

Project title: Loganholme Biosolids Gasification Project

Abstract:

The team will focus on a program of work through a series of projects which investigates the best management practice of biochar from thermal treatment of municipal solid organic waste. The work will be conducted in two phases that involve controlled experimental conditions in the glasshouse (phase 1) and field-scale trials using small plots (phase 2). Phase 2 will be informed by phase 1 in terms of size of the experiment, treatments, and specific soil-plant measurements and analytical procedures, and it will serve to conduct targeted observations under real, field-scale conditions over three cropping seasons. The outcomes of the project will increase knowledge and understanding of phosphorus and heavy metals dynamics in the soil-plant system following soil application of biosolids, biochar and mineral fertilisers; increase knowledge and understanding of contamination risks associated with microplastics and selected organic/inorganic emerging contaminants in soils receiving biosolids and biochar; and comprehensive datasets derived from multi-scale experimentation to support the development of industry guidelines and management practices for land application of biosolids and biochar, and be able to inform future R&D.

