

**REPORT TO THE SOUTH TYNE AND WEAR WASTE MANAGEMENT  
PARTNERSHIP JOINT EXECUTIVE COMMITTEE**

**23 September 2016**

**REPORT OF** - Tony Alder, Project Director, South Tyne and Wear Waste  
Management Partnership

**SUBJECT:** Resource Recovery Sector - Update

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**1. PURPOSE OF REPORT**

- 1.1 To update the Joint Executive Committee on the resource recovery sector, including issues arising across the sector in other treatment technologies that were previously considered as part of the process to secure a residual waste treatment solution for the South Tyne and Wear Waste Management Partnership (STWWMP).

**2. BACKGROUND**

- 2.1 As part of the residual waste treatment solution procurement process, councillors from each of the three partner authorities visited a variety of different waste treatment facilities, both within the UK and in Europe.
- 2.2 The programme of visits enabled the Joint Executive Committee to consider all of the treatment technologies available within the market, and provide enough background information for analysis to be undertaken to identify the most appropriate solution for STWWMP.
- 2.3 Electricity generation through energy-from-waste (EfW) was identified as the most cost-effective solution for the residual waste collected across Gateshead, South Tyneside, and Sunderland. STWWMP subsequently appointed SUEZ to construct an EfW facility at Teesside.
- 2.4 However, since this decision, a number of waste treatment technologies within the sector have encountered a range of technical, financial, or health and safety issues.

**3. WASTE TREATMENT TECHNOLOGIES**

- 3.1 Identifying a long-term and cost effective residual waste treatment solution for STWWMP was a difficult decision for the Joint Executive

Committee. A programme of site visits was undertaken to understand the broad range of residual waste treatment technologies available, the situation within the waste market, and the visual and environmental impact of the facilities.

3.2 To ensure that all available treatment options could be fully considered, a number of different technologies were considered, including:

- Anaerobic Digestion
- Autoclaving
- Bio-fertilisation
- Composting
- Energy from Waste
- Energy Recovery with Combined Heat and Power
- Energy Recovery with District Heating Facility
- Gasification
- Material Recovery
- Mechanical Biological Treatment

#### **4. RESOURCE RECOVERY SECTOR TODAY**

4.1 Across the country, a number of waste treatment facilities have encountered major problems in demonstrating their long-term viability.

4.2 The gasification sector, for example, has encountered a number of issues and several facilities have not been successfully completed because the technology can be considered as complex or embryonic in comparison with other combustion techniques. A high-profile and local example of this is Air Products' withdrawal from the sector by scrapping the Billingham-based Tees Valley 1 and 2 plants. Writing-off the part-built facility is expected to cost Air Products approximately £770m, but is symptomatic of the wider issues surrounding advanced thermal gasification.

4.3 Elsewhere, several facilities utilising mechanical biological treatment (MBT) technology have encountered long-term site closures following major issues such as large-scale fires. In some cases, this has resulted in extreme remedial action including changes to aeroplane flight paths, large-scale local business evacuations and road closures, or catastrophic failures in essential equipment that required new, bespoke, expensive equipment to be designed and installed.

4.4 Furthermore, several local authorities have encountered significant issues with the delivery of their energy-from-waste PFI projects.

4.5 For example, the Department for Environment, Food and Rural Affairs (Defra) withdrew £91 million PFI credits (or £169 million over 25 years) from Norfolk County Council's waste incinerator project. This resulted in the termination of the project. Furthermore, the appointed contractor submitted substantial compensations costs for the failure of the project, and the county council's request for financial support from government

to meet the claim was rejected by the Department for Communities and Local Government.

- 4.6 In addition, as the county council continues to seek an alternative, long-term solution to incineration, the short-term four-year replacement deal to export residents' waste as refuse derived fuel (RDF) to Germany and the Netherlands has been criticised as being 'hypocritical' and 'not green enough'.
- 4.7 An independent study conducted on behalf of an anti-incineration campaign group found that Cornwall Council's £1.1 billion, 30-year, waste PFI contract was 'outdated, not fit-for-purpose and expensive'. Variations to the contract were identified, but this resulted in delays to planning permission and ultimately required a ruling from the Court of Appeal to enable the construction of the 240,000 tonne capacity Cornwell Energy Recovery Centre EfW facility. The original PFI contract was signed in 2006, and whereas £25 million has now been invested in upgrading waste and recycling facilities across Cornwall, the construction of the EfW is still in its 'testing phase' not expected to begin service until later in 2016.
- 4.8 Greater Manchester Waste Disposal Authority (GMWDA) signed a 25-year PFI waste and recycling contract in 2009, worth £3.8 billion. However, the project has encountered a number of issues, including allegations that GMWDA breached procurement regulations, criticism of the PFI agreement from the (then) Communities Secretary, Eric Pickles, and several fires at waste facilities.
- 4.9 Alleged design faults delayed the completion of all waste facilities until 2015, which resulted in the contractor reporting a £5 million loss in reaching job acceptance. Earlier this year, GMWDA forecast an overspend of £2.5m, resulting partly from the limited functionality of its anaerobic digestion facility which subsequently required materials to be processed as RDF. This has since led to a number of Manchester councils to consider the introduction of a three-weekly residual waste collection schedule to mitigate the impact of a rising disposal levy that has been imposed by GMWDA.
- 4.10 In 2011, Cumbria County Council signed a deal to develop two MBT plants to manage the county's household residual waste. However, the Environment Agency enforced operations to be suspended due to a fly infestation, and then again on separate occasions to improve odour management. This resulted in the plant being unavailable whilst remedial works were carried out, and waste was subsequently diverted to landfill. This led to the contractor writing-off £5 million on its operating contract with the council, and to announce in its trading update that the contract was becoming 'onerous' and a 'burden' on its municipal division.
- 4.11 Lancashire County Council and Blackpool Council also experienced problems after taking over two waste recovery parks and their operating company following the termination of a 25-year £2 billion PFI project only three years into the contract. The facilities were subsequently

mothballed earlier this year in an effort to make cost savings, resulting in 250 job losses. Instead of materials being treated on site, they are now transported by road to other locations for recycling treatment or disposed as landfill.

## **5. CONCLUSION**

- 5.1 Instability elsewhere within the resource recovery sector highlights the effectiveness of the residual waste treatment solution identified by the Joint Executive Committee. STWWMP has experienced no major issues with any aspect of the procurement and construction of its energy-from-waste facility, or the subsequent management of the residual waste treatment contract and day-to-day working relationships with SUEZ.

## **6. RECOMMENDATION**

- 6.1 The Joint Executive Committee is requested to note the contents of this report.

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