

STATES OF JERSEY



ENERGY FROM WASTE FACILITY: RESCINDMENT (P.8/2009) – ADDENDUM

**Presented to the States on 3rd February 2009
by the Deputy of St. Mary**

STATES GREFFE

ADDITIONAL REPORT ON PROPOSITION P.8/2009

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Abbreviations used in this report:

EEA	European Environment Agency
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
RW	Recycling Waste – Report of the Environment Scrutiny Panel, July 2007
SOS	Save our Shoreline
SP	Strategic Plan 2006–2011
SWS	Solid Waste Strategy 2005 PsD

INTRODUCTION

On seeing the title of this proposition, members of the old Assembly may feel an understandable reluctance to “go there again”. However, reviewing policies, frameworks, service delivery, legislation is our bread and butter as parliamentarians – that is what we have been elected to do.

It is our job as States members to struggle with these knotty questions in order to arrive at the best decisions. How else can things be improved to the benefit of all Islanders, whether it be Income Support or the shape of our education system, or in the case of this proposition, our approach to the question of reducing, re-using and recycling our waste?

When should something be looked at again?

I believe that the following conditions for a review of a decision all exist in this case. Therefore to look again is not vexatious or frivolous but necessary –

- When circumstances have radically changed
- When public attitudes or perceptions have radically changed
- When the previous decision was taken on poor or misleading information
- When the process leading to the decision was flawed
- When the decision in question is significant enough to merit the effort involved in looking at it again.

There is no virtue in sticking with a mistake, if that is what it was. There is every virtue in having the courage to re-visit and, if necessary, cancel a decision in order to set off in a different direction if that is the right thing to do.

WHEN CIRCUMSTANCES HAVE RADICALLY CHANGED

The SWS, a policy of which the incinerator was an integral part, was put forward and adopted by the States, in 2005. Few would deny that circumstances have radically changed since that time. This report looks at 4 major aspects of our changing world.

THE CREDIT CRUNCH AND THE GLOBAL ECONOMY

The scale of what we are witnessing is vast and unprecedented. We may have “got used to it”, but that does not alter the scale and the implications of what has happened and is still to happen. Below is a list of names to jog memories and remind us of just what is going on:

Bear Stearns, BNP Paribas, Northern Rock, Merryll Lynch, RBS, Barclays, FTSE 100 down 7 weeks straight Fannie Mae, Freddie Mac, Lehman Brothers, Washington Mutual ...

And of course it’s still carrying on. The winds of recession are already buffeting Jersey: the close of the Heathrow link, Woolworths, Barrett’s, Mercury, Barclays ... and more to come.

The effects of the credit crunch are very real and this will have an immediate impact on the need for an incinerator. People will cut their spending. There will be less consumption and therefore less waste.

The question then is: is this change permanent? How big and how far-reaching is the change we are experiencing?

In the *Financial Times* of 7th January 2009, Martin Wolf (associate editor and chief economics commentator of the FT) writes: “We are in the grip of the most significant global financial crisis for seven decades”.

Citing the work of researchers Carmen Reinhart of Maryland University and Kenneth Rogoff of Harvard: he writes: “They note the similarities among big financial crises in advanced and emerging countries and, by combining a number of severe cases, reach disturbing conclusions. Banking crises are protracted, they note, with output declining, on average, for two years. Asset market collapses are deep with real house prices falling, again

on average, by 35% over six years and equity declining by 55% over three and a half years. The rate of unemployment rises, on average by seven percentage points over four years while output falls by nine percent.^[1]

Mervyn King, the Governor of the Bank of England, speaking in front of a VIP gathering in London last week and in front of the TV cameras, said of the crisis that conventional methods no longer work and so “we have to use unconventional methods”. In other words, according to the top banker in the country, we are somewhere we have never been before.

Paul Krugman, the USA’s most influential economist, regular columnist in the *New York Times*, and winner of the Nobel Prize for economics in 2008 said in a TV interview, on Channel 4, in October, that the recession (in the USA) would last 3 years.

And there are plenty of people from all parts of the political spectrum who say that there is more to come (see Appendix 1).

There is also a view that, were there to be a recovery in the conventional sense of rising production of goods and rising consumption, then the price of oil would immediately rise due to scarcity. This would stop any recovery of that kind (see Appendix 2 for up-to-the-minute analysis from top oil analysis site the Oil Drum).

The Assembly would be wise to look for, in these uncertain times, a solution that is flexible and adaptable. These are not qualities you can honestly associate with a £100,000,000 incinerator.

SUSTAINABILITY

Since 2005 knowledge and awareness of the issues around sustainability, growth and well-being has grown rapidly. The Sustainable Development Commission was set up in 2000 and expanded in 2006^[2] to advise the British government in this area. The New Economics Foundation began work in 1986 and now conducts research and programmes in a wide range of related fields around sustainability, well-being and green economics,^[3] for example the Happiness Index which received extensive media coverage recently.

“Consumption of resources is rising rapidly, biodiversity is plummeting and just about every measure shows humans affecting earth on a vast scale. Most of us accept a need for a more sustainable way to live by reducing carbon emissions, developing renewable technology and increasing energy efficiency.” So wrote the *New Scientist* opinion piece in the Special Issue on “The Folly of Growth” sent recently to all States members. The graphs are shown on page 40 and 41 and demonstrate how impossible it is for consumption to continue on its present upward path.

As US economist Kenneth Boulding said: “Anyone who believes that growth can continue forever in a finite world is either a madman or an economist”. We have to transition away from an economy where we take inputs from the planet, process them and throw them away to an economic model where the resources go round and round. The inevitable waste that occurs has to be “within the regenerative and assimilative capacities of the ecosystem” (Herman Daly^[4]).

The new Welsh Minister for the Environment said this recently in an interview: “Each of the individual agendas should not be treated as individual – waste, planning, energy, recycling, contributing to the quality of the environment and contributing to our overall approach to sustainable development.”

Sustainability is living in a way which does not compromise the needs of future generations. High level policy in Jersey has recognised the importance of sustainability for some time. It is, quite rightly, enshrined in the Strategic Plan 2006-2011, which has as the second bullet point in the VISION on the first page:

“People living here enjoy a good standard of living based on a strong environmentally sustainable and prosperous economy”.

This aspect of the vision is spelt out on page 14, commitment 1, Para. 1.1:

“Show the world that economic and environmental success can work together, indicated by:

- A reduction in per capita consumption of resources
- Targets and timescales for reductions in per capita waste arisings that reflect best practice globally.”

The Solid Waste Strategy says (p.32) “Sustainability is a critical underpinning principle for the island”. However, the Solid Waste Strategy does not follow this through by taking into account the embodied energy in all waste, i.e. the energy consumed in the making of that product in the first place. To be fair, research into the global warming impacts of different ways of dealing with our waste was not so widespread and mature as it is now. This research is cited in the next section.

This rescindment proposition is in line with the sensible and forward-looking goals stated in the Strategic Plan above. The incineration solution is incompatible with them. It presupposes that we will fail to reach our own goals as it is based on the assumption of ever-increasing waste per head.

CLIMATE CHANGE

The need to tackle climate change is now accepted by virtually all decision-makers – they argue only over how to achieve the necessary reductions in carbon emissions. A new round of negotiations to replace the Kyoto treaty is currently under way and Jersey is signed up to comply with global targets.^[5]

In contrast to this accepted need to tackle climate change, the Solid Waste Strategy back in 2005 did not consider carbon emissions as a relevant strategic factor. It was not on the radar at that time. For example SWS, in its discussion of paper and card, makes no mention of the embodied energy in these materials, and there are no references to life-cycle research on global warming impacts of different approaches to dealing with waste.

With respect to glass the Solid Waste Strategy states –

“the main benefits of re-cycling glass are from reduced energy consumption compared to manufacture from virgin materials.”

Yet, 4 paragraphs later, SWS states –

“Historically, glass bottles were often collected, washed and re-used. Advances in technology have made manufacture a cheaper option, or led to a switch to alternative packaging materials...”^[6]

This may be true for 2005 but fails to consider trends for the 25-year period of the strategy.^[7] Climate change and the absolute need to reduce energy consumption and cut carbon emissions was not a priority in 2005.

By contrast the Scrutiny Panel, in WR 2007 says –

“From a global perspective, it is also important to limit carbon emissions. Recycling materials as an alternative to incineration makes substantial carbon savings”^[8]

And the Scrutiny Panel, just 2 years after SWS, had both climate change and sustainability firmly in view–

“Taking value from the waste stream by re-cycling individual elements or mixed components has many benefits.

- It reduces the use of raw materials
- It saves energy
- It reduces polluting industrial processes

- It treats waste as a resource rather than a problem”^[9]

They continue –

“The advantages of recycling need to be considered within the life cycle of a product. Raw materials are used to produce products, which are transported to consumers and then purchased. The consumer may discard the product, which will then be collected and either recycled or disposed of. Environmental and financial costs accrue at each stage of this process and a full impact of recycling and disposal needs to be measured against the full life cycle.”^[10]

The global warming impacts of recycling versus other routes are now a major research and policy area within DEFRA. Jersey should take this new approach on board if we are to as environmentally responsible as we claim to be.

It is sometimes said that it is “not worth” recycling, as it takes more in carbon to move the materials around than you save. Members may have seen a recent front page story in the Telegraph, a story which the Mail also ran, quoting Peter Jones of Biffa Ltd. (a major firm in the recycling world) as saying just that. In fact he was angry that he had been misquoted, and WRAP (Waste Resources and Action Programme^[11]) issued a press release calling the story “misleading and inaccurate”.^[12]

In order to cast light on the debate and to see “who was right” WRAP had long before commissioned a major review of Life Cycle Analysis research from all over Europe.

