Excel Help Bedford

# Excel 2010: Controlling Data Entry

2010

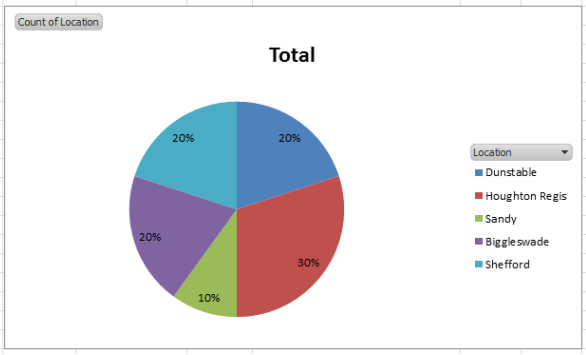
Ensure only valid data is entered in your spreadsheets

Excel Guides

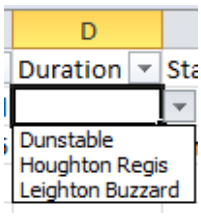
Last saved: 17 May 2017

# Contents

| Row Labels | Count of Location |
|---|---|
| Dunstable | 2 |
| Houghton Regis | 3 |
| Sandy | 1 |
| Biggleswade | 2 |
| Shefford | 2 |
| **Grand Total** | **10** |




# 3. List validation

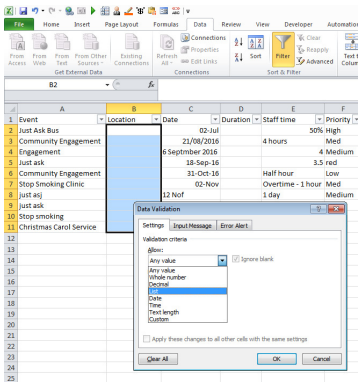


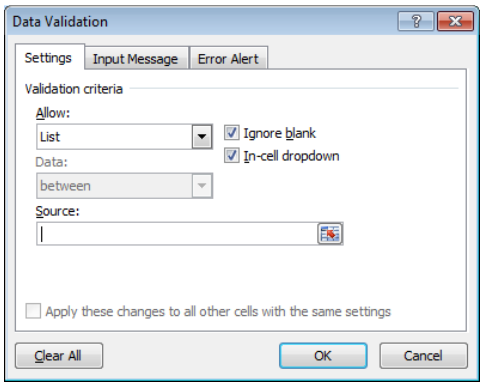

The most common way of controlling data is to give users a limited list from which they can pick an entry. It creates a *drop down menu*, the like of which will be familiar to most users:

There are two basic ways of doing this, and one more advanced way that allows the list to expand as more choices become available.[2]

## 3.1. Direct data validation

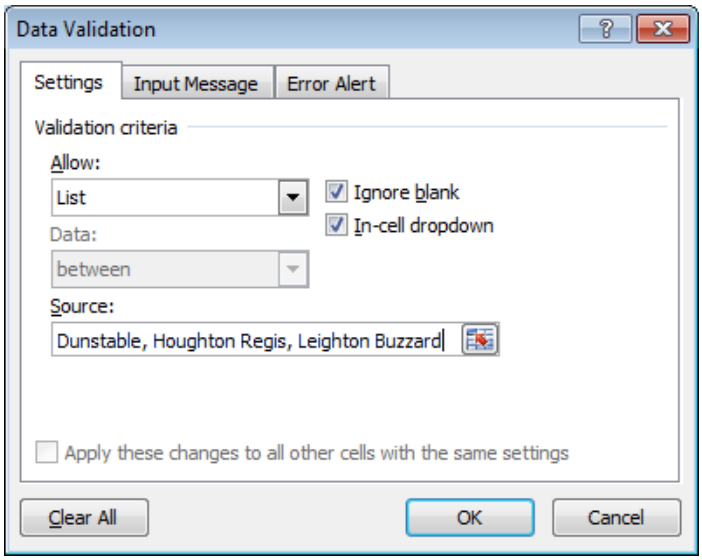
This is appropriate if there are only a small number of options. Click the **Data Validation** button, and the dialogue box below pops up:

