

Agenda Item	<b>23</b>
Report No	<b>EDI/35/18</b>

## HIGHLAND COUNCIL

**Committee:** Environment, Development and Infrastructure

**Date:** 17 May 2018

**Report Title:** Waste Management Strategy - Residual Waste Project

**Report By:** Director of Community Services

### 1. Purpose/Executive Summary

- 1.1 With reference to the [paper](#) submitted at 8 November 2017 EDI Committee and the subsequent Report No WS/02/18, the purpose of this report is to:
- i. outline the justification for adopting a strategy for managing the Council's waste for the next 30 years, including the ban on landfilling waste in Scotland from 1 January 2021;
  - ii. detail the benefits that adopting this strategy will bring to the Highlands; and
  - iii. present the preferred solution recommendations.

### 2. Recommendations

- 2.1 Members are invited to:
- i. agree Option 2 within the report - the establishment of a Materials Recovery Facility (MRF) in the Inner Moray Firth area as the Council's preferred interim arrangement for meeting the requirements of the ban on landfilling Biodegradable Municipal Waste (BMW);
  - ii. note that the cost of continuing with current arrangements, Option 0, would be £365,049,000 over 25 years if the ban on landfilling waste in Scotland was not in place;
  - iii. support the establishment of an in-house project team dedicated solely to delivering the project solution; and to support the back-filling of those posts;
  - iv. agree that further work is carried out to identify the Council's preferred long-term arrangements for the management of its waste for the next 30 years, in particular the viability of Option 3, an Energy from Waste plant located in the Inner Moray Firth area;
  - v. ask Council to agree to the continuation of the role of the Member Waste Working Group to support and scrutinise the project going forward; and
  - vi. agree to the development of a communication strategy to help explain to stakeholders the Council's medium and long term proposals for managing its waste, and the role people can play in minimising their effect on the environment.

### **3. Background**

- 3.1 The Council's Waste Management services operate in a highly regulated environment. This regulatory regime covers the type of collection services that must be provided to households and businesses, the operation of our landfill sites, and how material can be processed. The most significant regulatory issue that the Council currently faces is the ban on landfilling all biodegradable municipal waste (BMW) in Scotland from 1 January 2021. It is aimed at reducing the significant amount of greenhouse gases produced from landfill sites and improving the use of waste as a resource.
- 3.2 The ban was announced in 2012 and thus far the Council has not delivered on a strategy to ensure that its waste management arrangements comply with this change in legislation. Urgent action is required to address the financial, legal and reputational risk to the Council presented by this ban, and doing nothing is not an option.
- 3.3 The Council landfills approximately 83,000 tonnes of waste a year at a cost of approximately £11.112 million a year. Failure to address the ban on landfilling BMW is a significant financial, legal and reputational risk for the Council and this is reflected in the Community Services' current Risk Register. There is therefore a need to agree a preferred solution and to deliver that solution at pace.
- 3.4 A number of proposals and strategies have been developed by the Council to address these issues. The Council's current Waste Strategy was approved in 2009, and proposed that 3 Energy from Waste (EfW) plants were built in the Highlands to allow us to move away from our reliance on landfill for disposing of our waste. These plants were to be constructed in Skye, Caithness and the Inner Moray Firth
- 3.5 In 2015, an Outline Business Case (OBC) was prepared for the Council that examined a number of options for disposing of the Council's residual waste. These included:
1. exporting of untreated waste to markets in the Central Belt of Scotland or North of England for processing to create Refuse Derived Fuel (RDF) for use in EfW plants;
  2. treatment of our waste within a centrally located facility in the Highlands to create RDF for export to the Central Belt, north of England or Mainland Europe;
  3. construction of a centrally located facility in the Highlands to create RDF for local EfW plants in Skye and Caithness with the remainder being sent out of the Highlands; and
  4. construction of a centrally located facility in the Highlands to create RDF for local EfW plants in Skye, Caithness and the Inner Moray Firth, with the remainder being sent out of the Highlands.
- 3.6 In August 2016, the Community Services Committee agreed to develop a Final Business Case to develop detailed proposals for residual waste treatment at plant(s) located in the Highlands:
1. reviewing the current Policy and Regulatory Framework within the UK and EU;
  2. developing models for potential increases in household waste in the Highlands;
  3. Developing proposals for the alignment of existing Council 3rd party contracts for its various waste streams and developing interim solution to meet the 1 January 2021 deadline;
  4. developing Technical Options and costs models for 2-3 preferred options under consideration, including:
    - a. centralised Refuse Derived Fuel creation (medium term) and
    - b. waste-to-energy plant (long term), including possible additional capacity

for processing selected local commercial and industrial waste; and  
5. undertaking a Financial Appraisal in accordance with requirements of HM Treasury 'Green Book' on public sector investment and other relevant government guidance.

