

# Mountain Skills

## Map Relief and Elevation

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Map Relief and Elevation

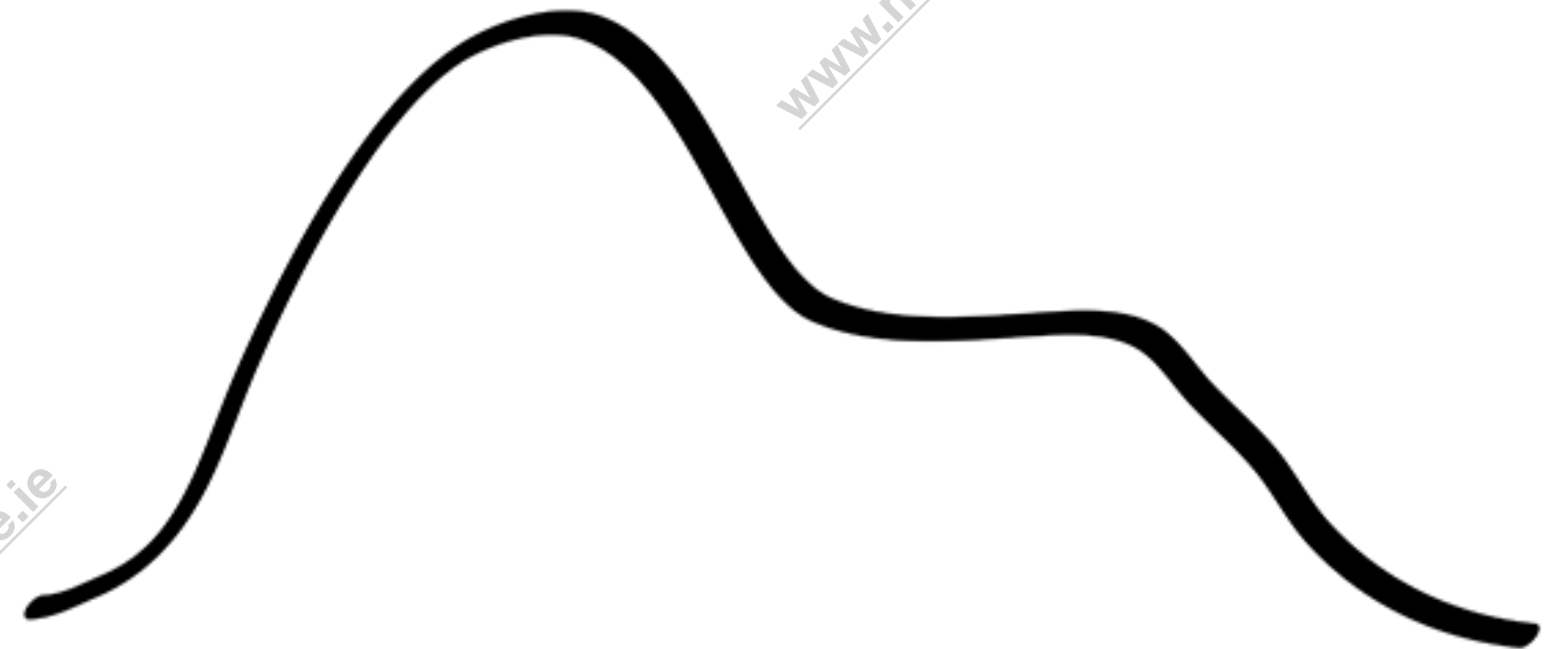
# Map Relief and Elevation

- What is Relief?
- It is the stuff outside.
- We all understand it because we see it all the time
  - What is a mountain?
  - What is water?
  - What is a path?
- We all agree about what these words mean
  - we all can understand this photo
- But how is it Depicted on a map?



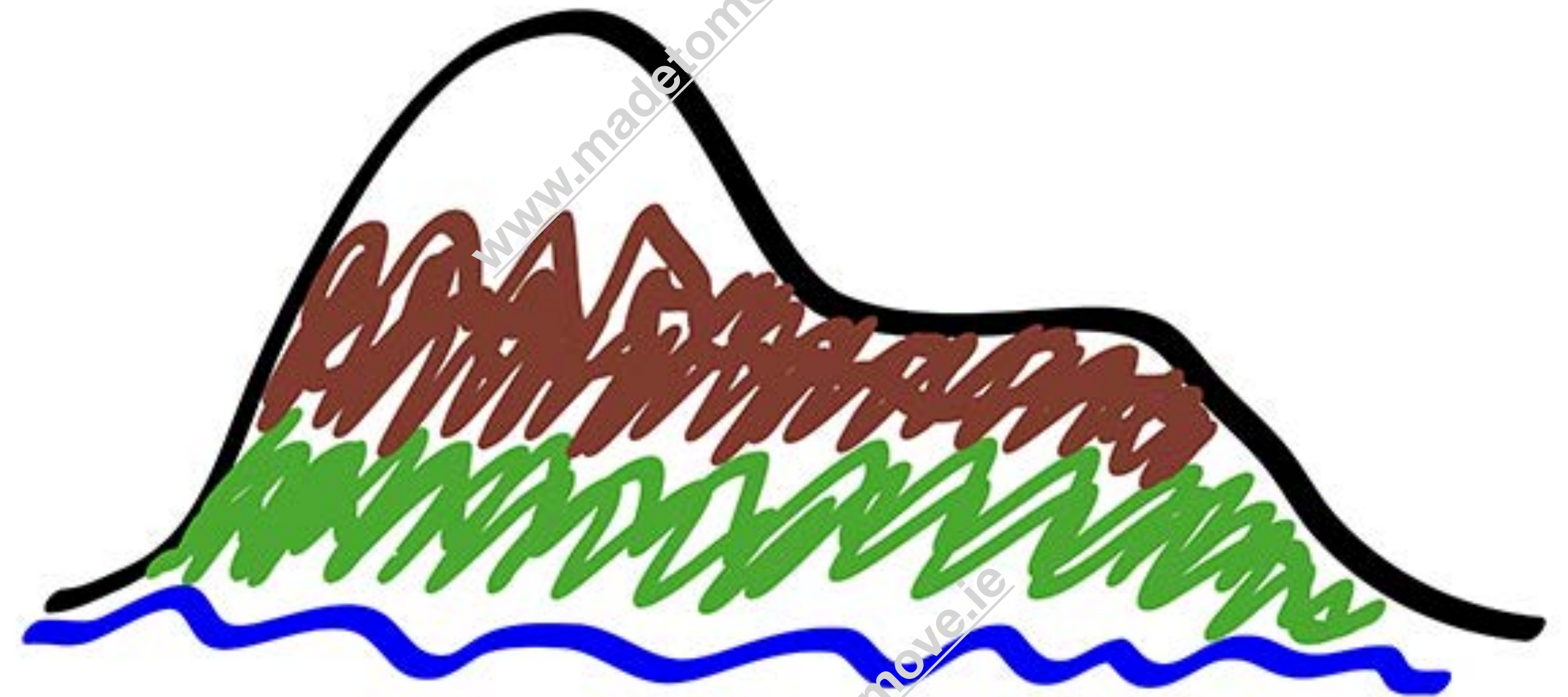
# A Shared Language

- What's this?
- A mountain?
- We all might understand what that is because we all have drawn one as kids



# Developing a Key

- Now what?
- It is a mountain with:
  - Water?
  - Vegetation?
  - Rock?
  - Snow?
- We all understand that because I have told you or you knew already.
- We don't need any specialist knowledge
- We are beginning to develop a shared set of terms and icons: A Key



