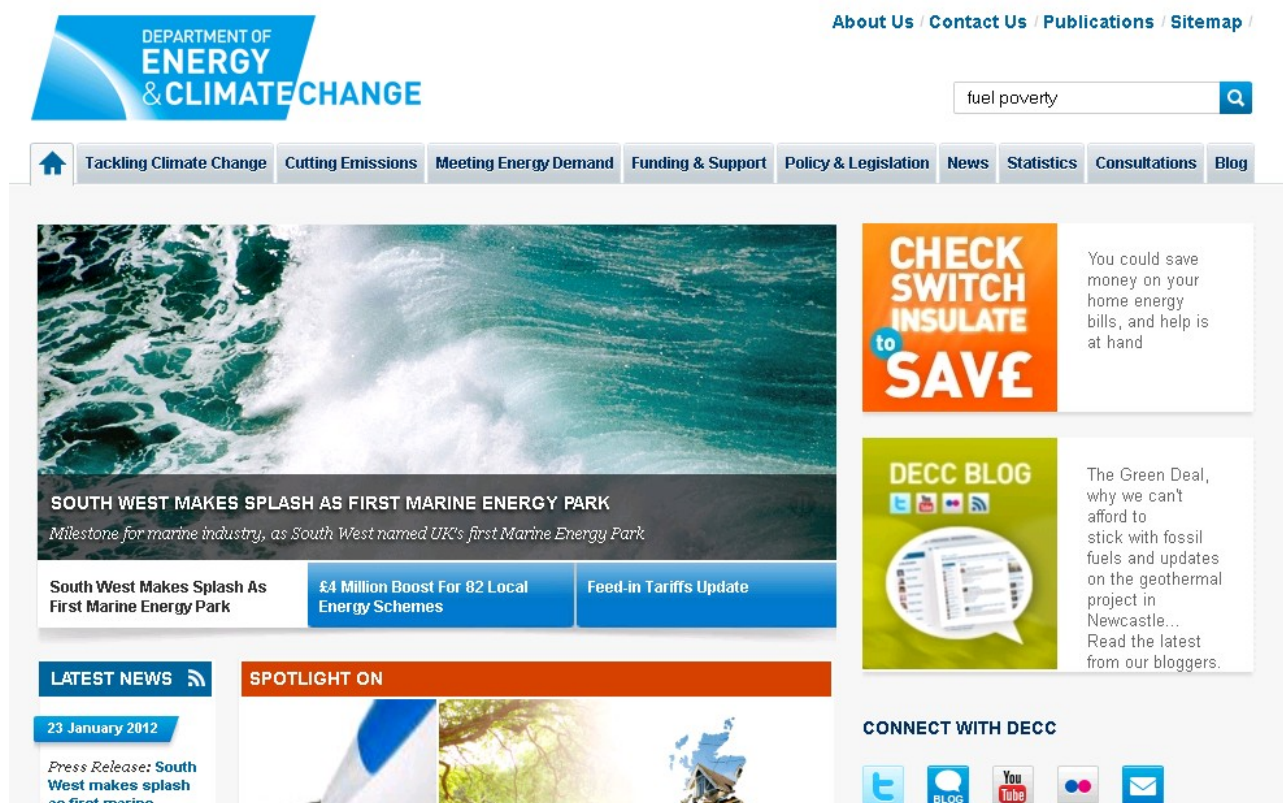


## EDINA UKBORDERS Thematic Mapper Tutorial.

In this short tutorial we will download a public dataset from the UK Government Department of Energy and Climate Change which contains estimated fuel poverty data for English local authorities and upload this data to the UKBORDERS Thematic Mapper application in order to visualise the data as a Choropleth map.

1. Go to UK Government Department of Energy & Climate Change website

[www.decc.gov.uk](http://www.decc.gov.uk)



The screenshot shows the DECC website homepage. At the top left is the DECC logo. To the right is a search bar containing the text 'fuel poverty'. Below the logo is a navigation menu with the following items: Tackling Climate Change, Cutting Emissions, Meeting Energy Demand, Funding & Support, Policy & Legislation, News, Statistics, Consultations, and Blog. The main content area features a large image of waves with the headline 'SOUTH WEST MAKES SPLASH AS FIRST MARINE ENERGY PARK' and a sub-headline 'Milestone for marine industry, as South West named UK's first Marine Energy Park'. Below this are three blue buttons: 'South West Makes Splash As First Marine Energy Park', '£4 Million Boost For 82 Local Energy Schemes', and 'Feed-in Tariffs Update'. To the right of the main content are two promotional boxes: 'CHECK SWITCH INSULATE to SAVE' and 'DECC BLOG'. At the bottom left is a 'LATEST NEWS' section with a date of '23 January 2012' and a link to 'Press Release: South West makes splash as first marine'. At the bottom right is a 'CONNECT WITH DECC' section with icons for Twitter, Blog, YouTube, and Email.

Search for **fuel poverty** using the search box at top right.

2. In the results list scroll down to and click the link for the

"**Fuel poverty regional statistics...**" item

3. Doing so should take you to the following page:

[http://www.decc.gov.uk/en/content/cms/statistics/fuelpov\\_stats/regional/regional.aspx](http://www.decc.gov.uk/en/content/cms/statistics/fuelpov_stats/regional/regional.aspx)

- [Climate change statistics](#)
- [Energy statistics](#)
- [Statistics publications](#)
- [Fuel poverty statistics](#)
- [Fuel poverty regional statistics](#)
- [Fuel poverty statistics: archive](#)
- [Coal health statistics](#)
- [Statistics for local authorities](#)
- [Statistics governance](#)

Home > Statistics > Fuel poverty statistics > Fuel poverty regional statistics

## FUEL POVERTY SUB-REGIONAL STATISTICS

Estimated fuel poverty levels at low levels of geography are available for 2009 in the Excel workbook:

[Fuel poverty 2009: sub-regional data](#) Size: [5.51 MB] File Type: [.xls]

The sub-regional fuel poverty data is described in more detail in the document:

[2009 Sub regional fuel poverty methodology and documentation](#) Size: [1.95 MB] File Type: [.pdf]

Modelling sub-regional fuel poverty in 2008 and 2009 use a broadly consistent methodology and so allow for approximate comparisons of % rates across consistent levels of geography between the two years.

Detailed census output area level fuel poverty rates, designed for advanced users of the data, are available on request by e-mailing [fuelpoverty@decc.gsi.gov.uk](mailto:fuelpoverty@decc.gsi.gov.uk).  
2006 and 2008 data are available from the [fuel poverty statistics archive](#) page.

