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28th April 2007.

For the attention of: Mr. Andy Conn, Senior Waste Management Officer,
Wiltshire County Council, County Hall, Trowbridge BA14 8JD.

Dear Mr. Conn, Wiltshire Waste Strategy : Financial Costs of Strategic Options.

Thank you for your letter of 30th March 2007 which replied to our letter of 22nd February 2007, and for the provision of the reports by Entec UK Ltd, titled "*Analysis of Strategic Long Term Options for Waste Management in Wiltshire Final Report May 2005*" and "*Logistics Modelling Final Report May 2005*". Both of these reports were provided by you under the Freedom of Information Act (Environment Information Regulations), although we had made no such request for a reply from you under these Regulations.

The immediate question is whether your reply of 30th March provided the information about the financial costs under "best value" criteria for strategic waste management options which we requested in our letter of 22nd February. Specifically, we requested on 22nd February:

"We are asking Wiltshire CC to provide us with the cost, expressed in £ per tonne (i.e. the cost of each tonne of municipal waste collected and managed), for the following strategic waste management options for delivery on the following dates 2010, 2015 and 2020:

1. Cost of collection and management (£ per tonne) with waste recycled and composted in order to meet the Landfill Regulations operative on the date in question (2010, 2015 and 2020) and with residual waste to landfill (cost inclusive of Landfill Tax expected to be operative on that date).
2. Cost of collection and management (£ per tonne) with waste recycled, composted and sent to incineration (e.g. Slough incinerator and MBT facility at Westbury) in order to meet the Landfill Regulations operative on the date in question (2010, 2015 and 2020) and with residual waste to landfill (cost inclusive of Landfill Tax expected to be operative on that date).

In the provision of this financial information, we ask that the financial information for each of the two strategic waste management strategies above is not just provided as a final total figure, but that it is also broken down into its components. These components are:

1. The cost of collection.
2. The cost of recycling and composting.
3. The cost of incineration.
4. The cost of landfill.

We believe that none of this information is commercially sensitive, that it is entirely generic (i.e. relates to the option per se, and no particular contract), and that it exists in costings provided to members of the Council in pursuance of their obligation to determine which strategic waste management option, or mix of options, the Council should pursue in order to deliver best value."

Your letter of 9th March 2007 from Mr. Andrew Mullins, WCC Admin and Project Co-ordinator, confirmed your understanding of the above details in our request, and asked whether we wanted the information on a calendar or financial year basis. We replied on 14th March to advise that

the information would be acceptable on a financial year basis, and that in respect of the middle date – 2015 – we asked that this be altered to financial year 2013/14 as this better fitted with the biodegradable waste diversion targets of the Landfill Regulations than financial year 2015/16.

You acknowledged receipt and your understanding of our letter of 14th March in your letter to us of 21st March.

Thus, with the above modifications, this was the precise nature of our request originally dated 22nd February to which you replied on 30th March.

Your reply of 30th March.

We note the following facts:

1. Your reply did **not provide** the cost of collection and management (£ per tonne) of waste on **any of the financial years** in question (2010/11, 2013/14, 2021/21) against either of the **two strategic waste management options** which we identified (namely: **a/**. waste recycled and composted in order to meet Landfill Regulations operative on the date in question with residual waste to landfill; and **b/**. waste recycled, composted and sent to incineration in order to meet the Landfill Regulation operative on the date in question, with residual waste to landfill), despite your earlier confirmation of your understanding of this request.
2. Your reply did **not** identify the specific **cost of collection of waste** (£ per tonne) for any of the financial years in question, despite your earlier confirmation of your understanding of this request.
3. Your reply did **not** identify the specific **cost of recycling and composting** (£ per tonne) for any of the financial years in question, despite your earlier confirmation of your understanding of this request.
4. Your reply did **not** identify the specific **cost on incineration** (£ per tonne) for any of the financial years in question, despite your earlier confirmation of your understanding of this request.
5. Your reply did **not** identify the specific **cost of landfill** (£ per tonne) for any of the financial years in question, despite your earlier confirmation of your understanding of this request.
6. Your reply did **not** provide any specific financial information relating the above matters in terms **“best value” criteria**, a procedure that local authorities are obliged to undertake in order to determine strategic options, despite your earlier confirmation of your understanding of this request.