The conclusion of the 253 page report was –

“The results are clear. Across the board, most studies show that recycling offers more environmental benefits and lower environmental impacts than other waste management options. Further analysis by WRAP of the research findings has provided an assessment of the relative greenhouse gas savings associated with current UK levels of recycling for paper/cardboard, glass, plastics, aluminium and steel. Again, the results are clear and positive. The UK’s current recycling of those materials saves between 10-15 million tonnes of CO2 equivalents per year compared to applying the current mix of landfill and incineration with energy recovery to the same materials.

This is equivalent to about 10% of the annual CO2 emissions from the transport sector, and equates to taking 3.5 million cars off UK roads.”^[13]

POLICIES ON WASTE ELSEWHERE

In line with all the above considerations of sustainability and climate change and in line with public opinion (see next section) policies on waste in neighbouring jurisdictions are rapidly evolving.

In December 2006, UK Environment Minister Ben Bradshaw said this –

“This is a fantastic achievement by householders and local authorities. Recycling is a vital part of our battle against dangerous climate change. The emission saved by current levels of recycling is the equivalent of taking 3.5 million cars off our roads. But performance is still far too patchy with some local authorities recycling more than 50% and some still down in the low teens.”^[14]

In SWS we read –^[15]

“UK Waste Strategy 2000

The UK published this strategy with the aim of setting targets for recycling and composting....these targets provide benchmark levels to which Jersey can strive.” (My emphasis).”

Here are the UK 2000 targets for recycling or composting “to which Jersey can strive” –

Year	Target
2006	25%
2010	30%
2015	33%

These targets have now been revised (2007) to look like this –

Year	Target
2010	40%
2015	45%
2020	50%

The sense of urgency, of the need for rapid progress in this area, can be read from these figures. We should be sharing in that outlook. However Scotland and Wales are progressing even faster.

In Scotland ...

“Plans for a zero waste Scotland, including tough new targets to increase recycling and reduce landfill, were outlined today. (24/01/2008)

“In a statement to Parliament, as well as announcing that £7.5 million is to be invested in community recycling projects over the next three years, Environment Secretary Richard Lochhead proposed to consult on new targets including:

- the amount of municipal waste being recycled or composted is to be increased to 60 per cent by 2020 and a new target of 70 per cent by 2025
- landfill from municipal waste is to be reduced to five per cent by 2025; and -no more than 25 per cent of municipal waste is to be used to generate energy by 2025 and large, inefficient incinerators are to be rejected; and -keeping the existing challenging target of stopping the growth in municipal waste by 2010”

The underlying thinking behind the new policy initiative was stated by the Environment Secretary Mr. Lochhead as follows:

“Dealing with waste sustainably is fundamental to the future of Scotland and the future of the planet. Our performance on waste has improved considerably in recent months with notable progress on recycling and reducing the amount of waste going to landfill.

“However, there is much more we need to do if we are to truly make a difference locally and globally and today we are setting out our new waste policy to make Scotland greener and a world-leader on waste management.

“I am determined to increase the focus on waste prevention and am committed to the existing challenging target of stopping the growth in municipal waste by 2010. Householders can play a part by home composting, rejecting junk mail, re-using carrier bags and avoiding food waste.

“Retailers also have key responsibilities in this area such as reducing packaging, working with Government on reducing the unnecessary use of plastic bags and encouraging their suppliers to prepare products which minimise waste and can be recycled.”

And:

“But individuals can only do so much. Businesses must also give greater consideration to the impact of their actions and I want to see a much bigger focus on reducing commercial and industrial waste.

“I also acknowledge that there is a role for energy from waste that is compatible with sustainable development, as well as our energy and climate change policies. However, the Government is rejecting the need for large, inefficient, 'white elephant' incinerators.”

And:

“As part of that process I am setting up a new Zero Waste Think Tank to ensure that Scotland benefits from the best possible expertise as we move towards a zero waste society.”

The new targets for Scotland are –

Percentage of municipal waste being recycled or composted –

Year	
2010	40
2013	50
2020	60
2025	70 ^[16]

Compare Jersey's targets:

2010	33.4
2013	35.2
2020	36.3
2025	36.4 ^[17]

And in Wales...

The current recycling targets (in Wales) were:

- 15% combined recycling and composting by 2003/04 with a minimum of 5% each of recycling and composting.
- 25% combined recycling and composting by 2006/07 with a minimum of 10% each of recycling and composting.
- 40% combined recycling and composting by 2009/10 with a minimum of 15% each of recycling and composting.

Now, active consideration is being given to a 70% recycling target. The lead paragraphs of a news story in www.letsrecycle.com state –

“11-07-2008

Plans for a 70% recycling target in Wales by 2025 are “not too ambitious” and will get the country talking about recycling, the Welsh environment minister has claimed, writes Caelia Quinault.

“For me it’s about how we deliver all our policies under the umbrella of sustainability and create virtuous circles”

Jane Davidson, Minister for the Environment.

Speaking exclusively to *letsrecycle.com* this week about her plans for the revised waste strategy for Wales, which is due to be published in 2009, minister Jane Davidson said that other countries throughout Europe– such as Italy, Germany and France – were already reaching the recycling level.

And, she explained that Welsh councils had already shown strong support for the measure at meetings

foreshadowing an official consultation on the draft strategy in the autumn.

She said: “I’ve been having consultations with local authorities about my proposals for 70% recycling and I have to say that local authorities have come up trumps in terms of the political support for a major reuse and recycling agenda.”

“I don’t believe that 70% is too ambitious. I’m not about to revise it upwards – I think it is ambitious enough – but I think it is right that we are ambitious about it because I want people to talk about it,” she added ...

She also said: “We are absolutely opposed to mass burn incineration and we are looking at all the issues at the moment for our policy document in the autumn.”^[18]

Already back in 2007 the Environment Scrutiny Panel were pointing out the awkward gap between Jersey’s words and Jersey’s deeds, in the shape of TTS predictions –

“6.7.8 Jersey

From a political standpoint, the Strategic Plan 2006-2011 sets an ambitious target in this area with the commitment

- “1.1 Show the world that economic and environmental success can work together – indicated by:
- a reduction in per-capita consumption of resources
 - targets and timescales for reductions in per-capita waste arisings that reflect best practice globally”

6.7.9 Since the publication of the Strategic Plan , T&TS have not provided any indication of .the policies that will be adopted to achieve this commitment. T&TS have not adjusted their waste arising projections to take account of the reduction in future years”^[19]

Packaging waste

The picture regarding packaging waste is changing also right across the EU –

“The target of 25% recycling of all packaging materials in 2001 (in the EU) was achieved by a good margin in virtually all countries. Seven Member States already comply with the overall recycling target for 2008, when not taking into account wood packaging, which has been added as a new category to the recycling targets by the amended Packaging and Waste Packaging Directive (2004/12/EC) (see Table 1) The total EU-15 recycling rate increased from 45 % in 1997 to 56 % in 2004.

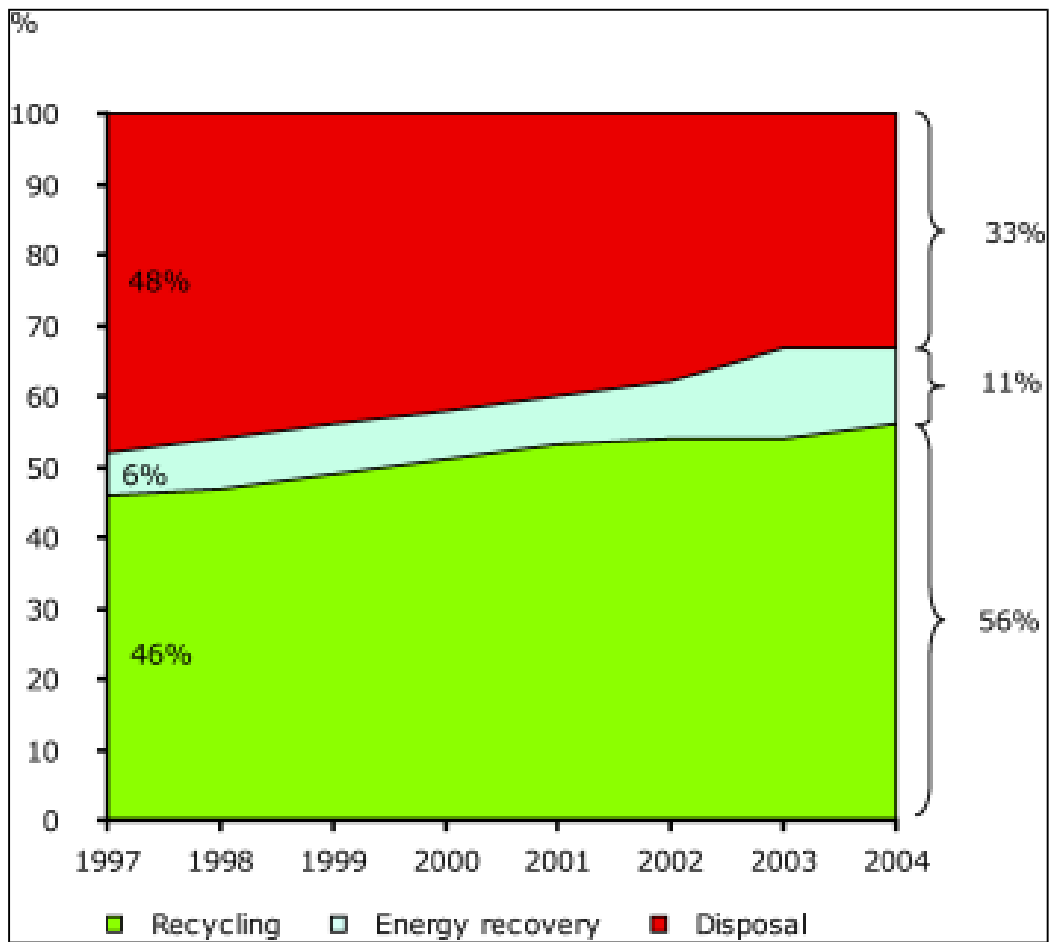


Fig. 5: Treatment of packaging waste (Ver. 2.00)

As with consumption of packaging per capita, the total recycling rate in the Member States in 2004 varied greatly, from 22% in Cyprus to 76 % in Belgium.”^[20]

All targets are steadily moving upwards in response to the environmental imperatives of sustainability (not wasting resources + avoiding polluting processes) and climate change (carbon benefit of recycling over producing from new).

