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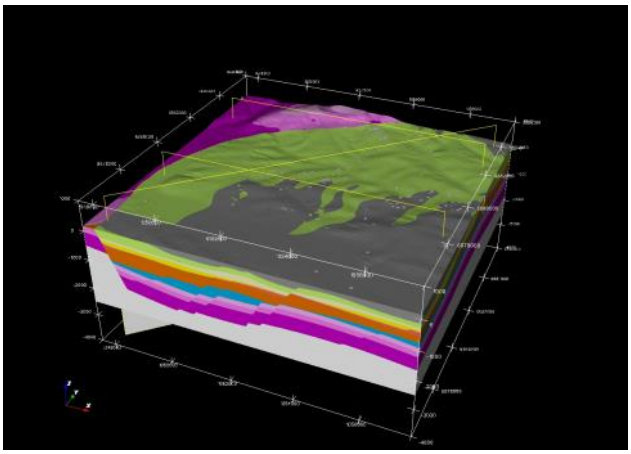
Irvine Royal Academy—Technical Department

Graphic Communication—Advanced Higher

Built Environment Surveys

Various types of surveys are carried out as part of a building development. These surveys are of use to the developer, builder and end-user of the site. The main types of survey you need to know are listed below.

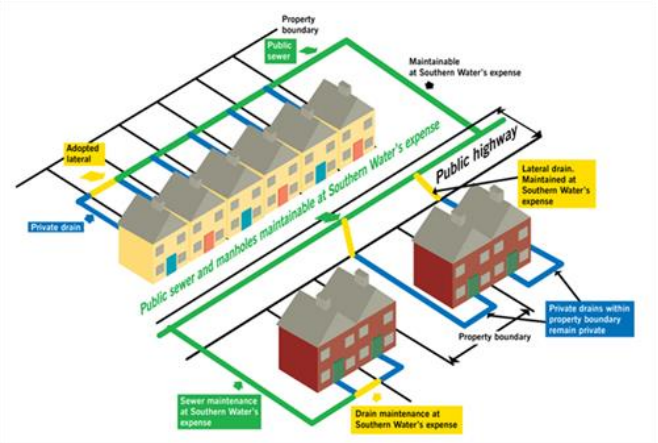


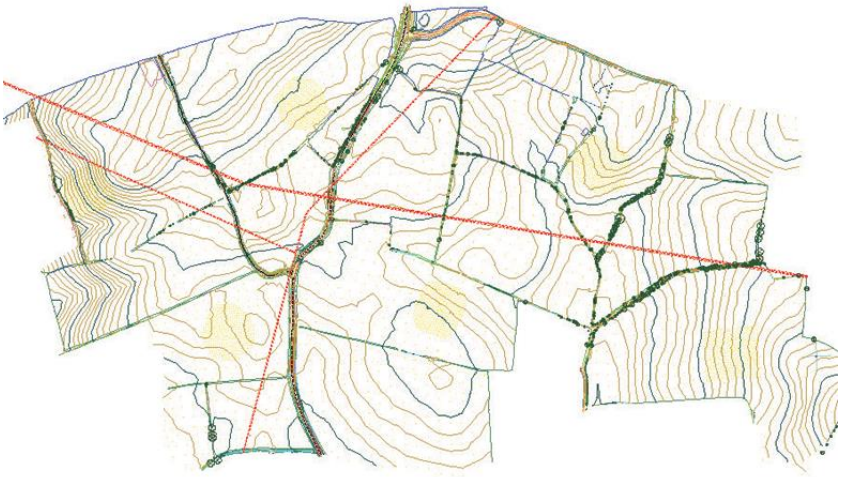
Underground Survey

This is often created using borehole surveys, or geophysics. It creates a plan which shows what sort of soil or rock is under an area of ground. The developer will need this to find out if the ground is suitable for building on, whether it may be liable to subsidence, how deep the foundations will need to be, what form of foundation will need to be used, has there been any previous developments that will affect new building, what types of soil (eg. clay, sand, rocky) is under the ground.

Drainage Survey

A Drainage Survey will show where water pipes are positioned underground. These will include the water main, sewers and rainwater pipes. The survey will indicate to developers where the pipes should be laid. Developers will also know where to position access points (including manholes). Owners of the property will also be able to identify the location of the main stopcock. The owner will know where the services enter or leave the property. Water authorities will know where their responsibility for pipes and drains end, and where the homeowner becomes responsible. The infographic shown here is not a proper drainage survey, but has been created using information from it. In this way it is easier for the homeowner to understand.





Topographical Survey

The main indicator of a topographical survey are the contour lines. These show the shape of the ground, as well as the height above sea level. This will indicate how steep or flat a site is, and how much digging may be required to flatten an area for building. If the ground is too steep, it may not be suitable for building on. As a result of the contours showing the landform, the flow of water can be identified (it will flow downhill!), meaning that the position of drains can be worked out. Any existing watercourses (eg burns) may be indicated on the plan. The amount of earth needing to be dug can be calculated by using the information on the plan.