The nearest your reply of 30th March 2007 comes to addressing any of the above matters is in your 5th paragraph where you state : *“Your letter of 22nd February also requests financial information on two strategic waste management options described by yourself. I am unable to meet this request, because I do not have generic financial information for strategic options, other than that made available in the two reports attached to this letter [the Entec reports of May 2005]. However, I hope that the information supplied and the large number of options covered will enable you to assemble information for something akin to the options that you describe.”*

Thus it would appear, by your own statement, that **Wiltshire County Council has no financial information on a generic basis of the components for any financial waste management strategy (the cost of collection, the cost of recycling and composting, the cost of incineration, and the cost of landfill) which would enable the County Council to assess on a “best value” basis its strategic waste management obligations and duties, either now or in the future.**

Entec Reports of May 2005.

The next question is whether the Entec Reports of May 2005 (attached to your reply of 30th March) supply any of the information which your own response failed to do.

The Entec Report, titled: *Analysis of Strategic Long Term Options for Waste Management in Wiltshire*, states in Chapter 7, Cost Performance of Options:

“A cost analysis of the principal options under evaluation has been conducted to gain an understanding of the relative costs of the competing options. In this analysis we have concentrated on the comparison of the overall infrastructure costs (capital and revenue) that could be accrued in pursuing the various options over a 25 year operational period”. Ref. 7.1 , page 83.

In fact, 12 options are considered and these are tabulated in Table 7.2, page 88.

Whilst the above statement (para 7.1, page 83) appears to be evaluating “the relative costs of the competing options” and involves “the comparison of the overall infrastructure costs (capital and revenue). . . . over a 25 year period”, we have noted the following qualifications in paragraph 7.2, page 83, titled: Cost Assumptions, in Chapter 7 of the Entec Report:

Firstly:

*“The unit processing costs are presented on a £/tonne basis and include for all operating and maintenance costs, debt repayments associated with the facility, capital cost and an element of profit to represent a return on capital of 10-15% to a third party owner/operator of such a processing facility. **In most cases the cost of handling residual streams from energy recovery systems are included in this processing cost, except for Landfill Tax and hazardous landfill fees.**”* [note: emphasis added and not in the original].

We note that “energy recovery systems” are a euphemism for the incineration option. The “residual waste stream” from an incinerator (bottom ash and chimney filter ash) and the residual non-recyclable inorganic material from an MBT plant which manufactures the fuel for an energy recovery process (e.g. a cement works) can both be considerable in terms of size (tonnage). Therefore to exclude Landfill Tax and hazardous landfill fees payable on this “residual” material from the cost analysis of energy recovery systems can lead to substantial distortion to the actual cost of this option.

Secondly:

*“**The costs of providing the enhanced kerbside recycling, bring bank and HRC** [Household Recycling Centre] **services has not been modelled within this analysis. Part of these costs may be provided by service innovations, increased public awareness, recyclate income and external grants.** Wiltshire County Council and their partners in the District Councils will have to examine this issue in detail.”* [note: emphasis added and not in the original].

We note that collection costs and recyclate revenue are a fundamental component of the recycling/composting option. Therefore to exclude an analysis of these costs from the evaluation of this strategic waste management option is a serious shortcoming. This omission seriously distorts, even invalidates, the Report’s evaluation of a key component of most of the strategic waste management options.

However, leaving these reservations and shortcomings aside for one moment, let us now examine the Entec Report’s figures and costings for three of the principal waste management options;

namely, Option 4 (Maximum recycling with residual to landfill); Option 8 (maximum recycling, residual to Energy from Waste [EfW]; and, Option 10b (Maximum recycling, with 100,000 tonnes per annum to EfW out of the county, and 60,000 tonnes per annum MBT with RDF [refuse derived fuel] in the county). Ref. Table 7.2, page 88.

