The design of a community-led monitoring scheme and data collection application for the **River Lea through Luton**



Claire Pook Supervisor: Tim Brewer

Introduction The River Lea flows from its' source at Leagrave Park in Bedfordshire to London where it forms one of the main tributaries to the River Thames. The upper reaches of the river pass through the town of Luton, where surface runoff, litter and heavy modification have been identified as sources of contamination in the river channel. This project envisages a 'citizen science' approach to monitoring water quality as a way to inform decisions about the future management of the river.



Methods & Results

Potential Sources of Volunteers

Sampling Strategy

The Riverfly Partnership train volunteers to record numbers of benthic macroinvertebrates as a measure of pollution in freshwater streams.





Thames 21 asks local residents to regularly test pH levels & survey litter in their stretch of river.

Repeat sampling of temperature, turbidity, nutrient levels, dissolved oxygen & presence of coliform bacteria at fixed locations on the River Lea will provide a general overview of water quality, and highlight pollution 'hotspots'. Photography can be used to record pollution incidents as they occur.







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Conclusions & Recommendations

- Citizen science volunteers will require comprehensive training, ongoing support & timely feedback for the duration of the project.
- Consideration should be given to the additional resourcing requirements (Costs of sampling equipment, data storage, staff etc).
- Although web technology makes online mapping widely accessible, care should be taken not to alienate certain groups.
- Many open-source tools exist for creating customisable spatial data collection applications, but the best results are achieved when using a web-based GIS, allowing greater functionality, enhanced presentation and secure data storage.



www.cranfield.ac.uk/courses/masters/geographicalinformation-management.html Cranfield University, College Road, Cranfield, MK43 0AL Email: t.brewer@cranfield.ac.uk