

Protective Fencing

To be erected prior to the commencement of all works on site, and retained in place throughout construction.
Default Specification: To comprise either 2.4m wooden site hoarding; or a 2.3m high scaffolding framework comprising of vertical and horizontal framework, well braced to resist impacts, with rights to be spaced at a maximum of 3.0m intervals and driven into the ground by a minimum of 600mm. On to this, standard anti-climb welded mesh panels are to be securely fixed to each other with at least two scaffold clamps and to the scaffold framework with wire.
Secondary Specification: To comprise of 2m tall welded mesh panels on rubber or concrete feet. Panels are to be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence. The panels should be supported on the inner side by stabilizer struts, which should be attached to a base plate and secured with ground pins.
 All weather notices should be erected at regular intervals on the wind mesh panels with words such as "Construction exclusion zone - Keep out".

Tree Protection Area
KEEP OUT
 Do not move this fence

(TOWN & COUNTRY PLANNING ACT 1990)
 TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND/OR ARE THE SUBJECT OF A TREE PRESERVATION ORDER.
 CONTRAVENTION OF A TREE PRESERVATION ORDER MAY LEAD TO CRIMINAL PROSECUTION.
 ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY.



Supervised demolition

Demolition of existing structures and foundations situated either partially or completely within RPAs of retained trees shall be undertaken with care and under the direct on-site arboricultural supervision as these areas are likely to contain roots.
 Where it is necessary for the foundations to be removed they are to only be removed where critical to the proposed development and to the minimum depth required. The foundations will be broken up using a hand held pneumatic breaker, hand tools and a wheel barrow to break up and remove the surfacing. In some situations and at the discretion of the arborist it may be possible to use an excavator using a hydraulic breaker and suitably sized toothless grading bucket. If an excavator is to be used it must be situated outside of the RPAs, on top of the hard surfacing working away from the RPAs or from ground boarding. If it is likely that there will be any collapse of the soil within the rooting environment excavation is to be stopped immediately and the trench is to be shored up to prevent loss of the rooting environment.
 Which ever system is used there is to be NO disturbance of the soil on the tree side of the foundations. If roots are found they are to be covered over with damp hessian and a layer of either sharp sand, wood chip or top soil to prevent desiccation.

Supervised Excavation

Excavation adjacent to RPAs are to be undertaken under direct on-site arboricultural supervision. Excavation will consist of a mixture of mechanical and manual excavation.
 Initial excavation will be undertaken by hand under to a minimum of 200mm deep of any excavation, the soil is to be loosened with the use of a fork or pick and then cleared with the aid of an air-spade, air-vac or shovel. There after excavation can be undertaken using an excavator with a suitably sized toothless grading bucket using a grading motion rather than digging and taking no more than 10-20mm deep swipes at any time, if any roots are discovered mechanical excavation will be stopped immediately and manual excavation will resume to expose the root. All roots to be cut will be clearly severed with the use of a hand saw or secateurs. The edge of the excavation closest to the retained trees will be covered over with damp hessian to prevent drying out, and where necessary be shuttered to prevent soil collapse or contamination by concrete. If appropriate soil beneath the depth 750mm may be sheet piled, regular piled or individual piles. Any deeper excavations may be undertaken by a machine provided it works form outside of the RPA or has appropriate ground protection in place to move and work upon.

Tree Categories

Trees are categorised in accordance with the cascade chart in Table 1 of the British Standard BS 5837:2005 'Trees in relation to construction - Recommendations'.
 Category 'U' - Trees in such condition that they cannot realistically be retained as living trees in context of the current land use for longer than 10 years.
 Category 'A' - Trees of high quality with an estimated remaining life expectancy of at least 40 years.
 Category 'B' - Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
 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 150mm.

Root Protection Area

In order to avoid damage to the roots or rooting environment of retained trees, the Root Protection Areas (RPAs) should be plotted around each of the category A, B and C trees. This is a minimum area for a tree to be retained.
 The RPA is calculated using the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'.
 The RPA is calculated using the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'.
 V = 0.15 x (DBH)^2
 Where there appears to be restrictions to root growth the root protection area is reshaped to more accurately reflect the likely distribution of the roots.

No. of Trees to be Removed

U	A	B	C
0	0	0	0

Foundations within RPAs

The use of traditional strip foundations can result in excessive root loss and as such should be avoided.
 Designs for foundations that would minimize the adverse impact upon trees soul include particular attention to the existing levels, proposed finished levels and cross sectional details. Site specific and specialist advice should be sought from the project engineers and arboriculturist.
 Root damage can be minimized by using:
 • Piles with site investigation used to be determined their optimal location whilst avoiding damage to roots important for the stability of the tree, by means of hand tools or compressed air soil displacement, to a minimum depth of 600mm;
 • Beams, laid at or above ground level, and cantilevered as necessary to avoid tree roots identified by site investigation.
 Where piling is to be installed near to trees, the smallest practical pile diameter should be used, as this reduces the possibility of striking major tree roots, and reduces the size of the rig required to sink the piles. If a piling mat is required, this should conform to the parameters for ground boarding. Use of the smallest practice piling rig is also important where piling within the branch spread is proposed, as this can reduce the need for access facilitation pruning. The pile type should be selected bearing in mind the need to protect the soil and adjacent roots from the potentially toxic effects of uncured concrete, e.g. sleeved bored piles or screw piles.

Arboricultural Supervision

The arboricultural consultant will be required to attend site to directly supervise all demolition and construction works that have to be undertaken within the root protection areas. This will include:
 1. Pre start meeting.
 2. Supervised demolition of foundations within RPAs of tree nos. 1, 5, and 7.
 3. Manual excavations for foundations within RPAs of tree nos. 1, 5 and 7.
 4. Any excavations within or adjacent to RPAs, including foundations, hard surfacing or underground services.

Arboricultural Method Statement

Please refer to Arbtch Consulting Ltd, Tree Schedule and Arboricultural Method Statement, for full details on all surveyed trees and how all aspects of the development maybe implemented without detriment to retained trees.



Project:
 13 Regents Park Road,
 Camden,
 London,
 NW1 7TL

Client:
 Mr Anthony Parsons

Drawing:
 Tree Protection Plan

Based on:
 Planning Proposal

Drawing No: Arbtch TPP 01
Rev:

Date: Nov 2014
Scale: 1:50 @ A1
Drawn: AST

Key:

Tree Nos. 1	Tree Canopies	Trunks
RPAs	Category 'B' trees	Category 'C' trees
Protective fencing	Supervised demolition	Manual excavation

All dimensions should be checked on site. No dimensions are to be scaled from this drawing.
 Please refer to any discrepancies from Arbtch Consulting Ltd, cannot be held responsible for inaccuracies in this drawing.
 This drawing is to be used as a definitive part of the engineering or construction design or method statement. It is not to be used as a substitute for any other drawings, specifications, standards or specifications. Any reference to any standards or regulatory requirements relating to proposed structures, hard surfacing or underground services.
 This drawing was produced in colour - a monochrome copy should not be relied upon.
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Manual excavation of proposed foundations under arboricultural supervision.

Supervised demolition of existing foundations under arboricultural supervision.

Protective fencing

Note: Existing hardsurfacing is to act as ground protection for the RPA's of trees.