3.7 The Final Business Case was completed in January 2018, and its recommendations are presented in Section 4 below.

3.8 In the meantime, a comprehensive Review of Waste Services was completed in January 2017 as part of Council Redesign. The Review recognised that urgent action was required to develop a long term waste management strategy, and recommended that Waste Services:

“Progress work immediately on finalising the business case for long term waste disposal in the Highlands, with an emphasis on determining whether and at what scale an Energy from Waste plant is appropriate. A clear plan of action and delivery timescales within a project management framework is essential. Requires a strong corporate and political lead and should be an immediate priority for the new Council”.

3.9 The recommendations within the Review were agreed at the Council meeting on 9 March 2017.

3.10 Finally, the Final Outcome Business Case provides the Council with an opportunity to:

- significantly reduce its impact on the environment;
- reduce its exposure to the volatility of the waste management market both in the UK and worldwide; and
- stimulate redevelopment within the Inner Moray Firth area.

#### **4. Final Outline Business Case**

4.1 Having completed the detailed analysis required for a Final Outline Business Case, three options have been identified as being the most practical and cost effective solutions to allow the Council to meet its statutory obligations with regard to managing its waste:

- Option 1 – Do minimum; that is, bulking and transfer of residual waste (currently circa 83,000 tonnes per annum) to third parties in the Central Belt of Scotland or the North of England for processing in accordance with applicable legislative requirements. This option requires the establishment of a Waste Transfer Station (WTS) in Inverness.
- Option 2 – Construct a centralised Materials Recovery Facility (MRF) on a suitable site in the Inner Moray Firth area to recover recyclates, and produce Refuse Derived Fuel (RDF); supported by haulage of separated recyclates and sale of RDF to third party end-users in Scotland and possibly North East England. This option will also require interim contracts to be established (for haulage of waste and waste processing capacity) with third parties until the MRF has been developed.
- Option 3 – Construct an Energy-from-Waste (EfW) facility co-locating it on the same site as the MRF from Option 2 above, and using the RDF created there.

4.2 The relative benefits and disadvantages of each Option are detailed in Table 4.2.1

below. However, it should be noted that all 3 Options would bring economic benefits to the Highlands with regards to the creation of at least 20 permanent jobs, and would allow the Council to meet its statutory obligations in terms of the ban on landfilling Biodegradable Municipal Waste

Table 4.2.1

Option	Benefits	Disadvantages
Option 1 - bulking and transfer of residual waste (currently circa 83,000 tonnes per annum) to third parties in the Central Belt of Scotland or the North of England	<ul style="list-style-type: none"> <li>• Relatively low capital cost (c. £3.2 million)</li> <li>• Suitable flexible interim solution to the Council, while it seeks to deliver one of the other options in the longer term.</li> </ul>	<ul style="list-style-type: none"> <li>• Highest unit cost of all 3 scenarios</li> <li>• Does not provide any recycling benefit to the Council</li> <li>• Highly sensitive to changes in transport costs and changes in the waste market</li> <li>• Relatively high carbon footprint compared with the other 3 options</li> </ul>
Option 2 – Construct a centralised Materials Recovery Facility (MRF) on a suitable site in the Inner Moray Firth area to recover recyclates, and produce Refuse Derived Fuel (RDF)	<ul style="list-style-type: none"> <li>• Low Capital cost (c.£6.5 million)</li> <li>• Lowest unit cost option</li> <li>• Flexibility with regard to coping with variations in the amount of waste that is delivered by the Council</li> </ul>	<ul style="list-style-type: none"> <li>• Uncertainty regarding the number of facilities needing RDF in Scotland</li> <li>• Additional transportation costs of RDF delivery to end-users in England or mainland Europe</li> </ul>
Option 3 - Construct an Energy-from-Waste (EfW) facility co-locating it on the same site as the MRF from Option 2 above, and using the RDF created there	<ul style="list-style-type: none"> <li>• Provides long-term skilled employment opportunities for plant operation</li> <li>• Contributes to the Council’s low carbon energy strategy and plans, by generating low carbon power for export to grid and heat for use locally by industry or in DH scheme</li> <li>• Could provide a focus for future ‘green’ industrial development (through provision of low cost, low carbon process heat)</li> <li>• Reduces vehicle movements on A9 by eliminating bulk haulage of waste to central Scotland</li> <li>• Contributes towards Council’s sustainability objectives.</li> <li>• Meets proximity principle</li> </ul>	<ul style="list-style-type: none"> <li>• More capital intensive than the other options (est. £88 million incl. ancillary District Heat infrastructure)</li> <li>• Second lowest unit cost option</li> <li>• Higher risk in terms of planning/ consents</li> </ul>

4.3 Aggregated development and operating costs for each of these three options, over a 25-year period (as per HM Treasury ‘Green Book’ on public sector investment), have been developed, along with an “Option 0”, which is the current cost of managing our waste projected over the same period.