In the light of the above, how are we to explain Jersey’s target of 36% to be reached by 2018? Is TTS saying that the folk of Jersey cannot or will not co-operate? Or that the parishes are incapable of achieving any improvements?

THE POLITICAL CLIMATE HAS CHANGED

There are **fourteen new faces** in the Chamber. The new Chief Minister, in his statement to the House, during the election for that post, promised repeatedly **“open and inclusive government”**. “I remain a strong believer in consensus government”. “I am conscious of the fact that, as a government, we have lost touch with some Islanders”.

At the hustings, candidate after candidate repeated that they would **“control population”** in the face of obvious public concern on this issue. If they meant what they said, and one can only assume that they did, this has an immediate impact on the assumptions built into the model. (For discussion of the model see below ...)

At *Imagine Jersey 2035* and in the survey which reached and was completed by for more people than attended the one day event, **Jersey residents** once again stated that **they did not want to see the population rise**.

On recycling, this is what some candidates at the Senatorial elections wrote in response to the J.E.P.’s questions on this issue –

Geoff Southern: “We could become a leader in this field and given the problems we continue to have with waste, targets should be high – around the 60% mark”.

Ian Le Marquand: “In the U.K. the current targets are 40% by 2010 and 50% by 2020... I favour the States target 36% [by 2018] being brought forward to 2012 with the situation then being reviewed”.

Philip Ozouf: “Parishioners have shown that they want to recycle and I believe the household target should be set at a minimum of 50%”.

Alan Maclean: “I would set a minimum target of 50% rising to 70% within five years”.^[21]

The political wind is blowing one way on what our recycling rate should be. Will the Assembly accept that the world of waste has changed?

WHEN PUBLIC ATTITUDES AND BEHAVIOUR HAVE CHANGED

Introduction

The last 3 years have also seen a radical shift in the attitudes and behaviour of the general public.

For some this is a conscious and specific response to the issues of sustainability and climate change. They know that they must take action now if they and their children and the rest of society are going to be able to enjoy life and enjoy the planet in the future.

For others, it is more of a gut response along the lines of “it can’t be right to burn all that stuff.” Gut reactions are very revealing and should be paid attention to. In this case, the gut reaction is spot on for 2 reasons. Firstly wasting resources is not right. It damages the environment for the reasons given by the Scrutiny Panel and the gut reaction is simply sensing that this is so. Secondly, there are serious health issues around incineration and the public can sense that too. This report deals with the health effects of incineration below in the section **IMPACT ON HEALTH**.

Change in attitudes

JASS 2008 looked at Jersey residents’ willingness to recycle. The results are set out in the table below –

Table 11.2 Would you recycle any of these items if they were collected from your doorstep? (*percentages*)

Type of recycle product	All	Most	Some	None	Don’t know	Total
Newspapers & magazines	87	9	2	2	1	100
Other paper & cardboard	83	10	3	2	2	100
Glass bottles & jars	90	6	1	1	1	100
Cans	85	8	2	3	2	100
Plastic	83	8	4	3	2	100
Clothes/textiles	81	8	5	4	3	100
Batteries	84	7	2	3	3	100

The results are startling and completely at odds with what TTS are assuming when they make their model on which the case for the incinerator is built.

It is worth pointing out that the Scrutiny Panel, writing in 2007, had already made this point about the public's willingness to participate in recycling (section 10.5). TTS unwillingness to listen to what Scrutiny were saying or this and other issues is discussed in the next chapter.

Change in behaviour

When considering these stated good intentions with a view to framing policy there is always the question: are they just froth? Are they a guide to what people would actually do? It would indeed be disappointing, and a blow to the case for rescindment, if they were just froth. But in this case it can be shown that behaviour is likely to follow intention.

Bus ridership

With no marketing or promotion to speak of, bus usage has risen year on year for the last 3 years: 4% in 2005, 7% in 2006 11% in 2007.

The new bus station has undoubtedly improved the experience of bus travel and has demonstrated, to some extent, the Island's commitment to the buses, but cannot explain the increase. The increase was under way before the new bus station existed. In addition, the conditions on peak hour buses have to be endured, not enjoyed; yet, in spite of this, people are increasingly using them.

Plastic bags

After 2 years of persistent and determined awareness-raising by the W.I. and then some promotional work by the Jersey One World in the form of a "beautiful bags" competition and a film showing of BBC documentary "Message in the Waves", the major supermarkets, prodded by the Minister for Planning and Environment, finally agreed to charge for all bags.

The public accepted this charge, virtually completely without protest, and the use of one-trip plastic bags has tumbled. You only have to think back 5 years to realise how big this change is. In JASS 2008 we read–

“The proportion of people who always reused carrier bags has increased significantly since 2006, from two-thirds (65%) to four-fifths (80%).”^[22]

Recycling trial – Havre des Pas

Finally, as evidence of the shift in public behaviour, the Havre des Pas “zero waste trial” in 2006 achieved a participation rate of 80% and a separation rate of 57.16% from a standing start.^[23]

This trial was purely voluntary on the part of the households within the area. The pie chart shows clearly that the vast majority of people (79.5%) are prepared and ready to participate. The trial also shows that whilst the participation rate increased throughout the period, so did the separation amounts. The final collection of the trial revealed the following quantities

Material	Weight Kg.*	Volume Litres*	% by Weight	% by Volume
Plastics (All)	120	4,560	2.64	10.73
Paper	675	3,830	14.87	9.02
Cardboard	560	4,645	12.33	10.93
Cans Mixed	100	2,135	2.20	5.03
Food	470	1,435	10.35	3.38
Glass	595	2,220	13.10	5.22
Other	75	560	1.65	1.32
Sub-Total	2595	19,385	57.16	45.63

Recyclables	Weight Kg.*	Volume Litres*	% by Weight	% by Volume
Refuse	1,945	23,095	42.84	54.37
TOTALS	4,540	41,160	100	100

The States and public opinion

The States risks alienating public opinion on this issue. There is a place, sometimes, for the government to resist the public's inclinations, but any such case has to be carefully justified. In this case the instincts of the public, their desire to increase recycling, and their willingness to participate should emphatically not be resisted by government.

Rather than resisting the good intentions of the public, we should be enabling good intentions to express themselves. The incinerator is a barrier to any ambitious drive to separate, reuse and recycle our waste.

DECISIONS TAKEN ON POOR OR MISLEADING INFORMATION

The two key documents in this matter of the incinerator are the waste arisings model and the EIA. If these are flawed or inadequate then the House is not in a position to take a well-informed decision.

The waste arisings model

The waste arisings model is the key document which predicts the amount of waste TTS expect to have to deal with, in all the various categories, for the Plan period (up to 2035).

This is the document which was listed by Scrutiny's consultants Juniper in their report as not having been made available to them – which is extraordinary as it is THE key document. The figure that emerges in 2035 as the "residual waste" determines the size of whatever solution is to be adopted, in TTS' case, an incinerator.

The 3 key assumptions are –

Population growth:

They follow the +250 heads of household scenario which was one of the scenarios presented to Imagine Jersey 2035. This figure has never been debated in the House, and it would lead to an increase in the Island's population

of around 11,000. But the model leaves the problem of housing all these people to others.^[24]

Increase in waste arisings per household

This is assumed to be 0.9% per year for the entire period of the Plan. The increase is frankly incredible. Compare this assumption, which leads to a waste increase of 27% by 2035 to this statement in the Introduction to SWS (page 16) –

“This Strategy describes initiatives which the Committee will undertake to change everybody’s perceptions of waste and our society’s attitude to creating it. If we do not move from a ‘throwaway’ culture, we will ultimately submerge in the resultant rubbish.”

How this assumption arose will be dealt with in a detailed analysis of the Model which members will have before the debate.

