For Hertfordshire County Council's Cabinet meeting on 14th March 2016

A briefing for the Leader of the Council and Executive Members on behalf of Herts. WithOut Waste

Subject: Revised Project Plan by Veolia ES for a Waste Incinerator Plant

In response to: The Officer's Report to the Cabinet Panel meeting on 4th March and to the Cabinet meeting on 14th March

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We have significant concerns regarding your potential acceptance of the Revised Project Plan (RPP) as the basis of the future direction of Waste Management in Hertfordshire.

The revised plan would incur an indicative £1.1 billion commitment[1] to build, commission and operate a waste incineration plant for the next 30 years. The Contract is no longer supported by PFI credits, so how is the RPP to be funded? Are you confident that future council tax payers will look back on the revised plan as a good use of taxpayers' money?

The facility, if built, would need to run for a 40 year lifetime, from 2020 at the earliest, consuming up to 320,000 tonnes of materials per annum. This would equate to 12.8 million tonnes destroyed that could largely have been re-used, recycled and composted. Are you confident that this suits the needs of present, and future, council tax payers[i]? What message do you think they will take from the Council agreeing to a proposal that is the very antithesis of support for efforts on the part of residents to prevent, reduce and recycle materials?

Waste management has changed considerably over recent decades and continues to do so. The direction of travel was recognised nine years ago by the Waste Strategy for England 2007[2], *"We are living beyond our environmental means. If everyone consumed as many natural resources as we do in England, then WWF suggests we would need three planets to support us. So our goal is 'One Planet Living'. Using the planet's resources within the limits of its eco systems is vital to the survival, health and prosperity of future generations."*

This is, of course, what the Circular Economy is about, and proposals[3] leading to a circular economy are of importance since they will provide the measures needed for waste management in future.

A circular economy implies reducing waste to a minimum. When a product reaches the end of its useful life, its materials are kept within the economy wherever possible. These can be productively used again and again, thereby

1 Figure 4 in the Officer's Report, Figure 4, page 17

2 Para 1, Chapter 1, of Defra's 'Waste Strategy for England 2007'
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/228536/7086.pdf

3 European Union hCircular Economy Strategy' http://ec.europa.eu/environment/circular-economy/index_en.htm

creating further value. Measures leading towards a circular economy include reusing, repairing, refurbishing and recycling existing materials and products.

Incinerating these resources would perpetuate the traditional, linear economic model, based on a 'take-make-consume-throw away' pattern and would be contrary to government policy. Defra's Energy from Waste Guide[4] states, "*Government's aim is to get the most energy out of residual waste, rather than to get the most waste into energy recovery. This reflects the desire to move waste up the waste hierarchy and the drive to prevent, reuse and recycle in the first instance".*

In addition to protecting the environment the circular economy model has the potential to offer substantial economic benefits. These include greater economic stability through increased resource security and new business and employment opportunities[5] from an expanding sector.

WRAP[6] considers that 16,282 new jobs could be created in Hertfordshire by 2030. By comparison, the proposal in the RPP would offer approximately 300 temporary jobs during the construction period and approximately 50 permanent jobs thereafter.

To aid the transition to a circular economy, one of the measures proposed is a legally binding target for recycling 65% of municipal waste by 2030. How would the RPP contribute to the achievement of such a target?

Speaking at a meeting of the Environment Council[7] which took place in Brussels on 4th March, with an environment minister present from each EU Member State, the European Environment Commissioner Karmenu Vella said, *"I would remind you that the targets which we have proposed are proven to be achievable by several member states and if you are not achieving those recycling grades then unfortunately you are literally burying valuable resources in the ground or burning them."*

A potential outcome of the EU's Circular Economy package is the introduction of a ban on incineration of any material that has not been through pre-treatment to remove recyclates. Appendix 4, page 35, of the Officer's Report states that the results from the waste composition analysis study indicate that 51.2% of

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4 Paragraph 59, in Defra's 'Energy from Waste: a Guide to the Debate', Feb. 2014
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/284612/pb14130-energy-waste-201402.pdf

5 Waste & Resources Action Programme (WRAP), 'Employment and the circular economy: Job creation in a more resource efficient Britain' http://www.green-alliance.org.uk/resources/Employment%20and%20the%20circular%20economy.pdfhttp://www.green-alliance.org.uk/resources/Employment%20and%20the%20circular%20economy.pdf

6 WRAP, 'Employment and the circular economy: Job creation in a more resource efficient Britain':
http://www.wrap.org.uk/content/employment-and-circular-economyhttp://www.wrap.org.uk/content/employment-and-circular-economy

7 European Union's Environment Council: public session on 4 March 2016
http://video.consilium.europa.eu/en/webcast/c6171453-2be8-4f83-ae5d-c01febac74f2http://video.consilium.europa.eu/en/webcast/c6171453-2be8-4f83-ae5d-c01febac74f2

residual waste collected contained recyclable materials. Since the RPP does not provide a materials pre-treatment facility, how would the Council comply with such a ban?