The cost of Option 0 is £365,049,000. This has been calculated by projecting the existing budget over 25 years, taking into account inflation at 2%.

The additional costs of the 3 Options, over and above Option 0, are detailed in the table below and are net of any income received for electricity and heat:

	Baseline Cost Difference over 25 years
Option 2	£4 million
Option 3	£20 million
Option 1	£50 million

There is a risk that the costs could escalate significantly should the Scottish Government decide to replace the existing Landfill Tax (currently £88.95 per tonne) with an alternative tax. However, there is no indication at this time as to the likelihood of this.

4.4 All three options would deliver a solution to address the ban on direct landfilling of municipal waste from the start of 2021. It is recommended that the Council adopt a two-phase approach as follows:

- i. Phase 1 – deliver an interim solution based on Option 2 (as described in 4.1ii above).
- ii. Phase 2 – consider delivery of a long-term solution based on establishing a Highland Combined Heat and Power Energy from Waste plant.

4.5 Option 2 should be the current development focus as Phase 1 of our strategy for managing the Council's residual waste.

4.6 It should be noted that Options 2 and 3 are not mutually exclusive, but that Option 1 would not allow the Council to pursue a longer term solution such as an Energy from Waste plant

4.7 Work has commenced on delivery of the preferred interim Option (Option 2) pending agreement on the recommendations within this report. A Council-wide project team is in place comprising of officers from Community Services, Development and Infrastructure, Corporate Resources and Finance Service. A Cross Party Members' Working Group has been established to provide political oversight and scrutiny.

## **5. Location for a Materials Recovery Facility**

5.1 The identification and acquisition of a suitable site is fundamental to delivering a long-term waste management solution for the Council. Preliminary work has been undertaken to identify a suitable site for Options 2 and 3 in the Inner Moray Firth area. This work has been undertaken by the Council's Planning Team within the Development and Infrastructure Service. The site search work acknowledges that the site for a Materials Recovery Facility should be co-located with an Energy from Waste plant if and when such a proposal is brought forward (though the sites could be separate but costs would increase accordingly). However, for the avoidance of doubt, the site search currently being undertaken relates specifically to the Materials Recovery Facility.

5.2 This preliminary work has identified that, although there are a number of natural heritage and land use constraints within the Inner Moray Firth area, these would not in themselves prevent the construction of a large scale waste management facility there.

It is important that the site search is directed in the first instance towards those sites that are supported from a planning policy perspective within the Council's existing Local Development Plans.

5.3 Sites will be further assessed against specific criteria as follows:

- i. Existing designation for waste management within Local Development Plans (the only site with this designation within the Inner Moray Firth Development Plan is the Longman Landfill site in Inverness);
- ii. Existing designation for industrial use within Local Development Plans;
- iii. Proximity to sensitive receptors such as housing, schools and offices;
- iv. Site access (from perspective of users of/ deliveries to the MRF plant);
- v. Wider transport impacts;
- vi. Proximity to waste arisings;
- vii. Land use conflicts; and
- viii. Land ownership and willingness to agree to/ support MRF development

**6. Project Governance**

Successful delivery will be significantly determined by clear roles and responsibilities, regular and positive interaction between the governance structures and by timely decisions being taken by the appropriate authority.

The governance structure intended for the project is:

Authority	Purpose	Frequency (2018)
Environment, Development & Infrastructure (EDI) Committee	*Approval of strategic direction and preferred development option (MRF). *Scrutinise performance regarding progress towards delivery of the preferred development option.	May, August & November
Cross-Party Members' Working Group	*Oversee the key actions in relation to the Council's Waste Strategy. *Evaluate the viability of recommendations which will be developed for and submitted to EDI Committee on 17 May 2018.	Twice prior to May 18 EDI Committee
Project Board	*Principal decision-making body comprising participants with authority to approve plans and allocate resources to the project. *Scrutinise risks and project progress and authorise any necessary changes or remedial actions. *Advise and support the project team in the planning and delivery elements of the project.	Monthly
Project Team	*Develop and oversee the delivery of project design, specification, contract, procurement, implementation, handover, and operational stages on behalf of the Project Board. *Develop and implement communications to ensure all key project stakeholders are fully consulted and informed to progress the project. *A mix of internal and external personnel to reflect project complexity as recommended within SLR report.	Fortnightly