# 3D to 2D



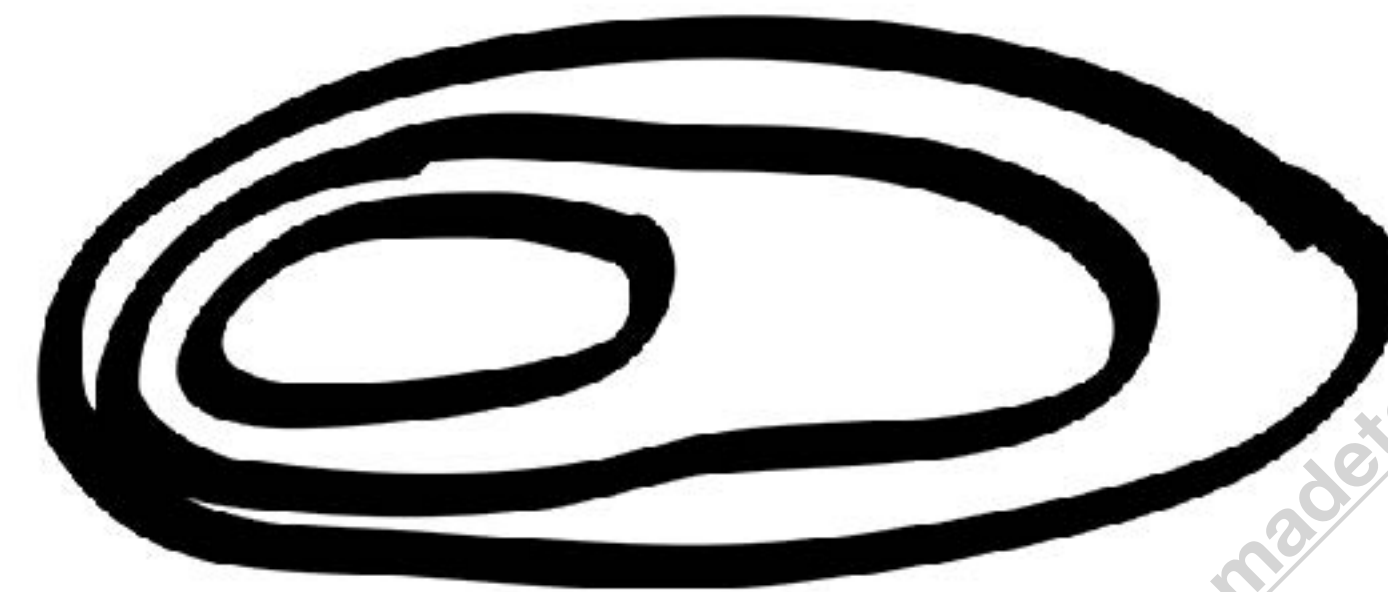
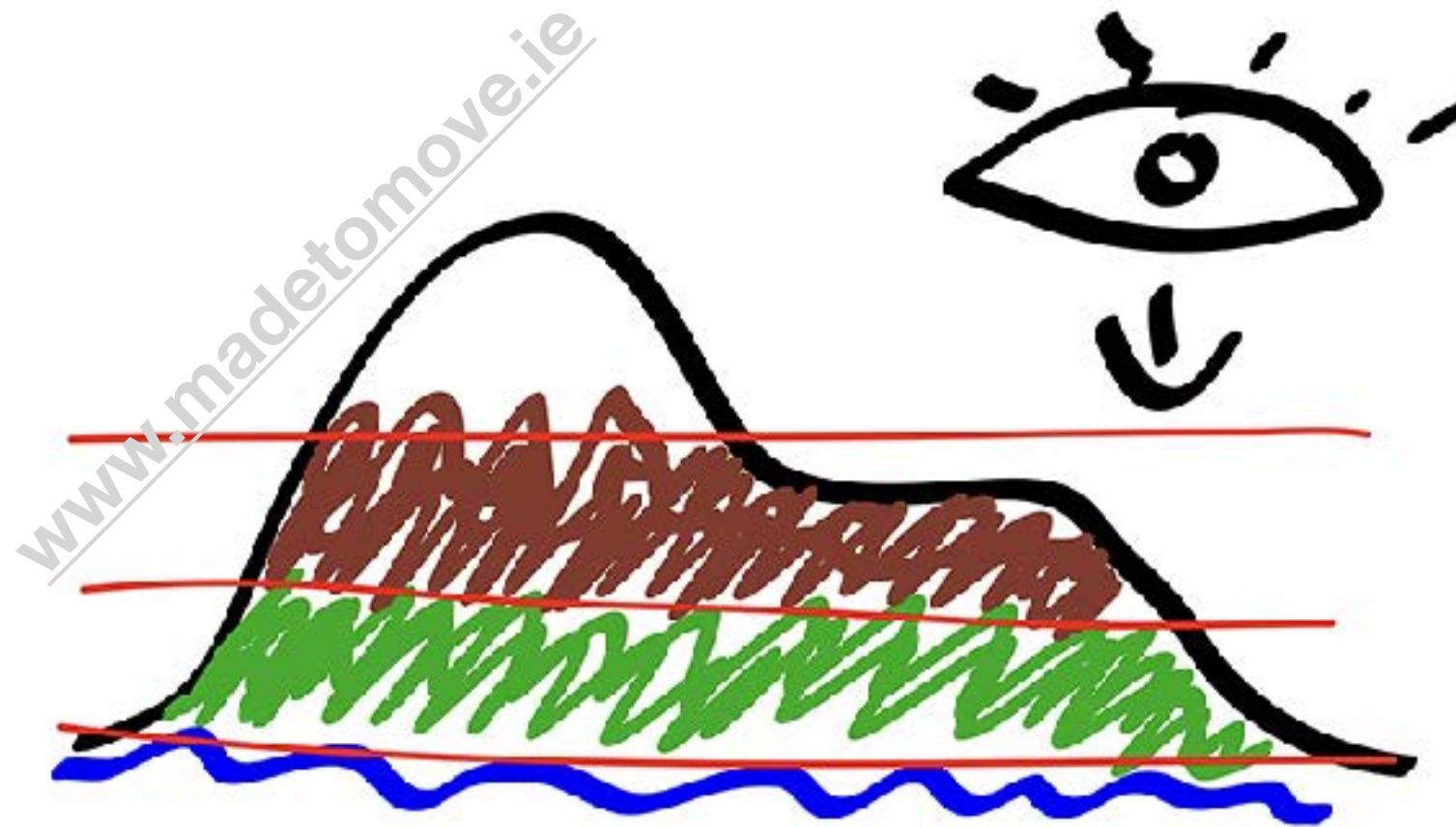
**Luggala: How do we represent this on a map?  
Can we draw this profile on a map?  
We have only one viewpoint.  
We are looking at the mountain from ground level**



**Lough Tay: How do we represent this on a map?  
We are looking down on the lake  
We can see the shoreline  
The shoreline represents a level line that intersects the landscape.  
We could see it as a 'Contour Line'.**