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[f](#) [e](#)

A household is said to be fuel poor if it needs to spend more than 10% of its income on fuel to maintain an adequate standard of warmth. This dataset provides for a number of different geographies, fuel poverty estimates for England in 2009. Full information about the data and how the estimates were derived are described in the PDF available at the Department of Energy and Climate Change website.

4. Click on the **Fuel poverty 2009: sub-regional data** link & download the **3617-fuel-poverty-2009-subregional-data.xls** file to a location on your computer.

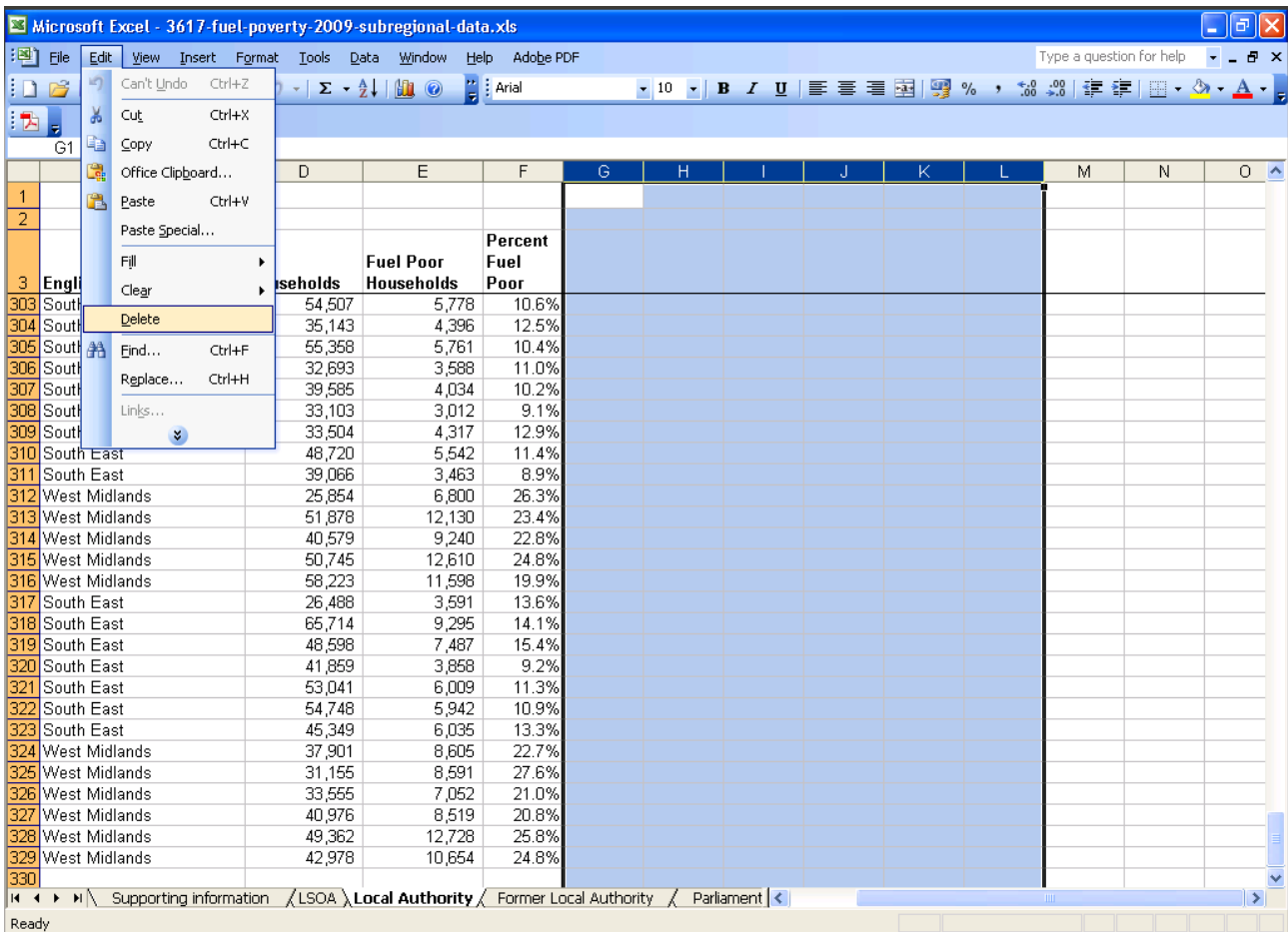
5. Open the **3617-fuel-poverty-2009-subregional-data.xls** in Excel. You could also use a similar program like LibreOffice Calc but the steps to follow may be slightly different.

6. In Excel go to the **Local Authority** worksheet.

	A	B	C	D	E	F	G	H	I	J	K
1	<b>Fuel Poverty in Local Authorities</b>										
2											
3	<b>LA Code</b>	<b>LA Name</b>	<b>English region</b>	<b>All Households</b>	<b>Fuel Poor Households</b>	<b>Percent Fuel Poor</b>					
229	30UL	Ribble Valley	North West	23,430	5,157	22.0%					
230	30UM	Rossendale	North West	28,430	6,514	22.9%					
231	30UN	South Ribble	North West	46,326	8,051	17.4%					
232	30UP	West Lancashire	North West	45,345	9,504	21.0%					
233	30UQ	Wyre	North West	47,518	10,712	22.5%					
234	31UB	Blaby	East Midlands	37,669	6,121	16.2%					
235	31UC	Charnwood	East Midlands	65,572	12,427	19.0%					
236	31UD	Harborough	East Midlands	34,100	6,532	19.2%					
237	31UE	Hinckley and Bosworth	East Midlands	44,473	8,366	18.8%					
238	31UG	Melton	East Midlands	20,837	4,771	22.9%					
239	31UH	North West Leicestershire	East Midlands	38,331	7,884	20.6%					
240	31UJ	Oadby and Wigston	East Midlands	22,475	4,094	18.2%					
241	32UB	Boston	East Midlands	26,383	6,801	25.8%					
242	32UC	East Lindsey	East Midlands	60,369	20,044	33.2%					
243	32UD	Lincoln	East Midlands	39,962	8,934	22.4%					
244	32UE	North Kesteven	East Midlands	44,376	9,650	21.7%					
245	32UF	South Holland	East Midlands	36,626	9,356	25.5%					
246	32UG	South Kesteven	East Midlands	56,616	11,597	20.5%					
247	32UH	West Lindsey	East Midlands	37,225	9,471	25.4%					
248	33UB	Breckland	East of England	55,248	11,300	20.5%					
249	33UC	Broadland	East of England	52,271	8,776	16.8%					
250	33UD	Great Yarmouth	East of England	41,403	8,967	21.7%					
251	33UE	King's Lynn and West Norfolk	East of England	63,204	15,326	24.2%					
252	33UF	North Norfolk	East of England	45,132	12,372	27.4%					
253	33UG	Norwich	East of England	59,009	10,073	17.1%					
254	33UH	South Norfolk	East of England	50,858	9,680	19.0%					
255	34UB	Corby	East Midlands	24,897	4,629	18.6%					
256	34UC	Daventry	East Midlands	31,347	6,029	19.2%					

7. Before we export the data we need to check which cell Excel thinks is the last cell in the data. To do this click on the first cell in the Local Authority worksheet - cell A1 and press the **CTRL & END** keys on your keyboard.

