| **Coursework Assessment Brief** | | |
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| **Module Code** |  | |
| **Module Title** | Research Methods and Techniques | |
| **Title of Assessment** | GIS Mapping Report | |
| **Summative (% of module) or Formative** |  | |
| **Typical individual student hours required to complete the assessment** |  | |
| **Assessment set by (and contact)** |  | |
| **Submission deadline (date and time)** | 22nd April 2022, 23:59 | |
| **Formal feedback** |  | |
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| **Module Learning Outcomes** | | |
| The following module learning outcomes and professional body learning outcomes are tested in this assessment:  (1) Understand basic techniques of data acquisition, analysis, and interpretation [Env Man PLO A2].  (2) Identify the appropriateness of digital datasets and GIS techniques for particular tasks [Env Man PLO B1].  (3) Understand the errors and limitations inherent in analyses [Env Man PLO B1]. | | |
| **Assessment task and specific terms** | | |
| For this assignment, you must implement a GIS-based site selection model for an application problem related to your course. For example, your model might locate potential sites to build a new waste incinerator, or wind or solar farm.  Submission is a pdf report of approximately 2000 words excluding references, tables and figures. The report should be structured in line with the assessment criteria. | | |
| **Assessment Criteria** | | |
| Assessment of your submission will be based on the following weighted assessment criteria as given below which relate to the specified module and PSRB learning outcomes. Assessment criteria are reproduced in Canvas in a rubric. | | |
| **Specific Criteria (marking scheme)** | | **Marks available** |
| **Introduction**  Explains the specific problem addressed by the study – the type of facility, and the geographical location and context, including existing facilities.  Introduces site selection modelling in GIS as a general activity.  Explains the site selection modelling method implemented. | | 10% |
| **Site selection criteria**  Model criteria, scaling and weighing must be justified in relation to the literature. | | 25% |
| **Data and Methods**  Outline the methodology using a conceptual workflow diagram accessible to someone without GIS experience to illustrate the process.  Data used in the model must be cited.  Provide sufficient additional information that it would allow someone with a basic knowledge of GIS to reproduce what was done.  The method should be presented using ‘software neutral’ language, i.e. use generic descriptions of processes rather than the names of specific ESRI tools.  Avoid repeating information in the workflow diagram as text.  Do not write a tutorial that explains the process at too low a level. | | 25% |
| **Results**  Maps and accompanying descriptions of the potential sites suitable for an executive decision maker.  A full-page map that shows the distribution of potential sites in the study area. Include contextual information such as existing facilities, location names and primary transport links. The features shown should be directly relevant to the problem.  One or more detail maps and associated short site descriptions that show the location and explain the character of the ‘best’ potential sites.  Maps should be created as ArcGIS Pro layouts with appropriate map furniture and explored as high-quality (300 dpi) images. | | 25% |
| **Critical Evaluation**  What are the limitations of the results given the methodology and data?  For example, is the data up to date, complete and at an appropriate scale?  Recommendations of further model development. | | 10% |
| **Referencing**  Correct in-text citation and references formatted in the Harvard style. | | 5% |
|  | | **Total = 100%** |
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| **Academic skills support** | | |
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