# PGIS Coursework 2014

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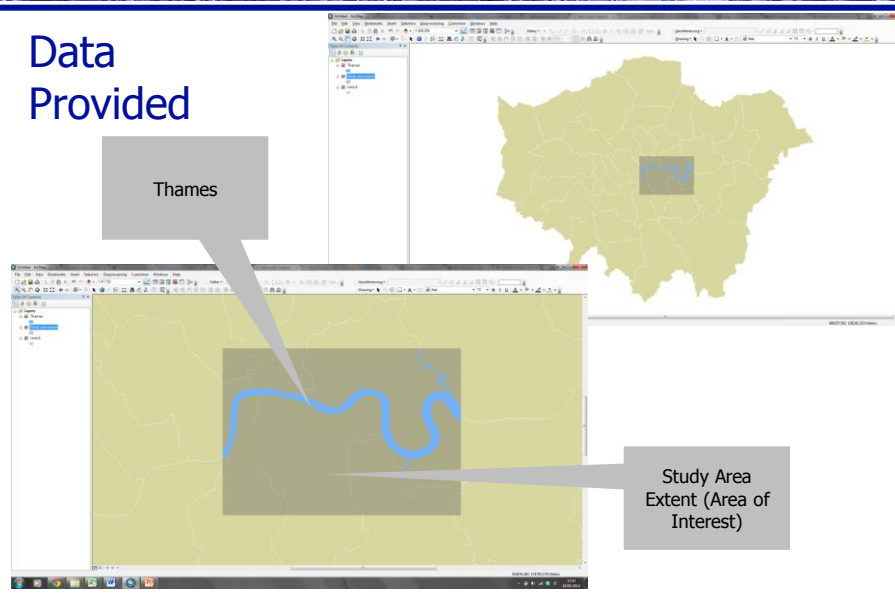
## Coursework Briefing

The objective of this project is to explore, with spatial analysis methods and maps, the consequences of a flood in London. Imagine that you are working as a GIS consultant. An insurance company (The Insurance Company ©) has contacted you to provide some mapping and a report of an area in London at risk of flooding. The Insurance Company have provided the findings of their own flood model which calculates that in the case of a flood all features and people located within 300 meters of the River Thames banks will be at risk.

The Insurance Company is providing you with some data but you will also have to create and source some other datasets. Specifically you will need to create the flood risk area of 300 meters from the Thames 'boundary' and then estimate both the population falling inside the risk area as well as the Area of Interest. You are required to source Census data (Population and one other variable/theme of your choice, e.g. Housing, Age Structure, Ethnicity, Number of Cars, etc) in order to do this.

In addition you will have to provide a report containing maps and figures about the affected area. The Insurance Company requires that the methodology is explained and that maps, tables and charts are clear and easy to understand. The Insurance Company also has some specific questions that they need answering which are detailed later in this project specification.

# Data Provided




# Flood Risk

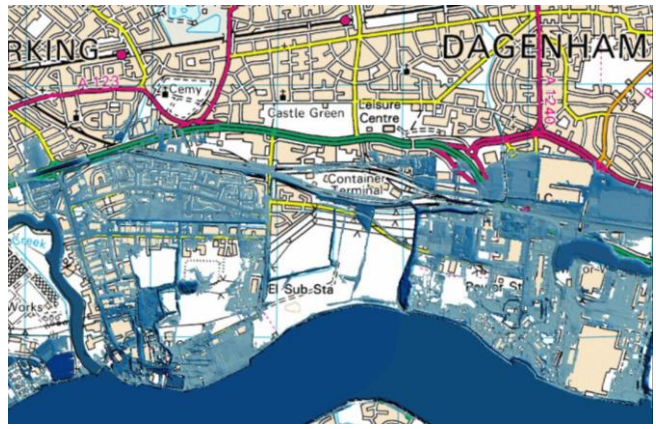
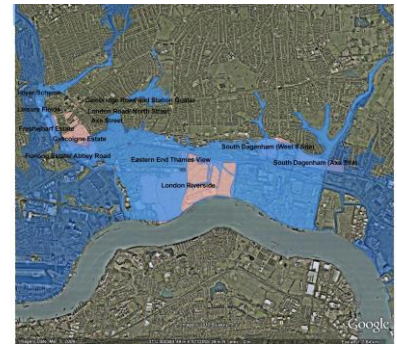