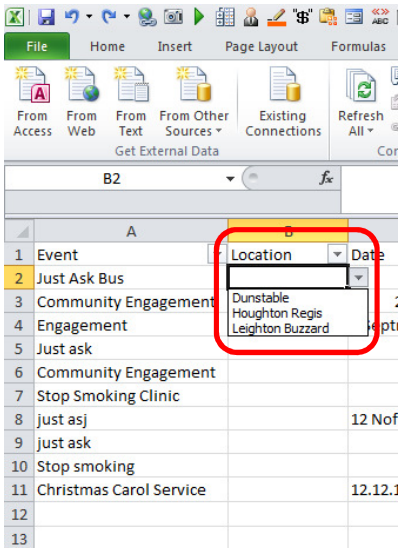




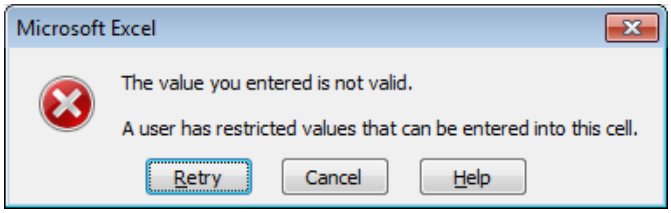

Choose **List** in the field titled **Allow**, and in the **Source** field, type the entries to which you want to limit users, separated by commas. For example, if it should just be **Dunstable**, **Houghton Regis** or **Leighton Buzzard**, your **source** field will look like this:

[2] See dynamic named ranges, section 3.4.




After clicking **OK**, and selecting one of the cells previously highlighted, a small arrow will appear next to the cell. Click that arrow, and your list of valid options will appear. Note that they will appear in the order in which you typed them.

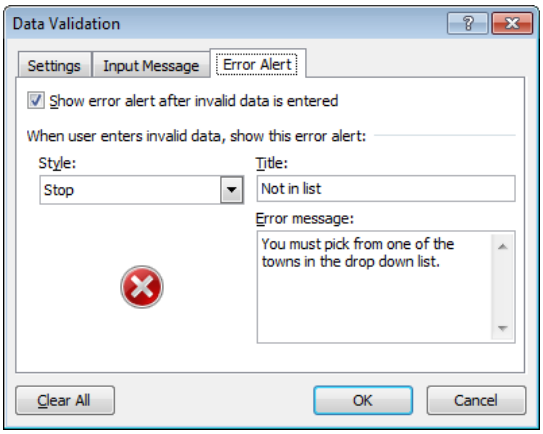



Now if you try to enter any other location names, a warning pops up to prevent you. For example, try typing **Flitwick** into cell B2 and you get the error message shown (left).

No matter how many times you **Retry**, unless you alter the validation settings, other entries will not be allowed.[3]

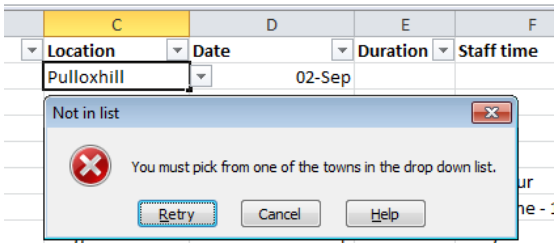
### *3.1.1. Error dialogue boxes and input messages*

Excel's standard warning above prevents invalid entries but gives no explanation as to the reason for the denial. However, In the Data Validation box, there is another tab, **Error Alert**. Here you can give the warning box a title and message regarding the validation rules, e.g.:

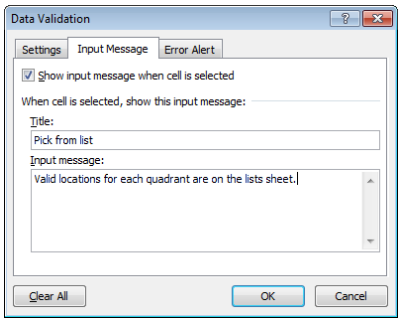



[3] The exception to this rule is if data is copied and pasted into the cell. This overrides data validation rules. A simple check is to apply an **Input Message** to the cell(s) so that when a user selects the cell, they are given a message not to paste data in. This won't prevent it (only a complex macro as in the Appendix can) but at least it will flag to the user the potential danger of pasting information into data validation cells.

Now when attempting to enter *Pulloxhill* as a town, the Error Alert displays thus:



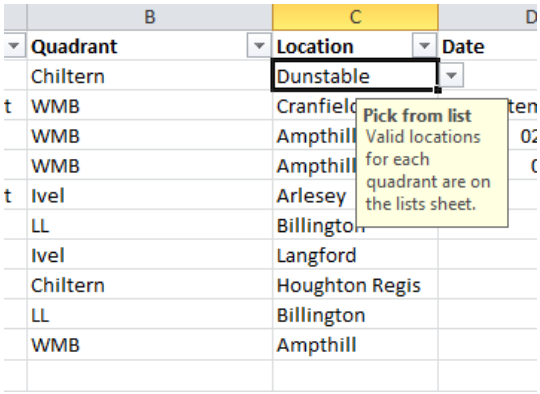

And after clicking **Cancel**, the cell will revert to its previous contents.