Notes:

1. Maximum recycling is defined as 51% of the municipal waste stream.
2. There is **no** Option in the Entec Report which currently mirrors the County's present Waste Strategy – namely (for calendar year 2020) : 39% recycling/composting, 47% energy from waste (incineration), and 14% landfill, ref. Table 15, Volume 1 : Wiltshire CC Core Strategy Preferred Options document, June 2006. In other words: 39% recycling/composting, with the remainder of the waste from N. Wiltshire DC/West Wiltshire DC/Kennet DC to MBT plant at Westbury (and thus into RDF for cement works with residual to landfill); and, 39% recycling/composting with remainder to Slough incinerator for Salisbury DC.
3. Option 10b assumes that the majority of residual waste (100ktpa) arising in Wiltshire will go *out of the county* for EfW [incineration with energy recovery] and a minority (60ktpa) of residual waste will go to MBT/RDF *out of the county* . Option 10a assumes that the majority (100ktpa) of residual waste arising in Wiltshire will go *out of the county* for EfW [incineration with energy recovery] and a minority (60ktpa) of residual waste will go to MBT/RDF *in the county* .

In actual fact, **the real Option (see Note 2 above)** – which we may call 10c and which is **not** considered by Entec – **is for the majority (100ktpa) of residual waste arising in Wiltshire to go to MBT/RDF *in the county*, and a minority (60ktpa) of residual waste will go for EfW [incineration with energy recovery] *out of the county*.**

Thus, the actual waste management strategy currently being developed by Wiltshire CC is not evaluated by Entec in any of its 12 Options.

Digest of Entec's Table 7.2

Cost Categories (all costs £ per tonne)	Option 4 Max. recycling, residue to landfill	Option 8 Max recycling, residue to EfW	Option 10b Max recycling, 100ktpa EfW out of county and 60ktpa MBT with RDF in county
Collection, Processing and Transport costs	£ 43	£ 179	£ 204
Landfill Disposal costs (exc. Tax)	£ 87	£ 26	£ 30
Landfill Tax costs	£ 92	£ 22	£ 33
BMW LF excess	£ 70	£ 0	£ 0
Sub-total	£ 292	£ 227	£ 268
Recyclates/Recoverables Sales	£ 16	£ 16	£ 16
BMW LF surplus	£ 2	£ 30	£ 29
Sub-total	£ 18	£ 46	£ 45
Net costs	£ 274	£ 181	£ 223

Therefore, in providing us with the Entec Report and its table 7.2, the essential question is whether you have provided us with the information which addresses our fundamental question : what are the unit costs, in generic terms (best value), for the cost of collection, the cost of recycling and composting, the cost of incineration, and the cost of landfill ?

The answer is that you have not. The reasons why is so are:

1. The unit costs are not evident from the table.
2. The basis by which the costs which are in the table have been arrived at (i.e. the factual basis) are not recorded in the Entec report.
3. Hence, any attempt to calculate these unit costs from the table would be wholly speculative and guesswork.
4. If one category of costs is taken as an example – Collection, Processing and Transport costs – this is cited as being £43 for Option 4, £179 for Option 8, and £204 for Option 10b. Why should this category of cost be so variable ? Can we be seriously expected to infer the unit cost for the cost of collection from Table 7.2 ?
5. As mentioned above, Entec state in paragraph 7.2, page 83 “ *In most cases the cost of handling residual streams from energy recovery systems are included in this processing cost, except for Landfill Tax and hazardous landfill fees.* ” This presumably means that the Landfill Disposal costs and the Landfill Tax costs for Options 8 and 10b are understated. Once again, can we be seriously expected to infer unit costs from Table 7.2 ?
6. It is also to be noted (not evident from our digest of Table 7.2) that the Recyclates and Recoverables sales appear to be understated. The evidence for this statement derives from the fact that in other Options in Table 7.2 where recycling is included at less than “maximum” level (i.e. not at 51%), the actual figure used is 35% (ref. paragraph 7.4, page 85). When the recycling rate is 35%, the values given to these sales is £14 per tonne. However when the recycling rate rises to 51%, the value given to these sales is £16 per tonne. Surely the rise from 35% to 51% in the recycling rate will generate more value than an additional £2 per tonne ? Therefore it would appear that this aspect – the unit cost of recycling and composting – clearly cannot be inferred from this table, and we have some further comments to make on this point below.