**Illustration purposes only, your flood risk area will not be this complex**

# Specific Questions

- How many people live in the Study Area ('people' in the context of these questions refers to population and your other variable of choice)?
- What proportion of London's population is this?
- How many people are at risk of being affected by a flood?
- What proportion of the Study Area's population is this?
- What areas are at the greatest risk (by numbers and density) of a flood?
- These questions should guide your analysis, if you want to go into more detail do




# Data To Be Sourced

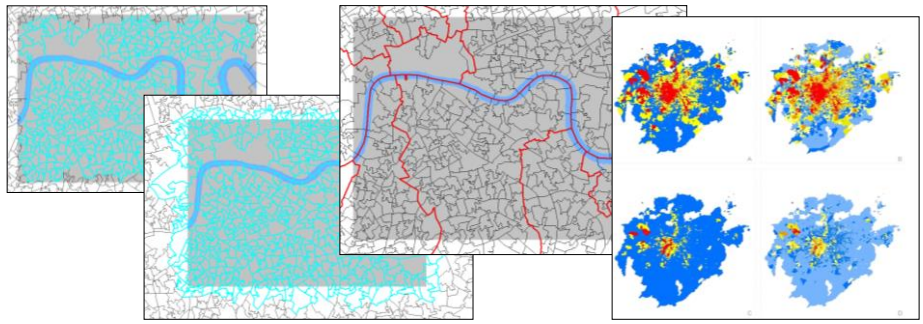
- You will be using the Census 2001
- You will use an academic data source (CASWEB)
- All instructions for CASWEB will be provided on Moodle
- If you want to use datasets from other sources you are more than welcome

# Data To Be Created

- You need to create the Flood Risk Area
- You will probably create intermediate Census related datasets

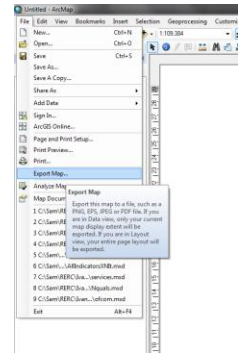
# The Final Report: Methodology

- Be aware of the techniques you use and how they impact the data
- Be aware of the data you are using and the impact it is having upon your analysis (this will be useful in the Discussion too)
- Be aware of how you are presenting your data



# The Final Report: Maps

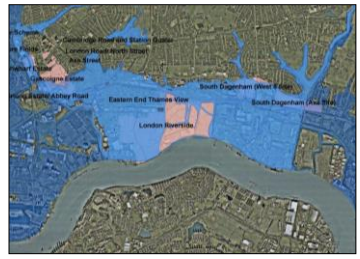
- spatial context of the study area (e.g. base mapping and the area of London the study covers, the river Thames, the flood area)
- thematic map or maps showing the population characteristics of the study area (number of people, density of people)
- Similar maps to those above showing your chosen Census variable
- maps of the population at risk and variable of choice at risk
- GOOD MAPS INCLUDED IN YOUR REPORT

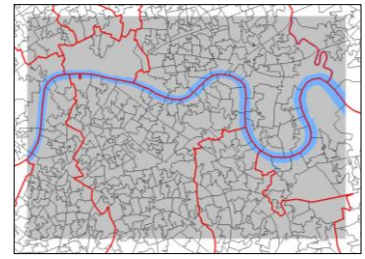


# The Final Report: Discussion

Discussion: A discussion on data quality must be included. Data quality issues do impact projects. In particular consider;

- Scale
- the data you have sourced (eg the Census)
- the Flood Model



# Assessment Criteria

In this project, we are not just looking for the correct answer to the problem. Of equal importance is that you:

- Demonstrate that you have carried out your analysis using GIS
- Explain in detail the steps you have taken and why a particular method was chosen (especially where alternative methods may exist)
- Produce clear and informative maps
- A discussion of results as well as a discussion of the implications of the data and methods used in the project.

