

NORTH LINCOLNSHIRE COUNCIL

CABINET

RESIDUAL WASTE TREATMENT FACILITY

1. OBJECT AND KEY POINTS IN THIS REPORT

- 1.1 To agree the appropriate technological solution for the future treatment of residual waste in North Lincolnshire.
- 1.2 To obtain approval to secure a partner to enter into a joint venture arrangement for the delivery and operation of a residual waste treatment plant.
- 1.3 To obtain approval for the necessary resources to set up a joint venture arrangement and for the joint venture to procure the agreed technology and Engineering, Procurement and Construction (EPC) contractor to deliver the residual waste treatment plant.
- 1.4 To obtain provisional approval for the use of Prudential borrowing to fund capital works associated with the delivery of a residual waste treatment facility.

2. BACKGROUND INFORMATION

- 2.1 The council has recently adopted a municipal waste management strategy for the future. The strategy indicates mechanical and biological treatment and advanced thermal treatment by a gasification process as favoured options on environmental grounds. The aspiration is to treat the remaining residual waste in order to recover energy from it, preferably in the form of electricity.
- 2.2 This strategy indicates a preference for generating renewable energy in the form of electricity while generating energy for residents and local businesses. This would also potentially benefit from the subsidies arising out of the review of renewable obligations. In terms of guarantee, these are time limited until 31 March 2017, but once accredited, will be available for a period of 20 years.
- 2.3 The council has consistently taken a view toward dealing with North Lincolnshire's waste at a facility in-county, in line with the published strategy and with previous public consultation outcomes. Furthermore, the encouragement of waste imports into the county are not supported, again in line with strategic objectives and consultation outcomes. This

limits the size of any treatment plant to one capable of dealing with the 50-60,000 tonnes of residual waste per annum that is generated in North Lincolnshire.

- 2.4 Planning is a key consideration in any decision relating to waste infrastructure. Planning approval exists for a 90,000 tonne gasification facility at a private site in North Lincolnshire, and approval for mechanical biological treatment exists at a Local Authority owned site in Scunthorpe.

3. OPTIONS FOR CONSIDERATION

- 3.1 A soft market testing exercise has recently been undertaken which indicates that there are 4 potentially deliverable solutions for treating residual waste.

Option A

Mechanical Biological Treatment (MBT) producing a Solid Recoverable Fuel (SRF) for combustion in a remote (out of area) Energy from Waste (EFW) or Advanced Thermal Treatment (ATT) facility.

Option B

Treatment in a local small scale ATT facility.

Option C

Treatment in a local small scale (less than 100,000 tonnes per annum) EFW facility.

Option D

Transfer loading and haulage of raw waste out of North Lincolnshire for treatment and/or direct combustion in an existing (or proposed) large scale (more than 100,000 tonnes per annum) EFW or ATT facility.

- 3.2 Following a refresh and subsequent adoption of the municipal waste management strategy, a value for money exercise was conducted on a small scale energy from waste facility based on gasification. With the potential for renewable obligation subsidies factored into the business case, this showed the potential for achieving renewable energy generation from waste at a competitive figure over 25 years.
- 3.3 Taking into account the factors outlined above in paras 2.1 to 2.4, options A and D in paragraph 3.1 are unable to meet the required criteria. This also applies to variations of options B and C that involve the addition of significant third party waste in order to maintain viability. When considering energy from waste plants sized at 50-60,000 tonnes per annum, the soft market test exercise indicated a preference for gasification over conventional mass burn technology, but not

exclusively. The VfM study indicated that certain gasification technologies were bankable and that these also benefitted from a higher level of renewable energy subsidy. Option B therefore is a better fit for the policy and strategic objectives set by the council.

3.4 The VfM assessment was predicated on the potential for achieving guaranteed income for a 20 year period from the Renewables Obligation. In order to attract this subsidy, a plant needs to be built, commissioned and accredited before 31 March 2017. In essence, this suggests a target completion date of October 2016. Discussions with potential suppliers and industry colleagues firmly indicate a build time of 24 to 30 months. This means that any procurement exercise has to be completed by March 2014, which is a challenging timetable. A project timetable indicating dates and milestones that would need to be achieved in order to secure renewable obligations income is attached at Appendix 2.

3.5 In order to create the best conditions to achieve this timetable, consideration has been given to the use of prudential borrowing and the potential for achieving a treatment plant by the setting up of a joint venture arrangement with an appropriate partner. A further soft market test exercise has demonstrated that there is market appetite for setting up a partnership.

4. ANALYSIS OF OPTIONS

4.1 An analysis of options is contained in the preceding paragraphs with further supporting information set out in Appendix 1.

