

BENEFICIAL RE-USE OF BIOSOLIDS -COMMUNITY ENGAGEMENT

Research Question

Community engagement and acceptance is vital to broadening the processing and application of the biosolids product for implementing low carbon solutions (Figure 1). However, community barriers caused by odours and other environmental impacts severely increase cost and consumption for biosolid strategies.



Figure 1: Biosolids are an inexpensive crop fertiliser.

Methodology

To facilitate improved engagement; multiple approaches have been implemented, including surveys, focus groups, odour analysis, as well as an online observation tool. In addition, complaint information has been obtained from various water companies. This is in order to guide survey distribution as well as establish best practice for complaint management (Figure 2).

Surveys have measured qualities of community members pertaining to their attitudes and beliefs, as well as demographic identifiers (Figure 4).

The use of Gas Chromatography-Mass Spectrometry/Olfactometry (GC-MS/O) assists in producing community odour testing that will illustrate the experiences of members of the community with regards to biosolids and other environmental factors. These approaches have contributed towards a proactive engagement procedure.

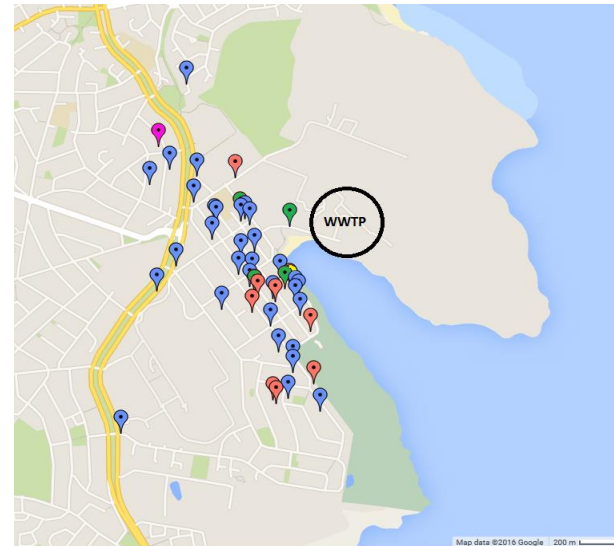


Figure 2: An example of best possible mapping from current complaint information-not very helpful!

Results

Online Dynamic Engagement for Communities (ODEC) is a workshop and online-observation procedure developed from this research. It is currently being administered at a WWTP. ODEC establishes a “common language” approach between community and industry and provides a platform for proactive discourse for community engagement (Figure 3).

Conclusions

Multi-faceted research creates better results when looking at communities. By the same token, we have designed a

method by which to establish a common language and subsequently obtain meaningful discourse and information that will improve industry/community relations.

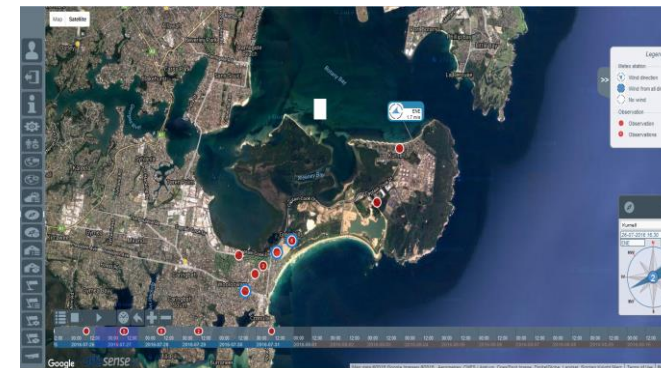


Figure 3: Example of online application from ODEC

Anticipated impacts

The project will improve strategic decision-making and reduce social-environmental barriers regarding biosolids. This will reduce cost factors to improve carbon efficiency and cost of biosolids re-use.

This project will provide stakeholders with improved methods of communication with the community, as well as a framework by which to determine the most appropriate solutions for specific community concerns.

Multi-faceted research creates better results when looking at communities

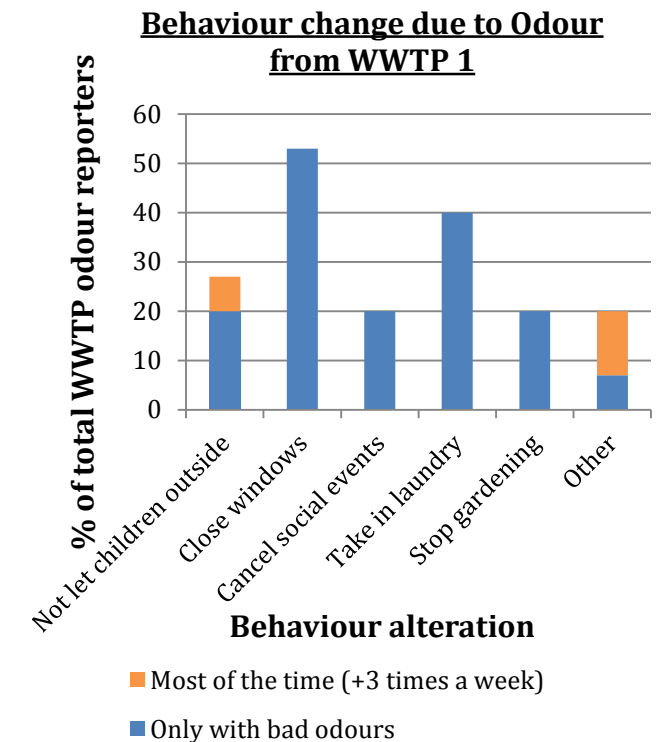


Figure 4: Types of complaint likelihood for WWTP 1.

Further information

For further information about this project and others please visit UNSW’s Odour Laboratory at www.odour.unsw.edu.au

Alternatively, feel free to contact the primary researcher.

Contact

James Hayes

School of Civil and Environmental Engineering

UNSW

j.e.hayes@student.unsw.edu.au