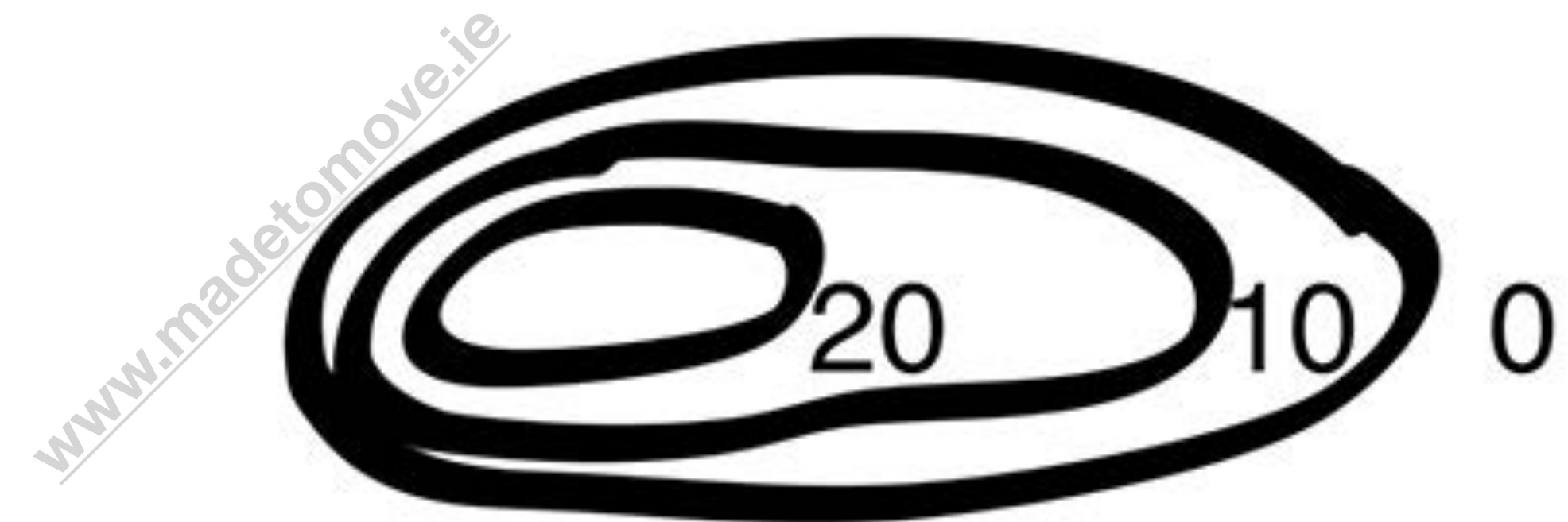
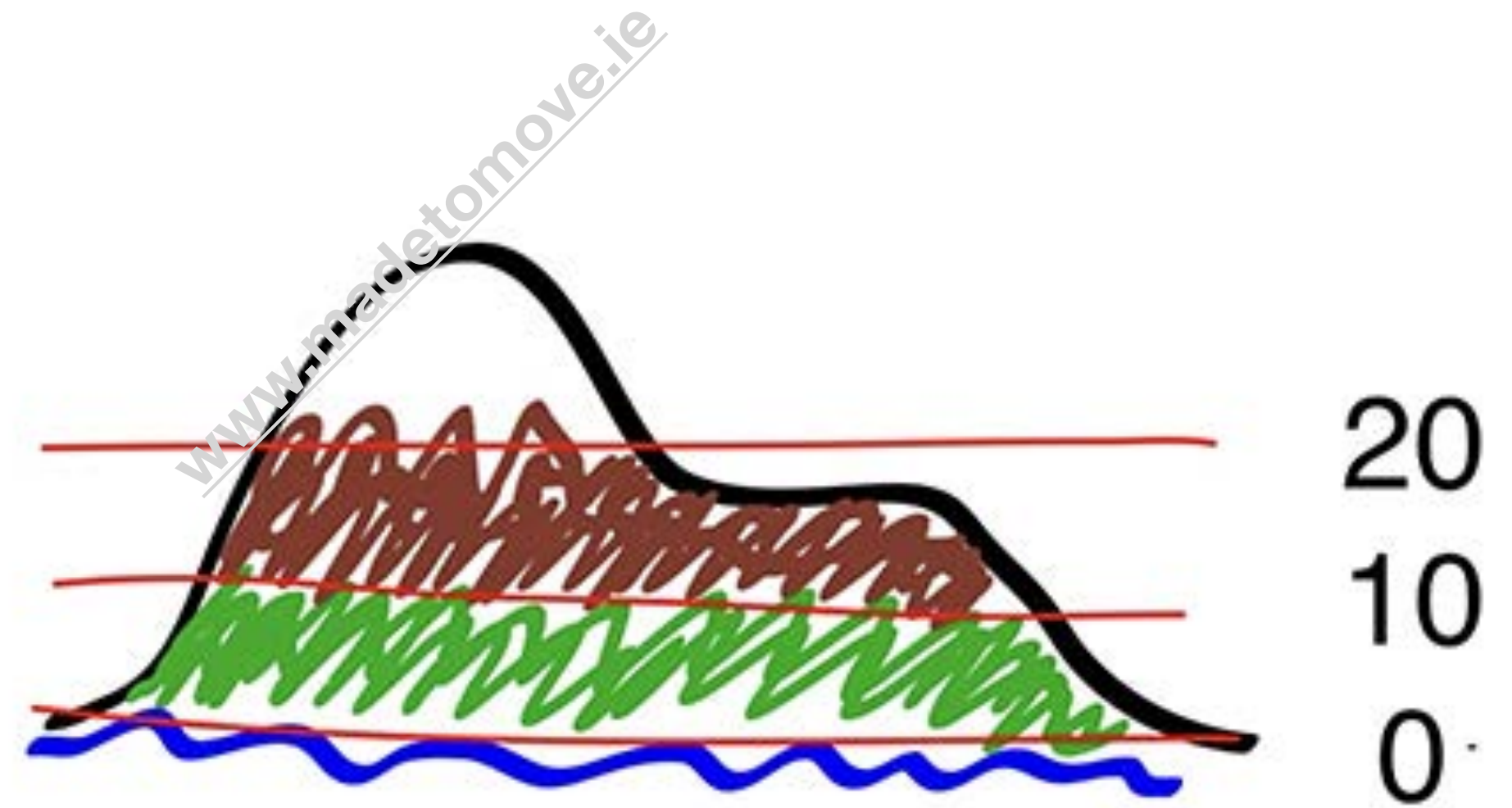
# Developing Contours

- How do we represent 3D landscape on a flat piece of paper?
- Using Lough Tay as an example; We draw evenly spaced imaginary lines through the mountain:
  - Each line represents an agreed height
- When we draw and view the lines from above we see where the lines intersect the volume of the mountain:
- These lines are called 'Contour Lines'
- The relief of the natural landscape is represented on a map by a series of these contour lines. 3D into 2D