When I did this the cursor jumps to the L329 cell so I want to delete the columns G through to L. To do this I highlight columns G through to L and choose **Edit >> Delete**.



8. Now export the data from Excel as a CSV file

In Excel Click **File** >> **Save As...**

Navigate to location on your computer and give the file the name **fuel\_poverty\_by\_la**

Set "Save as type" to **CSV (Comma delimited) (\*.csv)** and click the Save button

At the Excel "The Selected file type does not support workbooks that contain multiple sheets..." dialogue click "OK"

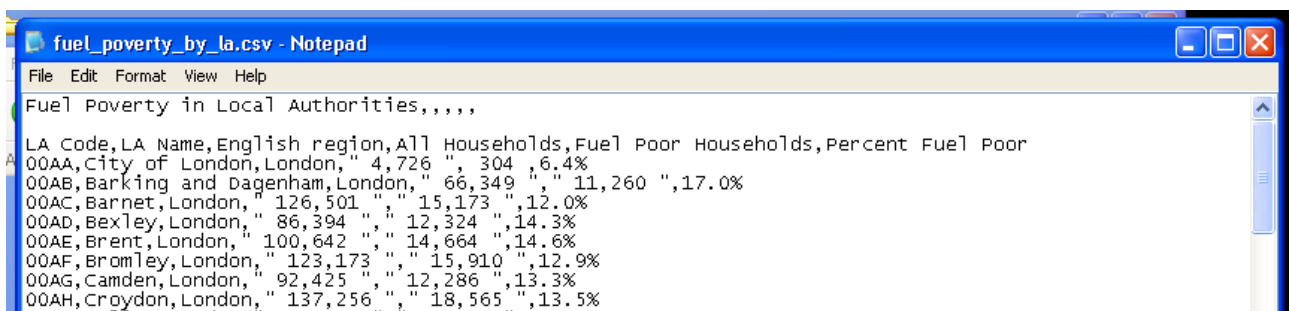
At the Excel "fuel\_poverty\_by\_la.csv" may contain features that are not compatible with CSV (Comma delimited). Do you want to keep the workbook in this format? dialogue click "Yes"

Close Excel

CSV files uploaded to Thematic Mapper need to meet the following specifications:

- Only file names with a .CSV file extension are supported.
- The uploaded CSV file should have a header row as the first row in the file giving column names.
- Each column name in the header row must be no more than 10 characters in length.
- Each row in the uploaded CSV file should have the same number of columns.
- You will only be able to create a Choropleth map from columns containing **numerical** data.
- You will **not** be able to create a Choropleth map from columns containing text / categorical data.
- Any records with missing values in the field you wish to use to create your map from will not be included in the output Choropleth map.

9. Open the CSV file in a text editor e.g. notepad.



As it stands the CSV file does not meet this specification required for upload to the Thematic Mapper application. We'll fix this now by:

- *Deleting the first 2 lines of the file.*

- *Renaming the column names in the header row (at the moment some of these are more than 10 characters in length).*

At the moment column names are like this

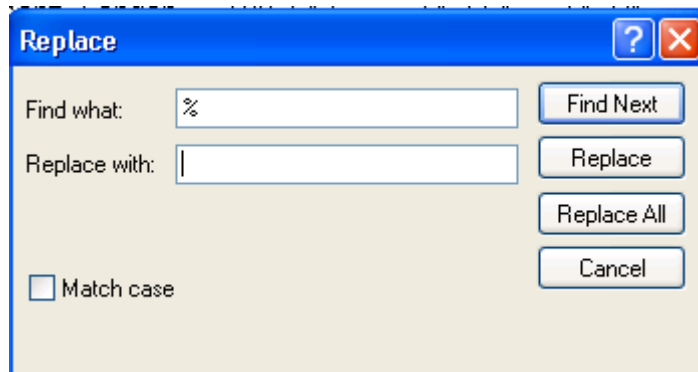
LA Code,LA Name,English region,All Households,Fuel Poor Households,Percent Fuel Poor

so we'll rename them to

LACode,LAName,Region,AllHH,FP HH,FP\_pct

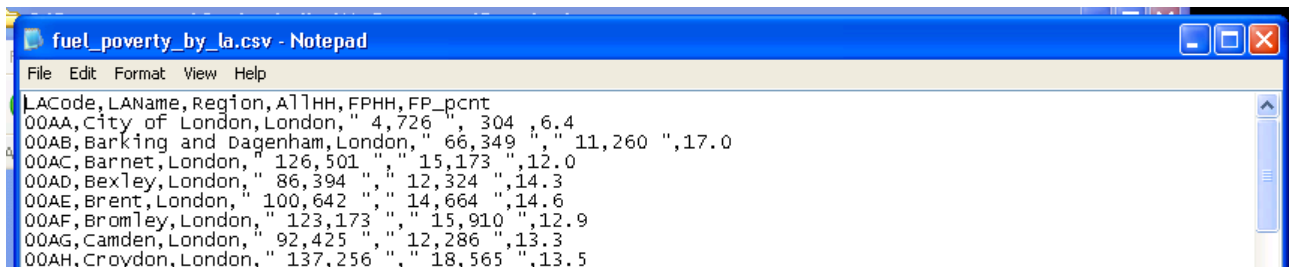
- *removing % literals in the last column of data (The current version of the Thematic Mapper application will interpret the % literals as indicating that the data is non-numerical).*

In Notepad use Edit >> Replace



to replace all cases of "%" with "".