As an additional help, you can also create an **Input Message** that displays when a cell is selected. This can direct the user so they know what data should be entered and prevent error alerts (if combined with data validation rules).

Choose the **Input Message** tab, and type a title and message.

On selection of the cell(s), the input message will pop up:




## 3.2. Range data validation

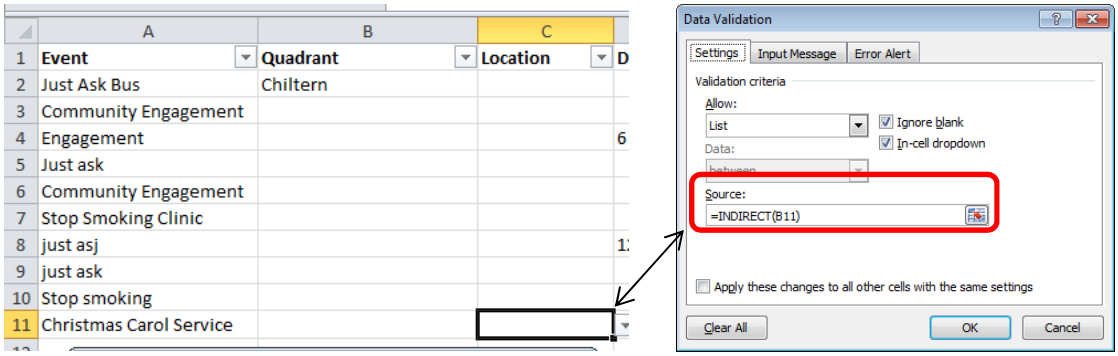
You can also choose to make a separate list of your valid entries and use that array of cells as a control. This can be used with a list of any length, but is especially appropriate if you have more than just a few options.

Type your valid entries into a range of cells. This could be on the same sheet as your data, although it's often useful to set up a separate sheet (e.g. named **Lists**) on which to do this.

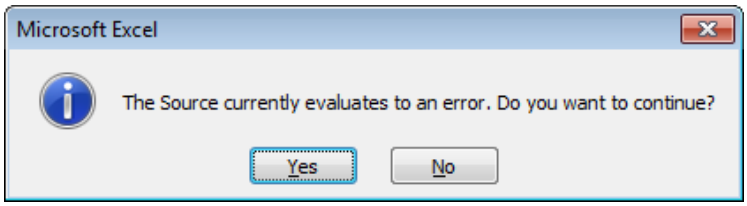
Then open up Data Validation as before. This time, click on the **Collapse / Expand icon** at the right of the **Source** field and you will be able to select a range in the workbook.

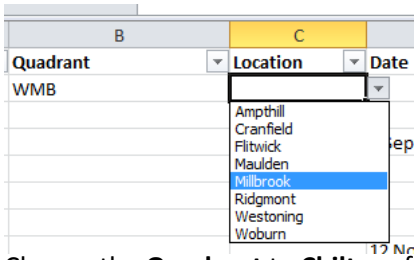
As you click and drag across the range, you will see a dotted line running around your selection and the cell range appear in the **Source** field. Click OK and the validation rules are set to only allow entries as you have listed them.

The usage of the relative reference **B2** means that the INDIRECT function will be copied down in each of the preselected cells, i.e. in cell C11 the data validation rule will be =INDIRECT(B11).



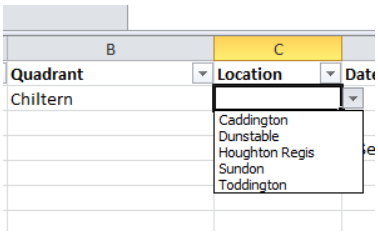

If there is no entry in the first-level field, you may get this box appearing after clicking OK:




It should be fine to click **Yes**. Once you have made an entry (e.g. **WMB**) in the first level field (here, column B), the drop down list in the second level field will display. More importantly, the valid entries will vary depending on which list they are based on:

Change the **Quadrant** to **Chiltern** for example, and as long as you've set up an appropriate named range, the second level options will also have changed:




One thing to watch out for is that changes in the higher-level selection will *not* automatically change the second-level entry.

