Coursework journal 4: 15%

Practicals 7 & 8

Refer to your course outlines for deadlines and late penalties.

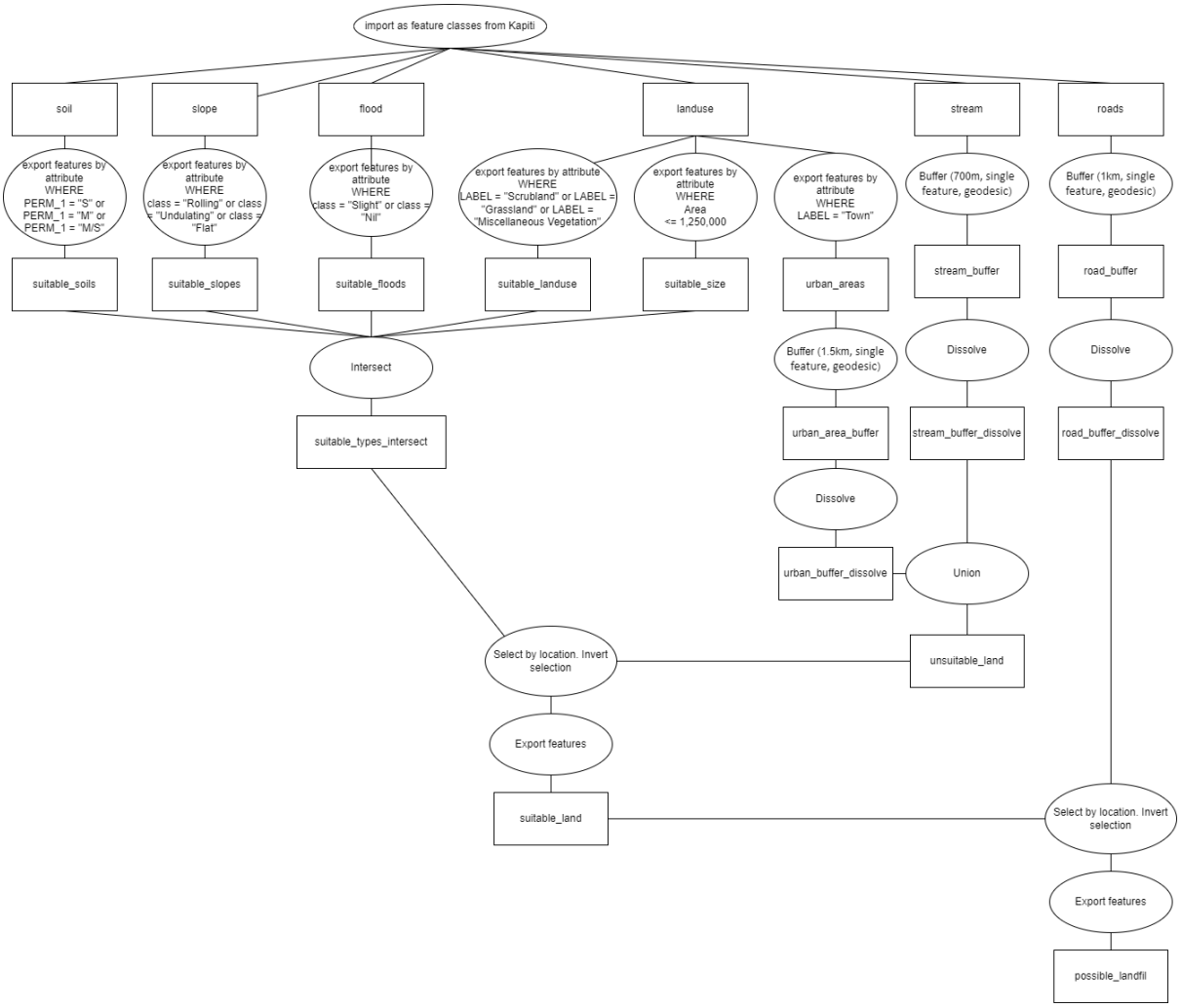
Note: These practicals are a lot harder than the previous ones. They require you to get to grips with the software on your own. While you can discuss the *processes or thinking behind them* with your classmates, don't discuss or pass on the *answers*! This is an individual assessment, and you cannot submit 'joint' work, students who submit the same assessment or part thereof are plagiarising.