Once a material resource has been incinerated, regardless of any energy extracted, it has gone. Further, when assessing the amount of energy produced by the proposal, consideration needs to be given to the fact that energy will be needed to extract virgin raw materials from the natural environment and transform them to produce goods to replace those destroyed. Many of the materials could also have been remanufactured from recycled materials, or upcycled for re-use, thus saving further energy. Taking this into consideration would reduce considerably the net amount of energy that the proposal would generate, and might even negate it; so the plant might well consume and dissipate more energy that it would generate.

The EU's Circular Economy package could also result in an incineration tax[ii] to curb overcapacity[iii] and to ensure that the waste hierarchy is complied with 'from the top down'. Would the liability for paying an incineration tax reside with the County Council? Furthermore, might there be a requirement for the County Council to pay any incineration taxes arising from Veolia accepting third-party waste?

The Waste Review 2011[8] states, *"Waste infrastructure has a long lifetime and therefore changes in the composition and potential volumes of waste in the future cannot be ignored in the development and selection of technologies now".*

The RPP may appear to be economically the best option currently available, which we would in any case dispute because no other solutions apart from incineration have been evaluated to the same extent.[iv] However, is there clear evidence that it would be so for the duration of its lifetime? Furthermore, has the Cabinet been given the evidence to show that the RPP would be the best environmental option?

The amount of CO_2 emitted by incinerators is neither measurable nor regulated. The fact is that the proposal would emit CO_2 into the local environment. The Environment Agency[9] estimates that between 0.7 and 1.7 tonnes of CO_2 is generated per tonne of local authority collected waste (LACW) that is combusted.

In its report 'Energy recovery for residual waste: A carbon based modelling approach'[10] Defra concludes that there are potential balance points beyond which energy from waste could perform worse than landfill in carbon terms.

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8 Para. 230 of Defra's 'Government Review of Waste Policy in England 2011': https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69401/pb13540-waste-policy-review110614.pdf

9 Environment Agency 'Pollution inventory reporting – incineration activities guidance' Dec. 2012: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/296988/LIT_7757_9e97eb.pdf

10 Defra's 'Energy recovery for residual waste: …', 2013: http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=0&ProjectID=19019

Moreover, 'The Economics of Waste and Waste Policy'[11] notes*: "MBT (mechanical biological treatment) - landfill provides the best emissions performance in terms of the treatment/disposal of residual waste. It essentially involves landfilling*[v] *somewhat stabilised wastes with some material recovery. The magnitude of the environmental impact depends on the extent to which the waste is stabilised."*

It is well known that no food waste should ever go to landfill. In our view it is equally environmentally, and economically, irresponsible to send it to incineration.

In the waste hierarchy Anaerobic Digestion[12] (AD) is preferred to incineration for disposing of food waste. The benefits of AD are energy recovery and the production of valuable biofertiliser. The biogas can be used to generate heat and electricity, converted into biofuels or cleaned and injected into the gas grid.

AD is less costly than incineration, and it has an important place in a circular economy.[13] Moreover, the residue is a beneficial biofertiliser that can be used in place of chemicals.

Such local processes require much lower levels of investment and can be set up or dismantled more easily so they afford the flexibility to benefit from economic and technological developments.

By comparison, incineration produces residues that are hazardous.[14] According to Defra[15] the amount of Flue Gas Treatment residues (FGTr) produced by an incineration process can be between 2% - 6% of the waste input. It is proposed to send the FGT residues to a former salt mine near Winsford, Cheshire. The distance to Winsford is *ca*185 miles by road from Ratty's Lane; a round trip of 370 miles, which would add to haulage costs and pollution by HGV emissions.

Incinerator Bottom Ash (IBA) is also a waste product of incineration. According to the Environmental Services Association, IBA represents about 20-30% of the input waste. IBA has a 'mirror' classification in the EA Technical Guidance[16], meaning that it can be classified as hazardous waste depending on its contents,

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11 Page 14, of Defra's 'The Economics of Waste and Waste Policy', 2011
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69500/pb13548-economic-principles-wr110613.pdfhttps://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69500/pb13548-economic-principles-wr110613.pdf

12 Paragraph 2.2, in Defra's 'Guidance on applying the Waste Hierarchy', June 2011
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69403/pb13530-waste-hierarchy-guidance.pdf

13 Ellen MacArthur Foundation 'Circular Economy System Diagram':
http://www.ellenmacarthurfoundation.org/circular-economy/interactive-diagram

14 Para. 6.4 in the Officer's Report, paragraph 6.4

15 Defra 'Incineration of Municipal Solid Waste', Feb. 2013:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/221036/pb13889-incineration-municipal-waste.pdf

16 Environment Agency and others, 'Waste Classification … Technical Guidance WM3':
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/427077/LIT_10121.pdf

e.g. heavy metals. If found to be hazardous, specialist landfill is also required for this by-product.