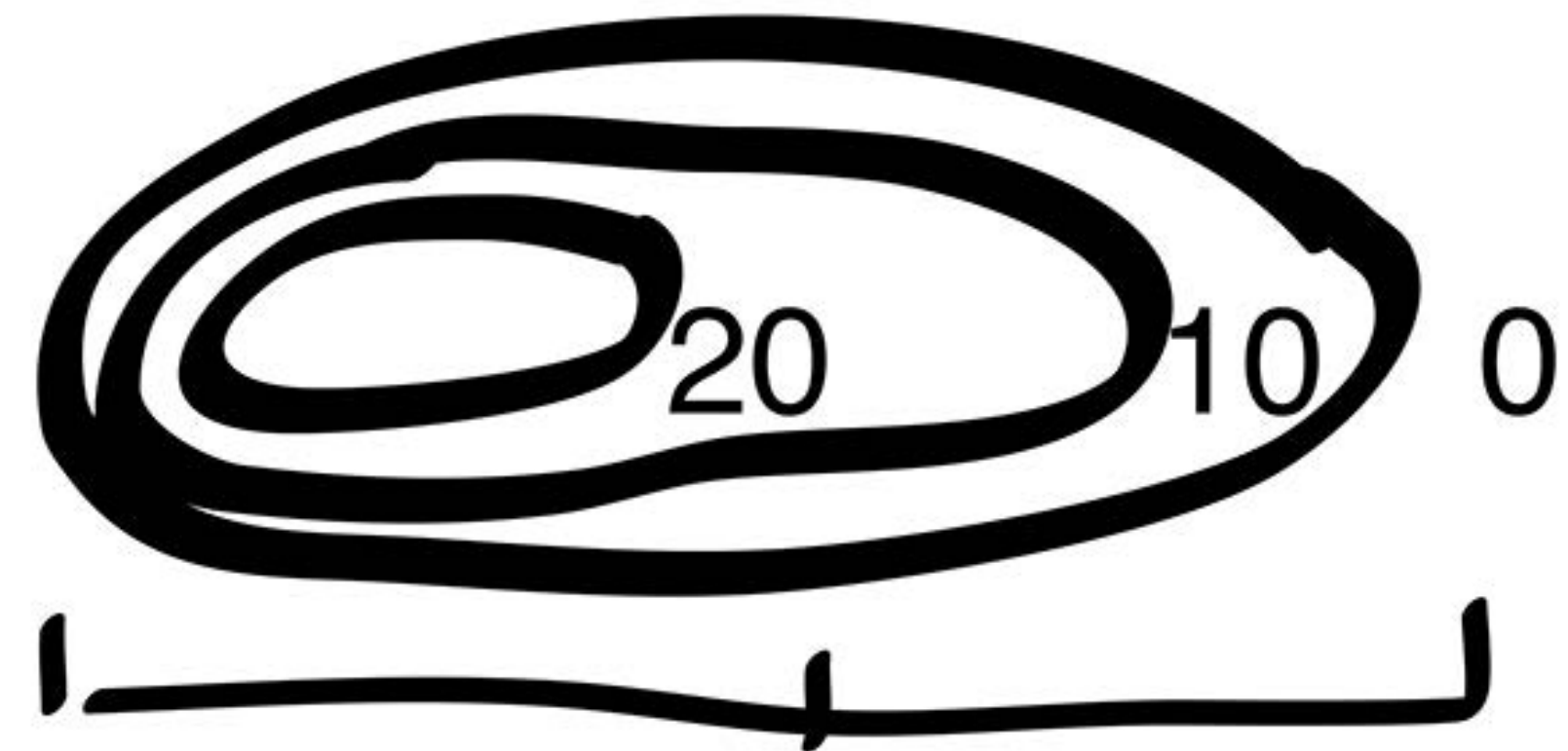
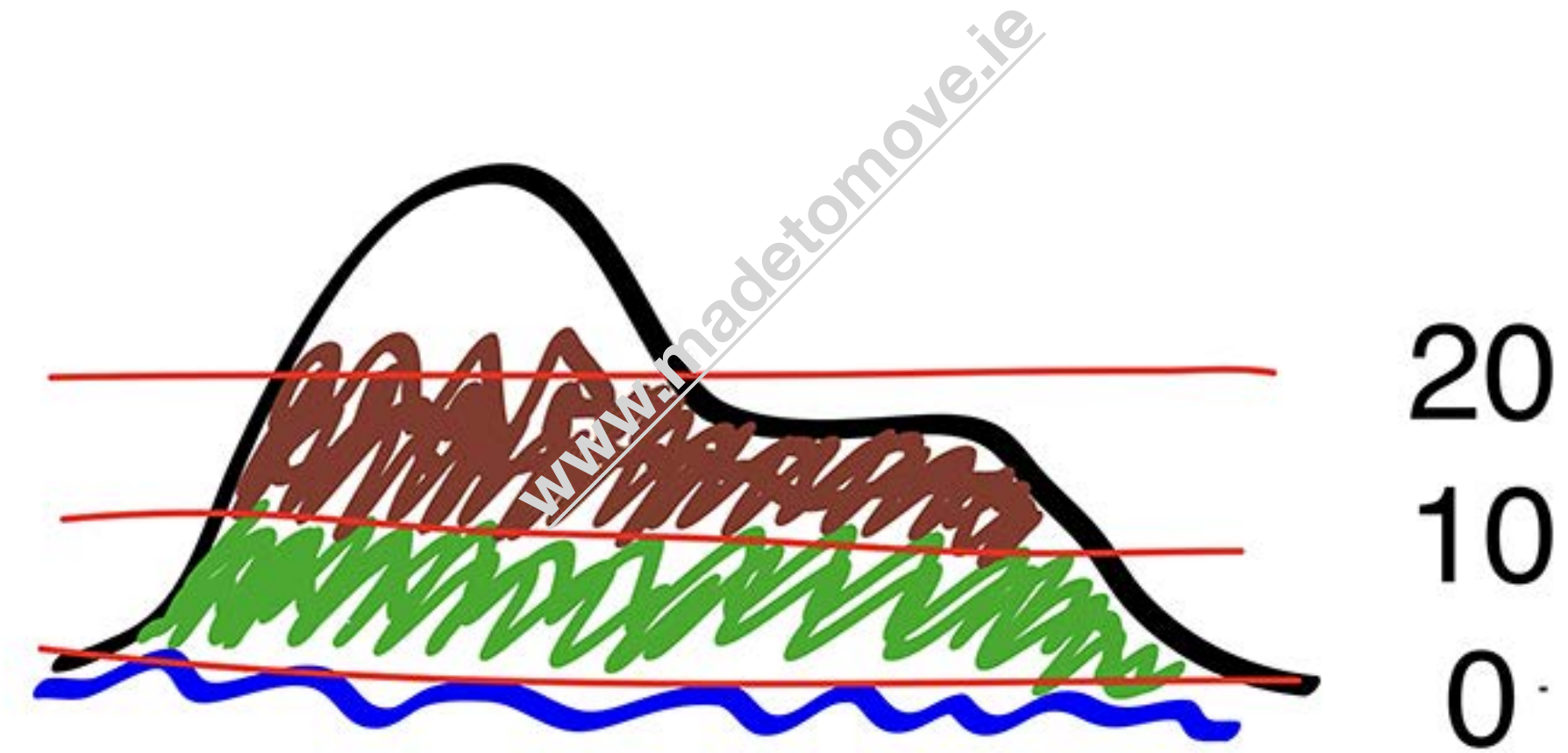
# Adding Detail

- If we space the lines out evenly at agreed intervals, we can tell what the 'shape' of the landscape is at those heights
- By observing the relationship between the contour lines we can understand more detail about the landscape
- The closer the contour lines are the more sudden the height gain is and therefore the landscape is steeper
- The wider the space between the contour lines are indicate a more gentle the slope
- Looking at just the contours we can tell that it would be easier to walk up the mountain on the right side. The left side is steeper