5. RESOURCE IMPLICATIONS (FINANCIAL, STAFFING, PROPERTY, IT)

5.1 Financial

5.1.1 The cost of waste disposal and landfill tax is set to rise by a minimum of £0.8m by 2016/17. This assumes that the current costs of landfill would continue beyond the existing contract term and that landfill tax does not rise above the level of £80 per tonne. The government have made it clear that this level of £80 is a "floor" which in all probability will rise by at least inflation but could also continue to rise by £8 per tonne per year in order to promote increased landfill diversion. Costs may therefore continue to increase as market levels for gate fees increase and landfill tax increases. As a result, it is possible that the Council could be facing a further annual budget increase of £1.7m pa over that indicated in the forward plan. It should be possible to deliver the recommended solution within this budget, providing at the same time more certainty and reduced risk exposure to a "do nothing" position. Notwithstanding the financial arguments, landfill as a long term strategy is unlikely to be an option.

5.1.2 Implicit in a decision to secure the recommendation is a willingness to use prudential borrowing. This would be a significant addition to the council's debt which currently stands at £109m. However, this route is considered as providing the best value means by which to finance the recommended solution, either in whole or part. Prudential borrowing costs would be met within the overall waste budget.

5.1.3 There will be requirement to commit sufficient resources to enable the project to succeed. This will inevitably include an internal project team supplemented by specialist external advisors as required. At this stage, the total resources required to deliver the project are estimated at £1m to £2m.

5.2 Staffing

5.2.1 A small team comprising as a minimum, a Project Director, Senior Legal and Financial Officers and administrative support will be needed to negotiate and conclude the setting up of a joint venture, supplemented by specialist external advisors as required.

5.3 Property

5.3.1 None

5.4 Information Technology

5.4.1 None

6. OTHER IMPLICATIONS (STATUTORY, ENVIRONMENTAL, DIVERSITY, SECTION 17 - CRIME AND DISORDER, RISK AND OTHER)

6.1 The provision of an advanced thermal treatment facility for processing residual waste will contribute to an increase in the level of materials recycling and significantly reduce the amount of waste being landfilled.

6.2 The EU Landfill Directive requires landfilling to be reduced to 25% of those levels that were being landfilled in 1995. In the event that a Council fails to achieve this level of diversion, significant fines can be levied against it.

6.3 The emissions from any thermal treatment facility must be fully compliant with the requirements of the relevant EC Directive. In the case of the relevant gasification technology, these emissions are significantly below the statutory thresholds.

7. OUTCOMES OF CONSULTATION

- 7.1 A consultation exercise conducted prior to the drafting of the Municipal Waste Management Strategy indicated a broad support for treating waste in North Lincolnshire and recovering energy from the process.
- 7.2 The updated Municipal Waste Management Strategy has gone through a statutory consultation process with no adverse comments being received.
- 7.3 The Chief Executive, the Director of Policy and Resources and the Director of Places have been consulted and are in agreement with the content and recommendations in this report.

8 RECOMMENDATIONS

- 8.1 That the preferred option for long term residual waste treatment with production of renewable energy be a small scale advanced thermal treatment facility.
- 8.2 To approve progress of the necessary steps required to secure a partner to engage in the setting up of a joint venture in order to deliver and operate the residual waste treatment facility.
- 8.3 That appropriate specialist financial, technical and legal support be determined and procured.
- 8.4 To approve the establishment of a Project Team as outlined in the report.
- 8.5 To approve the allocation of funding to facilitate recommendations 8.3 and 8.4 above.
- 8.6 That the Director of Policy and Resources investigate the use of prudential borrowing and settle the terms of all arrangements for funding the majority, or all of the capital expenditure associated with the delivery of the waste treatment facility.

DIRECTOR OF PLACES

Civic Centre
Ashby Road
Scunthorpe
North Lincolnshire
DN16 1AB
Author: Keith Ford
Date: 18 January 2013