## 6. Implications

6.1 Resource: To work up to the point where Option 2 solution commences to operate, financial resources will be required for four key elements:

- i. The capital cost to design and build Option 2 (a Materials Recovery Facility, circa £6.5m). £6.695m has been identified in the Council's 2018/19 – 2022/23 capital programme for this purpose.
- ii. To renew and/ or replace the contracts for continuing to transport and handle the Council's residual waste until the Inner Moray Firth-located solution is ready. Current contracts will expire during 2019. The 2017/18 annual cost for these services is £6.34 million. There is an additional cost of £4.772 million to dispose of waste through internal arrangements at the Council's landfill sites at Seater in Caithness and Granish in Aviemore.
- iii. There will be limited market capacity in the UK, and particularly in Scotland, for processing waste after the landfill ban is introduced in 2021. It is therefore anticipated that renewed/ replacement contracts will be more expensive in the short to medium term. Further justification regarding any increase in funding will be provided to the Director of Finance and Corporate Resources.
- iv. The scale and complexity of the project will necessitate the engagement of experienced external advisers to complement and augment the expertise and capacity of the Council. In particular, assistance will be required with regards to:
  - a. Planning
  - b. Legal
  - c. Finance
  - d. Technical aspects of the project and
  - e. Procurement
- v. As identified in 6.2 above, Highland Council has established a Project Board which will be supported by a Project Team. In addition:
  - a. It will be necessary to supplement the core team with an internal project management resource dedicated to supporting the project. This could potentially come from the Council's Commercial & Efficiency Team.
  - b. To facilitate a dedicated team approach it is considered essential that approval be granted to back-fill positions for the duration of the project.
  - c. The annual cost for a dedicated team, assuming minimum of experienced HC10 and 30% on-costs:
    - i. Year 1: £41k x 6 (including Project Manager) x 1.3 = £320k. The team would consist of specialists in Planning, Procurement, Finance, Waste and Infrastructure Development. It would be supported by a dedicated Project Manager
    - ii. Year 2: £42k x 4 (including Project Manager) x 1.3 = £220k. The reduction in 2 posts from the previous year reflects the anticipated reduction in Procurement and Planning activity
    - iii. Year 3: £43k x 4 (including Project Manager) x 1.3 = £224k
  - d. These posts will be funded through the allocation to the Waste Strategy in the Council's current Capital Plan.

6.2 Legal: The Council's Waste Management services operate in a highly regulated environment. This regulatory regime covers the type of collection services that must

be provided to households and businesses, the operation of our landfill sites, and how material can be processed. The most significant regulatory issue that the Council currently faces is the ban on landfilling our waste from 1 January 2021. This was introduced through the Waste Management (Scotland) Regulations 2012. The Council is developing a strategy to address this ban, and the recommendations in this report are aimed at providing short to medium term solutions.

- 6.3 Community (Equality, Poverty and Rural): There are no known implications at this time.
- 6.4 Climate Change / Carbon Clever:
- 6.4.1 One of the aims of the ban on landfilling Biodegradable Municipal Waste is to reduce emissions of greenhouse gases from landfill sites. The methane emitted from landfill sites is significantly more harmful than CO<sub>2</sub>, although it is effectively controlled at the sites used by the Council.
- 6.4.2 The use of waste as a low carbon fuel in either 3<sup>rd</sup> party or our own facilities will reduce the Council's carbon footprint.
- 6.4.3 In the short to medium term this footprint will be affected by the increased transport required to effectively manage our waste; however, savings moving away from landfill to energy recovery will more than mitigate the effect of the additional transportation. Our footprint will be reduced in the longer term if an Energy from Waste facility is provided in the Inner Moray Firth.
- 6.4.4 These changes in our Carbon Footprint have not yet been evaluated. A full carbon footprint evaluation can be undertaken once the final location of the treatment facility is confirmed.
- 6.5 Risk
- 6.5.1 The Council's failure to develop a solution to the ban on landfilling Biodegradable Municipal Waste is a significant legal, financial and reputational risk to the Council. This is reflected in Community Services' current risk register.
- 6.5.2 There are also risks associated in the delivery of the project including:
- Regulatory regimes (planning and licensing); and
  - Changes to waste markets
- 6.5.3 These will be mitigated using the Council's Risk Management Strategy.
- 6.6 Gaelic: There are no known Gaelic implications.

Designation: Director of Community Services

Date: 8 May 2018

Author: Andy Summers, Head of Environmental and Amenity Services