

Hand excavation method for fence post holes within tree rooting areas/under tree canopies

Excavation of any kind in rooting areas/under tree canopies is less than ideal for trees. Excavation leads to soil disturbances that affect moisture, nutrients and soil oxygen levels. Also at risk is soil structure and the tree roots themselves. Bark becoming damaged allows decay pathogens to enter the tree system and leads to long term decline. However, sometimes it is a requirement to excavate trial pits, fence support post holes or pad foundations in or close to a tree's rooting area/under a tree canopy. Careful hand excavation can occur as long as the following is in place.

- The need for excavation is agreed with the local planning authority. If the tree is subject to a tree preservation order or within a conservation area or part of an active planning application, written permission will be required from the LPA.
- The excavation can also be carried out with adequate arboricultural supervision (arb watching brief).
- All excavation must be minimal.
- No plant equipment is used within a rooting area or under the canopies of trees.
- Holes can be hand dug or pedestrian post hole auger excavated.
- Excavated material can be stored outside of tree rooting areas or on temporary ground protection.

Hole method

1. No excavation is to be placed within 1.5m of where the trees buttress root flare meets the soil/turf/tarmac so that structural roots are avoided.
2. Using clean and sharp hand digging tools, lift the turf/soil surface from the designated location.
3. Carefully and slowly excavate soil from the hole and place out of the rooting area or on temporary ground protection. An auger can also be used for excavation but it must be a pedestrian operated. Machine-based auger must have the machine placed outside of tree rooting areas and supervision by an AWB.
4. If tree roots larger than 15mm diameter are found in holes you must work around them. Do not cut roots in excess of 15mm diameter. The AWB must be notified for further direction.
5. Exposed roots must be kept damp and cool by covering with wet hessian material.
6. Once a suitable hole has been excavated to the appropriate depth and width, it must be polythene lined before any cement-based products such as concrete are poured into the hole. Using polythene rubble bags in post holes before the post and concrete is added is a simple yet effective method for ensuring no cement products contaminate rooting area soils. Careful work is



essential to prevent soil contamination – no cement spillages/washings must be in soils within 10m of any tree/plants.

7. Once concrete has set within the hole the polythene can be trimmed back to the soil surface and any back fill required can be placed back in the hole and consolidated (not compacted).
8. All excess excavated material must be removed from tree rooting areas/site.
9. It is advisable to record each stage and excavated holes by photographing progression through the work.
10. AWB to update the LPA as required with a photographic record and written explanation of the work.