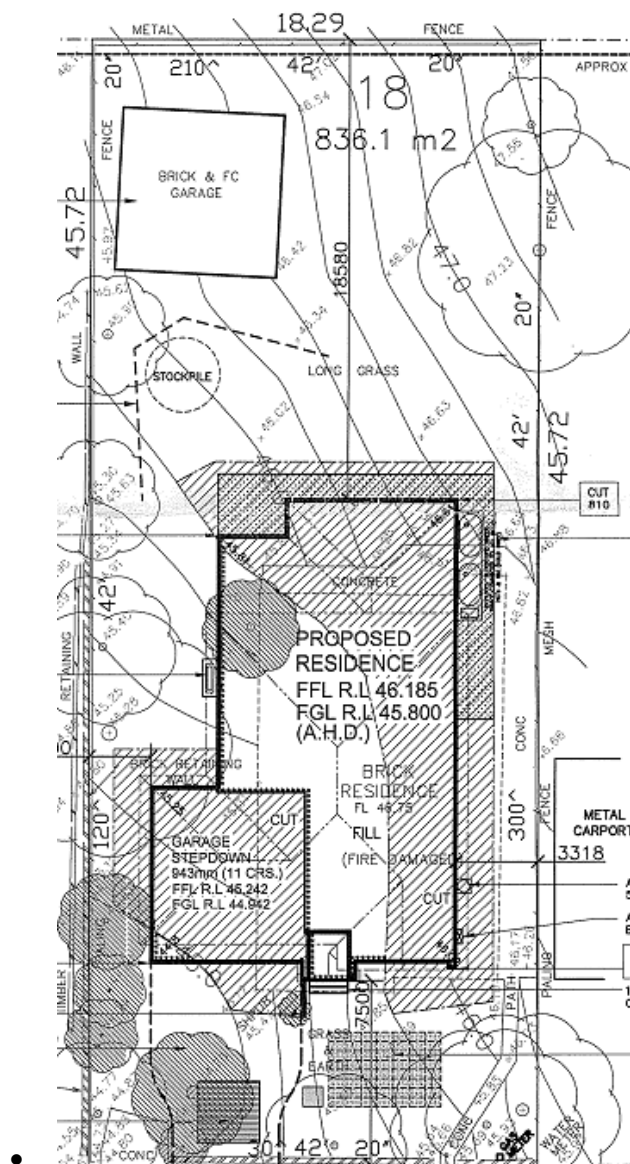


Detail Surveys

Contour drawings for construction drawings are used so as the designers can determine the best position of the proposed building horizontally and vertically.

They are usually prepared by surveyors on drawings called detail surveys. As the name implies the purpose of the drawing is to detail the features of the site such as,

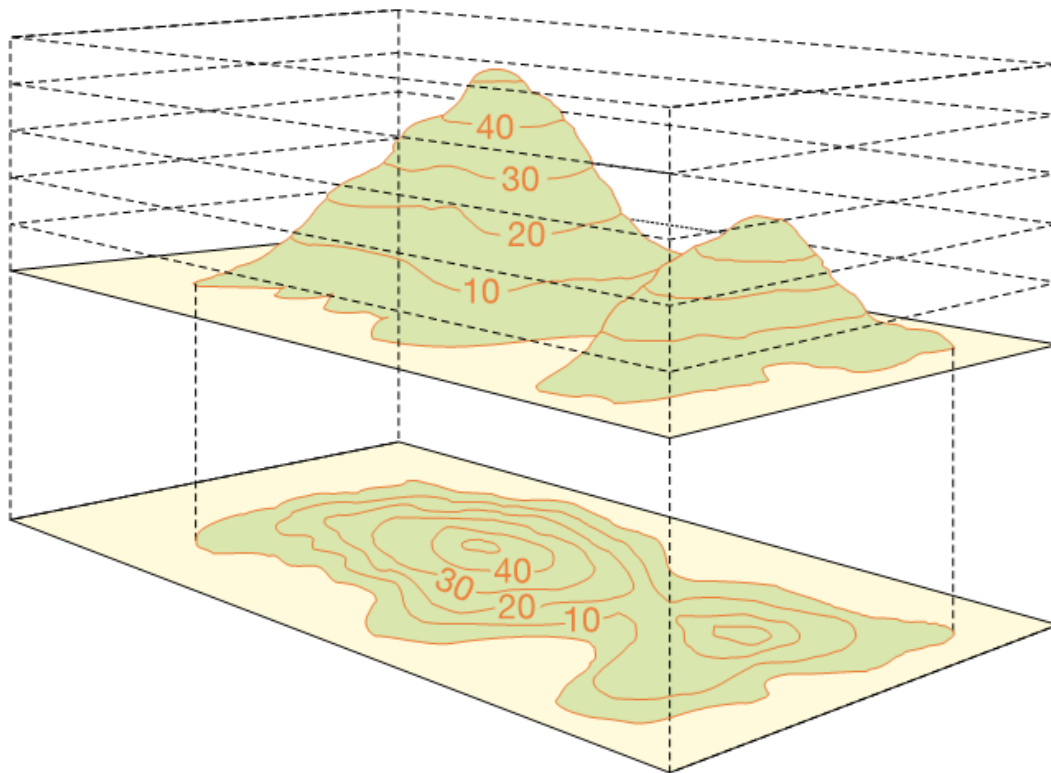
- Direction of fall of the land
- Location of Trees
- Location of existing structures
- Location of services
- Location of any other features that may affect the design & placement of the building.