The following are some more general Assessment Criteria Assessable Standards that we shall also be looking for:

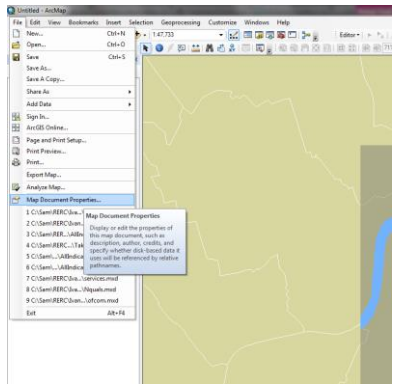
- The project is clearly presented and demonstrates the student's ability to 'think spatially'.
- Justified methods are presented in a sequence which is logical in structure, fully explains analysis steps and is informative to a non GIS specialist.
- The choice of methods demonstrates understanding of ArcGIS functions.
- GIS output is clear and displays correct use of cartographic principles.
- Final analysis of GIS output is clearly and concisely explained and meets the project proposal objectives.
- The final report is clearly written following the guidelines on the previous page. Any references should be academically sourced and referenced accordingly.

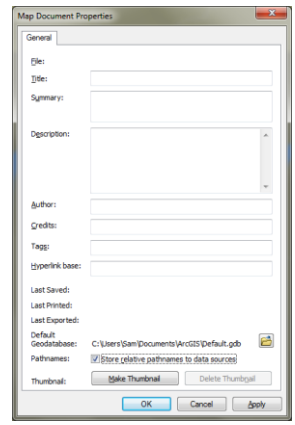
# Tips and Advice

- Don't panic! Most of (if not all) the GIS tasks required by the project have been already covered in the practical sessions.
- If it appears overwhelming break the project down into smaller more manageable chunks.
- A clear yet concise commentary on the methods you have used and their justification as well as a good discussion on the results is important!
- Create good maps. If the materials in the practical sessions and lectures are not enough, search for additional information.
- A tip: a good reference for colour schemes on graduated colour maps can be found at: http://colorbrewer2.org/.
- Create a folder for your project and remember to save the ArcMap project using relative paths for the data sources.
- Name the new files properly (i.e. Flood_risk_area, Pop_risk).
- Do not leave this project a week before it needs handing in
- Last but not least...use common sense.

- SUBMIT YOUR PROJECT ON MOODLE ON 02/05/2014

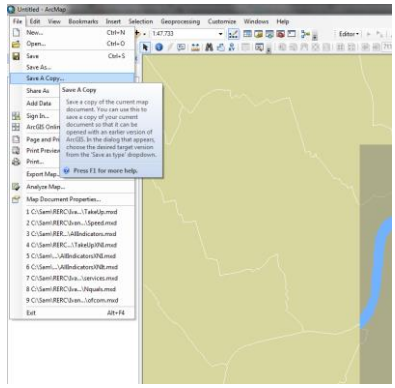
# Relative Pathways

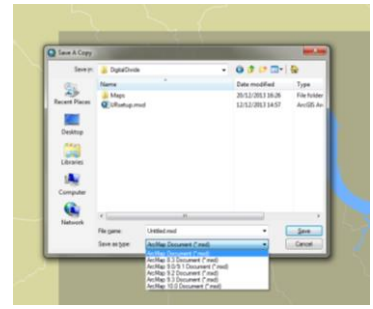



If you are transporting data between home and Birkbeck then save your projects (.mxds) using relative pathways otherwise you will find your data doesn't appear to work (you will see a red exclamation mark in the Table of Contents if this is the case)

# Save a Copy





If you are transporting data between home and Birkbeck then also save a copy of your projects as ArcMap 10.1. At home you are using ArcMap 10.2. MXD files saved in 10.1 work on 10.2 but not the other way round those in 10.2 do not work on 10.1 unless they are converted using 'Save a Copy'