

Creating Beach Profiles in Excel 2019

Note: you need to be using the **desktop version** of Excel to do this. The online version that you access through your web browser isn't good enough.

Save a copy of the **Beach Profile Spreadsheet** (find it at the web address in the header – go to the Geography section) and use this to work through the instructions.

I recommend turning **Autosave off** (top left). That way, if you make a mistake you can start again.

Enter the data you have for angles and distances in **columns C and D**. It's easiest to start from the shoreline and work up the beach.

You should end up with something like the spreadsheet on the right. Just ignore any blank rows underneath – they're there in case you have a really wide beach.

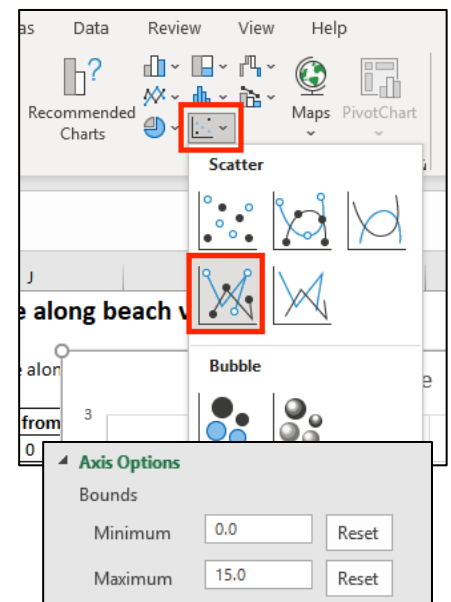
Point	Angle	Dist along beach	Distance from shore	Actual Vertical Change
1 (Sea)	0	0	0	0
2	15	4.1	3.96	1.06
3	-4	4.5	8.45	0.75
4	15	4.7	12.99	1.96
5	1	7.9	20.89	2.10
6	5	8.1	28.96	2.81
7				
8				
9				
10				
11				
12				
13				
14				

Use this version if you laid your measuring tape along the beach

STOP! Don't press delete on these cells. The cool and interesting formulae in the cells you don't want delete.

Now, draw the beach profile:

- Highlight** the cells in **columns J and K** with numbers in. Don't forget the zeros in **row 6**. In the screenshot I highlighted from J6 to K11.
- Click **Insert** on the ribbon > and from the chart section at the top choose the **Scatter graph** type shown **on the right**. This will draw a basic profile, but it looks a bit odd.
- Right click** on one of the vertical (up/down) axis numbers > choose **Format Axis**. A sidebar pops up on the right.
- In the **Bounds** section, set the **Maximum** value to something like 15 and press **Enter**. Make sure the **Minimum** value is 0.
- Move** the chart to a new sheet. **Unlock** the sheet first (**Review** tab on the ribbon and press the **Unprotect Sheet** button) then click the **Chart Design** tab at the top > choose **Move Chart** on the right and select **New Sheet > OK**.
- Add **axis titles** – click **Chart Design > Add Chart Element** (on the left) > **Axis Titles**:
 - Vertical axis: Height of beach (metres)
 - Horizontal axis: Distance from shoreline (metres)
 - Don't forget to change the chart title as well.



You can now add labels (using text boxes) or photos to the chart. You may want to adjust gridlines (**Chart Design > Add Chart Element** again) – try adding minor gridlines to the vertical axis.