In your letter of 30th March 2007, you state “ *I do not have generic financial information for strategic options. . . . I hope that the information supplied [the Entec reports] and the large number of options covered [Table 7.2] will enable you to assemble information for something akin to the options that you describe.* ”

The answer to your hopeful thinking is clear – you are mistaken in your belief that the unit costs of collection, recycling/composting, incineration and landfill can be inferred from the information you have provided. Indeed, not only does Wiltshire CC itself have no generic financial information for the strategic waste management options, but it also appears that your consultant, Entec, does not have this information either.

It would appear that a clear, logical assessment of “best value” in terms of the unit costs of the key components of the principal waste management strategic options has neither been undertaken by the Waste Authority nor its consultants, and that the published evidence and work that does exist in support of the Waste Authority’s decision-making is factually obscure and not clearly grounded.

Sales of Recyclate and Recoverables.

Wiltshire Friends of the Earth, in common with the Waste Hierarchy, supports the maximisation of recycling, re-use and composting in preference to incineration and landfill. This is because recycling and composting conserves valuable resources, both in terms of raw materials and energy, and because incineration and landfill destroy those resources and are, by comparison, highly polluting.

It is therefore important that a waste management strategy maximises the ability to recycle, re-use and compost waste materials.

Central to this ability is affordability and good financial arrangements. It is for this reason that we place such great value and emphasis on Wiltshire County Council being able to demonstrate the financial cost (generic unit costs) of the key components of its waste strategy and the strategic options. If this information does not exist, or is poorly calculated, then it is very likely that poor decision making will follow and that the needs and requirements of the Waste Hierarchy will be frustrated.

We have observed that in the Entec reports, supplied with your reply of 30th March, the evaluation of the potential ability of the sale of recyclate and recoverables to contribute significantly to the financial soundness of the waste strategy has been largely unassessed or, at least, unrecorded.

We are not in a position to make definitive statements in this regard. However, using the factual information available in published form from the Waste Authority and others, we are able to provide an *illustrative* account of the scale and importance of this specific matter.

We therefore offer the following figures for consideration:

We assume that the annual tonnage of municipal waste handled by the Waste Authority to be around 300,000 tonnes (ref. Wiltshire CC Core Strategy Preferred Options document, June 2006).

We assume the composition of the municipal waste stream to be as follows (ref. Entec report: *Analysis of Strategic Long Term Options for Waste Management in Wiltshire Final Report May 2005*, Fig. 2.3, page 13):

Biodegradable Recyclables		Non-Biodegradable Recyclables		Non-Biodegradable Residuals	
Paper and cardboard	24%	Glass	8%	Plastic film	4%
Kitchen waste	22	Textiles	3	Misc. combustible	6
Garden waste	16	Ferrous metal	3	Misc. non-combustible	2
		Non-ferrous metal	3	Fines	4
Sub-total as % of total municipal waste		22%		16%	

Therefore, in theory, 84% (62% + 22%) of the municipal waste stream is potentially available to recycling, re-use and composting.

However, in reality, the capture rate for kerbside collected recyclable and compostable material is lower. Entec in their Report, *Analysis of Strategic Long Term Options for Waste Management in Wiltshire Final Report May 2005*, recognise and quantify this reality. Only a fraction of each waste stream (paper, plastic, glass and so forth) is actually available for recycling and composting. This is quantified in their Table 4.2, page 39, and the details are as follows:

<u>Material.</u>	<u>Portion of waste stream that is recyclable.</u>
Paper	80%
Plastic	70%
Glass	90%
Ferrous metals	90%
Non-ferrous metals	70%
Textiles	90%
Garden waste	90%
Kitchen waste	90% (Note: kitchen waste is not covered in Table 4.2, but we assume a recyclable rate equal to garden waste).