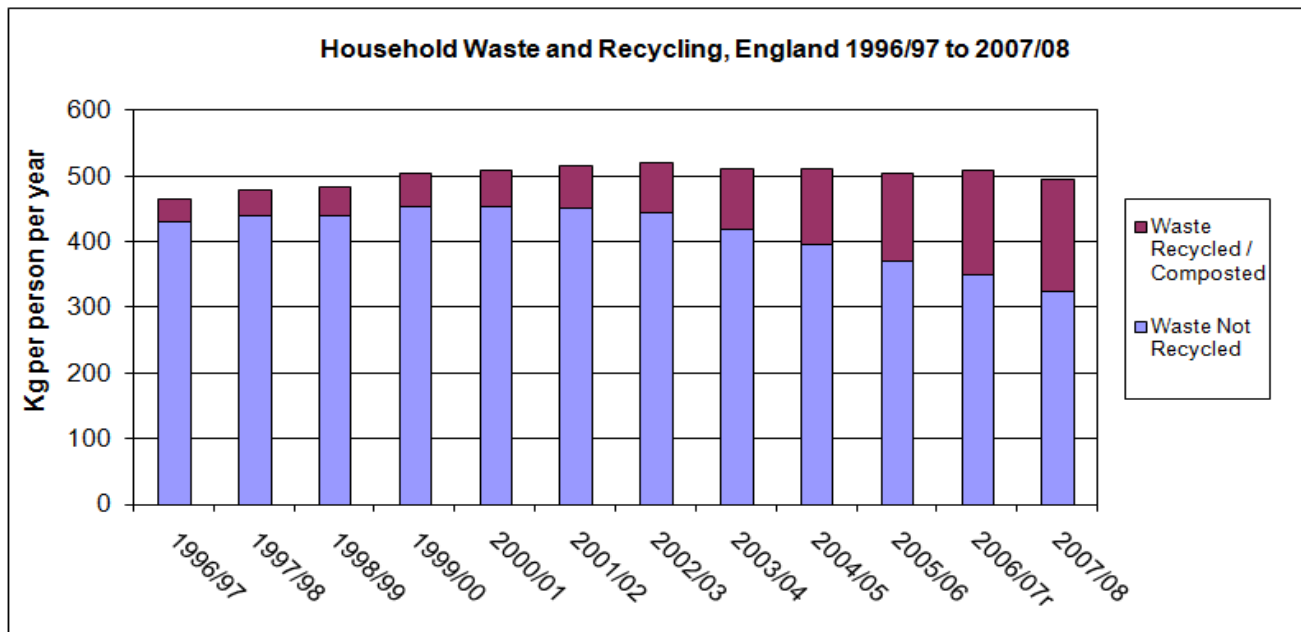
The increase is in total contrast not only to aspirations and targets elsewhere, it does not even reflect what is happening now and over the last 5 years in England –

Chart taken from: <http://www.defra.gov.uk/news/2008/081106a.htm>
Ref: 352/08 6th November 2008

MUNICIPAL WASTE MANAGEMENT STATISTICS 2007/08

Defra

The chart below shows the changes in household waste and recycling per capita.



Assumptions around the number of households and waste per household

Will be covered in my detailed report on the Model.

Recycling rate

TTS’s assumption is that Jersey will manage to achieve 36% by 2018 and thereafter the rate will not increase for the rest of the period up until 2035.

As we have seen above, this is flatly against –

- States' own declared high level policy and goals
- TTS own departmental policy and goals
- The desires of the public
- Policy and goals in neighbouring jurisdictions

Where did 36% by 2018 come from?

We have done work on the effect of different assumptions and this will be released as part of the detailed study of the Model.

The EIA

The process of the EIA was so flawed as to deny members of this House the information needed. Especially, but not only, with respect to Ramsar: the people who were most well-informed and most concerned to protect Jersey's wonderful coastline were ignored. This is the exact opposite of what a correctly run EIA should do which is to involve stakeholders in an iterative process of scoping and review.

That way nothing gets missed, and everything that should be challenged is challenged. That way leads to results which are as robust and safe as possible.

The next chapter covers this aspect in detail.

THE PROCESSES LEADING TO THE DECISION WERE FLAWED

They were flawed and for 3 principal reasons:

- failure to be open and listen on the part of the TTS
- Failure to conduct an adequate EIA
- Complete exclusion of Ramsar from the process.

This report does not try to personalise the issue. The failure is systemic and the evidence is that comments, criticisms and offers made in good faith are ignored, and that real discussion about issues is somehow sidelined or avoided

FAILURE TO LISTEN ON THE PART OF TTS

There are 3 instances of this failure which I will cover in this report:

- The scrutiny Report "Waste Recycling"
- The technology review
- Total waste

The scrutiny Report "Waste Recycling"

WR states (paragraph 1.3.1, page 3) ...

"Current UK recycling rates are still low in comparison to many European countries. The Jersey target of 32% to be achieved during the 25 year strategy period is now well below that of the UK. Indeed, some UK local authorities have already exceeded the 50% target, set for 2020. In order to maintain Jersey's international reputation, environmental policies, including recycling, need to be in line with best accepted practise".

TTS raised the target to reach 36% recycling by 2018; this is 4% less than the UK target for 2010, 9% below the

UK target for 2015, and 14% below the UK target for 2020. Wales and Scotland are adopting higher targets still.

WR states (paragraph 1.5.1, page 4) ...

“17% of household waste is food waste. Keeping this separate from other waste reduces contamination leaving cleaner, dry recyclable materials available for easier separation and collection. The St Helier zero waste trial confirmed that the public are willing to separate food waste and that it is feasible to collect it separately.”

Nothing done: TTS kept to their line that: (a) the land bank was not sufficient in Jersey to accept the resultant compost, and (b) the supermarket protocols would not permit the spreading of such compost on potato land.

Did TTS look at trends in this area? Or alternative ways of dealing with the digestate until it is permitted for use on land? This is another area where rapid change is likely due to concerns about sustainability, the price and availability of agrochemicals into the future, and the absolute priority which must be given to maintaining the fertility of our soils.

WR states (paragraph 1.6.1, page 5):

“Recycling is now part of mainstream politics and has a high profile at all levels. There is a keen interest amongst the Jersey public and an overall desire to undertake more recycling than is currently being done.”

Since that was written, the recycling bank network has been extended, I suspect, and the St. John's separation scheme launched. But the recycling rate, one of the key assumptions built into the waste model, was raised just 4% from a 32% target in 2009 to 36% by 2018.

The technology review

The Babbie-Fichtner Technology Review 2008 was issued to all States members as part of P.72/2008. This review applied a criterion to all the technological plants reviewed which effectively excluded everything but incinerators: “A key factor in determining the sustainability of facilities has been the ability of the proposed process to deal with the whole waste stream.”

Where does this criterion come from? Two observations need to be made; firstly, P.72/2008 refers (Executive Summary, bullet point 5, page 3) to “the pre-qualification criteria (sic) set by the then Environmental & Public Services Committee that companies must have at least two reference plants operating on a commercial basis for at least two years.”

But further on in P.72/2008 we come to this additional criterion, which is not stated to have been agreed by the committee, so maybe it was and maybe it wasn't. In the section “Related requirements of P.95/2005”, at paragraph 3.3, page 6, we read “The environmental performance, complexity and energy efficiency of the technology was considered. Finally, whether each technology offered was capable of dealing with the whole of Jersey's waste stream or produced any residual waste stream that required further treatment and/or disposal.” (my emphasis)

And so, for example, an Anaerobic Digestion system (BTA), with 20 reference plants, is dismissed in the following comment: “The technology is not considered suitable for Jersey because it is only suitable for processing the organic fraction of municipal waste and would therefore require upstream mechanical separation plant. Non-organic waste would require another disposal route” (SWS Technology Review 2008, page 63).

The solution proposed by Total Waste for Jersey consists of multiple pieces of hardware, each dealing with one element of the waste stream: a crumbing machine for tyres, a film and board separator for juice and milk cartons, and so on. Why was any such multi-plant system ruled out of court by TTS?

Total waste

Steve Le Cheminant wrote to Will Gardiner on 27/09/07 offering a total solution to waste collection and recycling for Jersey. The proposal listed an array of recycling equipment, each capable of dealing with one element of the waste stream: plastics, tyres, food waste, glass, UBCs (Used beverage Containers) electric cable, plasterboard, fluorescent tubes, etc. Mr. Le Cheminant made it clear that he was flexible and would work in with, e.g., collection systems as they stood: “if any of our services suit your intentions that would give us a starting point.”

The reply was dismissive: TTS run everything in house, we have a waste to energy plant, and “we short listed four companies to submit tenders for a design and build contract in December 2006.” For full text of Mr. Le Cheminant’s letter and TTS reply, see Appendix 3.

Yet in P.72/2008 we read –

“A robust procurement process has been followed for the proposed facility. Initial expressions of interest were invited from all potential waste technology providers. The 9 respondents were short-listed to 4 companies who were invited to tender in November 2007. Three bids were received at the end of February 2008”.

Failure to conduct an adequate EIA

Two differing views of what an EIA is

The EIA, according to the Environment Director, is the overall process by which the Planning and Environment Department assesses a project for its environmental impact. Prior to the applicant, in this case the TTS, writing, or commissioning consultants to write, an EIS (often shortened to ES), the Planning and Environment Department are responsible for scoping the EIS. Scoping should involve stake-holders, and it identifies all relevant issues to be covered by the EIS. The EIS is then written addressing all the issues raised, and this is scrutinised again by Planning. The whole process is described in an EU. Directive, which I understand to be accepted as guidance by the Planning Department, it may even have legal force.^[25]

Now consider what TTS write in P.72/2008, page 8, describing the same process ...

- “5.1 Following approval by the States of the La Collette reclamation site for the replacement of the Bellozanne incinerator in 2006, Transport and Technical Services undertook a full Environmental Impact Assessment for the proposed facility. A short-list of 4 companies and 2 reserves had been agreed, all of which could be defined under the collective term “Energy from Waste”, but which included a gasification technology solution in addition to conventional incinerators. As a result the proposed solution was confirmed as being an “Energy from Waste” technology type from this time.
- 5.2 The Environmental Impact Assessment was summarised within an “Environmental Statement” which formed part of an Outline Planning Application submission by Transport and Technical Services in January 2007. The Environmental Impact Assessment concluded that the proposed Energy from Waste facility would result in a considerable improvement in air quality for the Island. The only significant impact from the facility was determined to be the visual impact. The Outline Planning Application was the subject of a full public consultation process by the Planning Department and the Transport and Technical Services Department also organised its own public awareness as part of the application process.”

