

Report of the Director of Environment and Housing

Report to Executive Board

Date: 20th April 2016

Subject: Recycling and Energy Recovery Facility Update

Are specific electoral Wards affected? If relevant, name(s) of Ward(s): Burmantofts and Richmond Hill, Temple Newsam	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Are there implications for equality and diversity and cohesion and integration?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is the decision eligible for Call-In?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Does the report contain confidential or exempt information? If relevant, Access to Information Procedure Rule number: Appendix number:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Summary of main issues

1. This report provides an update on the Recycling and Energy Recovery Facility (RERF) being delivered by Veolia ES (Leeds) Ltd under the Council's PFI contract.
2. Since the last update to Executive Board in September 2014, the construction and the commissioning of the RERF have been completed successfully, with the Independent Certifier having issued the Acceptance Certificate on 31st March 2016, over three months ahead of the anticipated date previously reported. This triggers Full Service Commencement under the Contract.
3. Commencement of full operations at the RERF will deliver a range of significant environmental benefits. The plant is expected to capture at least 16,000 tonnes per annum of materials from kerbside black bin waste for recycling. It is estimated that the facility will process around 4 million tonnes of black bin waste over the life of the contract, the majority of which would otherwise have been landfilled. This will result in a reduction in carbon emissions of 62,000 tonnes a year, equivalent to taking 29,000 cars off the road each year.
4. The RERF will generate around 11MW of electricity, equal to the power demands of over 22,000 homes. Further infrastructure has now been installed within the turbine to facilitate the supply of hot water to a district heating scheme. The Council is actively progressing the delivery of a scheme, with the Executive Board approving a funding and procurement strategy in February 2016. This will not only deliver further environmental benefits, but will contribute to tackling fuel poverty in social housing.

5. The RERF has an undeniably high quality and iconic architectural design, featuring a green wall believed to be the largest of its kind in Europe. It also features a dedicated visitor centre which will enable visits and tours for schools and other interested groups, also enabling wider recycling and sustainability messages to be communicated to the residents of Leeds and beyond.
6. In line with previous Executive Board approvals, the Council has now exercised contractual options to make a £30m capital contribution to the project and to extend the lease of the site to Veolia for a further 15 years beyond the PFI contract term, allowing Veolia to operate the facility on a commercial basis during this period (the 'Non-Reverting Asset' option). In return the Council will receive a substantial reduction in the cost of waste treatment over the life of the PFI contract.
7. The PFI contract with Veolia was already expected to save the Council around £2.7m per annum compared to the cost of continuing to landfill the majority of kerbside residual waste. However, with the payment of the capital contribution and the agreement of the 'Non-Reverting Asset' option involving the extension of the lease to Veolia, the total savings compared to the previous reliance on landfill are now expected to be **£7.0m** per annum.

Recommendations

8. Executive Board is recommended to note the contents of this report, most notably the fact that Full Service Commencement under the PFI contract has now been achieved, along with the resulting significant environmental and financial benefits to the Council and the City.

1 Purpose of this report

- 1.1 The purpose of this report is to provide an update on the Recycling and Energy Recovery Facility (RERF) being delivered by Veolia ES (Leeds) Ltd under the Council's PFI contract. In particular, the report provides a summary of progress since the previous report to Executive Board in September 2014 and an overview of the key areas of environmental and financial benefit resulting from the project.

2 Background information

- 2.1 The Council signed the PFI contract with Veolia ES (Leeds) Ltd in November 2012 for the delivery of a facility to treat the City's residual household waste. Construction of the RERF commenced in September 2013.

3 Main issues

3.1 Construction, commissioning and operational transition

- 3.1.1 Since the last update was provided to the Executive Board in September 2014, the construction and the commissioning of the RERF have been completed successfully, with the Independent Certifier having issued the Acceptance Certificate on 31st March 2016, over three months ahead of the anticipated date previously reported, thus triggering Full Service Commencement under the Contract.

3.1.2 The Refuse Collection service has been directly delivering all of the City's kerbside black bin waste to the RERF since the end of November 2015. This involved some minor adjustments to collection routes in the west of the City, but was achieved with minimal disruption, resulting in collection day changes to only 1,500 properties. This transition for the collection service has been effected very successfully, and although the direct delivery of this waste to the RERF from across the whole City has involved a degree of additional travel time for some crews, the turnaround times for the Council's vehicles being achieved by Veolia are generally substantially lower than those that were being achieved at the previous disposal outlets.