When Table 4.2 is applied to the percentage composition of municipal waste, Fig 2, page 13, in the Entec Report, *Analysis of Strategic Long Term Options for Waste Management in Wiltshire Final Report May 2005* (see above), the actual percentage of recovered materials is apportioned as follows (e.g. Paper and cardboard: 90% (recyclable rate) of 24% (composition rate) = 21.6%)

<u>Biodegradable Recyclables</u>		<u>Non-biodegradable Recyclables</u>	
Paper and cardboard	21.6%	Glass	7.2%
Kitchen waste	19.8%	Textiles	2.7%
Garden waste	14.4%	Ferrous metals	2.7%
		Non-ferrous metals	2.1%
		Dense plastic	3.5%
Sub-total	55.8%	Sub-total	18.2%

Therefore, instead of 84% of the municipal waste stream being available for recycling, re-use and composting (the theoretical model), in practice the figure is 74% (55.8% + 18.2%).

It is true that this would require 100% of all households to participate in kerbside recycling for this figure of 74% to be available for recycling, re-use and composting. Whilst this is clearly not true at the present time, certain Local Authorities are reporting participation rates in excess of 80%, and by the year 2020 it is possible that there will have been a sufficient “culture change” for the participation rate to be approaching 100% (i.e. financial incentives and penalties in the calculation of Council Tax to support kerbside recycling).

These “practical recycling rates” for individual materials in the waste stream can now be applied to the annual total of Wiltshire’s municipal waste (300,000 tonnes) in order to quantify the actual amounts of particular materials becoming available to the Waste Authority, and thus available for recycling, re-use and composting. For example, paper and cardboard constitutes 21.6% of the waste stream, and therefore the annual tonnage available is 64,800 tonnes (300,000 x 21.6). The amounts of each material available annually can therefore be tabulated as follows:

Paper and cardboard	64,800 tonnes
Glass	21,600 tonnes
Dense plastic	10,500 tonnes
Ferrous metals	8,100 tonnes
Non-ferrous metals	6,300 tonnes
Textiles	8,100 tonnes
Kitchen waste	59,400 tonnes
Garden waste	43,200 tonnes

Knowing these quantities, it is now possible to calculate the potential value (revenue) of each of these waste “commodities” in the market place, and thus the potential revenue stream available to the Waste Authority from a maximised recycling, re-use and composting waste strategy.

The market place value for these materials are obtainable from Letsrecycle.com, and we have used the April 2007 values in order to calculate the potential annual revenue that would be available. This is tabulated below:

Material	Market Value, £ per tonne	Annual Quantity	Annual Revenue
Paper and cardboard	£ 55	64,800 tonnes	£ 3.56 million
Glass	£ 25	21,600 tonnes	£ 0.54 million
HDPE plastic	£ 180	3,500 tonnes	£ 0.63 million
LDPE plastic	£ 250	3,500 tonnes	£ 0.86 million
PET plastic	£ 90	3,500 tonnes	£ 0.32 million
Ferrous metal	£ 90	8,100 tonnes	£ 0.73 million
Aluminium	£ 800	4,050 tonnes	£ 3.24 million
Textiles	£ 80	8,100 tonnes	£ 0.65 million
Kitchen/Garden waste	Nil	1,026,000 tonnes	£ 0.00
			Total £10. 53 million

Notes: The aluminium tonnage is calculated at 50% of the non-ferrous metal tonnage.

The individual plastic tonnages (HDPE/LDPE/PET) are calculated at one-third each of the dense plastic tonnage.

The glass value is calculated at the bottom end of the clear/brown/green glass values.

We thus have a potential revenue value for the annual recyclable component of the Wiltshire municipal waste stream. It should be emphasised that this is not an actual value, but an *illustrative* value. Clearly there are a lot of variables in the calculation of this figure (the main variables have been explained above), but **the important lesson is that the Wiltshire municipal waste stream has financial value, that this value is recoverable, and that this value is potentially available to finance Wiltshire’s waste strategy.**

Of course, in reality, both the recyclable and compostable waste materials are, once delivered to Wiltshire’s waste contractor and partner (Hills Waste), the property of Hills Waste. Thus the figure of £10.53 million which we see above belongs to Hills Waste and not to Wiltshire County Council.

There is an argument that this revenue should be used, at least in part, to finance Wiltshire’s waste services in the area of collection services and their incremental development so that all the above materials are collected at the kerbside, and adequate local in-vessel aerobic composting facilities are developed throughout the county in order to serve the county’s agricultural economy.

