Foundations:

Everything you need to know from the ground up:

Foundations are the most important part of your project, whether that be an extension to your house or a new dwelling, It's obvious that they must done correctly as quite literally everything else relies on them being right. Failure to do so will incur expensive costs. This is where Local Authority Building Control's extensive knowledge can help. Below is some basic advice.

What basics should you consider?

Dig a trial hole and contact your Local Authority Surveyor. A small diameter preliminary excavation through the topsoil into virgin undisturbed subsoil will let you know the basic ground conditions. In East Suffolk we generally experience 2 types of subsoil conditions – Sand and Clay

Depth in Sand:
Excavation should be at least 450mm deep to ensure foundation concrete is below the depth at which frost can affect groundwater and lift the structure upwards.

Depth in Clay :
Clay subsoils naturally swell and shrink due to moisture changes. A minimum excavation depth of 900mm will normally be sufficient

Clay and Trees :
Trees close to foundations in clay subsoils may influence moisture levels, so in order to reduce the risk of building subsidence due to trees extracting water from the clay, foundations will need to be deeper than the capability of a tree to dry out the clay. A tree survey by a Local Authority Surveyor can give helpful foundation depth advice prior to commencement of work.

Width :
Foundations must be wide enough to adequately spread the buildings weight onto the subsoil, typical internal loadbearing walls should be 450mm wide and external 100mm width cavity walls 600mm wide.

Foundation Thickness:
The foundation concrete should be at least 150mm thick or the same thickness as the distance from the external face of the wall to the side of the trench excavation, whichever is greater.

Common influencing factors

Drains:
If a foundation is within a meter of a drain run then the foundations must be excavated to the base of the drain trench in order to prevent building loads from damaging the drainage. Foundation depths may reduce as the distance to the drain increases.

Wells and underground surface water tanks:
The best option is often to fill them with lean mix concrete or rubble and a cast concrete lid over them and reinforce the foundation concrete over and locally beyond them.

Previously disturbed ground:
Subsoil that has been removed and backfilled or replaced will rarely be as strong as the original subsoil, the best way to ensure a suitable foundation support will be to excavate through the body of the weaker backfilled material and onto virgin undisturbed subsoil.

This list is not exhaustive, please contact Local Authority Building Control for comprehensive advice if required.

Still have a query? Did you know that we do offer 1 hours free pre application consultation for those who need it. Contact us today at buildingcontrol@eastsuffolk.gov.uk / 01502 523072