# Adding Context

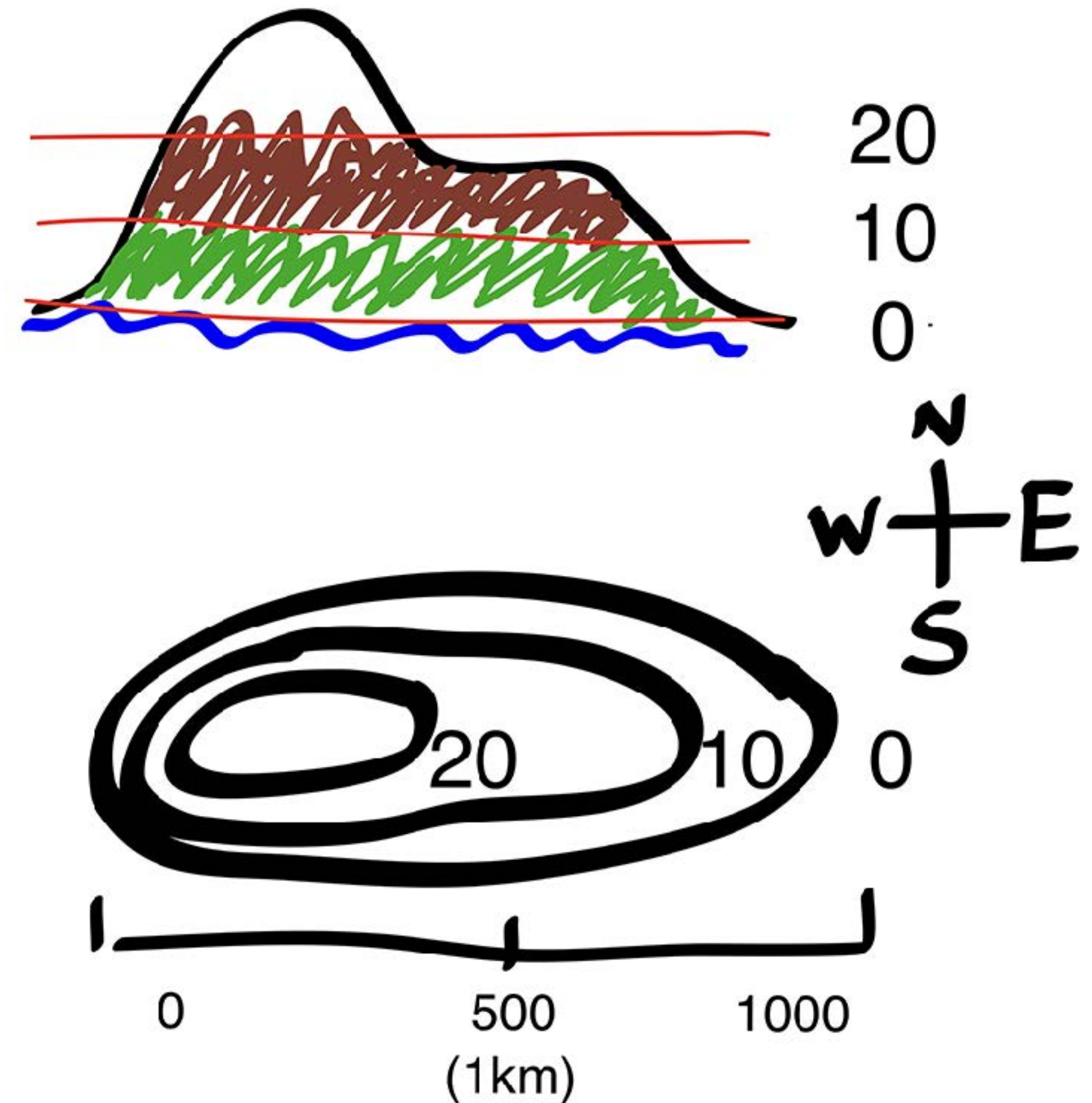
- To really help us plan and navigate our way about this map we need more information
- How big is this mountain?
- Will it take all day to walk up there?
- A scale is useful
- What direction are we traveling?



