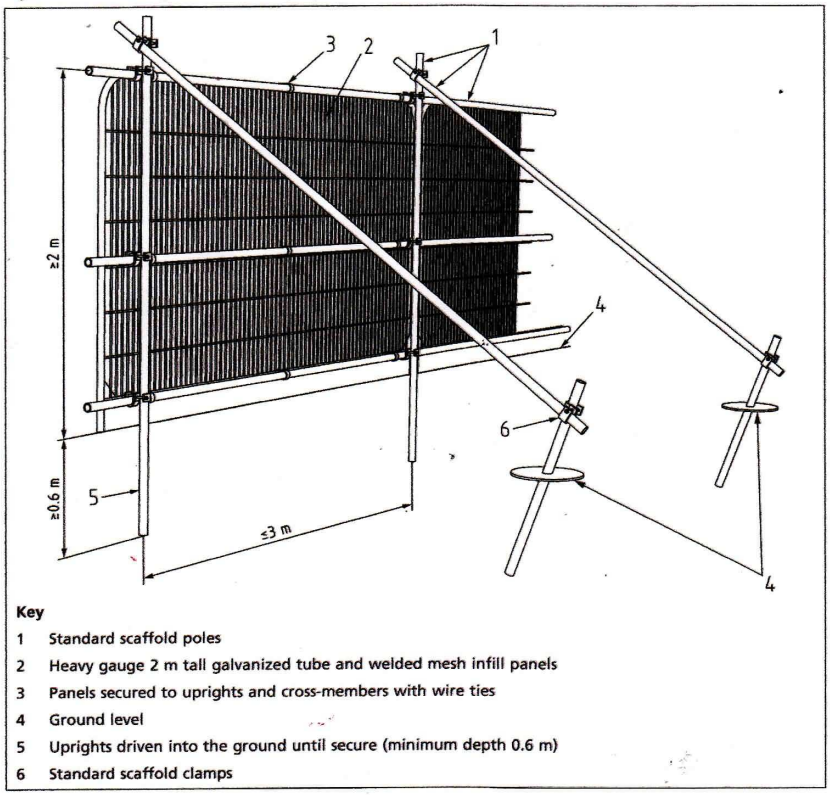
The cardboard layer will decompose rapidly and will leave a vented void underneath the concrete pad.

The electricity supply and pipe work will be ducted at existing ground level unless it can be shown that existing services are ducted to this area.

- Remove plywood sheets.
- Make good all levels by addition of topsoil
- Turf.

3. Assemble the tree protection fence in the position shown on the tree protection plan.

Figure 2 **Default specification for protective barrier**



Key

1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

4. Method for creating vehicular crossover.

- Remove sweet Chestnut T5 and other front garden vegetation.
- Dismantle existing garden walls to ground level hand held tools only. Leave existing foundations in situ.
- Existing crossovers on Prince Arthur are pavers similar to those in situ in the area of the new crossover.
- Existing kerbs will be lifted using hand held tools only. The kerbs will be replaced with drop kerbs set with a soft cement mix which is placed dry. The dry mix will cure from water drawn in from the soil and atmosphere.
- Pavers will be lifted by hand. Re grading will be done using a shovel and blunt bar only. (A blunt bar will do considerably less damage than a sharp bar if a root is accidentally hit).
- Any roots which are over 30mm in diameter will be wrapped or covered in stiff wool felt kept in place with Hessian string. The wool felt will remain in place, will protect the root from abrasion and will slowly decompose and allow for incremental growth.
- Hollows will be filled with washed sand (please note builders sand sometimes contains salts so should not be used).
- Pavers reset on washed sand.

- Demolish existing house within its own foot print.
- Set sheet piles from with the basement foot print and construct basement.
- Build out new house.
- Build new front walls, drive and planting beds.
- Remove tree protection fence.
- New rear garden paving (this will be set on to sand and not concrete).
- Front and rear garden planting.

Arboricultural site monitoring report sheet

client	site address	proposal	consent notice	LPA LB Camden	visit date

Check List

tree barrier in place **Y N**	tree barrier as approved	tree barrier breached	action requested

ground protection in place	ground protection as approved	tree damage since last visit	action requested

comments	
signed	date of next visit

Tim Price. M.arbor.A.