You can test for invalid data by using the **Validation Circles** tool:

| Quadrant | Location |
|---|---|
| Chiltern | Dunstable |
| Chiltern | Arlesey |
| WMB | Millbrook |
| WMB | Ampthill |
| Ivel | Caddington |
| LL | Heath and Reach |
| Ivel | Langford |
| Chiltern | Houghton Regis |
| LL | Billington |
| WMB | Caddington |

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|---|---|
| Chiltern | Dunstable |
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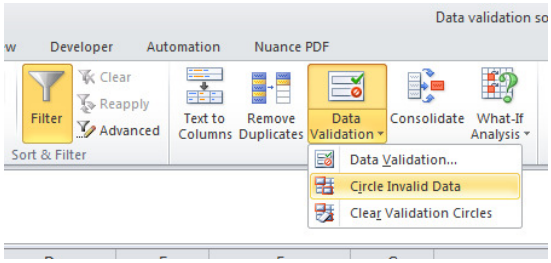
| Ivel | Langford |
| Chiltern | Houghton Regis |
| LL | Billington |
| WMB | Caddington |



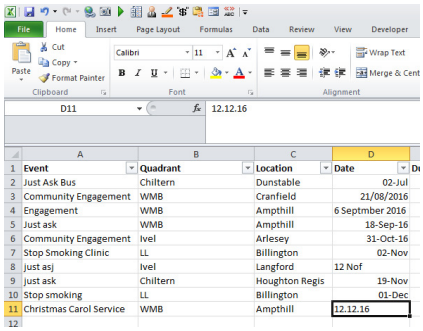

**Quadrant** selections changed after **Location** entries have been made means that some incorrect data has been entered.

Using the highlighted ribbon command prompts Excel to show where entries have got past validation rules.

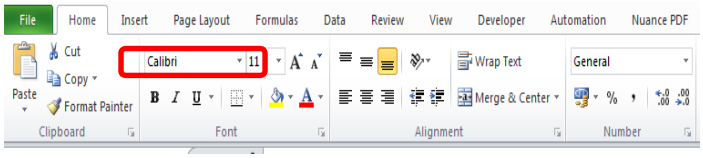
You can automate the clearing of cell contents if the top-level cell is selected or changed by using some specialised code that clears the second-level content (see Appendix).

# 4. Date validation

There are several other options for controlling data entry. One example is **Date** validation. This forces the user to enter date values, and we can further restrict them by defining this more specifically as before, after or between stipulated dates.

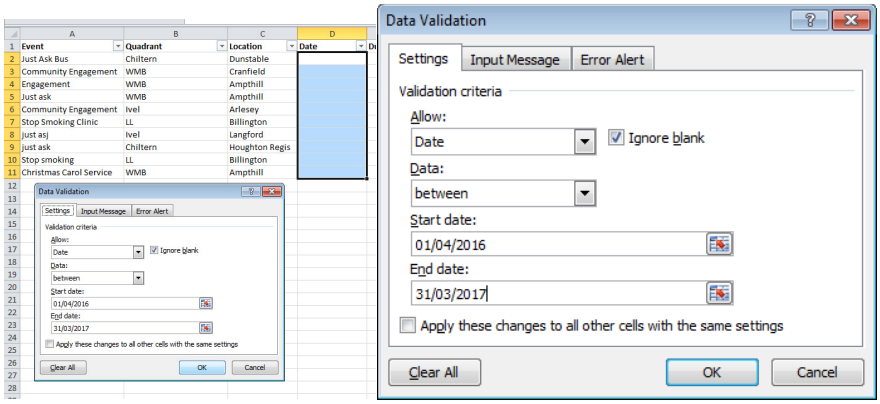


| | Event | Quadrant | Location | Date |
|---|---|---|---|---|
| 2 | Just Ask Bus | Chiltern | Dunstable | 02-Jul |
| 3 | Community Engagement | WMB | Cranfield | 21/08/2016 |
| 4 | Engagement | WMB | Ampthill | 6 Septmber 2016 |
| 5 | Just ask | WMB | Ampthill | 18-Sep-16 |
| 6 | Community Engagement | Ivel | Arlesey | 31-Oct-16 |
| 7 | Stop Smoking Clinic | LL | Billington | 02-Nov |
| 8 | just asj | Ivel | Langford | 12 Nof |
| 9 | just ask | Chiltern | Houghton Regis | 19-Nov |
| 10 | Stop smoking | LL | Billington | 01-Dec |
| 11 | Christmas Carol Service | WMB | Ampthill | 12.12.16 |




In our original sheet, some date data had been entered in an acceptable date format and had been recognised as such, but others contained typos and other errors and so was only being recognised as **General** format.[6]

After clearing this data out, we can better set up the column:




Here, we've set valid entries **between 1 April 2016** and **31 March 2017**, i.e. a financial year.

Date validation does not produce a drop down menu like list validation, but it does mean that attempting to enter dates outside of the range or data that is not a date will be prevented, e.g. as in the case of a typing error below:

[6] Dates separated by full stops are not recognised by Excel as valid dates. You must use slashes (/) or hyphens (-) to indicate date entries.