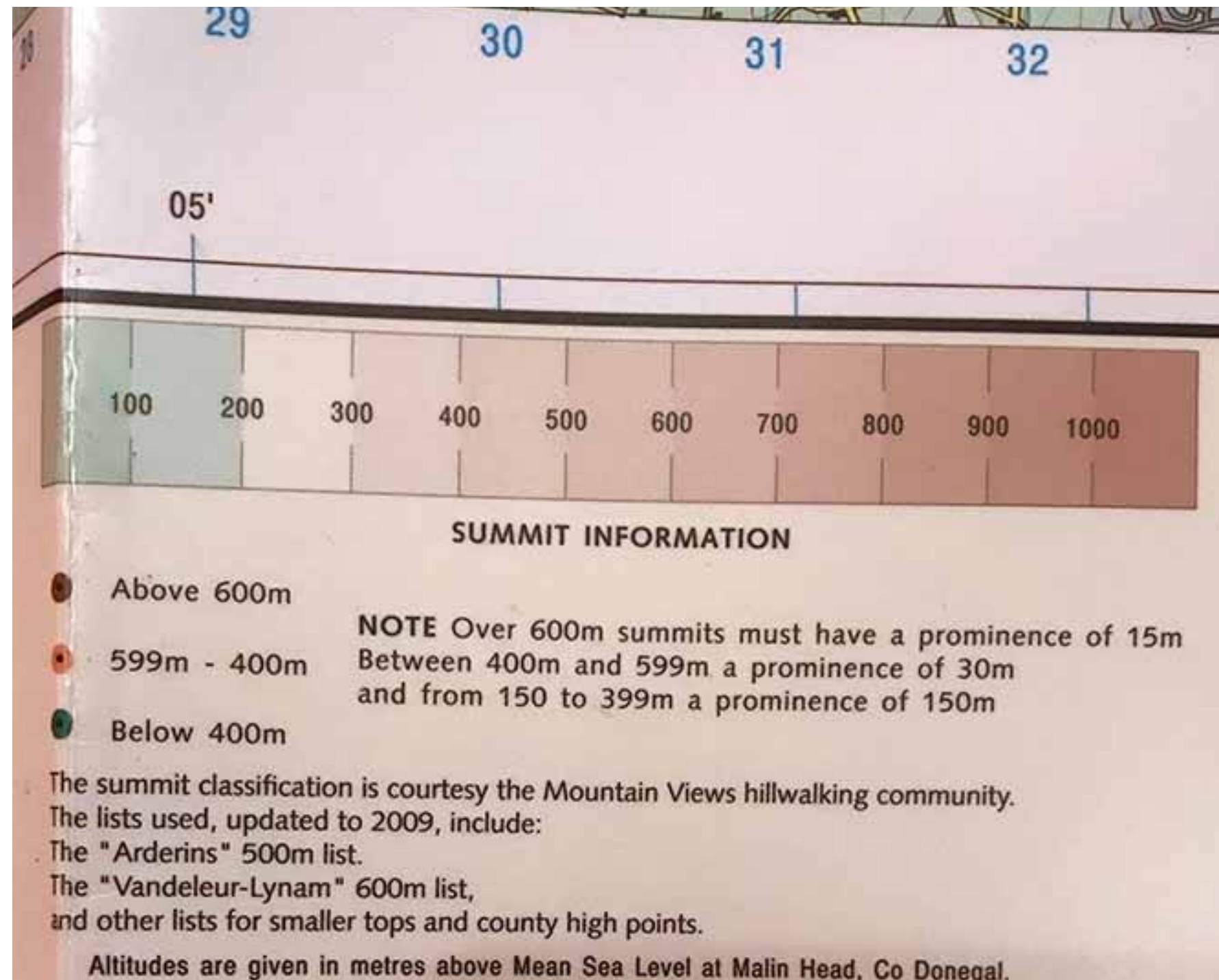


# Adding Context

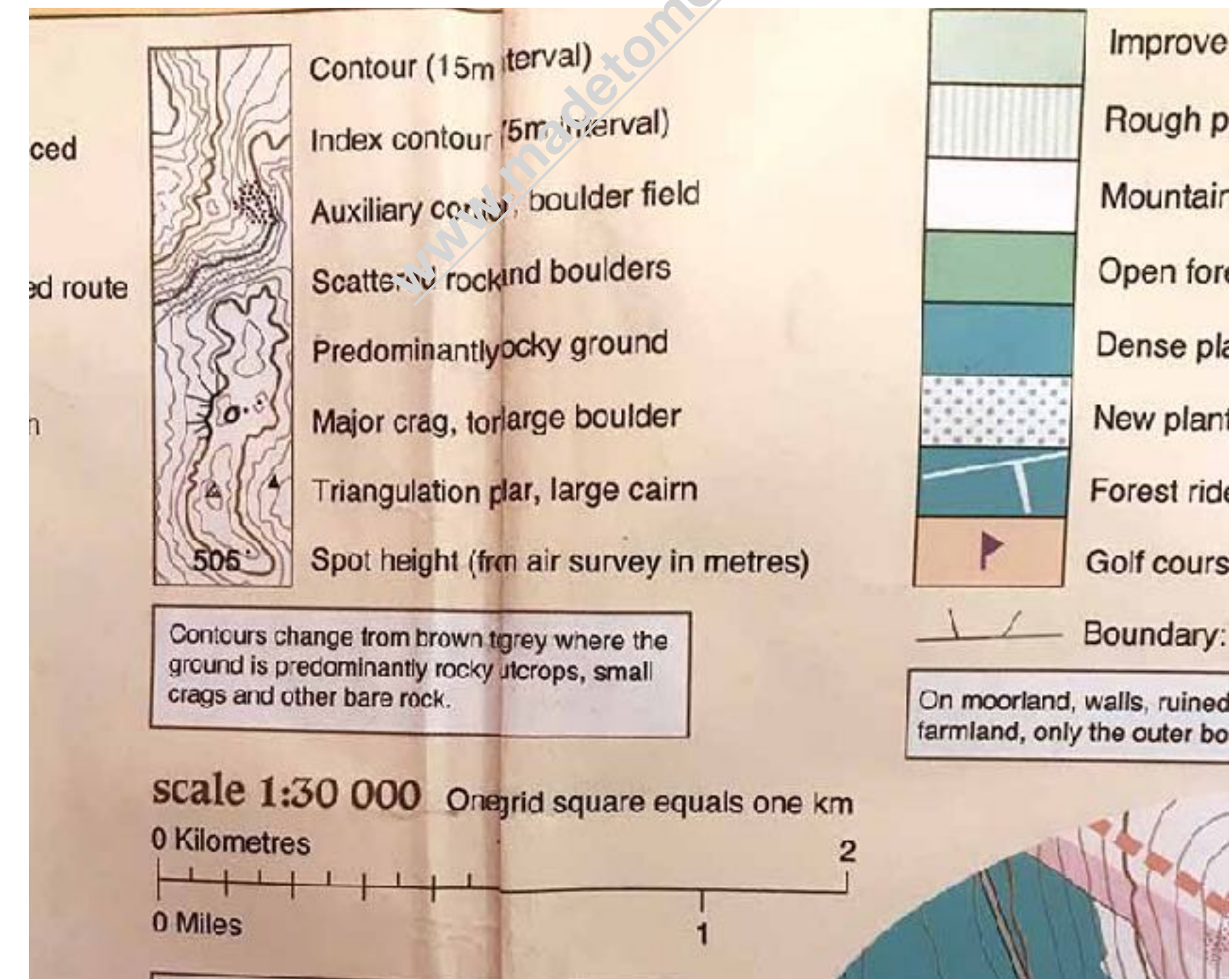
- To really help us plan and navigate our way about this map we need more information
- How big is this mountain?
- Will it take all day to walk up there?
- A scale is useful
- What direction are we traveling?
- All these things help us to understand the 'Relief' of the landscape