Your file should now look something like this:



10. Save the CSV file and then close notepad.

11. The Thematic Mapper application is provided as part of the UKBORDERS service. UKBORDERS can be reached by going to:

<http://edina.ac.uk/ukborders/>

EDINA Help & Support | About | Feedback | Contact | Site Map | Search Site:  Go

# UKBORDERS

CENSUS.AC.UK

You are here: EDINA > UKBORDERS

### UKBORDERS Menu

- Login
- Description
- Access & Subscription
- Help & Support
- EDINA News & Events

For Library & Support Staff

## Login to UKBORDERS

Boundary datasets and geographic look up tables of the United Kingdom.

[Login](#) via UK federation. [\[info\]](#)



Maps are based on data provided with the support of the ESRC use boundary material which is copyright of the Crown, Post Office and the EDLINE consortium.

### Related Links

**Maps & Data**

- [agcensus](#)
- [Digimap](#)
- [Digimap OpenStream](#)
- [GoGeo](#)

EDINA is a JISC National Data Centre based at the University of Edinburgh | [Privacy Policy](#) | [Accessibility](#) | [Acknowledgements](#)



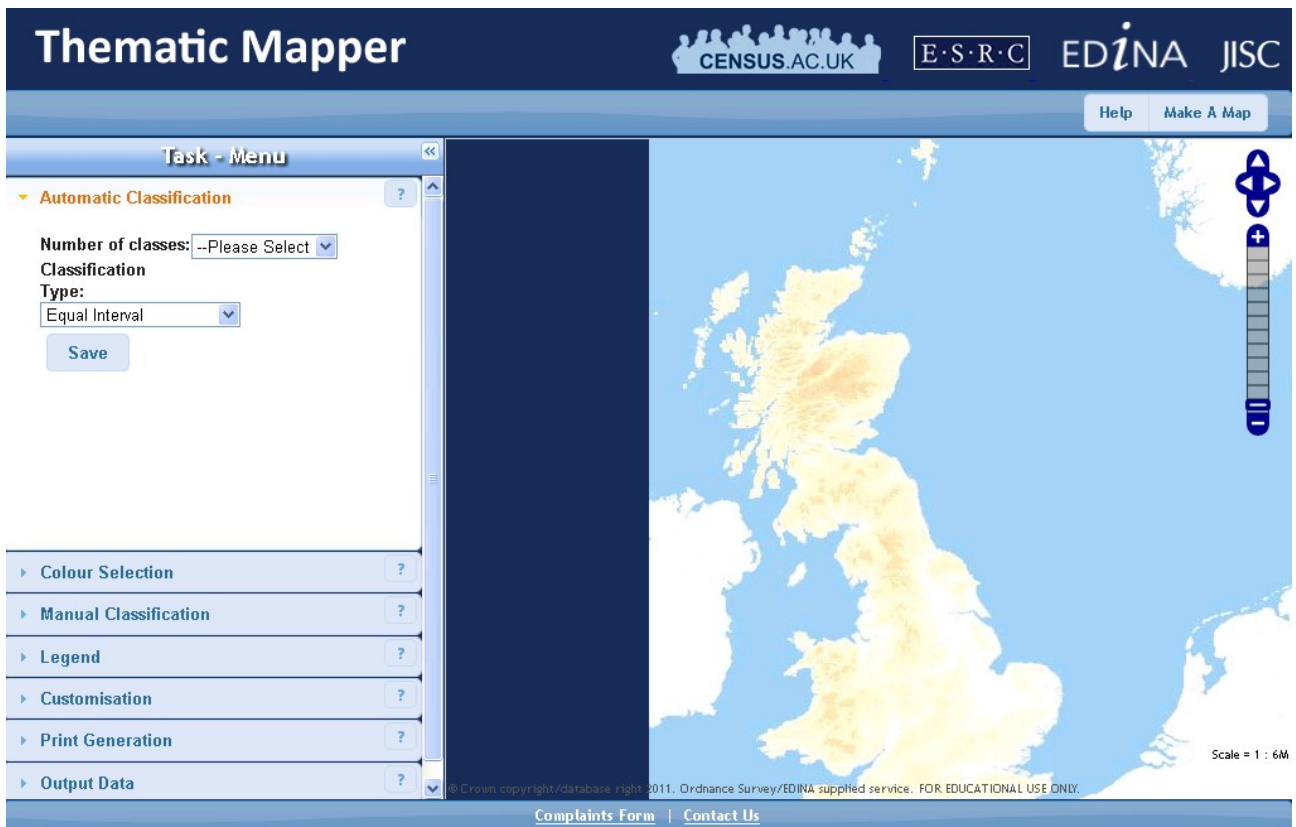
The UKBORDERS service is hosted by EDINA as part of the ESRC Census Programme. To access the UKBORDERS service and the Thematic Mapper application you will need to be registered with the ESRC Census Programme. Assuming you are registered with the ESRC Census Programme login to the UKBORDERS service and start the Thematic Mapper application by clicking on its icon.