3.2 **Capital contribution and 'Non-Reverting Asset' contractual options**

3.2.1 Amongst the key recommendations agreed to by the Executive Board in September 2014 was that the Council make a £30m capital contribution to the project in return for a substantial reduction in the cost of waste treatment over the 25 year life of the PFI contract.

3.2.2 Executive Board also agreed to an extension to the lease of the site to Veolia for a further 15 years beyond the PFI contract term (the 'Non-Reverting Asset' option), allowing Veolia to operate the facility on a commercial basis during this period, again in return for a significant reduction in the cost of waste treatment.

3.2.3 Delegations were approved by the Executive Board to the Deputy Chief Executive and Directors of Environment and Housing and City Development to implement these options, which have now been formally exercised via the PFI contract. Payment of the £30m capital contribution has now been made to Veolia further to receipt of the Acceptance Certificate.

3.2.4 The overall financial benefits of the PFI contract are set out within the 'Resources' section of this report. However, it is estimated that the payment of the £30m capital contribution to Veolia will reduce the cost of waste treatment to the Council by around **£2.3m** per annum over the life of the contract, and the 'Non-Reverting Asset' option involving the extension of the lease to Veolia will reduce the annual treatment costs by approximately another **£2.0m** per annum.

3.3 **Recycling, landfill diversion and other environmental performance**

3.3.1 The mechanical pre-treatment element of the RERF is now extracting materials for recycling from the domestic black bin waste. It is expected that at least 16,000 tonnes of material will be recovered each year from this waste stream for recycling based on the current level of waste deliveries. The Council and Veolia plan to review the composition of the incoming waste on a regular basis in order to explore opportunities for additional recycling beyond that guaranteed within the contract.

3.3.2 The RERF has delivered a major step change in moving away from the Council's historical reliance on landfill, along with its significant negative environmental impacts. It is estimated that the new facility will process around 4 million tonnes of waste over the 25 year life of the contract, the majority of which would otherwise have been landfilled based on the Council's former contractual arrangements and outlets for this material.

- 3.3.3 This move away from landfill will result in a reduction in carbon emissions of around 62,000 tonnes per annum, equivalent to taking 29,000 cars of the road each year.
- 3.3.4 In addition to the recyclables captured through mechanical pre-treatment, the ash resulting from the incineration process will all be recycled and used as aggregates or in other construction applications.
- 3.3.5 Veolia are also seeking alternative treatment options for the residues from the treatment of the flue gases at the facility such that they are also used beneficially. This would mean that practically every output from the RERF process was being used as a resource rather than a waste.
- 3.4 **Emissions, air quality and odour management**
- 3.4.1 The RERF operates under an environmental permit system, with the permit awarded and regulated by the Environment Agency. This permit sets a wide range of environmental conditions for the operation of the plant, including stringent limits for emissions. In addition, Veolia are required to have robust odour management plans and mitigation measures in place, and odours arising from the permitted activities at the facility are also regulated by the Environment Agency.
- 3.4.2 The multi-stage process at the RERF to clean and monitor the gases resulting from waste incineration before they are released to atmosphere forms a substantial part of the facility. In addition to the flue gas treatment, there is independently certified monitoring equipment located in the stack to monitor emissions from the plant continuously, with samples also extracted regularly for laboratory analysis. Results must all be reported to the Environment Agency, who will analyse the data to ensure compliance with the permit conditions. These results, as interpreted by the Environment Agency, are the definitive means of measuring potential impacts of emissions from the RERF, and are available on the public register, but are also proactively published by Veolia on their website.
- 3.4.3 In terms of odour management, all waste delivered to the facility is tipped off in an enclosed waste reception hall with fast acting roller shutter doors. This area operates under negative pressure such that the air in the reception hall is generally drawn into the incineration process rather than escaping from the building. The reception hall is also fitted with an odour suppression system intended to neutralise odours in this area. The waste contract management team, the Environmental Action service and the Environment Agency will work together with Veolia to ensure that odours are monitored off-site and are being managed effectively at the plant.
- 3.4.4 The Environment Agency has conducted site visits and assessments of performance data during the commissioning process for the RERF. It is recognised that the commissioning process, by its nature, may present some minor issues as processes and equipment are tested in order to reach a steady state of operations. However, based on their assessments, the Environment Agency has raised no concerns in relation to environmental impacts during commissioning, nor in terms of the RERF's ability to operate in accordance with the permit conditions now that it is fully operational, although the facility will naturally remain subject to ongoing monitoring throughout its operational life.

