

In some cases a completely different type of foundation may be necessary, such as a piled or a raft solution. These types of foundations must be designed by a Structural Engineer and submitted to the Local Authority for checking.

Trees adjacent to a building can often be the cause of structural problems such as cracking and sometimes movement or even cause damage to drains. Trees are a specialist subject and your architect should be in a position to advise you before making a Building Regulation submission. Should you elect to carry out the work under the Building Notice procedure then you are advised to seek the advice of a Structural Engineer prior to starting work.

#### **Planting New Trees Close to Buildings**

When planting new trees and hedges consider the future consequences, think carefully about what and where you are planting. It is inadvisable to plant a tree closer to the property than the eventual mature height of tree (for example, a conifer hedge can grow approximately 450mm a year and could reach over 18 metres in height).

#### **Further Advice**

Before felling any trees you must first check that the trees are not subject to a Tree Preservation Order (TPO), or are sited in a Conservation Area, to check this and for further advice before felling any such tree please contact the Councils Planning Section.

Email: [planning@oadby-wigston.gov.uk](mailto:planning@oadby-wigston.gov.uk)

For further design information reference can be made to;

- NHBC Standard 4.2 (Building Near Trees) or British Standard,
- BS 5837:2005, Trees in relation to construction. Recommendations,
- BS 8103-1:1995, Structural design of low-rise buildings. Code of practice for stability, site investigation, foundations and ground floor slabs for housing.

#### **For further information:**

Website:  
[www.oadby-wigston.gov.uk](http://www.oadby-wigston.gov.uk)

Telephone:  
(0116) 2888961

E-mail:  
[buildingcontrol@oadby-wigston.gov.uk](mailto:buildingcontrol@oadby-wigston.gov.uk)

or write to:  
Building Control Section  
Oadby & Wigston Borough Council  
Council Offices  
Station Road  
Wigston  
Leicestershire  
LE18 2DR



## *Borough of Oadby & Wigston*



## *Building Control*

Building Regulations 2010

**Foundations  
Close to Trees**

## Foundations Close to Trees

These notes are to assist the house owner when considering carrying out building work near trees and are not intended as a complete design tool.

## Trees Adjacent to Dwellings

When considering extending your property it is important to look around the area on which you want to build and check that no obstructions exist. These could take the form of underground drains, overhead cables, existing structures and trees.

Whilst the builder and architect can overcome most difficulties, building near trees can sometimes cause particular problems.

## Trees

Whilst trees are pleasant to look at and enhance any garden they can present hidden problems to a proposed building or extension. In simple terms depending the type of tree and the local ground conditions, the closer the tree is to a new building the deeper the foundations must be. The minimum depth for any foundation is 900mm, however, this depth could be greatly increased, depending on how close the tree is to the new extension.

The basis of any design is to ensure that the foundations are taken down to such a depth that they will not be prejudicially affected by the presence of trees. The trees themselves do not necessarily have to be large varieties, such as Oak or Beech, even small trees such as Plum or Apple could have an effect on foundations.

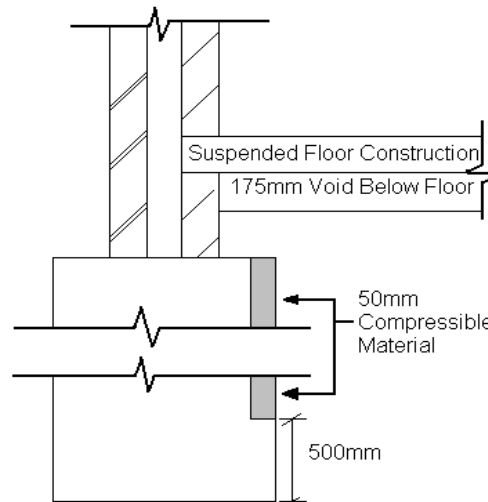
## The Solution

In the borough of Oadby and Wigston the majority of soils are of medium shrinkable clay. The adjacent table gives some common trees and the minimum depth required for the foundations, dependant upon the distance the foundations are from the trees.

Should you have a tree in your garden, having it felled will not mean that the foundations will not be affected. Heave in clay soil can take place after the felling or removal of trees and hedgerows as the ground reabsorbs the moisture that the tree previously removed, causing the ground to swell. To avoid the adverse effects of heave, the design of the foundations and substructure should take this into account. The following diagram shows a typical construction detail for a trench fill foundation together with the precautions to prevent damage from heave.

It is important that;

- The compressible material shown is provided to all internal faces of a foundation.
- The faces of the excavation are clean and vertical.



SPECIES	DISTANCE FROM BUILDING												
	1m	2m	4m	6m	8m	10m	12m	14m	16m	18m	20m	22m	24m
Alder	1.90	1.80	1.65	1.50	1.30	1.15	0.90						
Apple	1.80	1.70	1.40	1.10	0.90								
Ash	1.90	1.85	1.73	1.60	1.50	1.30	1.20	1.10	0.95				
Beech	1.90	1.80	1.70	1.55	1.40	1.30	1.10	0.95					
Birch	1.40	1.30	1.15	0.95									
Cedar	1.80	1.65	1.35	1.05	0.90								
Cherry	1.90	1.80	1.60	1.45	1.30	1.05	0.95						
Chestnut	1.90	1.85	1.75	1.60	1.50	1.35	1.25	1.10	1.00	0.90			
Fir	1.80	1.65	1.35	1.05	0.90								
Hawthorn	2.80	2.60	2.30	1.95	1.65	1.30	0.95						
Holly	1.35	1.25	1.05	0.90									
Laburnum	1.35	1.25	1.05	0.90									
Laurel	1.80	1.70	1.40	1.10	0.90								
Leylandii	2.90	2.73	2.50	2.25	2.05	1.85	1.55	1.35	1.10	0.90			
Lime	1.90	1.85	1.70	1.55	1.45	1.30	1.15	1.05	0.90				
Magnolia	1.33	1.20	0.95										
Maple	1.90	1.80	1.65	1.50	1.30	1.15	1.00	0.90					
Mulberry	1.33	1.20	0.95										
Oak	2.93	2.85	2.70	2.55	2.40	2.20	2.15	2.00	1.85	1.70	1.55	1.45	1.30
Pear	1.85	1.75	1.50	1.25	1.00	0.90							
Pine	1.80	1.60	1.25	1.05	0.90								
Plum	1.80	1.70	1.40	1.10	0.90								
Popular	2.90	2.85	2.70	2.60	2.45	2.35	2.25	2.15	2.00	1.90	1.75	1.65	1.55
Spruce	1.40	1.35	1.20	1.05	0.95								
Sycamore	1.90	1.85	1.70	1.55	1.45	1.30	1.15	1.05	0.95				
Willow	2.90	2.80	2.70	2.55	2.40	2.25	2.15	2.00	1.85	1.70	1.55	1.45	1.30

DEPTHS IN METRES (SHADED DEPTHS REQUIRE HEAVE PRECAUTIONS)