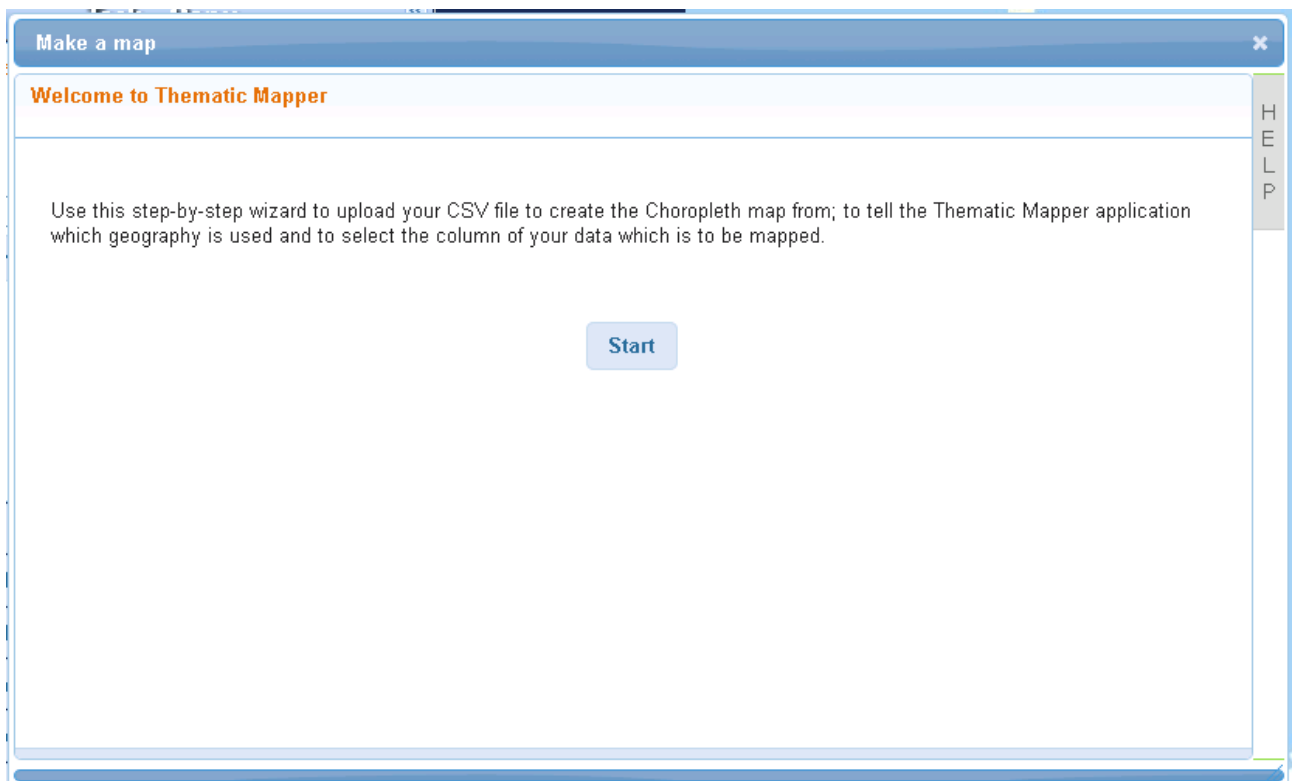
**NEW Thematic Mapper**

Create Choropleth thematic maps from your own uploaded CSV file and boundary data from UKBORDERS.

12. The Thematic Mapper application should open in a new browser window or tab.

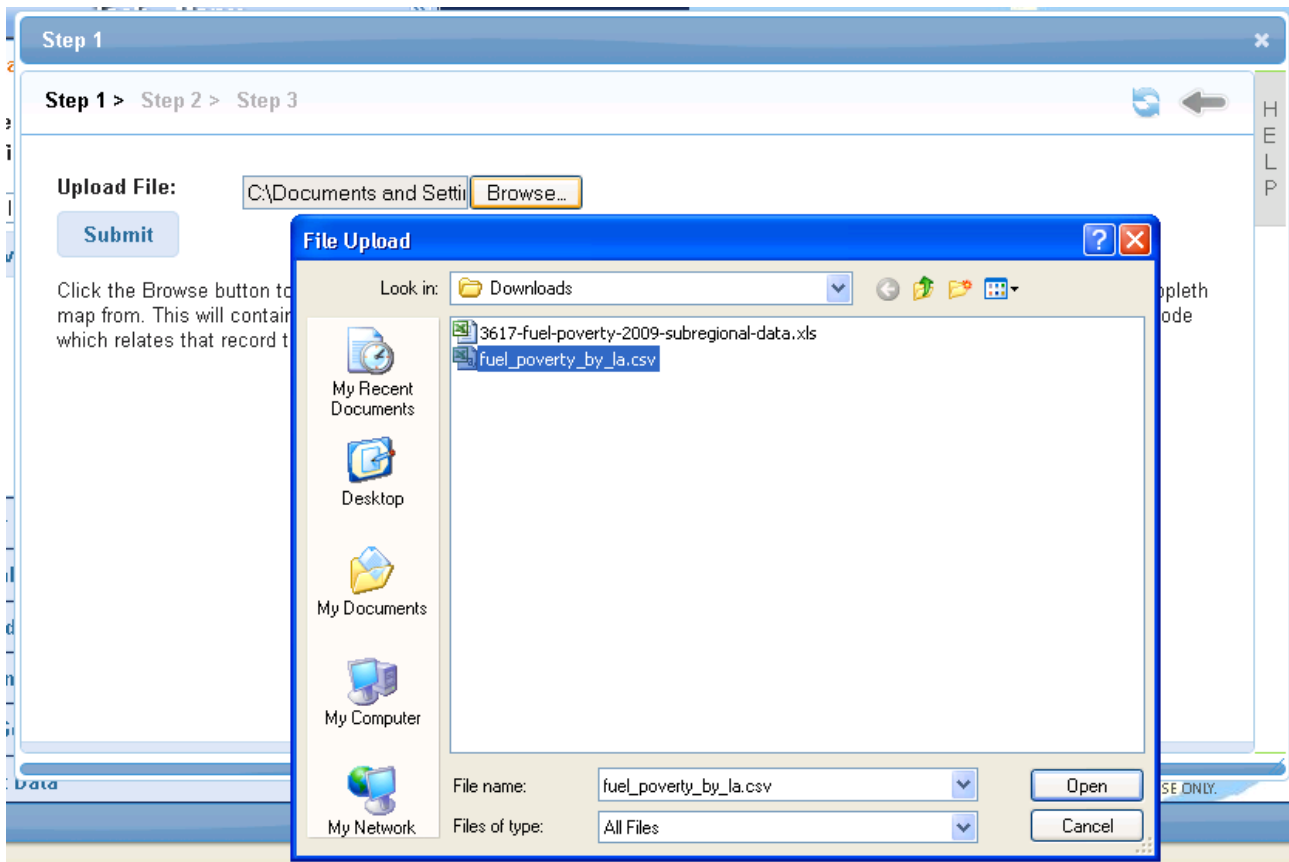


To begin click the **Make A Map** button at top right. The Make a Map dialogue will be shown. This dialogue consists of a number of steps which guide us through the process of uploading CSV data to the Thematic Mapper application. Contextual Help is available at each step by clicking the Help tab at right.