To say that "*good use will be made of the aggregate ash"* or that *"all the ash is recycled"*[vi] is to oversimplify what is a very complex issue.

In future it is possible that changes will require more rigorous testing[17] of IBA. This would incur costs for both treatment and for specialist disposal of any IBA that was deemed eco-toxic. Would Veolia pay these additional costs or would that risk fall to the Council?

And, of course, the more incinerators that are operational, the more IBA will be produced. This could lead to a saturated market in Incinerator Bottom Ash Aggregate.

The Waste Management Plan for England[18] states, *"We anticipate that waste prevention measures will ensure that the progress that has been made in decoupling growth and waste arisings will continue."*

It should not therefore be assumed that residual waste will rise throughout the lifetime of the proposal. In fact, we submit that with separate, efficient collection and anaerobic digestion of food waste; increased sorting and recycling of plastics, paper and other key materials, and further re-use facilities, there will be little residual waste and even less combustible, genuinely residual waste in the very near future.

It is said that the RPP has its roots in the Joint Municipal Waste Management Strategy 2007 (JMWMS) for Hertfordshire.[19] However, there is no mention in the strategic objectives or core policies of the JMWMS of 'a long term solution' such as that proposed by the RPP. In fact page 22 states, *"the suggestion is that the best balance of affordability and performance for the strategy as a whole is likely to be met through a facility of relatively small scale (60-80,000 tonnes) to be followed by further capacity development in subsequent years. The capacity of subsequent treatment should be informed by performance in respect of recycling and composting. This approach renders the whole strategy more flexible to changes in technologies, policies, associated performance and social preferences".*

This was the recommendation to the Hertfordshire Waste Partnership in a report by Eunomia[20] in 2006. We submit that adopting this recommendation would better meet the aims of the Circular Economy than the RPP.

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17 BIO by Deloitte (BIO), INERIS for EU DG ENV, 'Study to assess the impacts of different classification approaches for hazard property "HP 14" on selected waste streams Final report' http://ec.europa.eu/environment/waste/studies/pdf/H14.pdf

18 Page 36 of Defra's Waste Management Plan for England, Dec. 2013: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/265810/pb14100-waste-management-plan-20131213.pdf

19 Para. 4.1 of the Officer's Report

20 Eunomia 'Management of Residual Wastes: Report for Hertfordshire Waste Partnership' May 2006: http://www.hertsdirect.org/docs/pdf/w/residualsreport.pdf

There is an opportunity now to invest to save in the Hertfordshire Waste Partnership so as to process arisings locally in industrial and agricultural units sited close to the main towns in the county.

We call upon the Cabinet to reject the Revised Project Plan and to cancel the Contract forthwith. This would enable the Council to explore a strategy for all partners that would meet the resource needs of the County in future.

Explanatory notes *(p.t.o.)*

i Herts WithOut Waste recently ran a petition that called on Hertfordshire County Council for more recycling and composting instead of incineration, which was presented at the Cabinet Panel meeting on 4th March. It gathered over 200 signatures from residents across the County in just two days.: https://www.change.org/p/councillor-richard-thake-urge-herts-county-council-to-stop-incinerating-waste-and-raise-recycling-rates-instead?recruiter=39260012&utm_source=share_petition&utm_medium=copylink

ii There is already incineration overcapacity in a number of EU states, e.g. Germany and the Netherlands, which has necessitated the importation of RDF/SRF from other countries. In Norway, the competition between incineration facilities for less and less residual waste has led to a sharp drop in gate fees. So much so, that some facilities are closing, e.g. the Energos Averøy plant in Norway, as the stakeholders were unwilling to subsidise continued the operation of the plant.

iii The report by Defra for Hertfordshire County Council in Oct. 2014, 'Forecasting 2020 waste arisings and treatment capacity', which accompanied the withdrawal of financial support for the Council's Residual Waste Treatment Project, showed that further incineration capacity in Hertfordshire will lead to UK overcapacity. The report stated that if the project went ahead operational capacity in the UK would rise from 65% to 67% above the required target.
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/364243/forecasting-2020-hertfordshire-analysis-20141016.pdf

iv A comparison of the RPP with the market engagement responses is not comparing like with like, since the RPP is contractual and the market engagement responses are hypothetical. This is acknowledged at para. 16.11 of the Officer's Report which states, "*It is important to note that the market consultation exercise is not a formal procurement exercise and as such the information supplied is not binding and was supplied in good faith at the time of the exercise being carried out".*

v Landfilling of fully stabilised and inert materials is generally accepted as a means to restore areas which have been quarried for minerals.

vi Not all IBA is re-used, some is landfilled, as waste data shows. Further IBA does not count towards recycling targets, para 9.1,
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/221036/pb13889-incineration-municipal-waste.pdf