

***Project:*** *Evaluation of Microbial Activity within a Biofilter Treating Landfill Gas*

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***Project Outline:***

Microbial oxidation of methane in a biofilter or biocover layer is a developing method for treating landfill gas emissions (see References). UNSW are currently conducting several biofilter trials at landfill sites in western Sydney. An important aspect of the research is to understand where within the biofilter the microbial methane oxidation is occurring, and why it is occurring at that location. The aim of this project is to evaluate microbial activity within samples taken from the UNSW trial landfill gas biofilters. The scope of the project involves: 1. Assisting with sampling of the biofilter media; 2. Conducting laboratory experimentation to assess microbial activity within the biofilter media samples. This will involve conducting controlled batch experiments to assess microbial methane oxidation activity within the biofilter media samples. A gas chromatograph will be used to analyse the methane consumption and gas generation. 3. Collating, recording and analysing the test results; 4. Writing up the work for your final year project.