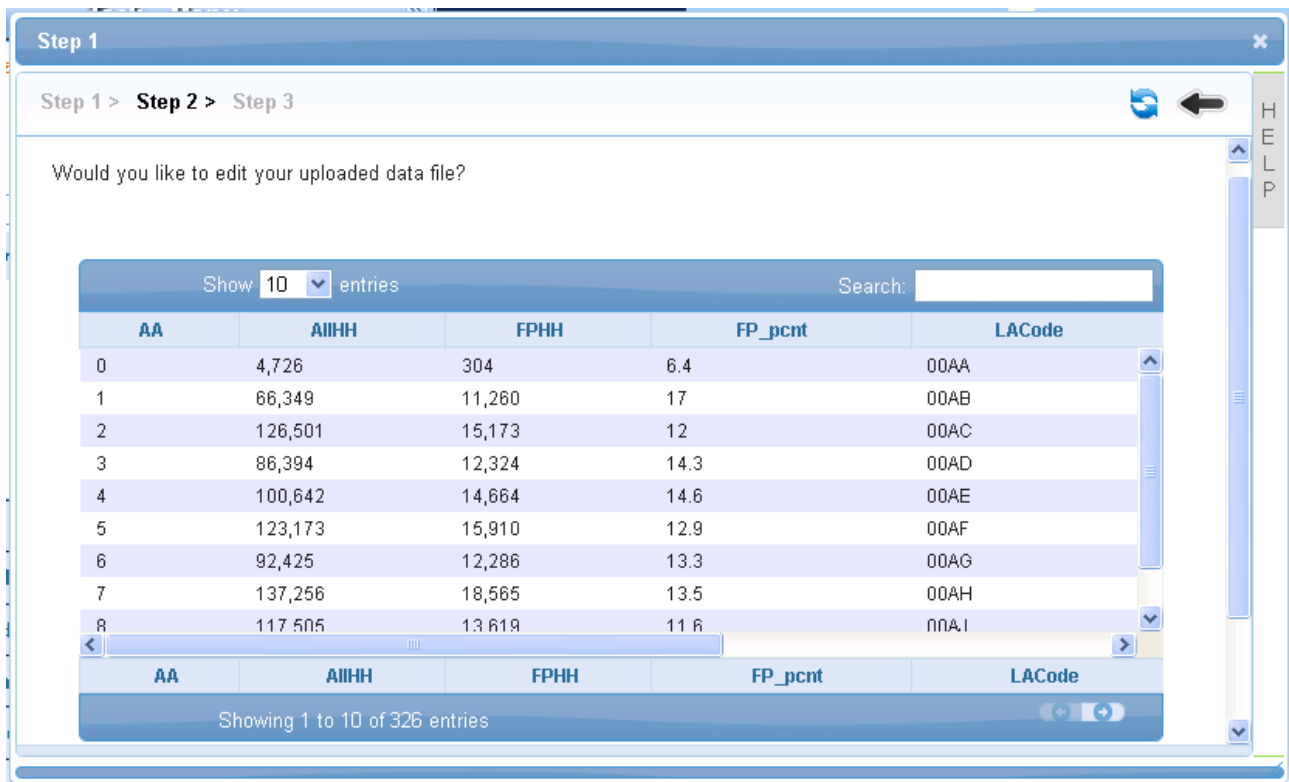


To begin uploading the CSV we exported from excel and tidied up earlier click the **Start** button.

13. Click the **Browse** button and then navigate to and select the **fuel\_poverty\_by\_la.csv** file we finished modifying at step 10. Once you have done click the **Submit** button.



14. The contents of the uploaded CSV file should now be shown. If Thematic Mapper detected problems with the uploaded data such as missing data we could correct them here before continuing.



If needed scroll down the dialogue and click the **Apply and continue** button to continue.

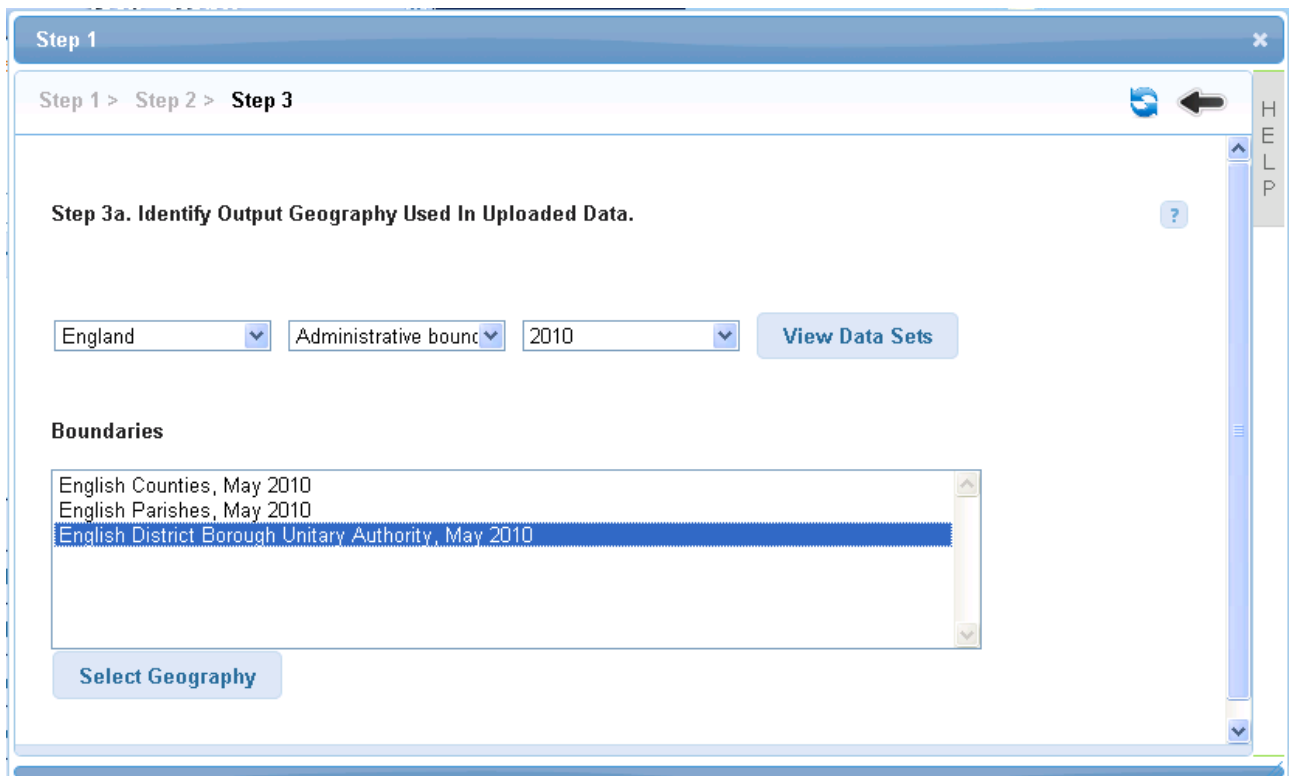
15. At this next step we need to tell the Thematic Mapper application which type of output geography is being used by the particular CSV file that we have uploaded.

