

Report to the Cabinet

Meeting to be held on Thursday 18 January 2024

Report of the Director of Highways and Transport

Part I

Electoral Division affected:
(All Divisions);

Corporate Priorities:
Protecting our environment;

Anaerobic Digestion at the Farington Waste Recovery Park

Contact for further information:

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Brief Summary

This report outlines details of the obligation to process separately collected food waste from April 2026, the options considered, the financial implications and a proposal to provide an in-house solution through Lancashire Renewables Limited.

This is deemed to be a Key Decision and the requirements of Standing Order C19 have been complied with.

Recommendation

Cabinet is asked to approve:

- (i) The proposal to provide an in-house solution to process separately collected food waste.
- (ii) The provision of capital to fund the proposal as set out in the report.

Detail

The Environment Act 2021 is the legislative means by which government will deliver its Resources and Waste Strategy and it introduces a requirement for the separate weekly collection of food waste by waste collection authorities. The Department for Environment, Food & Rural Affairs has confirmed that these new obligations are to be in place from April 2026.



Modelling has been undertaken which estimate the amount of food waste collected based on population and demographics, it is anticipated that around 40,000 tonnes per annum of food waste will be collected in Lancashire, although the actual amount will remain uncertain until collections are in place.

Options for food waste processing

In most cases food waste is treated using a process called anaerobic digestion. The process creates a gas which is converted into electricity. There are two options in this respect:

1. Processing through third party contracts.

Market research has shown that currently the capacity to process Lancashire's food waste does not exist locally. This does not mean that the market will not respond, but it does mean that new infrastructure will likely have to be delivered to enable that. This in turn means that operators will logically seek to recover the capital investment made which could drive up processing costs across the market.

2. Processing at our Waste Recovery Parks.

At both Farington and Thornton Waste Recovery Parks we have anaerobic digestion infrastructure which is currently mothballed and in a state of preservation. Separately collected food waste is the ideal feedstock for anaerobic digestion and these facilities already contain a large amount of the infrastructure required to treat it, albeit that some modification will be required.

The capacity of the anaerobic digestion facilities is around 60,000 tonnes per annum, in excess of what it is anticipated will be collected. This allows contingency if the amount collected is more than the model suggests. In the event that it is less, the spare capacity can be sold commercially, generating income to reduce operating costs.

Both facilities already have two 943 kilowatt gas engines which can produce enough electricity not only to run the anaerobic digestion facilities but to run the whole of the waste plant, providing significant savings on energy costs.

Proposal for food waste processing

The proposal is that food waste be processed in-house, initially through our waste recovery park at Farington, utilising the energy recovered from the food waste to power the processes at the facility.

To achieve this will require procurement and installation of one new piece of equipment, some relatively minor modifications to the existing anaerobic digestion facilities and to refurbish some of the currently redundant equipment to handle and transfer the food waste.

The new equipment required will remove any contamination, such as packaging, from the food waste and prepare the food waste feedstock into a consistency which promotes the best gas yield for creating electricity.



The food waste treatment processes will be provided and operated by the council's waste company, Lancashire Renewables Ltd.

As the separate collection of food waste becomes established and a better understanding of actual tonnage and the operation of the Farington anaerobic digestion process is gained, the business case for replicating the process at Thornton Waste Recovery Park, including the potential for processing commercial food waste, will be assessed.

The proposal will require a one-off capital investment of an estimated £2.5m made up of £1.4m for new processing equipment and £1.1m for the changes to existing infrastructure and remediation and reinstatement of the existing plant.

Our modelling indicates that the general cost of processing the food waste based on 40,000 tonnes per annum will be around **£49.60** per tonne, or **£1.984m per annum**. The typical cost per tonne for treatment (known as the "gate fee") in the market currently is around £30 per tonne, or £1.2m per annum.

However, the generation of electricity based on 40,000 tonnes is estimated to save the waste recovery park direct energy costs circa **£4.019m** per annum based on current costs, which includes income generated from the trading of Renewables Obligation Certificates, issued by Ofgem for every megawatt hour (MWh) of renewable energy generated (through the Renewables Obligations Scheme), again, acknowledging the uncertainty of the energy market itself.

The overall saving to operating costs for Lancashire Renewables is therefore estimated at **£2.035m** per annum.

Despite the cost of processing the food waste, it should be noted that removing the food waste from residual waste will save an additional £4.301m against the cost currently incurred by the council in disposing of it as refuse derived fuel. As such the overall net revenue benefit of this proposal is estimated at **£6.336m** per annum.

In line with our joint working agreement with Blackpool Council in relation to waste disposal the above cost burden and benefits will be split 87.5%/12.5% between the county council and Blackpool Council respectively (£5.544m/£792k).

Consultations

N/A

Implications:

This item has the following implications, as indicated:



Risk management

Financial

The proposal elicits financial savings of £5.544m for the county council. Savings related to energy costs would not be realised if the proposal is not supported and a third party solution was required.

The capital commitment will be paid for by the revenue savings and as such will attract no additional borrowing requirement or interest charges to the revenue budget.

Any ability to sell unused capacity at the plants would also not be available.

Procurement

A procurement exercise will be conducted to purchase the new equipment required to deliver the project. Market research into the required technology and associated services has confirmed its availability.

Environmental

An in-house solution for processing food waste and generating electricity to power the waste recovery park allows the council to reduce its carbon burden more than a procured third party option.

Legal

Although, given the value, such services would normally require a procurement exercise to be carried out in accordance with the Public Contracts Regulations 2015, as Lancashire Renewables Limited is an entity under local authority control, the proposed arrangement would fall within the exemption from the public procurement rules permitted under regulation 12, permitting the county council to commission the services from the company without inviting competition.

List of Background Papers

| Paper | Date | Contact/Tel |
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None

Reason for inclusion in Part II, if appropriate

N/A