These are, however, issues for debate in the context of Wiltshire’s strategic waste management options – which is why we have asked to see the financial costs in generic form (best value) for all of the various components of the waste strategy – namely: cost of collection, cost of recycling and composting, cost of incineration, and cost of landfill. The above illustrative revenue figures for recycle demonstrate, we believe, the clear and compelling need for this financial information to be in the public domain.

It is also to be noted that before kerbside collection began to be developed in Wiltshire, some three or four years ago, it was stated that the cost of collection and disposal of a tonne of municipal waste (largely to landfill) was in the region of £55 per tonne.

If this figure is placed alongside the 300,000 annual tonnage, the cost of delivering the Wiltshire waste strategy at that time was in the region £16.5 million.

It is not clear what proportion of that figure was paid to Wiltshire's waste contractor (Hills Waste) as a fee for landfill disposal charges – such figures have remained “commercially confidential”. However if the fee were to have been 50% of the cost per tonne (£55), then Hills would have received around £8.25 million per annum for landfill disposal charges.

With recycling potentially capable of generating in the region of £10.53 million per annum from sales of recovered materials, it would therefore seem that Wiltshire's waste contractor (Hills Waste) could be adequately compensated for the “loss of business” (i.e. waste material no longer going to landfill), and still leave a substantial positive revenue stream to enable the County's waste services infrastructure to be developed in order to assist the kerbside recovery of materials and their environmentally sound management.

In short, there is scope for the Hills contract to be re-negotiated to the mutual benefit of all parties, including the Council Tax payer.

This is the clear lesson, we submit, of the above analysis of the sale of recovered recyclable materials – something which neither the Waste Authority nor its consultant, Entec, appear to have examined. As a result, it is not surprising that the Waste Authority appears to have no clear knowledge of generic unit costs (best value) of the principal waste management components in the strategic waste management options. This is, we submit, lamentable.

Conclusions and Recommendations.

1. It is clear from the evidence, and from the County's own statement, that the Wiltshire Waste Authority has no generic financial information relating to the unit cost (£ per tonne) under “best value” procedures for the principal components of the County's Waste Strategy – namely, the unit cost of collection, the unit cost of recycling and composting, the unit cost of incineration, and the unit cost of landfill.

Given this fundamental deficiency, both in practical and financial terms, in the County's Waste Strategy it is our recommendation that these unit costs be established and that they be referenced to the key dates for the implementation of the Landfill Regulations.

2. It is clear from the present published Municipal Waste Strategy for Wiltshire that incineration plays a key, even dominant, role in the strategy. It is also clear that the Waste Hierarchy establishes recycling, re-use and composting as the key and central principle for waste strategies; and, that incineration, even with energy recovery, and landfill are options of last resort. Thus the Wiltshire Municipal Waste Strategy is in serious danger of inverting the principles of the Waste Hierarchy, and of giving the central role in the strategy to incineration rather than recycling and composting. Also this inversion is being implemented without the County Council having rigorously costed the various waste management options available.

Whether the present Wiltshire Municipal Waste Strategy is properly formulated in accordance with the waste management principles established by the UK and EU governments,

and whether the present Wiltshire Municipal Waste Strategy is properly designed and constituted in financial terms are, once all matters have been considered, questions to be determined and by the County's elected political representatives and the political process. Therefore given that the Wiltshire Municipal Waste Strategy is the responsibility of Wiltshire County Council, and given the facts as presently known, we believe that the whole question of whether the Waste Strategy is founded on the right waste management principles, and is also founded on a clear and open declaration of the financial costs pertaining to the various waste management options, are matters which should be *reviewed by the County Council's Overview and Scrutiny Management Committee.*

We believe that there is an imperative need for these two recommendations to be implemented, and that the evidence presented here fully supports our belief.

Accordingly, we would be grateful to receive your advice concerning these recommendations and the evidence supporting them.

We advise that we have forwarded a copy of this letter to the leaders of the political groups on the County Council.

Yours sincerely

S. D. Eades
On behalf of
Wiltshire Friends of the Earth.