Editorial

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It has to be said that there has been a mixed reaction to the conclusions of the recent UK Governmental review of waste policy for England (Defra, 2011). The shift in the economic priorities of many of the developed regions of the world throws up interesting and often conflicting responses to policy development, particularly it seems, where waste management is concerned as it can often be seen as a direct cost rather than an opportunity. In this regard, this issue of *Waste and Resource Management* has an interesting and highly topical dual theme of opportunity and direct cost (albeit indirectly related to engineered systems and pretreatment processes).

For many, the lack of unambiguous recycling targets within the review document represents a downgrading in previous aspirations to 'meet and exceed' EU recycling requirements. Chilton (2012) in his briefing very usefully sets out an alternative interpretation of the review that allows the waste hierarchy to guide the decision making process in a sustainable manner but one which can accommodate social, economic and environmental considerations. Of particular note and related to opportunity is the blurring of the recycling and recovery boundary that may enable genuine progress in the development and uptake of energy from waste systems.

A number of the common waste management processes associated with pretreatment or disposal generate significant and sustained heat energy. In the second briefing of this issue Preene and Brown (2012) detail the use of ground energy systems or ground source heat pumps in recovering heat energy from a range of waste treatment processes. A number of scenarios are presented and some of the challenges in commercial exploitation are discussed. However, it is clear that there is currently very limited exploitation of this energy resource using established and relatively simple technology.

Where there is a waste stream there is usually an opportunity – in this case an activated carbon fibre matting derived from pyrolysed waste biomass flax fibres. Illingworth *et al.* (2012) present a detailed description of the development and performance of this material. The activation process can be altered to produce a range of porosities and therefore allow an activated carbon matting to be fabricated with adsorption properties tailored to a particular pollutant.

Thomas *et al.* (2012) highlight the negative environmental impacts of oxo-degradable plastics through the use of additives

to accelerate their degradation at end of life. The key concern focuses on the extent to which the plastic can genuinely be said to degrade (i.e. broken down into carbon dioxide and water through microbial action) and their unsuitability for more conventional recycling given the presence of the additives. That they can easily enter the plastics recycling stream is a particular worry and one requiring further investigation.

Zhang *et al.*, (2012) provide solutions for a stability analysis of a tapered capping system incorporating seepage. The use of a tapered cap – increased thickness at the base of the cap where it meets the ground – is common in practice and the solution proposed addresses the problematic veneer slope stability case. These solutions have been validated against existing design cases and the interface shear strength between the cover soil and the geosynthetic layer found to be the most important factor related to capping slope stability.

The final paper by Jing *et al.* (2012) compares two methods for the pretreatment and removal of organic compounds from oily sludge derived from water–oil separation systems; the wet peroxide oxidation (WPO) method and the catalytic wet oxidation (CWO) method. Under a range of operational conditions, the WPO method was found to be the more effective of the two methods as measured using a BOD/COD.

Finally, two discussions are presented in this issue and more contributions of this kind are encouraged.

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