

Simon Pryce Arboriculture

Ground investigation methodology to discharge Condition 8 of consent HGY/2023/2299

Client: Highgate Cricket and Lawn Tennis Club

Site: Tennis courts at Crouch End Playing Fields, Park Road, Hornsey,
London, N8 8JP

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Reference: 21/130 C8

Haringey ref: HGY/2023/2299

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I Introduction

- 1.1 This document has been prepared for Highgate Cricket and Lawn Tennis Club (HCLTC) in connection with the resurfacing the existing tennis courts, provisions of floodlights, redevelopment of the clubhouse and associated works at Highgate Tennis Club, Crouch End, N8 8JP. Haringey Council have granted consent for this, their reference HGY/2023/2299 subject to conditions.

- 1.2 This document and plan have been prepared to address Condition 8, which states:

The development hereby approved shall take place in complete accordance with the approved Arboricultural Impact Assessment (AIA) and Tree Protection Plan (TPP) as supplied by Simon Pryce Arboriculture with trial excavation undertaken by hand or air spade. The commencement and findings of the trial excavation should obtain written approval of the Local Planning Authority. The works shall also be monitored accordingly by a suitably qualified Arboricultural consultant during and until the completion of the project.

Reason: In order to ensure the safety and well being of the trees adjacent to the site during constructional works that are to remain after works are completed consistent with Policy G7 of the London Plan 2021, Policy SPI 1 of the Haringey Local Plan 2017 and Policy DM1 of The Development Management DPD 2017

Investigation

- 1.3 The attached site plan, ref 20/130 C8, shows the investigation and the methods are described in more detail below.

2 Methods

Radar

- 2.1 This is the primary method, subject to the LPA's approval of an application by HCLTC for a non-material amendment to condition 8 to allow investigation by ground penetrating radar as an alternative to, or as well as, excavation by hand or air spade. Radar will be used in all the locations accessible to the unit, i.e. the courts and other flat ground. The scanning unit has a 400MHz antenna which sends down a beam every 10mm to a depth of 2 - 3m. Water reflects the beam, so it only detects live roots containing water, not dead or dried out ones and only those over 20mm diameter. The results are analysed and plotted on a CAD file, which will be overlaid on the site plan, so the roots depths and locations will be known precisely in order to inform the works.
- 2.2 This is a relatively new technology that is being widely adopted by many Councils and other bodies. Tree Radar UK, who are doing the work here, have also worked for Haringey and Islington Councils on a joint project at Stanhope Road Bridge. Other listed clients of theirs include Lewisham Council, the City of London, Highways Agency, Kier Construction, Treework Environmental Practice and the RSPB.
- 2.3 Radar has major advantages over the various methods of physical excavation, in particular:
- Effect on roots - none, there is no ground disturbance
 - Environment - it does not create the noise and dust associated with using compressed air.
 - Sustainability - the carbon footprint is considerably smaller than physical excavation and associated works.

Excavation

- 2.4 The only advantage of excavation over radar is that it can be used in the few places inaccessible to the radar unit or impractical for it, such as the narrow spaces between trees and fences along the footpath. Excavation will be carried out using a hand operated compressed air spade (air pick) and loosened spoil will be removed from around the roots by hand. Small areas like the lighting columns can be investigated by digging with hand tools.
- 2.5 However, should Haringey Council not approve the NMA application, excavation by air spade and hand digging would be used by investigating in the same areas as the radar as shown in Drawing Ref 20/130 C8.

Phases

- 2.6 Investigations for both phases can be combined, unless there is a need to demolish the existing pavilion in order to investigate the ground beneath it.
- 2.7 For Phase 1, the court resurfacing, the most important factor is the depth of the roots from the oak trees, particularly those along The Greenway. Lighting cables will be above ground in conduits attached to the fence, but the locations of individual columns will need to be determined. Some of those will be picked up by the radar, otherwise they will need to be hand dug in order to avoid significant roots. That can be done as a combined investigation and installation hole excavation, using a post hole digger or hand auger and adjusting the location to avoid roots.
- 2.8 In Phase 2 the new pavilion is near the edge of the RPA of the nearest oak, tree 10, so large roots are less likely to be present than closer to the trunk. Investigation will need to determine the sizes and depths of any roots under the new pavilion wall in order to inform the design of the new foundation.

Excavation methodology

1. Before any work starts the contractor and arboriculturist agree all work that might affect the trees, particularly storage of any lifted paving and spoil.
2. Any hard surfaces, such as the pavilion floor, are to be taken up by hand, breaking out with hand operated power tools if necessary, fragments removed by hand and stacked nearby.
3. No lifted paving is to be leaned or stacked against tree trunks and spoil is to be piled well clear of the trunks on existing hard surfaces or heavy duty plywood laid on soft ground.
4. If required trunks can be protected against incidental damage by boxing in with plywood on a timber frame or sectional pedestrian barriers as illustrated at fig 1 below.
5. Roots less than 25mm diameter can be cut cleanly. Any larger roots are to be retained, wrapped in hessian sacking for protection and the arboriculturist notified. Wrapping should be kept moist to prevent the roots drying out until they can be covered with soil again.
6. Lighting column investigation and excavation of the column installation holes can be a combined operation using a post hole digger or hand auger to locate any roots, adjust locations if necessary then dig the hole ready for installation.

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Fig 1

Crowd control barrier suitable for trunk protection



Fig 2

Hessian wrapped roots



(Image J Barrell)