

NGEA51 – Report of placement in The Department of Geography and Planning, School of Environmental Sciences, University of Liverpool, UK

**Teaching assistant – supervisor Chris Lloyd**

Over the course of 8 weeks, I was a demonstrator (teaching assistant) for three separate exercises for the ENV5257 course. The two programs used for these exercises were QGIS and RStudio. QGIS is a very similar mapping program to ArcGIS, and learning how to use QGIS has overall increased my knowledge of data manipulation and I can now also utilise QGIS as well as ArcGIS. RStudio is a scripting program, one of which I had no prior knowledge. By teaching students how to use it, I learned very quickly the program's capabilities and what the most common issues with using it were. Teaching a program made me learn how to use it a lot faster than I initially thought it would, and I am close in age to the most of the students I was teaching.

As a demonstrator, my job was to answer any questions during the practical and help students who had difficulties. A lot of the time we were required to work backwards through a student's exercise in order to try and understand where they had gone wrong, and then explain how and why they went wrong. Learning a program in order to teach it and answer questions about it was a new experience, and it greatly increased my knowledge of mapping using ArcGIS and QGIS, as well as learning a whole new program from scratch, RStudio, in order to teach it. I very much enjoyed and benefitted from this experience.

*Exercise 1, Liverpool by Day and Night:*

The first exercise was an introduction to QGIS where students were asked to examine employment and residential geographical patterns by mapping them for Liverpool, and later for Birmingham in their final assignment. This was done in order to analyse the different types of industries, and how they attract workers from around the city. This practical was solely based in QGIS.

*Exercise 2, Bricks vs. Clicks:*

This exercise looked at how retail centres have been affected by online shopping, the supply and demand of retail centres in comparison to online shopping, as well as mapping how and where consumers with different incomes spend their money. The students had to use both QGIS and RStudio in this practical and functions such as calculating buffers and creating spatial joins were learned.

*Exercise 3, Dynamic Cities:*

The third exercise was almost completely based in RStudio, with a little QGIS also involved. Students were required to examine commuting and employment data for Liverpool to see how well the existing transport systems help commuting workers.

**Research assistant – supervisor Neil MacDonald**

The second aspect of my work at the University of Liverpool was in the form of a short project working with Dr Neil MacDonald in the Department of Geography and Planning. The aim of this project was to map ten major storms that had crossed England between the 1700s and the present day, many of which had then moved on into Scandinavia. A further aim was to map damage reported from each storm.

Ten major storms were selected using historical records. The choice of storms before the 1900s was largely dependent on these records and the availability of synoptic charts. It was sometimes difficult to find these charts. I used them to map the movements of the low pressure systems, and some storms had to be replaced by others when I was unable to find reliable data from my initial selection. Storms before the 1900's were not as well documented as some modern ones, which also meant that the type and quality of damage reports varied. Low pressure systems were chosen to be mapped as they showed the centres of the storms, and so could represent the movement of each storm. After this, the locations of the damage reports were mapped to show the spread of damage each storm caused.

This work linked directly to my studies at Lund University as it is linked to climate and the impacts of extreme events. This project is also linked very closely to my coming MSc project which is going to be about storm damage in southern Sweden with a focus on trees and the forestry industry. The experience of undertaking this piece of research, looking for evidence and mapping storm tracks, has been a very useful preparation for my coming master's dissertation.

Both of these positions (teaching and research assistant) have given me new insights into Geography, and have taught me a great deal. I really enjoyed teaching and helping people in the practical's, and the project allowed me to tackle a significant research area and explore in depth some of the past extreme weather events that have hit England.

### **Short summary of placement**

I did a placement at the Department of Geography and Planning, School of Environmental Sciences at Liverpool University. The placement was divided up into two parts, teaching assistance and research assistance. For the teaching assistant part, I was a demonstrator for the ENVS257 course, which handled GIS and scripting programs. As a demonstrator, my job was to answer any questions during the practical and help students who had difficulties. A lot of the time we were required to work backwards through a student's exercise in order to try and understand where they had gone wrong, and then explain how they could correct it.

For the research assistant aspect, I carried out a short project about extreme weather events in England. The aim of this project was to map ten major storms that had crossed England between the 1700s and present day, which had then moved on to Scandinavia. A further aim was to map damage reported from each storm.

Both of these positions (teaching and research assistant) have given me new insights into Geography, and have taught me a great deal. I really enjoyed teaching and helping people in the practical's, and the project allowed me to tackle a significant research area and explore in depth some of the past extreme weather events that have hit England.