Background Papers used in the preparation of this report: None

Residual Waste Treatment Options Analysis	
Option A: Mechanical Biological Treatment (MBT) producing Solid Recovered Fuel (SRF) for combustion in a remote (out of area) Energy from Waste (EFW) or Advanced Thermal Treatment (ATT) process.	
Strategic Fit	The process (MBT) and use of SRF as a fossil fuel replacement in a local industrial process scored high in an Environmental Options Appraisal (EOA) completed as part of the refresh of the Municipal Waste Management Strategy (MWMS). The use of SRF as a fuel in an EFW or ATT plant was not specifically assessed. Transport of the SRF, potentially over long distances, would impact negatively on any WRATE assessment outcome.
Electricity	This option could generate renewable energy in the form of electricity. This would be done remotely, out of area.
Planning	There would be no planning risk and/or procurement delays if the EFW and/or ATT is in existence or already consented.
Proximity	The movement and treatment of SRF out of the area could be perceived as exporting waste. This is contrary to the stated aspiration within the MWMS to treat our own waste locally.
3rd Party Waste	This option assumes that SRF produced locally will be exported to a large existing treatment facility with surplus capacity. The requirement to source 3 rd party waste will not be an issue for the council.
Option B: Treatment in a local small scale ATT facility.	
Strategic Fit	ATT scored high in the EOA. Limited experience of treating MSW by ATT exists within the UK. Use of the technology is more commonplace on Mainland Europe. Approvals for UK based facilities have recently been granted.
Electricity	ATT attracts a higher ROC tariff than EFW (1.8 ROCs /MWhr of electricity in 2016/17). A 50ktpa throughput plant will generate 28,000 MWhrs of electricity of which up to 20,000 MWhrs could be renewable.
Planning	Planning consent for an ATT facility to be constructed within North Lincolnshire currently exists.
Proximity	This option assumes an ATT will be constructed within North Lincolnshire.
3rd Party Waste	The calorific value (CV) of MSW is at the lower end of the range (8 – 18 Megajoules/kilogram) of materials that can be treated in an ATT. Mixing MSW with higher CV wastes, removes a risk element. Sourcing third part wastes may be problematic. ATT facilities tend to be modular in design. A single facility will treat circa 50ktpa.

Option C: Treatment in a local small scale (less than 100,000 tonnes per annum) EFW facility.	
Strategic Fit	This option scored highly in the EOA. EFW is a proven technology with many reference plants within the UK and elsewhere. Most EFW facilities are large scale (>100,000 tonnes pa throughput) enjoying economies of scale, but smaller plants e.g. Stallingborough, are operational.
Electricity	Along with heat, electricity is the usual output of such facilities. Renewable Obligation Certificates (ROCs) are available for EFW with Combined Heat and Power (CHP). EFW facilities are the most efficient in terms of converting waste into energy but attract only single ROCs.
Planning	Planning consent for an ATT facility to be constructed within North Lincolnshire currently exists. Obtaining a second or subsequent consent for the same or similar facilities on a second site may be problematical.
Proximity	This option assumes an EFW will be constructed within North Lincolnshire.
3rd Party Waste	The treatment of Municipal Solid Waste (MSW) in an EFW is commonplace and proven with or without the addition of third party waste streams. The technology is comfortable with waste streams with relatively low calorific values e.g. MSW. The higher capital cost of EFW over gasification plants are normally offset by increasing the capacity to accept third party waste on viability grounds.
Option D: Transfer loading and haulage of raw waste out of North Lincolnshire for treatment and/or direct combustion in an existing (or proposed) large scale (more than 100,000 tonnes per annum) EFW or ATT facility.	
Strategic Fit	This option scored lower than the other technology options considered. The movement of raw waste out of North Lincolnshire and subsequent treatment elsewhere is contrary to the stated aims and aspirations of the MWMS.
Electricity	This option could generate renewable energy in the form of electricity. This would be done remotely, out of area.
Planning	There would be no planning risk and/or procurement delays if the EFW and/or ATT is in existence or already consented.
Proximity	The movement and treatment of raw waste out of the area will attract criticism. It is contrary to the stated aspiration within the MWMS to treat our own waste locally.
3rd Party Waste	The requirement to sort third party waste will not be an issue for the Council

RESIDUAL WASTE TREATMENT DRAFT PROJECT TIMETABLE

Complete extension of soft market testing – January 2013

Report to Cabinet recommending way forward – 29 January 2013

Analyse potential for satisfactory arrangements for dealing with key commercial issues in potential partnership models – February 2013

Project design, determination of evaluation criteria, technology due diligence, project outcomes – February/March 2013

Procure partner – March 2013

Negotiate JV agreement – April – September 2013

- Agree structure
- Resolve funding issues
- Resolve accounting, tax, competition, state aid and regulatory issues
- Agree property and asset ownership issues
- Agree decision making and control
- Agree dispute resolution procedures
- Agree technology and JV procurement issues
- Agree evaluation criteria and specification
- Agree termination and evaluation of assets issues
- Agree on how to deal with risks identified in standard waste contracts, widip

Form JVA – October 2013

Procure Design and Build and Operate and Maintain contractors in parallel. Use restricted procedure, if possible, 5 months minimum – November – March 2014

Commence D and B contract, 30 months – March 2014

Procure and evaluation of PPA – March 2014

Project completion – August 2016