Understanding Contours

Contours Lines - are imaginary lines that joint points of the same height above the **datum** (points of equal elevation). They allow a person viewing the plan which is 2 dimensional to form an impression of its 3 dimensional shape.

It is important that the contours refer to a datum so as construction based on the design will be built at the appropriate height.

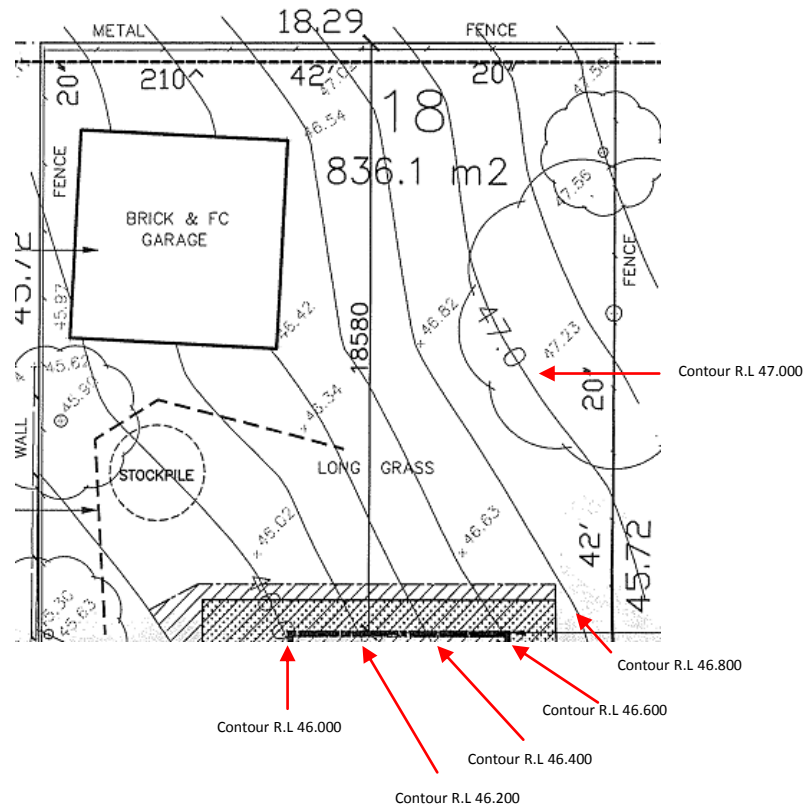


This photo of a terraced rice farm in Indonesia give a good physical indication of what contour lines are.

As we all know water will always settle to level. So as the farmers can dam the water they terrace the land in level lines. Each terrace traces a level line around the land feature.

Contour Interval – the contour lines represent the height of the land in the form of a Reduced Level above the datum. Each contour will represent a different Reduced Level, so an impression of the shape of the land can be formed the contours must be determined at a regular intervals. This is the Contour Interval.

The excerpt from a site plan gives an example of the contour interval; in this case it is 200mm

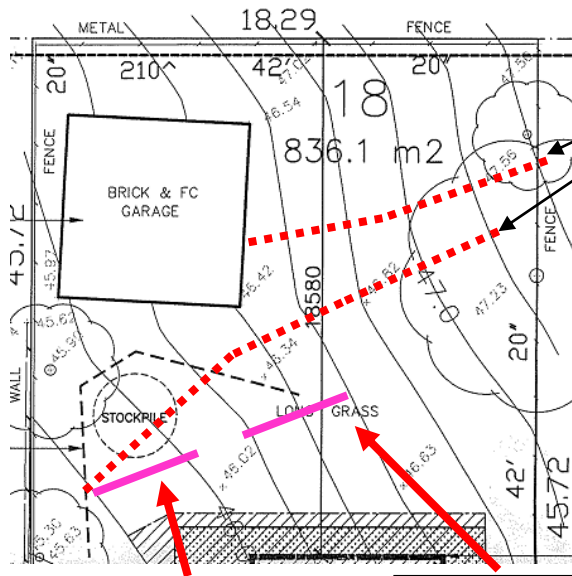


A physical example of contour intervals can be seen on the Terraced Rice Farm.

The vertical height difference between the terraces would represent the contour interval.

When preparing a detail survey it is important that the contour interval is constant throughout the whole drawing.

Interpreting Contours



1. The land always falls at 90° to the contour line at the point it is drawn and the direction of fall may constantly change.

2. Closer contours indicate steeper land.

Distance between terraces are closer, land is steeper

Distance between terraces are further apart, land is flatter



The following diagram is from a 1:25000 topographical map but the same rules apply to detail drawings prepared by surveyor. Contours are a plan view of the slope of the land.