GEOG 215: Introduction to GIS

Computer Practical 7: Spatial Analysis and Vector Processing

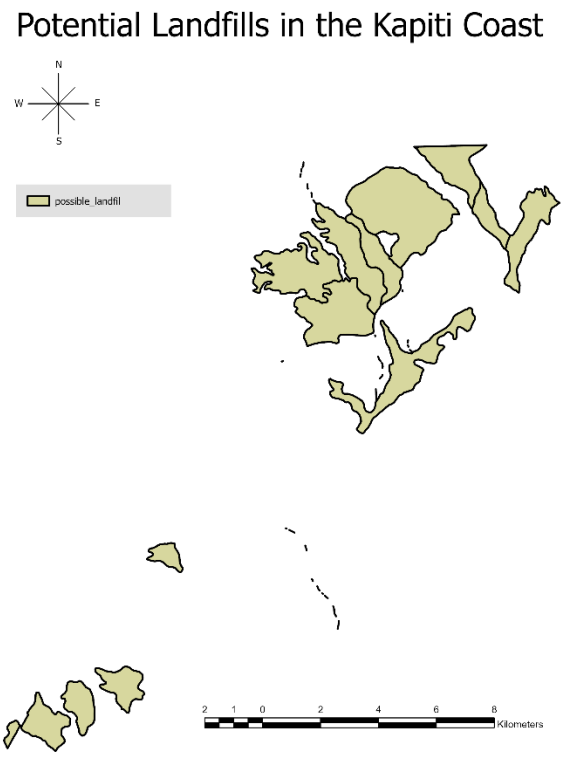
	***1. For this practical, you need to create your own process diagram and include it in your coursework journal*. (20 points)**

Answer



	2. In addition to the <u>process diagram</u>, you need to create a minimum of two <u>maps</u> showing the location(s) you have chosen (including as usual all the relevant map elements, e.g. title) and insert these maps into your coursework journal. (25 points)

Answer



	3. The output of your GIS analysis will be used within the council to identify a new location for a landfill. Taking this into account, detail in 200 words or less whether this process has identified the most suitable area for this landfill? (5 points) Include a word count for your answer.

Answer

I had some trouble with the areas intersect when creating the maps. Somehow when I intersected the data I managed to sum the areas. This meant that not all the shapes are the correct size. If I was to do this practical again I would redo this step to find the correct areas.

These two maps one, show the full possible areas where a landfill could go. The second map shows each piece of land property that could be turned into a landfill. This will identify to the council where they could put a new landfill. All the places identified on the maps have got road access, far enough away from the towns and rivers and have the correct land types.

For these maps it would have been beneficial to include some form of a base map so that councillors and decision makers can see where the landfills are located within the Kapiti coast.