3.5 Energy generation

- 3.5.1 The incineration process is now being used to generate a substantial quantity of electricity via the steam turbine. The RERF will export around 11MW of electricity to the national grid, equivalent to that required to power over 22,000 homes.
- 3.5.2 In addition to this, the Council is actively progressing the delivery of a district heating network linked to the RERF, supplying heat to local business and homes in the form of hot water or steam. Further to Executive Board approval in September 2014, the Director of Environment and Housing authorised the installation of a grid control valve in the RERF turbine, which enables a fuller range of heat off-take from the plant than would otherwise be achievable. This has now been installed and tested as part of the main commissioning of the RERF.
- 3.5.3 Alongside this, Veolia have now independently secured planning permission for a paper pulping facility on small portion of the vacant Council owned site adjacent to the RERF. It is anticipated that this would accept and process all of the paper and card extracted from the mechanical pre-treatment process at the RERF, converting this material into a fibre which can then be used to manufacture saleable recycled products.
- 3.5.4 It is planned that the paper pulping process will use heat from the RERF. Most significantly, this enables the possibility of gaining agreement to the value of Renewable Obligation Certificates (ROCs) for heat supplied from the RERF before the subsidy regime changes in March 2017. Agreement to the value of ROCs before this deadline will then allow this level of subsidy to be applied to a future expansion of supply of heat from the RERF, and is therefore critical to the business case for the Council's wider district heating proposals.
- 3.5.5 The Council's proposals for district heating were the subject of a recent report to the Executive Board in February 2016, with the Council agreeing the funding and procurement strategy for a scheme which will:
- be capable of heating the equivalent of approximately 10,000 homes;
 - reduce the city's carbon emissions by around 22,000 tonnes per year, equivalent to taking over 11,500 cars off the road;
 - reduce fuel bills for residents in social housing by up to £250 per annum per household, thus contributing to tackling fuel poverty;
 - provide greater energy security for the city;
 - create construction, operation and maintenance jobs and support further local economic development;
 - create the potential for future expansion of the network to deliver low carbon heat to additional sites across the city.

3.6 Employment

- 3.6.1 During the construction phase, some 600 people were employed on the project, providing a wide range of additional qualifications and training for those involved. The project also generated a significant amount of business for the local supply chain. It has provided the opportunity for different types of work experience for

university and secondary school students, as well as providing a number of apprenticeships throughout the construction phase.

- 3.6.2 During construction, Veolia and Clugston (the primary construction sub-contractor) worked in partnership with Construction and Housing Yorkshire to engage a local charity supporting homeless people, St George's Crypt, to provide on-site catering facilities. As well as securing additional funding for their charitable work, they were able to provide training and employment to long-term unemployed people.
- 3.6.3 Around 60 people will be employed at the RERF during its operational phase, and latest figures indicate that 20% of permanent operational posts have been filled by people living in adjoining wards to the facility.

3.7 **Design and biodiversity**

- 3.7.1 Veolia have delivered an undeniably high quality and iconic architectural design, featuring 42 metre high timber arches and creating a unique landmark for the City. The facility's design has already secured a national award, and is expected to garner more in due course.
- 3.7.2 The RERF also features an extensive living wall, believed to be the largest of its kind in Europe, which houses a wide range of indigenous plant species, provides habitat boxes for local wildlife, and will promote biodiversity in the area.
- 3.7.3 The scheme has also provided a green corridor along its eastern side and a cycle path along the western boundary, linking together sections of the existing cycle path network which were previously disconnected.

3.8 **Local community engagement**

- 3.8.1 Veolia and the Council have distributed information on the facility at key milestones in its development to keep local residents informed and to provide contact details. Although it is not being suggested that the RERF has now been fully embraced by the local community, the level of issues raised by local residents during construction and commissioning, and now through to commencement of full operations at the plant, has been extremely limited, providing no evidence for concerns about its ongoing impacts and long-term presence in this area.
- 3.8.2 A dedicated community liaison group has been established for some years now, although attempts to generate greater interest and attendance have been of limited success. Officers continue to make themselves available to meet with residents and attend community forums as required.
- 3.8.3 A community benefit fund has also been established via the PFI contract, and this will provide the opportunity for local groups to apply for funding for environmental and other community projects and improvements over the life of the contract. The Council's project team will be consulting local Ward Members on the eligibility criteria and the evaluation process for prospective applications.