There is something wrong here – TTS think it is they who run the EIA process, they “undertake the EIA” and it is “summarised within an EIS” whereas in fact it is Planning and Environment that create and carry out the EIA in a regulatory role. Perhaps regulator and applicant came too close? And perhaps this explains the disastrous failure of the process in this case?

The actual content of the EIS and the conduct of the EIA

Chris McCarthy, co-director of Battle McCarthy – a consulting, engineering and design company, with an

enviable track record of projects all over the world,^[26] who has a personal family connection to Jersey, described the EIS as “not good” and “inadequate”.

Mr. McCarthy's criticism centres on the lack of baseline air quality survey data. In addition, PM 2.5s are not considered at all, which is unacceptable as they pose a major health risk. The UK government, the World Bank and the UN, all are now monitoring PM 2.5s.^{[27] [28]}

These criticisms are especially important in view of the Ramsar site just 30 metres or so away, and in view of the fact that thousands of Jersey residents living in St. Clement, St. Helier, Grouville, and St. Saviour, are threatened with air pollution from the incinerator.

Dr. Stephan Funk MSc, PhD is expert in correct scientific procedures and with EIAs. He is highly critical of the EIA and has written to the Scrutiny Panel with detailed critique. I copy below just one point from a letter to me to illustrate how inadequate the EIA is:

“The EIS fails to qualify and quantify some potential risk to the RAMSAR site throughout. For example, the disposal of hazardous waste just lists the procedure (lining and sealing of pits with a plastic membranes xii) without any further information on associated risk. This is especially important as materials designed to contain waste can deteriorate over time and might pose significant risk in the future except if mitigated. However, whether this is the case or not can not be assessed as the EIS does not give data. The EIS also does not consider accidents that might lead to leakage through the plastic membranes. Without assessing the risk, no mitigation can be put in place. In other words, no assessment of the long-term environmental risk was conducted for the procedure.”

A third criticism comes from Save our Shoreline who point out that the EIA completely ignored the existence of the Ramsar site, and sidelined both the local Ramsar Steering Group members and the Ramsar Secretariat itself, thus failing a primary test of an EIA, that of full consultation with all stakeholders.

The EIA process is our protection as a society when major projects are considered. It is a key part of the process of obtaining planning permission. There are very clear rules which have not been followed, in particular the active and public involvement of stakeholders.

Complete exclusion of Ramsar from the process

Ramsar site background ...

To remind members of the background to the Ramsar designation I copy here the opening of a short dossier sent to sent to all States members by the Save Our Shoreline committee dated 6th December 2008.

“The Convention on Wetlands, signed in Ramsar, Iran, in 1971, is an intergovernmental treaty which provides the framework for national action and international co-operation for the conservation and wise use of wetlands and their resources. There are presently 158 Contracting Parties to the Convention, with 1,822 wetland sites, totalling 168 million hectares. The year 2000 marked a milestone in the Island's environmental history.

The States of Jersey gave approval for 32.1 square kilometres of intertidal habitat to be designated a United Nations Ramsar Wetland of International Importance. The area stretches from the seaward edge of the tanker berth at St. Helier Harbour to the tip of Gorey Pier and equals 25% of Jersey's landmass (See map). Three offshore sites have also been designated: Les Écréhous & Les Dirouilles, Les Minquiers, Les Pierres de Lecq (the Paternosters).”^[29]

Ramsar site issues

The issues surrounding the incinerator and Ramsar are as follows –

- Breach of the Ramsar Convention itself
 - Failure to notify
 - Failure to ensure a proper EIA
- Failure to consult with stakeholders
- Failure to consider the Ramsar site within the EIA process
- Damage to Jersey’s international reputation.

Breach of the Ramsar convention – failure to notify

Article 3.2 of the Ramsar convention states –

Article 3

1. The Contracting Parties shall formulate and implement their planning so as to promote the conservation of the wetlands included in the List, and as far as possible the wise use of wetlands in their territory.
2. Each Contracting Party shall arrange to be informed at the earliest possible time if the ecological character of any wetland in its territory and included in the List has changed, is changing or is likely to change as the result of technological developments, pollution or other human interference. Information on such changes shall be passed without delay to the organization or government responsible for the continuing bureau duties specified in Article 8. (My underlining)

Planning consent was granted on 29th October 2007 and the contract was signed on Friday 21st November 2008, but according to Save our Shoreline –

“We received confirmation on 3rd December 2008 from Monica Zavagli, Assistant Advisor for Europe at The Ramsar Secretariat in Gland, Switzerland, that as of that date this process (notification) has not happened. Planning Consent had already been given by Planning and Environment Minister Freddie Cohen, and the contract was signed on Friday 21st November, 2008 by TTS without the courtesy of written notification to the Ramsar Secretariat.”^[30]

Mr. Tully of DEFRA who is responsible for overseeing Ramsar sites in the UK and also Jersey and other overseas territories confirmed indirectly that he had not been notified either.

Mr. Tully suggested to me that Jersey might notify ‘when in a position to formally advise us of various impacts and the way they are going to mitigate.’ With respect to the incinerator he said that ‘The Department (Planning and Environment) didn’t consider there was anything there that would have a negative impact’ It is ‘up to the authority to assess if there is going to be an impact and then to advise us.’^[31]

What is clear from this conversation is that Jersey has not formally notified the UK and so we are in breach of the convention.

Breach of the Ramsar convention – failure to ensure a proper EIA

Resolution VII.16 states –

“Resolution VII.16 :The Ramsar Convention and impact assessment: strategic, environmental and social, calls Contracting Parties to reinforce and strengthen their efforts to ensure that any projects, plans, programmes and policies with the potential to alter the ecological character of wetlands in the Ramsar List, or impact negatively on other wetlands within their territories, **are subjected to rigorous impact assessment procedures...** and to ensure that impact assessment procedures seek to identify the true values of wetland ecosystems in terms of the many functions, values and benefits they provide, to allow these environmental, economic and broader social values to be included in decision-making and management processes.”

Monica Zavagli, Assistant Advisor for Europe at The Ramsar Secretariat in Gland, Switzerland added: “The solution to these controversial cases would be therefore a proper Environmental Impact Assessment.”

By not informing Ramsar a source of expert guidance and advice on setting up an adequate EIA with respect to the maritime environment was lost to the Island.

Failure to consult with stakeholders

The Save our Shoreline dossier submitted in January to Environment Scrutiny gives a “partial list” of “organisations and individuals... who do not appear on the list of consultees.”

The list reads like a Who’s Who of environmental organisations and leading naturalists in Jersey. It includes all the members of the States of Jersey Ramsar Steering Group, not one of whom was consulted.

And of course, beyond that, Ramsar itself was not informed or consulted either.

Babtie Fichtner held about 60 consultee meetings, between February and November 2006, there is a table of them attached to their EIS. In the topics column the word Ramsar appears just once and the consultee was the States’ Principal Ecologist (on 6th February 2006, at the very first meeting). Thereafter, nothing.

It is hard to square this consultee list with the Chief Officer of Planning and Environment’s view (letter to National Trust for Jersey chairman dated 1.12.08) –

“Relevant Jersey consultations were carried out with ecology interests to support this view (sc. that the proposal would adversely affect the Ramsar designation)”.

There is just a black hole where Ramsar should have been, in the whole consultation process, a black hole that should arouse serious doubts in the minds of members about the impartiality or competence of the process being followed.

Failure to consider the Ramsar site within the EIA process

The effect air pollution might have on the Ramsar site was not identified as an issue and therefore does not appear in the EIS at all.

The EIS at section 10.3.2 “Potential Impact on Marine Habitats” states –

“10.3.2 Potential Impact on Marine Habitats

“The closest site of value is the marine RAMSAR site which lies some 30 metres from the boundary of the proposed facility.

There would be no direct loss of habitat designated as RAMSAR site. The only potential impact on the RAMSAR site would be water pollution risk from the construction and operation of the new facility (see Section 16: Water Resources and Drainage). (my underlining)

There is a potential for impact from the discharge of cooling water from the boiler to the sea and subsequently having an impact on the RAMSAR site by changing temperature gradients near to the outfall and therefore affecting the composition of species in the shoreline habitat.

The proposed facility would have no direct thermal discharge to water. However, steam would be sent to the Jersey Electricity Company power station where it would be passed through a steam turbine and condensed. The condenser would use the existing power station sea water cooling system, which circulates water through the system to an existing consented outfall into the sea to the east of La Collette.

As much of the power station equipment is now not used, additional load from the Energy from Waste

facility cooling system would not exceed previous thermal loading from the existing power station and therefore the new facility would not have a significant impact and would operate within the conditions of the existing consent.”

And that’s it. That is all there is to say about airborne pollution risks to the Ramsar site.

Save our Shoreline’s response, highlighting particularly the possible impacts of build-up of airborne pollutants in the food chain, is at Appendix 4 to this report.

The health issues referred to in that document are dealt with in section IMPACTS ON HEALTH below.

Save our Shoreline also bring to everyone’s attention the issue of liquid and ash pollution, be it from rainfall or leachates or the ash pits. I copy below their comments – the point being that in any proper EIA these concerns would have been identified during the scoping process, addressed during the EIS process and reviewed thereafter with stakeholder participation at all relevant points. But that is not how the EIA for this incinerator at La Collette was done. They write –

“Marine Pollution Threat

We know from long years of involvement with the Reclamation Sites and historical practices thereon, that La Collette Phase 2 currently holds pits full of toxic bottom and Fly ash from our current incinerator. The linings are old and often the ash can be seen to blow into the sea. The siting of a new incinerator on what is a porous rubble compacted surface, not sealed from the elements, causes grave concern. Any water that falls onto the site will make its way into the sea and carry leachates with it.