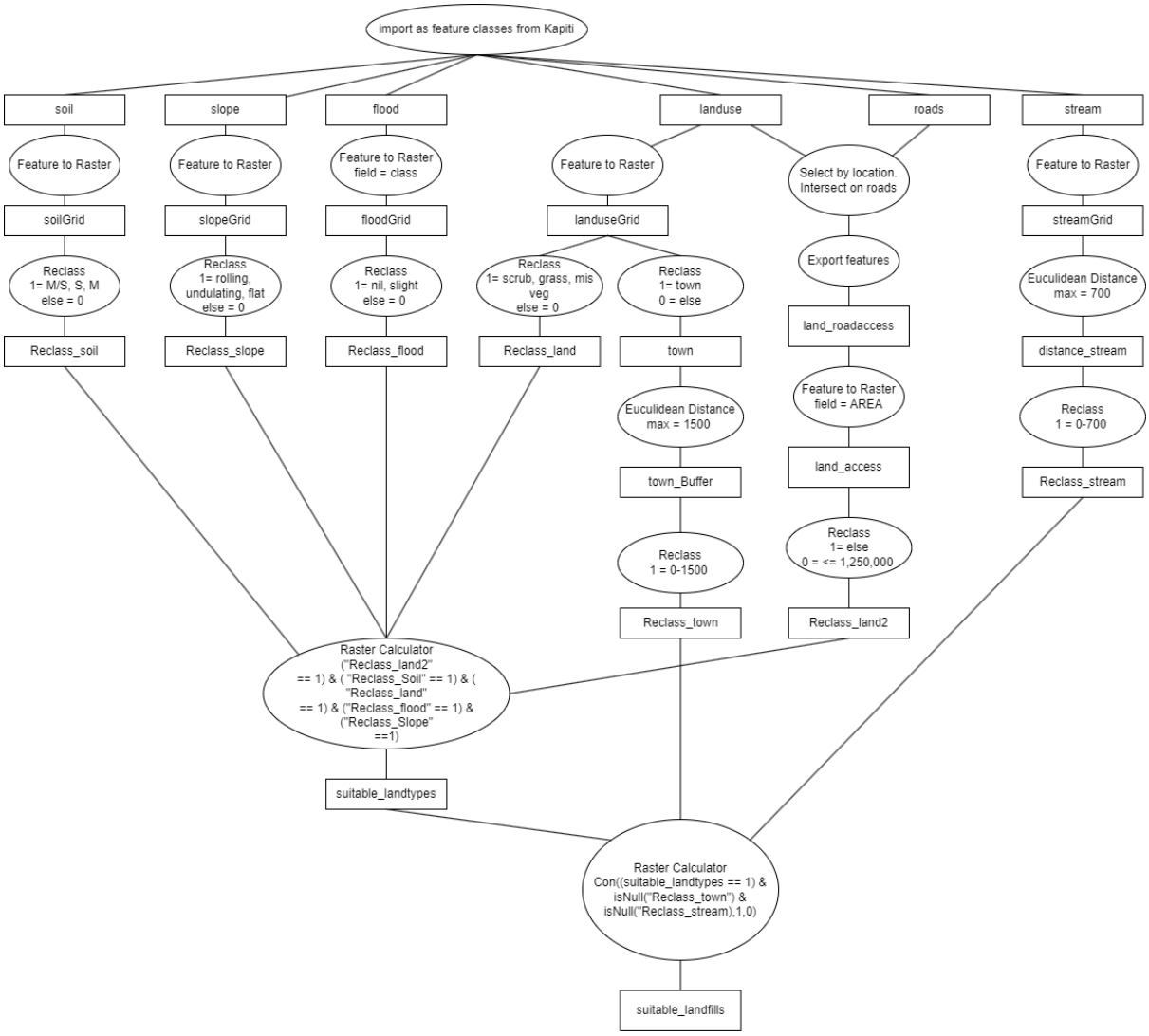
Word count = 154

GEOG 215: Introduction to GIS

Computer Practical 8: Raster Processing and Spatial Analysis

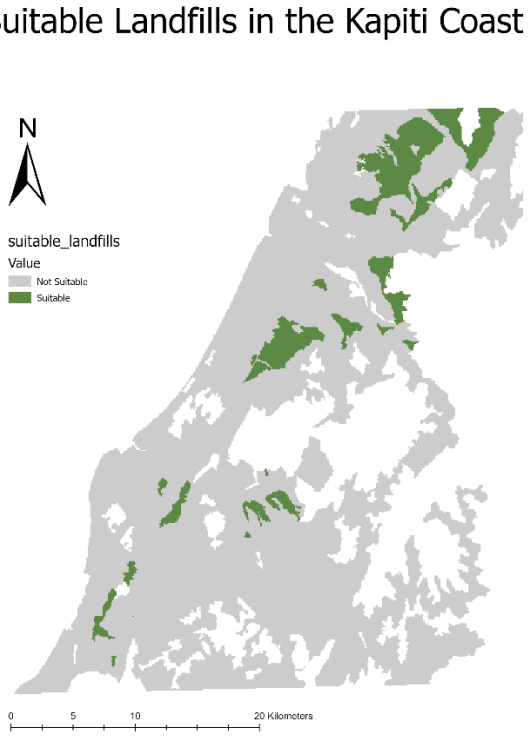
	1. You need to create a <u>process diagram</u> (20 points)

Answer



	2. Two or more <u>maps</u> showing the location(s) of potential landfill sites (including as usual all the relevant map elements, e.g. title) and insert this map into your coursework journal (25 points).

Answer



	3. In 200 words or less, why is vector better for this analysis? Justify your answer (5 points). Include a word count for your answer.

Answer

Vector data is a lot easier to manipulate than raster data. Vector data can have more than just one value which means intersecting or selecting values becomes a lot easier. For example, when creating the map using Raster data I followed my steps from practical 7. The last step I needed to do was check that the possible landfills had road access. What I realised doing this way is that it would only select raster cells that both intersected. This is what I was doing with Arcgis but it was not what I wanted to achieve. This meant that I had to change elements of my map and redo portions. What I found was that I needed to select all the properties before converting them into raster cells. If I was using Vector data, it would not have been an issue. I also found that Vector data has more tools that achieve exactly what you want. For example, buffers, although this is a function on vector data it is not on Raster. I had to calculate a distance using raster data creating more steps for me to complete.

Word count = 188.