3.8.4 The Council has also invested substantially in the neighbouring Cross Green and Nevilles estates during 2015, delivering a range of significant improvements to properties and their surrounding local environment.

3.9 Education

3.9.1 The project has attracted significant interest even throughout the construction period, with visits from a wide range of institutions including Leeds University and Leeds College of Building, and this is expected to continue into the operational phase.

3.9.2 The RERF features a dedicated Visitor Centre for use by the Council, enabling educational visits, presentations and facility tours. With the facility now complete, the Council's contract management team and Veolia are starting to organise visits, and have been working together with other partners to develop their format and content. It is intended that these visits will be made available to schools, and will provide an important opportunity, not just to explain what happens at the RERF, but also to communicate wider environmental messages, such as the importance of recycling at home, through interactive games and activities.

4 Corporate Considerations

4.1 Consultation and Engagement

4.1.1 The completion of the RERF is the culmination of many years of work, and this project has been consulted on extensively at different stages during this time. The ongoing community engagement is outlined in section 3.7 above.

4.2 Equality and Diversity / Cohesion and Integration

4.2.1 A full Equality, Diversity, Cohesion and Integration Assessment was completed for the project in June 2012, and a subsequent update was appended to the Executive Board report on this project in September 2014. Public consultation raised issues regarding traffic impacts, odour, noise, visual impact, emissions and health impacts. An action plan was prepared during EDCI assessment to address these issues and demonstrate how any potential impacts will be mitigated. It has not been deemed necessary to complete any further updates for this project, and the previous assessments referred to above are appended for information.

4.3 Council Policies and Best Council Plan

4.3.1 The proposed strategy is consistent with the Best Council Plan 2015–20 in terms of contributing to:

- A strong economy and compassionate city; and
- Becoming a more efficient and enterprising council, through a reduction in landfill costs.

4.3.2 The delivery of the RERF is also significant in relation to the Council's Climate Change Strategy. Furthermore, the future development of a district heating

scheme will not only result in additional reductions in carbon emissions, but will also provide the opportunity to contribute to tackling fuel poverty in social housing.

4.4 Resources and value for money

4.4.1 The PFI contract with Veolia was already expected to save the Council around £2.7m per annum compared to the cost of continuing to landfill the majority of kerbside residual waste. However, with the payment of the £30m capital contribution and the agreement of the 'Non-Reverting Asset' option involving the extension of the lease to Veolia, the total savings are now expected to be £7.0m in 2016/17.

4.4.2 Overall, it is estimated that the PFI contract with Veolia will save the Council an estimated £270m over its 25 year life when compared to the projected cost of a continued reliance on landfill.

4.5 Legal Implications, Access to Information and Call In

4.5.1 The issues covered in this report are all within the scope of the PFI contract which the Executive Board gave approval to the Council entering into with Veolia ES (Leeds) Ltd in November 2012.

4.5.2 The capital contribution and 'Non-Reverting Asset' options, and the installation of infrastructure at the RERF in order to facilitate a district heating scheme, have been exercised in accordance with the delegations agreed by Executive Board in September 2014.

4.6 Risk Management

4.6.1 A dedicated risk register has long been established for this project and is monitored regularly by the Project Board.

4.6.2 Clearly there is a wide range of potential risks associated with major infrastructure of this kind. However, robust contingency, health and safety, environmental and emergency plans and measures are in place either through the PFI contract or with the relevant regulatory and other authorities to ensure that risks have been fully assessed and are being effectively monitored and managed.

5 Conclusions

5.1 The RERF achieved Full Service Commencement under the PFI contract on 31st March 2016, over three months ahead of the anticipated date previously reported, thus triggering Full Service Commencement under the Contract. The facility is now delivering on a range of very significant environmental benefits, in particular in terms of recycling, landfill diversion and carbon reduction.

5.2 The contract will also deliver very substantial savings to the Council compared to the cost of a continued reliance on landfill.

6 Recommendations

- 6.1 Executive Board is recommended to note the contents of this report, most notably the fact that Full Service Commencement under the PFI contract has now been achieved, along with the resulting significant environmental and financial benefits to the Council and the City.

7 Background documents¹

- 7.1 None.

¹ The background documents listed in this section are available to download from the Council's website, unless they contain confidential or exempt information. The list of background documents does not include published works.