114 / 35 King Henry's Road
Planning Permission 2017/2946/P
Planning Condition Notes
18.09.2017

Condition 4
Prior to commencement of any works on site, details of the design of building foundations and the layout, with dimensions and levels, of service trenches and other excavations on site in so far as these items may affect trees on or adjoining the site, shall be submitted to and approved in writing by the local planning authority. The relevant part of the works shall not be carried out otherwise than in accordance with the details thus approved.

Please refer to drawings appended drawings;

114P_A12_01 showing dimensioned location and frequency of screw pile foundations.
114P_C14_01 showing detail of screw pile foundation.

The proposal is to use 6no. small diameter screw pile foundations. In this location screw piles are deemed to be the least intrusive option for the foundations based on the London clay soil formation and the proximity adjacent trees, particularly the Japanese Maple (T1). The Structural Engineer has recommended screw piles as the best solution to mitigate any potential differential movement in the soil and foundations, and as the most appropriate method for protecting the tree roots.

The screw piles will be hand augured with no large plant or machinery required. This allows greater flexibility in the placement and setting out of the piles; each pile location can be moved marginally on investigation to avoid a tree root when installing.

The timber garden room has been designed to be pre-fabricated off site in panels (walls, roof, floor and windows), small enough to easily move into the garden. The panels will be hand lifted into place and fixed to the flat plate of the screw piles. This will minimise traditional construction methods in the rear garden, and reduce any risk of damaging the adjacent trees.

The following points have been confirmed by ABC Anchors, a specialist supplier and installer who will be appointed to install the screw piles;

- **a-** Screw piles are a far less invasive foundation system than other solutions; they consist of a slender pile shaft (maximum diameter 89mm) and a number of thin helices (350mm max diameter).
- **b-** This comparatively slender pile shaft may damage a very small portion of the root system upon installation, with the helices also causing minimal damage (the helices are fairly blunt so we assume would act to move the roots out of the way rather than cut through them). It could be argued that the installation process provides some aeration to the soil round the roots which may well actually be beneficial to the tree.
- **c-** Screw piles support load directly on the aforementioned helices, which are placed well below the root ball of the trees in line with Arboriculturalists recommendations. This ensures that soil and tree roots within the root ball do not experience any loading influence and remain entirely undisturbed following installation.
- **d-** Screw piles are resistant to water movement in the soil (heave/shrinkage) experienced as a result of water uptake from the soil by the tree.
- **e-** Each pile is driven to a specified torque during the installation process so no pile testing is required once in the ground, putting the tree at further risk of damage.
- **f-** Screw piles are regularly specified by various County Councils as the foundation system of choice in root protection zones, and we have had positive recommendations from senior Arboriculturists in the industry with respect to the minimal impact of screw piles used near trees.

Condition 5

Prior to the commencement of any works on site, details demonstrating how trees to be retained shall be protected during construction work along with an appropriate method statement shall be submitted to and approved by the local planning authority in writing. Such details shall follow guidelines and standards set out in BS5837:2012 "Trees in Relation to Construction". All trees on the site, or parts of trees growing from adjoining sites, unless shown on the permitted drawings as being removed, shall be retained and protected from damage in accordance with the approved protection details.

Please refer to drawing 114PL_L11_01showing the location of the garden room in relation to the primary retained tree T1 Japanese Maple.

Note that the lateral growth and crown of the Japanese Maple has been trimmed back as per the permission 2017/2964/T. This tree is in fact not under the group TPO in the local gardens.

The client and Maich Swift Architects are committed to protecting the Japanese Maple tree and other trees in the vicinity. The Japanese Maple in particular is an important character aspect of the garden and character of the local area.

As shown on the drawing there will be a local Construction Exclusion Zone (CEZ) around the tree and along the site boundary, separating the upper and lower flat garden demise. This zone will be protected by a protective fence or ground protection that limits any construction activity within the root protection. Ground protection will be applied around the perimeter of the garden room footprint to provide a working area avoiding any damage to the soil or roots.

As noted in the description of the foundation design in Condition 4 information, the garden room will be pre-fabricated offsite, there will be limited traditional construction methods on site; cutting, wet trades or excavation. This will mitigate any risk to the tree roots by excavation or potential pollution. The only risk of damage to the tree is when moving the garden room panels into place. This will be mitigated by local protection to the tree.

See description of screw pile installation in Condition 4 information above. The screw piles will be installed by specialist suppliers and installers who have significant experience installing in sensitive root protection areas. The screw piles will be hand augured, with no large plant required.

A trial pit local to the footprint of the garden room has been commissioned to a depth of 1.5m to establish the required depth of the pile foundations. This trial pit will also determine whether there are any roots in the vicinity of the of the pile locations. The excavation for the trial pit will be undertaken by hand, with care taken not to damage any roots. The trial pit will be backfilled as required once completed.