# Adding More Detail

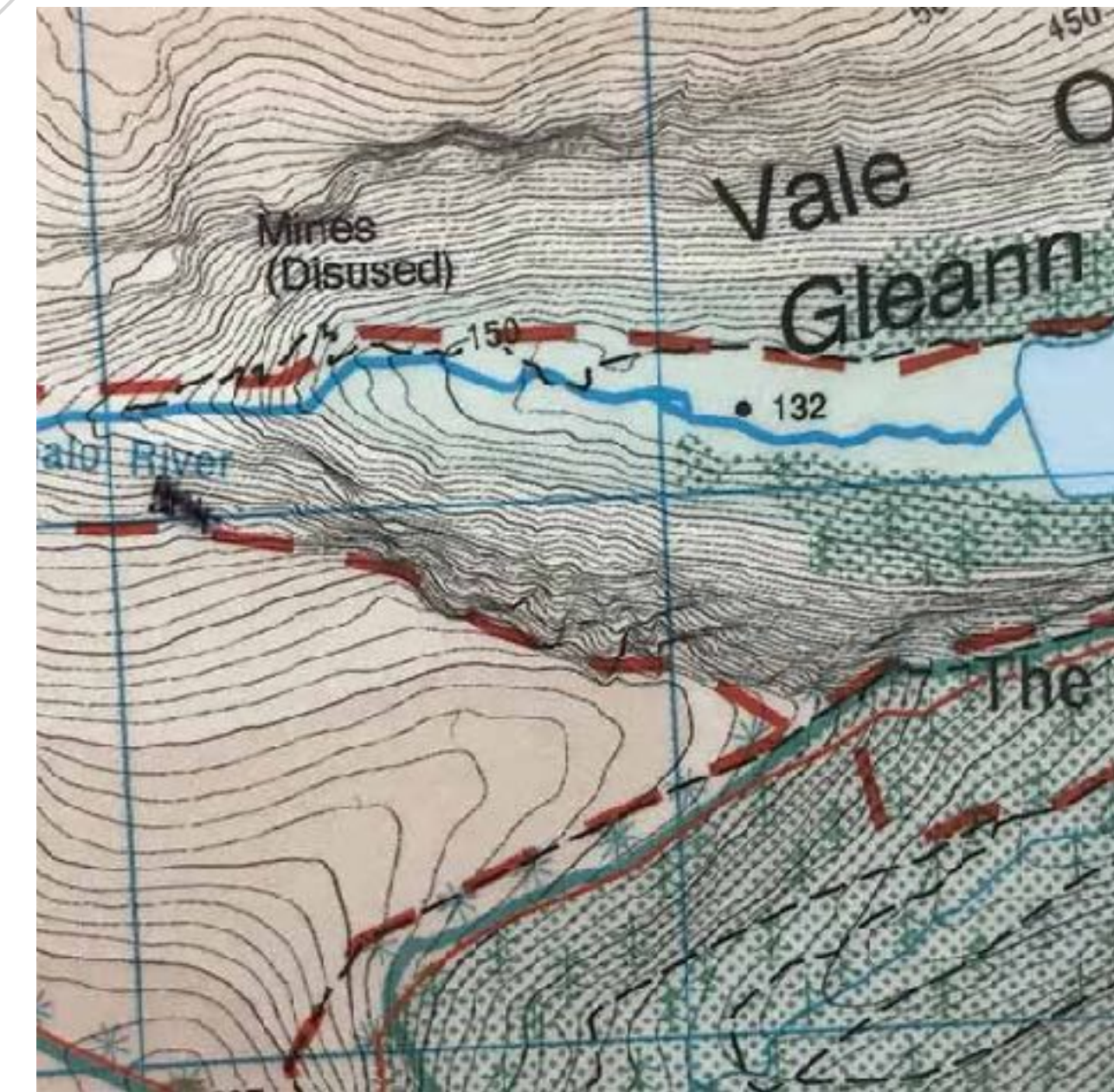
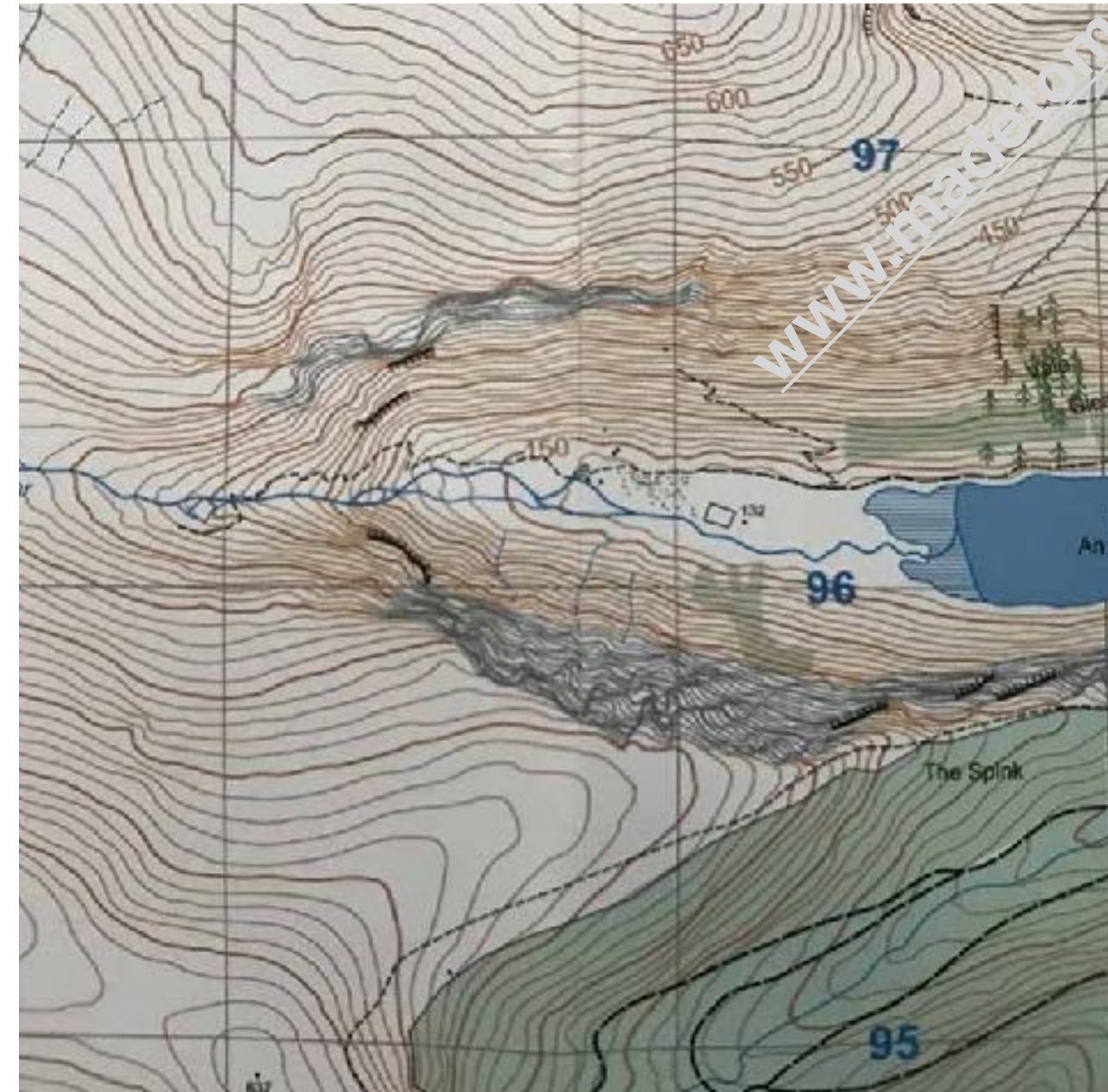
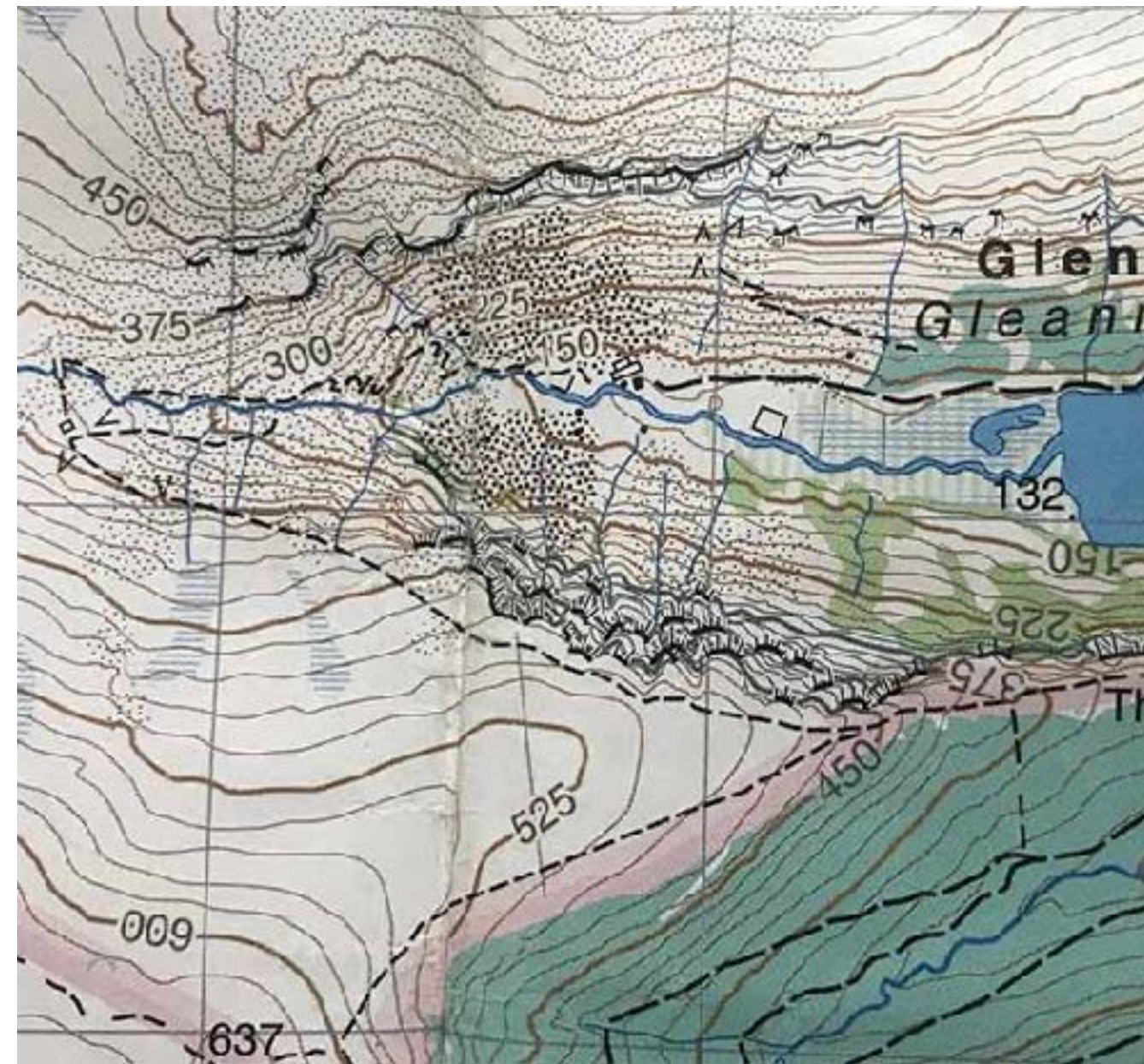
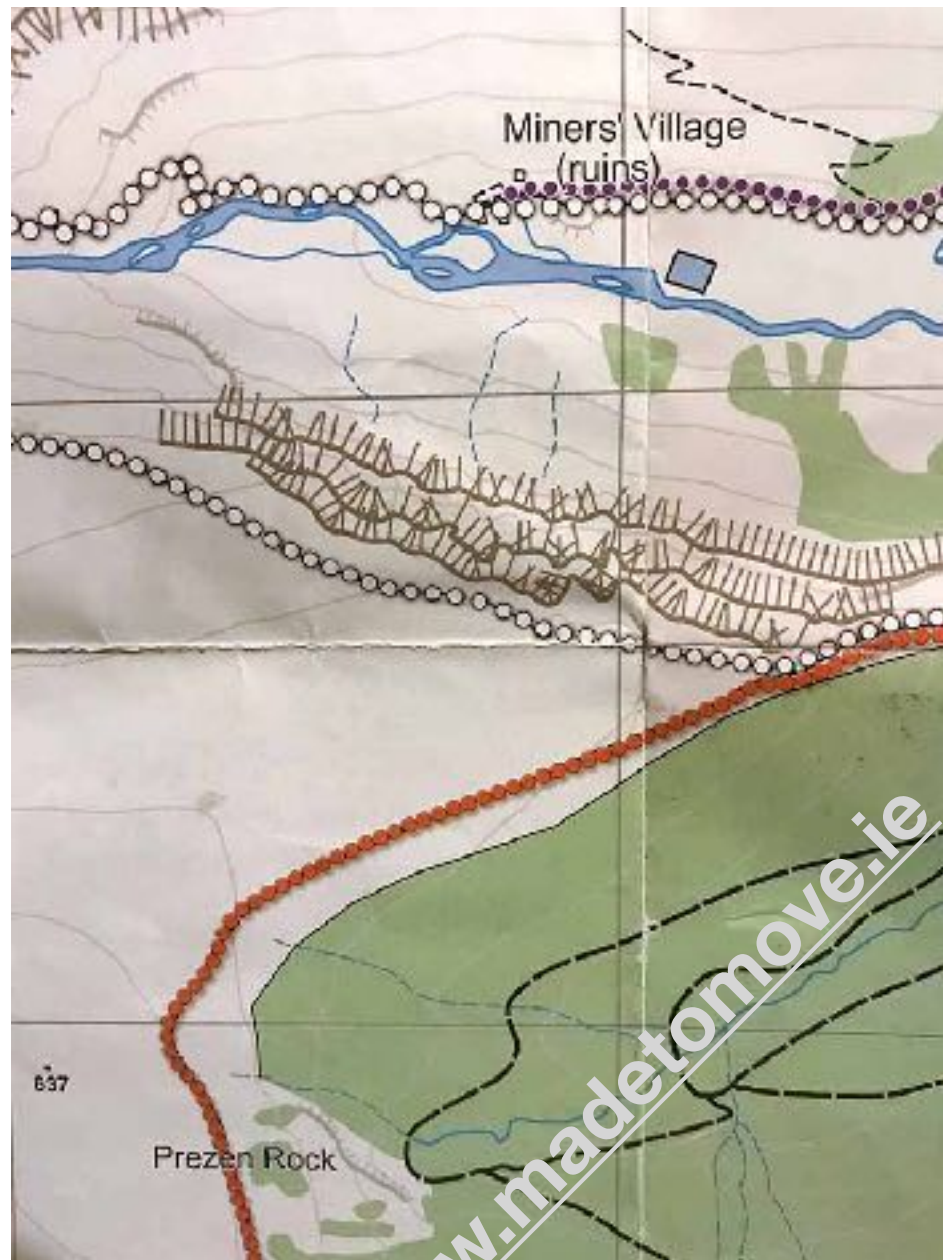