Thematic Mapper supports a range of different geographies. The drop downs can be used to filter these. For example setting the drop downs as follows

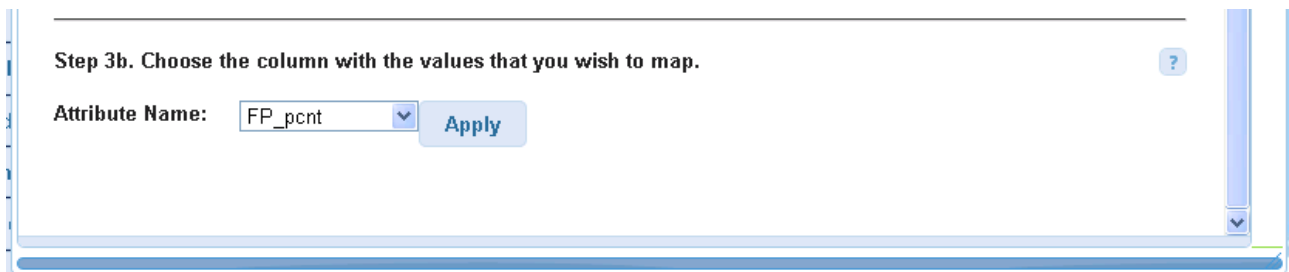
England | Administrative boundaries | 2010

and clicking the "View Data Sets" will show only the most recent administrative geographies that are available for England.

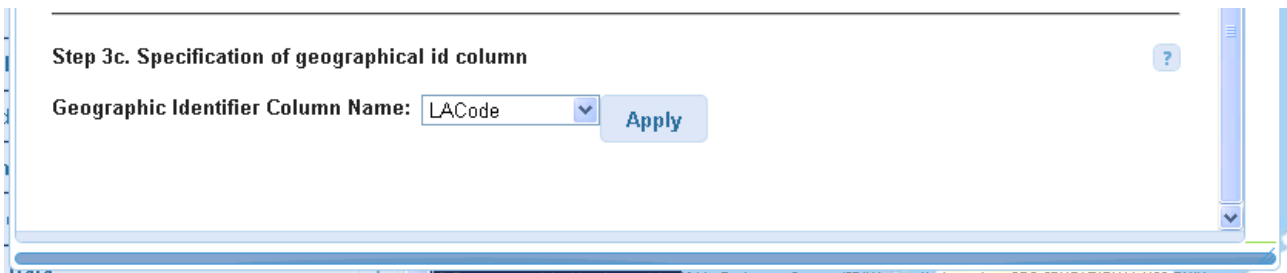
Since the estimated fuel poverty data that we have is output using English local authorities we select the **English District Borough Unitary Authority, May 2010** dataset in the list and click the **Select Geography** button.



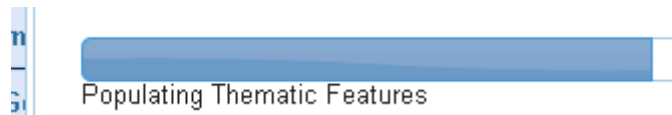
16. In the next step we need to tell the Thematic Mapper application which column in the uploaded CSV file we want to base the Choropleth map on. Since we want to create a map visualising the percentage of households by local authority deemed to be in fuel poverty we select the **FP\_pct** column and click the **Apply** button.



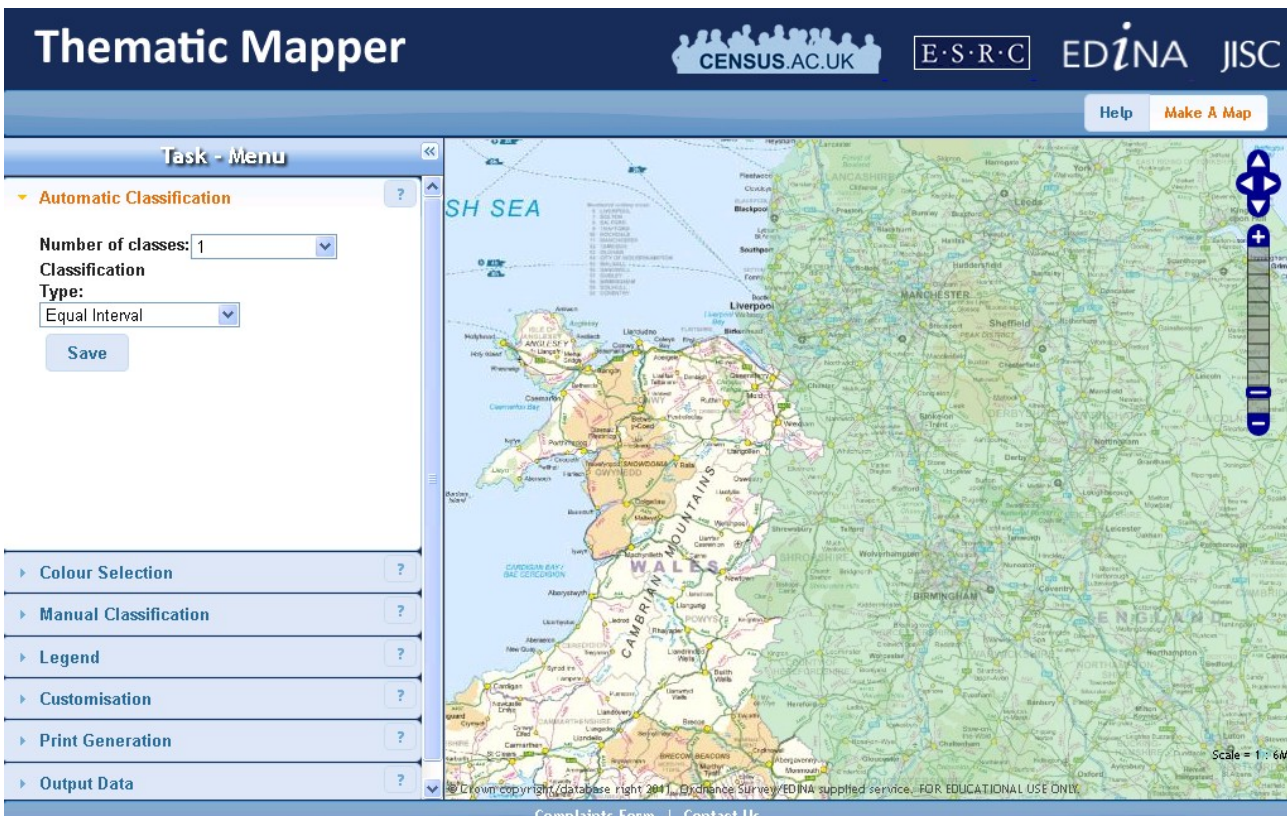
17. We've already told Thematic Mapper which type of output geography is being used by the particular CSV file that we uploaded. In this final step we need to tell Thematic Mapper which column in the uploaded CSV file contain the unique geographic identifiers that correspond to this geography. We select **LACode** and click the **Apply** button to continue.



