

Digging foundations? Trees nearby?



Trees and soil type have the potential to influence the depth and design of your foundations. Not all soil types will be affected by nearby trees, see the table below for reference.

Soil type	Minimum depth required*	Heave potential	Potential for foundations to be affected by trees
Chalk	450mm	✗	✗
Sand	1000mm	✗	✗
Clay	1000mm	✓	✓

**This is dependent on a case by case basis, and can be subject to change*

If you have clay present on your site, further action may be required. The standard depth in a clay area is 1m deep (depending on the existing foundation and drain depths). Certain types of trees, along with the porosity of the clay, can cause heave which may result in foundation depths requiring excavation beyond 1m deep and in some circumstances necessitate a suspended floor in place of a concrete slab.

To ensure you are not inconvenienced later down the line, we recommend following one of the below methods as soon as possible:

1. **LABC Foundation Calculator** – this is a free service; if you follow the link provided and sign up you can use their software to calculate the required depth of your foundations <https://info.labcwarranty.co.uk/foundation-calculator>
2. **NHBC Foundation Depth Calculator** – this is a free smartphone app; it works similarly to the above calculator whilst including measuring and identification tools.
3. **Structural Engineer** – speak to your structural engineer so that they can perform a calculation to ascertain the required depths.
4. **Speak to us** – if you provide us with an annotated sketch, showing the distances of the tree to the nearest section of the proposed foundation, the type and height of the tree, and the type of clay, we can perform the calculation for you.



With all of the above methods, the following information will be needed:

- ✓ **Trial hole** – excavate a small hole to 1m deep to identify the soil type at the bottom.
- ✓ **Type of tree** – identify each individual tree (the NHBC smartphone app mentioned above can provide ways of identifying trees).
- ✓ **Height of tree** – measure the tree, from soil to highest leaf.
- ✓ **Distance to tree** – from the nearest part of the trees trunk to the nearest section of the foundation.

Please note that if there are several trees, of similar or different types, please provide information for all of them. And be aware that there are some trees which can impact foundation depths even when they are over 20m away.

