

# Urban Aerial Food Zone Mapping System



William Basil Bardsley

September 2013

Dissertation submitted in partial fulfilment for the degree of  
Master of Science in Information Technology

Computing Science and Mathematics  
University of Stirling

# Abstract

Land for farming is in short supply, we are running out of it as urban areas grow; the increase in global population also means that more mouths need feeding. This means we need more land for farming and currently there just is not enough to sustain the growing global population. *Ecoideam*, a Scottish based company, want to use flat rooftops to grow crops to help deal with this issue. This requires a means of measuring flat rooftop space for development of urban agriculture. This dissertation project was negotiated to develop a web based application that has an embedded map to accomplish that aim. With this users can make and save site measurements to a database where it can be stored and redisplayed on the map for future reference. A combination of JavaScript and PHP were predominantly used to develop this application. The project may be developed further by *Ecoideam* and used by other companies for similar use.

The following report will start off by putting the project into context outlining key tasks to complete. It will then give insights into more specific requirements of the system and demonstrate how these were satisfied in terms of system design. It will, furthermore, discuss how the system was implemented and finally evaluate it by analysing usability test results.