Apart from already present leachates, marine pollution will increase, from refuse stored alongside the new incinerator (with all its toxins and heavy metals), and from toxic chemicals used in the plant, which will inevitably find their way into the sea. The beach to the east is already severely affected, scoured out in some places and increasingly muddy in others.

The prevailing current is from the west and carries the water along the shoreline to the Violet Bank, (see aerial photo, colour pictures at Appendix 6) where the currents swirl and mix. Toxins carried in the seawater and from air fallout at low tide will affect much of the flora and fauna of these wetlands in ways which are not yet fully understood, and the need for an urgent independent EIA is obvious.”^[32]

If concerns such as these are not to be addressed in an EIA, when are they to be addressed? And members will know perfectly well that the phrases “historical practices” and “grave concern” are based on real fear, borne of previous bad experience and the absolute desire that “it does not happen again.” Where is the citizen to turn to for a hearing?

And yet, in spite of all this – there was no EIA, or rather there was an EIA which excluded the very people who were most concerned and most knowledgeable and who had worked hard for the island to see through the designation in the first place!

And most bizarre of all

What Babbie Fichtner did do was to commission a report from Ambios Consulting entitled “Baseline Ecological Assessment: Land at La Collette reclamation Site, Havre des Pas, Jersey”.

This bizarre 1,265 word report carefully assesses every ecological aspect of the La Collette reclamation site including its water features and its hedgerows, as it was no doubt asked to do.

Meanwhile the internationally recognised south-east coast, fulfilling 6 out of the 9 criteria for a Ramsar site, right on the shore-step of La Collette.. was ignored! What was going on?

In all this discussion of Ramsar, may I remind members of this, using the words of Save our Shoreline:

“it is not just a matter of informing Ramsar when something has been built that may impact on a Designated area. The Ramsar designation is meant to be a joyful thing. Good news for Jersey. It is in many respects Europe’s Great Barrier Reef in its importance and diversity.^[33]”

Consequential damage to Jersey’s international reputation

This is a side effect of our cavalier treatment of the Ramsar designation and what it stands for. This aspect is discussed in full below at the section on IMPACT ON OUR INTERNATIONAL REPUTATION.

THE DECISION IS SIGNIFICANT ENOUGH TO MERIT REVIEW

The last of the criteria for reviewing a decision of the States is when the decision in question is **significant** enough to merit the effort involved in looking at it again.

The incinerator which this proposition seeks to rescind –

- Will cost over £100 million
- May have profound negative effects on Islanders’ health
- May have profound negative effects on Ramsar site
- Will have a negative effect on our international reputation
- Will have a negative effect on the value of the land at La Collette
- Will have a profound negative effect on waste policy.

All these effects, except the first, are specific to this project and will last for 25 years.

COSTS

Costs I deal with in a separate chapter below.

IMPACT ON HEALTH

The Babbie Fichtner short version of the EIS assesses the possible health effects of the incinerator as “negligible.” They point out that for most pollutants from the chimney the new facility is better than the old, and that the emissions are below the relevant “objectives” of the NAQS (National Air Quality Strategy).

Firstly, the comparison with the old incinerator is not really the point. The old one will be closed down soon whatever solution is adopted by the States, as we have a moral duty to do so. Secondly, these objectives are not based on health criteria alone. They are based on expediency.

“We (= the NAQS authors) have set **standards** for minimum or zero risk levels of pollutants purely with regard to scientific and medical evidence on the effects on health or, in the appropriate context, on the wider environment. However, when we set **objectives**, we also have to consider economic efficiency, practicability, technical feasibility and timescales.” (From paragraph 8.2.1 of the EIS, my emphasis)

The research shows that this is a highly unwise thing to do. We are basically inflicting ill-health on people, and it is all avoidable, simply by avoiding the technology.

What follows is taken from “The Health Effects of Waste Incinerators” (hereafter HEWI) 2nd edition, June 2008, moderators: Dr. Jeremy Thompson and Dr. Honour Anthony.^[34]

PM2.5s

These are particulates. The Babbie Fichtner EIS only considers PM10s; they simply ignore the smaller particles.

Beneath their dignity perhaps! But this is no laughing matter.

A large and growing body of literature has highlighted the dangers of particulates to health. Various studies have confirmed that *the smaller the size of the particles the more dangerous the health effects*²¹. The data from the World Health Organisation shown in the graph below clearly illustrates that PM_{2.5}S particles have a greater effect on daily mortality than the larger PM₁₀S¹⁸.

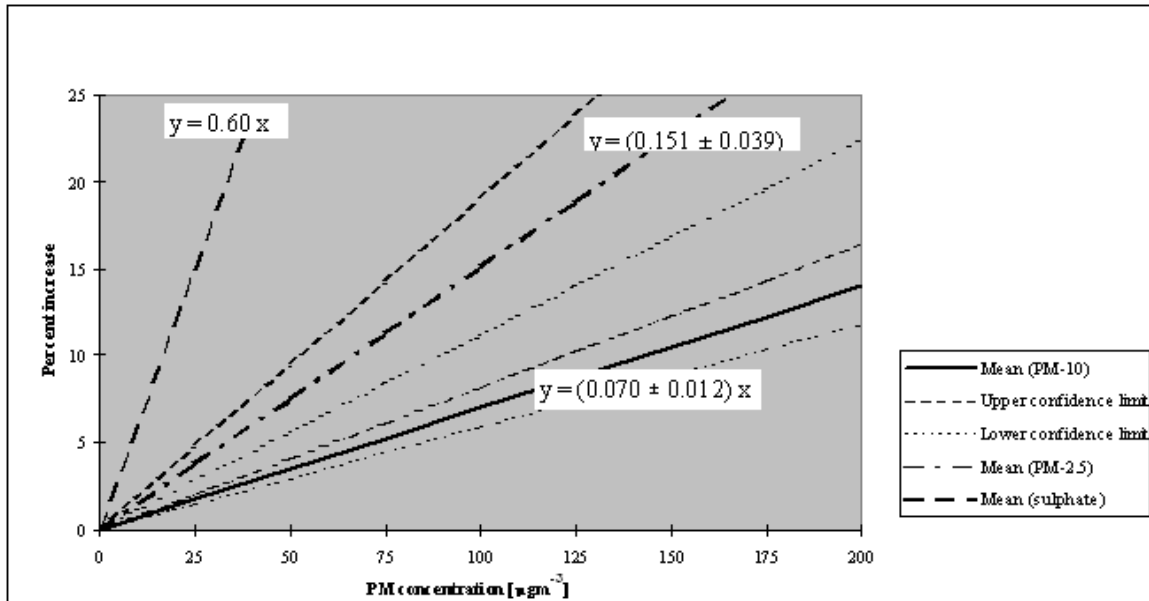


Figure 1. Increase in daily mortality as a function of PM concentration.
(reproduced from ref 18, Figure 3.6)

I include the graph not because I understand all of it, but because it scotches the claim that “there is no evidence” about the effect of these particulates on health. It has been studied, and studied seriously, at WHO level.

“The smaller particles are not filtered out by the nose and bronchioles and their miniscule size allows them to be breathed deeply into the lungs and to be absorbed directly into the blood stream where they can persist for hours²². They can then travel through the cell walls and into the cell nucleus affecting the cell’s DNA. The WHO state that there is no safe level of PM_{2.5}S and health effects have been observed at surprisingly low concentrations with no threshold^{23, 24}. The smallest particulates, particularly the ultrafine particulates (PM_{0.1}) are highly chemically reactive, a property of their small size and large surface area²⁵. A further danger of the smallest particulates is that there are thousands more of them per unit weight. In incinerators heavy metals, dioxins and other chemicals can adhere to their surface²⁶ increasing their toxicity. The body does not have efficient mechanisms for clearing the deeper part of the lung as only a tiny fraction of natural particles will be as small as this.

As incinerators are effectively particulate generators and produce predominately the smaller particulates that have the biggest effect on mortality it is clear that incinerators have considerable lethal potential.” HEWI p.11

In the American Cancer Society study 552,138 adults were followed from 1982 to 1989 and their deaths analysed. The effect of the PM_{2.5}S was separated out and the results led the EPA to “place regulatory limits on PM_{2.5}S, establishing the National Ambient Air Quality Standards in 1997. These regulations were challenged by industry but ultimately upheld by the US Supreme Court²⁹ after the data from all the studies had been subjected to intense scrutiny including an extensive independent audit and a re-analysis of the original data³⁰.

The health benefits of bringing in these new regulations have been estimated as \$32 billion annually³¹ based on mortality and chronic and acute health effects, and a White House report from the Office of Management and Budget in September 2003 calculated the benefits in terms of reductions in hospitalizations, premature deaths and lost working days as between \$120 and \$193 billion over the last 10 years.”

HEWI p.12^[35]

In light of the above, members must ask themselves, as they consider this proposition: why is there NO mention of PM2.5s in the EIS? And why was none called for?

Low level toxicity

“Professors Ashford and Miller¹⁵¹ noted that a proportion of the population react to chemicals and pollutants at several orders of magnitude below that normally thought to be toxic. For example research has discovered individuals who react to levels of toxins previously considered to be safe. Two examples are benzene²⁷⁸ and lead⁹³. It has been demonstrated that there is a tenfold difference between different individuals in the metabolism of the carcinogenic PAH benz(a)pyrene²⁷⁹.