Above we see summit information (altitude) indicated by numbers and colours



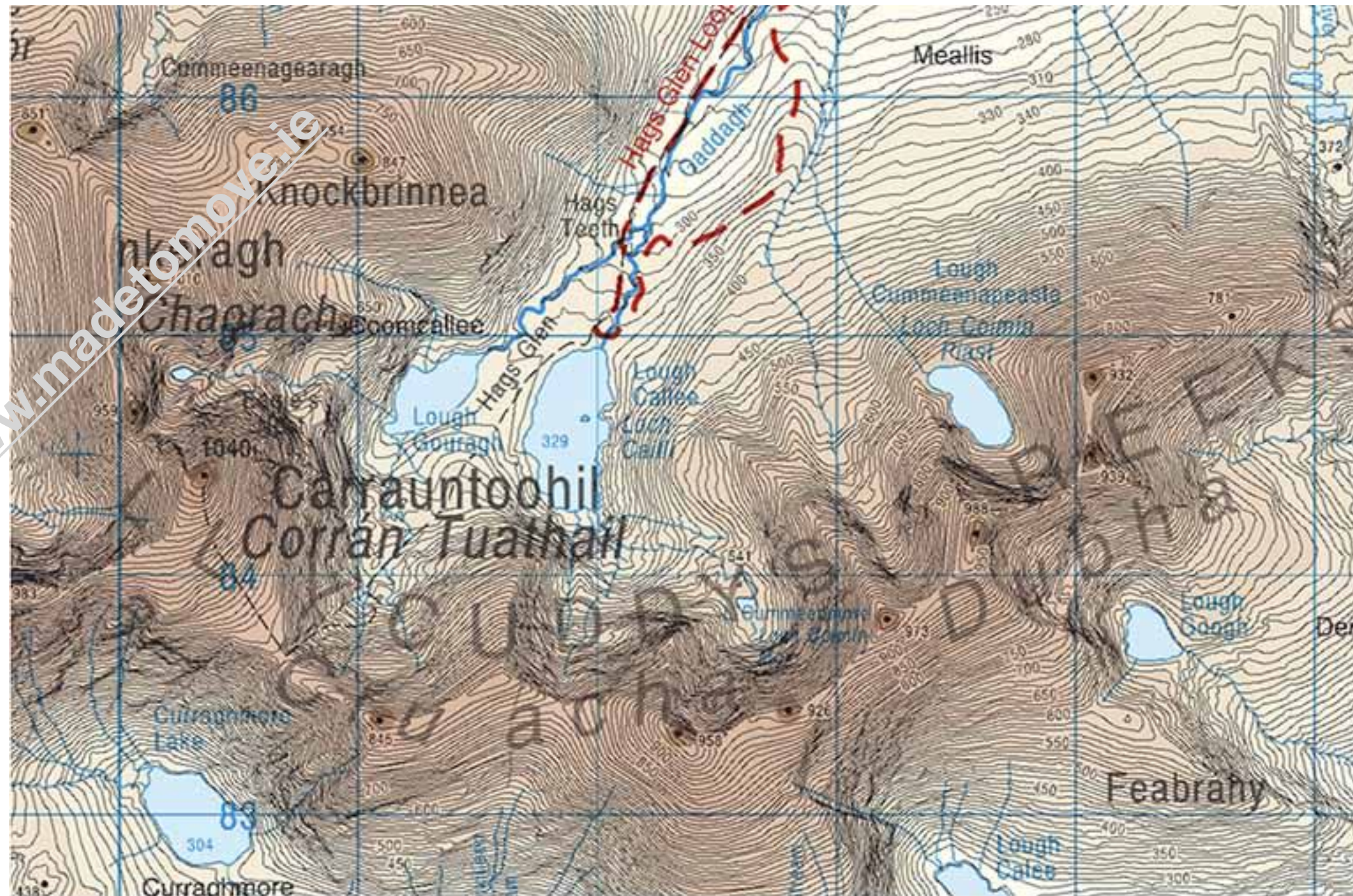
Above we see contour and relief information (boulder fields, scree and forest) indicated by lines, symbols and colours

# Different Styles



Four maps of the same area all showing slightly different ways to depict relief

# Map of Photo



- Now you can see of the contours that represent our original photo



**Thanks!**  
**The End.....**

# **Mountain Skills**

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