18. This is all the information that Thematic Mapper needs.



The Thematic Mapper application will go off to the UKBORDERS database, grabs polygons corresponding to the geography that we identified and overlay these against the base map in the map view.



19. We can change the appearance of the choropleth map using the Automatic Classification task to change the number of classes and the method used to classify the data. Ensure that on the Automatic Classification task the Number of classes drop down is set to 5 and Classification Type is set to Equal Interval.

▼ **Automatic Classification** ?

Number of classes: 5

Classification  
Type:  
Equal Interval

Save

We can use the Colour Selection task to change the colour ramp applied and how visible the polygons are against the backdrop map.

▼ **Colour Selection**



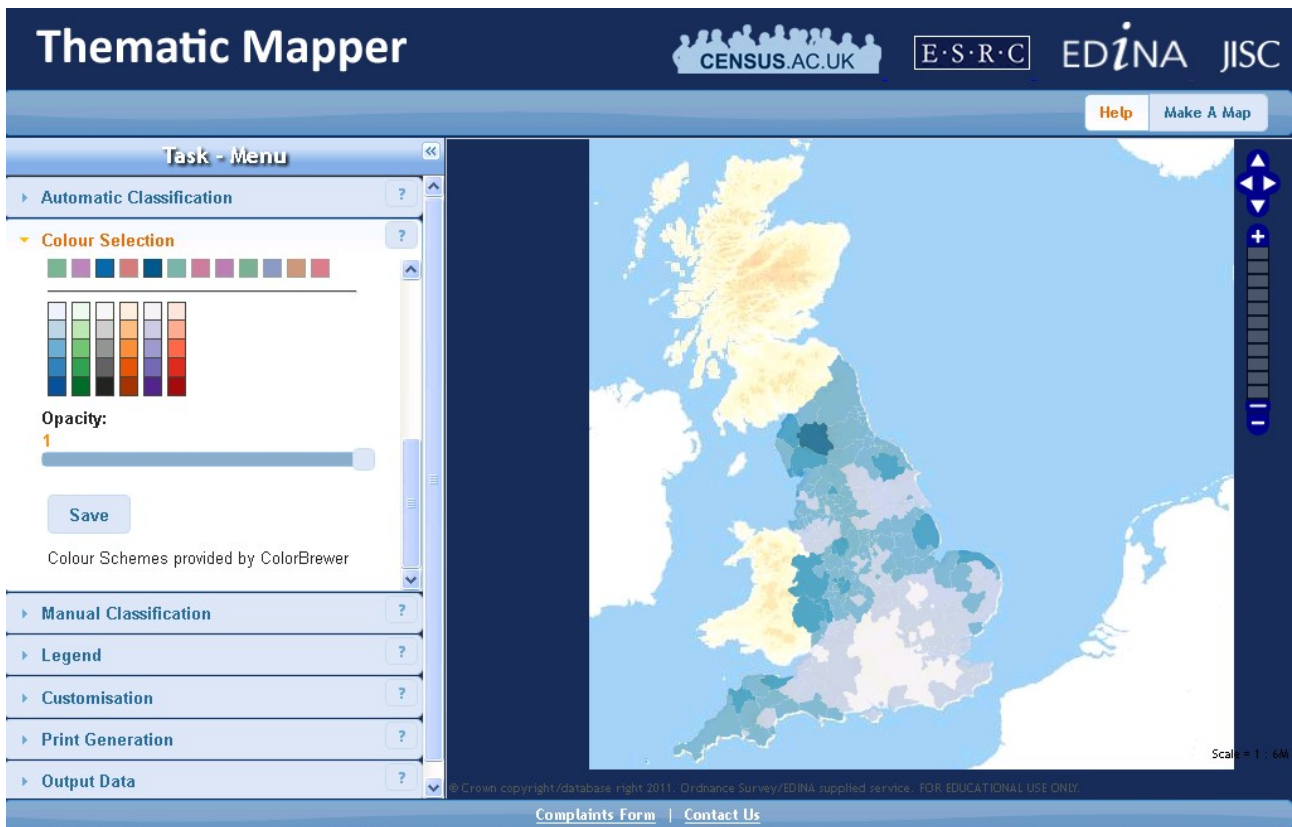
---



Opacity:  
1

Save

Options are available to output the current Thematic Map as a PNG image or PDF document and we can also download a Shapefile of the data shown.



20. Thematic Mapper includes contextual Help built into the application. Additional Help describing the different geographies supported by Thematic Mapper and their code ranges is also provided.

Help
✕

**Attribute Name** - The name of the column that you picked from the uploaded CSV file.

**Attribute Description** - This should indicate what the values in the column represent and the unit of measure used.

**Print Generation Task**

Export your Choropleth Map as a PNG image for incorporating into documents and web pages or as a standalone PDF.

**Output Data Task**

Export the polygon features that make up the Choropleth Map as a Shapefile dataset.

Provided with each Shapefile exported in this way is an Open Geospatial Consortium (OGC) Styled Layer Descriptor (SLD) file which describes the class breaks and colour palette which was used to produce the Choropleth Map. SLD is an XML based OGC standard format for persisting the styling of geospatial datasets. Being XML based and conforming to an open standard, SLD files can be easily read in order to reproduce the styling of the associated geospatial dataset on different platforms. Some Open Source desktop GIS applications like uDig and Jump which support the OGC SLD standard will automatically detect the presence of the SLD file provided by the Thematic Mapper application and apply the style when you open the Shapefile. In this way you can easily recreate the Choropleth Map offline. Even if your desktop GIS of choice does not support the SLD standard itself there are often third party extensions which can be used to convert the style information held in an SLD file into the particular style format used by the software being used. And of course because the SLD XML file is readable by humans with a defined structure it is straightforward to work out where the class breaks are and which colours should be used if you wanted to recreate the Choropleth manually in your favourite desktop GIS application.

The backdrop Ordnance Survey map will not be included with the Data Download. However by signing up to the free EDINA OpenStream service which is used to provide these contextual maps to Thematic Mapper you will be able to stream similar maps to your desktop GIS application. You can sign up to EDINA OpenStream by going to <http://openstream.edina.ac.uk/registration/>

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**Supported Geographies**

Dataset	Description	Code Range
English County Electoral		10005 -