Ashford and Miller also noted that studies in both toxicology and epidemiology have recognised that chemicals are harmful at lower and lower doses and that an increasing number of people are having problems. A significant percentage of the population have been found to react this way (15 to 30% in several surveys with 5% having daily symptoms).¹⁵¹

Research has shown 150 to 450 fold variability in response to airborne particles²⁸⁰. Friedman has stated that environmental regulation requires the protection of these sensitive individuals²⁸¹. This highlights the dangers of incinerators which emit a multitude of chemical compounds.”

HEWI p. 32

The claims of the EIS about reduced levels of emissions may not be a guarantee of safety in the light of this research.

Synergistic effects

Various studies have shown that a combination of substances can cause toxicity even when the individual chemicals are at a level normally considered safe. The report “Man’s Impact on the Global Environment” by the Massachusetts Institute of Technology stated “synergistic effects among chemical pollutants are more often present than not”¹⁵⁶.

Testing has been minimal and most of the synergistic effects are likely to remain unknown. Toxicologist Prof Vyvyan Howard has calculated that to test just the commonest 1,000 toxic chemicals in unique combinations of three would require 166 million different experiments and even this would disregard varying doses¹⁵⁷.

Synergy has been demonstrated when organic chemicals are combined with heavy metals,^{158,159} and with combinations of pesticides^{160,161} and food additives¹⁶². The last study is of particular concern. Rats fed with one additive were unharmed. Those fed two developed a variety of symptoms whereas those fed all three all died within two weeks. In this case the chemicals appeared to amplify each other’s toxicity in logarithmic fashion.

In a recent experiment scientists dosed animals with a mixture of 16 organochlorine pesticides, lead and cadmium at “safe levels” and found they developed impaired immune responses, altered thyroid function and altered brain development¹⁶³. Another study in 1996, published in Science, reported on the dangers of combinations of pesticides and their ability to mimic oestrogen. They found that combinations could increase the toxicity by 500 to 1000 times¹⁶⁴. Mice exposed to 25 common groundwater pollutants, all at levels well below those that produce

any effects in isolation, developed severe immunosuppression¹⁶⁵.

The level of concern about the multiplicity of pollutants released into the air by incinerators is enhanced by the fact that even when the probable effects of the single pollutants involved are known, no one has any idea what damage the combinations can cause.

Health effects summary

I have excerpted from HEWI a small selection of the research most obviously applicable to Jersey. There is no doubt in my mind that there is a case to answer, and the EIS fails in this regard. Government and people, we are left in the dark.

Competence of the authorities

The safety of the incinerator when in operation and when being built will depend on the competence, attitudes and awareness and training of the operating staff and the determination of the States to put an adequate regulatory framework and procedures in place.

This should give rise to serious doubts in the minds of the public and of States members. Bellozanne has been known to be dangerous ever since the flue gasses were finally tested in 1992.

“...the incinerator itself produces such high degrees of toxicity and pollution from its chimney that it has been illegal to operate any such plant in the European Union for over a decade. Were Jersey a full-member of the EU – the incinerator would, by law, have been closed down.”^[36]

The ash dumping affair and the failure to institute any health monitoring for the population related to Bellozanne, and the burn-it-all philosophy which until a few years ago ruled at Bellozanne, including such toxic waste as PCs, and the fact that all these matters do not seem to arouse the attention they deserve do not give confidence.

IMPACT ON RAMSAR

All that applies above to human health applies equally to the Ramsar site. The EIS did not consider the impacts of airborne pollution on the Ramsar site and there are serious question marks about the cooling water discharge. The health effects of airborne pollution such as comes from an incinerator chimney on marine organisms of all kinds, and on birds have been left as unknowns, neither scoped nor investigated.

This is hardly the way to go about protection of a wetland of international importance.

IMPACT ON INTERNATIONAL REPUTATION

Conventions Jersey complies with and conventions we don't

In SWS we read that “aim Seven of the States Strategic Plan 2005-2010 is ‘to Develop Jersey’s International Personality’ and, in the spirit of international recognition and co-operation, the States pledges to ‘demonstrate responsible and cooperative behaviour with regard to global issues’. This implies active compliance with the international Multi-lateral Environmental Agreements to which Jersey is a signatory, essential to maintain Jersey’s reputation and credibility.”^[37]

SWS goes on to discuss the United Nations Geneva Convention on long range transboundary air pollution (1979) and the Basel Convention. It does not mention the Ramsar Convention, which was not an issue at that time as the debate about the location of the proposed incinerator had not taken place and the preferred location in 2005 was Bellozanne (SWS p.88, section 7.4).

SWS at pages 21-22 makes much of the fact that the Basel Convention allows very little “wiggle room”. If we wish to go against its provisions then we have to make the necessary application for permission. Here is what

SWS says –

“The Basel Convention – This Convention requires signatories to handle and dispose of their waste in an ‘environmentally sound manner’. In general terms this provides that jurisdictions should deal with their own wastes within their own boundaries, unless it is **‘not possible for them to do so’**. It seems unlikely that Jersey could argue that this exemption applies, as Jersey has successfully dealt with the bulk of its waste for decades. However, the Waste Management (Jersey) Law 2005 has just received approval from the Privy Council, and will allow the Convention to be extended to the Island. In turn, this will permit the export of certain forms of hazardous waste that Jersey does not have the capacity to deal with. In the meantime, this waste is stored safely at Bellozanne. The export of materials for recycling is not covered by the Convention. (my underlining)

If Jersey did wish to export its residual municipal waste for disposal (whether by energy recovery or landfill), the Island would need to make a case for exemption from the Convention, to be judged by the recipient country. The Island has been advised that the UK is unlikely to grant such a request (except in an emergency), because the UK Management Plan for the Imports and Exports of Waste contains a legally binding presumption against the import of waste into the UK for disposal. A request made to another potential recipient country that is a signatory to the Convention would be assessed by that country.” (SWS pages 21 and 22)

Members may recall that this discussion of whether or not Jersey could export some of its waste was part of the overall debate about the need for an incinerator. The Department of the time was keen to rule out the possibility of export as a policy option.

Members may wish to compare the eagerness to comply with an International Convention which we find congenial with the eagerness to ignore the Ramsar Convention completely.

The need to protect our international reputation has been reaffirmed in the current Strategic Plan:

5.2 Continued development of the Island’s international constitutional position and international profile

Three of the 8 indicators are reproduced below –

- Jersey being internationally recognised and more widely understood
- An enhanced international reputation as a co-operative and generally well-regulated jurisdiction
- Compliance with relevant and reasonable international treaties^[38].

All three are directly contradicted by our failure to comply with the Ramsar Convention.

The SP at Para. 1.1 calls for –

- A reduction in per-capita consumption of resources
- Targets and timescales for reductions in per-capita waste arisings that reflect best practice globally
- Targets and timescales for reductions in greenhouse gas emissions that reflect global commitments
- Minimisation of adverse environmental impacts resulting from economic growth
- Conservation and enhancement of biological diversity locally and contribution towards the conservation of global biodiversity where appropriate.

In order to **“Show the world that economic and environmental success can work together”**.

Best practice globally is to minimise waste and to re-use and recycle. Communities across the world are achieving

70% and 80% recycling rates. Here too an incinerator based policy is not going to do anything for our international reputation.

IMPACT ON LAND VALUE

The La Collette land reclamation site is bigger than the centre of St. Helier. It has views over to Green Island in the East and to Noirmont and Elizabeth Castle in the West. It is the best and most important piece of real estate in Jersey^[39] (see colour plates at Appendix 6 to this report).

If the incinerator is built at La Collette then the States will be throwing away around £400 million. The public may not forgive us the loss of such a golden opportunity.

This calculation is based on the fact that the area is approximately 4 times greater than the financial quarter which has been effectively valued at £100 million.

If the States agree to put an incinerator at the very entrance to this land they remove, at a stroke, a large part of its development potential and therefore its value.

In 2000 the States agreed to a proposition P96/2000 which approved a framework for the future development of land at La Collette reclamation site, and this proposition designated the reclaimed land for –

- industrial, storage and warehousing use;
- for a major landscaped feature and public open space;
- for storing aggregate material imported through St. Helier Harbour;
- for access to the water at all states of the tide and for associated facilities for marine leisure craft.

It is perhaps time the States took a fresh look at the asset they have created and are creating. Much wild foreshore was lost to the land reclamation (see colour plates at Appendix 6 to this report) let us respect that loss and at least be imaginative in getting full value for the people of the Island.

IMPACT ON WASTE POLICY

Building an incinerator has a serious knock-on effect on all policy upstream. It makes demands that have to be satisfied. It pre-empts creativity, makes innovation unnecessary, denies democracy and damages sustainability.

And overarching all these effects is its inherent inflexibility. At a time of maximum uncertainty the States risks committing itself, for 25 years, to one, fixed, very expensive technology.

INFLEXIBILITY

The SWS recognised this as a major problem. In its introductory chapter, at section 1.6, entitled “The Future” we read –

“This Strategy incorporates current best practice, but recognises that the management of waste is a developing area, which is receiving increased public scrutiny and which is subject to steadily evolving legislation. The Strategy has a degree of flexibility to enable a response to be made to changes in emphasis or technology. Through regular review, the Strategy can be developed to accommodate future technological advances.”

The emphasis on flexibility, adaptation, changing legislation, advancing public attitudes, technological development is absolutely commendable. The need for this overall approach is reinforced in the following 2 paragraphs –

“.....A particular area in which developments are expected is recycling. It is apparent, particularly in Europe, that the drive towards better environmental solutions is accelerating. This should result in greater promotion of recycling initiatives and stimulation of markets for recyclables; this will probably result in the recycling of additional components of the waste stream becoming feasible. This could have a knock-on effect in providing better opportunities for Jersey to which the Island must be ready to respond.”

And –

“the Island should be prepared to take advantage of them (= emerging technologies) when they become robust enough. To enable this, the Committee will maintain a regular review of developments in this area.”

The mystery is how to reconcile these adaptive and progressive declarations of intent with a single £100 million highly complex and inherently dangerous piece of kit. And there is a very real possibility that waste arisings will decline, due to a number of factors, acting alone or in combination: public desire to act more sustainably, the “end of growth” causing a reduction in waste, or the decoupling of waste creation from growth.

THE INCINERATOR PRE-EMPTS CREATIVITY

There are ways of getting around problems, if you allow, indeed encourage people to be creative. There is a spin-off too – doing things creatively is likely to be more fun, more sociable and therefore more likely to contribute to building our communities than using a technology-based centralised solution.

If the Island had a real goal of saving waste, if we had to show thrift, would we not be better off? “Oh we can’t go back to milk bottles, can we?” someone said to me. But we could go forward to re-usable lightweight plastic bottles, couldn’t we? Why not get Bellozanne sooner rather than later?

The proposals of Total Waste in Guernsey for handling the island’s waste show the same creativity at island level. “The inhibiting risk aversion that pervades waste management in the UK needs to be replaced with a culture of imaginative problem-solving and a new ‘waste utilisation’ approach. The quest for convenient ‘magic box’ solutions that deal with mixed municipal waste must be replaced with an energetic and forward-looking search for flexible solutions that eliminate dependence on polluting and unpopular ‘burn it or bury it’ technologies altogether.”^[40]

THE INCINERATOR HAS DEMANDS THAT MUST BE SATISFIED

In section 1.2 of SWS, entitled “A Strategy in Support of States Policies” we read –

“The States will promote the conservation and sustainable use of resources, and will minimise environmental pollution in all its own activities. It will seek, through its influence, the achievement of the same objectives by other sectors of the community.”

But the incinerator will only function correctly if the CV (calorific value) of the input material is within a certain range and if there is enough material to burn. Below 37,500 tons per annum it cannot be run continuously, and this is not only a waste of our capital expenditure, it would entail more start-ups and switch-offs which is bad for the plant and bad for the environment.

I am informed^[41] that each incinerator is designed for a specific CV and can only accept waste input to either side of that CV within certain limits. TTS will therefore have already discussed this with the supplier and will have decided what the design CV will be.

From then on the Island is locked in. The waste stream must be of that CV or within the permitted range for the incinerator to operate properly.

And everyone must deal with their waste the TTS way. The Island must not go in for this recycling lark, or at

least must not take it too seriously! The States of Jersey, if this incinerator goes ahead and is not rescinded, are committing themselves to not encouraging the re-use and recycling of resources, in flat contradiction of all the fine words of the SWS.

THE INCINERATOR HAS A LARGE ELEMENT OF RISK

If an entrepreneur had a business proposition involving a large biomass burner costing millions, the business plan would include a statement as to where the feedstock was being obtained, who was growing it, and the nature of the contract, otherwise nobody would finance the project.

In the case of Jersey's incinerator there is a huge risk. The supply of burnables is not guaranteed, it cannot be guaranteed without total control of the waste supply and that means that TTS must have total override of all the parishes' wishes. It is strange that this aspect of the proposal to construct an incinerator has appeared nowhere, so far as I can see, in any of the documents surrounding the waste strategy or the incinerator.

THE INCINERATOR DAMAGES SUSTAINABILITY

Sustainability as a theme for our time has been discussed earlier in this report. The incinerator cannot promote this goal. It sends instead a very different message.

SWS quotes the Environment Charter –

“The States will promote the conservation and sustainable use of resources, and will minimise environmental pollution in all its own activities. It will seek, through its influence, the achievement of the same objectives by other sectors of the community.”^[42]

The incinerator directly contradicts this statement. As I pointed out above, the relative global warming benefits of recycling versus incineration may not have been a subject of much research in 2005, but the data exists now.

“Modelling studies of the carbon emissions of different types of waste management indicate that most types of recycling have significant climate change benefits over energy from waste and landfill^[43], and that the anaerobic digestion of source separated food wastes is more beneficial than incineration or landfill.”^[44]

Wales is looking to go down a route of greatly increased recycling. In support of this aim research was carried out in this same area –

“As the recycling rate increases, the net burden becomes a benefit between 50% and 60% recycling. At 80%, WRATE forecasts that municipal waste management will result in avoided emissions greenhouse gases equivalent to over half a million tonnes of CO₂.”^[45]

THE ALTERNATIVE SOLUTION

GENERAL REMARKS

Any alternative waste solution to the incinerator will embody a completely different attitude to waste which is in line with –

- (a) public opinion
- (b) best practise
- (c) the way the world is moving.

The aim is to reduce residual waste to a small fraction by minimising, re-using and recycling as much as is environmentally sound. The aim is to be flexible, future-proof, going with the grain of sustainability and not against it, going with the public's best desires. What is good for the environment and for sustainability is good for

us too.

The authors of this report and of the paper at Appendix 1 do not have the resources of TTS so of course it is of necessity an outline.

COST COMPARISON

See mainly chapter 8 on COSTS below. But discussion of collection costs is here.

It is likely that the costs of collection are not increased greatly by provision for separation. First, see the following from WR –

“8.2.3 UK Local authorities are responsible for household collections and provide bring banks and civic amenity sites. Costs in 2006 ranged from

Description	Cost per household	
All local authorities (LA)	£47.71	
LAs with recycling rate less than 32%	£46.20	
LAs with recycling rate greater than 32%	£53.36	
LAs with recycling rate greater than 40%	£53.97	
LAs with recycling rate greater than 45%	£51.92	

It can be seen that there is a small increase in the cost of collection services for local authorities with high recycling rates, although the additional cost is not great.”^[46]

The variation in costs of collection between authorities providing what DEFRA takes to be the same service is considerable. “The cost per household of collection for the highest performing authorities ranges from £39.46 (Waveney) to £69.35 (Lichfield).^[47]

And the figures for Jersey are as follows –^[48]

Parish Collection Costs 2005/6

Parish	2005/6 Cost	2005/6 Tonnes	£/Tonne
St Helier*	£942,912	16,805	£56.11
St Saviour	£255,015	5,724	£44.55
St Clement	£242,264	2,972	£81.52
St Martin	£74,300	1,648	£45.08
Trinity	£32,000	1,188	£26.94
St Lawrence	£64,391	1,595	£40.37
St Mary	£22,574	574	£39.33
St Brelade	£302,005	5,064	£59.64
St Ouen	£121,212	1,623	£74.68
Grouville	£58,222	2,108	£27.62
St Peter	£90,035	2,674	£33.67
St John	£31,684	1,013	£31.28
Total	£2,236,614	42,988	

Ave £/Tonne	£52.03
--------------------	---------------

* Figures not supplied
 – estimated figure
 used extrapolated
 from previous years.

This variation demands closer study, but from these figures it is likely that the additional cost of a separated collection would add less to a parish's bill than the difference between the least and the most expensive parishes.

In other words, management and cost control are bigger factors in the eventual cost than the type of collection. This is an aspect which would clearly need further investigation and I regret not having had the time to talk with the Connétables and parish offices to begin to explore this issue.

It has to be borne in mind that the overall costs of the incinerator solution include budgets for recycling schemes, working with the parishes and with business. And these budgets are available to both solutions.

PARISHES AND COMMUNITY

The alternative solution is flexible and local in its nature, so it is ideally tailored to our parish system and the advantages it confers on Jersey as a place to live. It expects that the desire to co-operate on recycling and reduction can be successfully tapped into by the parishes. It assumes that, for example, food waste and green waste can and perhaps will be diverted from the "national" streams and be processed locally into compost or digested, yielding local benefits and saving parishes money (see below for section on "financial incentives").

Likewise the income streams that exist in all waste will be exploited 100% at local level. It is entirely likely that parish organisations can self-fund through waste.

Everyone in the parish working together in imaginative ways to reduce and recycle will be an additional way to generate and reinforce the sense of community which is so important to well-being.

It is because of the potential for community involvement that we are confident that the collection costs will not be greatly more than they are now and they will be offset also by increased income – see following sections.

The Green direction consulting report has been an arms-length exercise and I apologise here for any repetition

between the above paragraphs and the report.

FINANCIAL INCENTIVES AND DISINCENTIVES

The principle is stated in SWS, page 6 –

“PREVENTION & MINIMISATION

Rationale

To prevent or reduce the waste we generate. This will be achieved through incentives/disincentives alongside education programmes to encourage the public to change their lifestyle habits with respect to waste.

Aims

The Committee will develop proposals for financial mechanisms that will aim to change behaviour and meet environmental objectives – these will be submitted for States approval. These could include initiatives such as the introduction of environmental taxes, for example weight/volume related collection/disposal taxes for municipal waste, individual taxes on items such as newspapers or plastic bags, imposed at the point of sale, or incentive schemes such as support for the purchase of washable nappies or home composting kits.” (my underlining)

Fiscal initiatives have happened in Jersey with respect to washable nappies (encouragement) and with respect to charging for plastic bags (discouragement) and with charging for the dumping of inert waste (discouragement). Here are some ideas along these lines which would create the right financial environment on a wider basis.

MAKING MONEY FROM WASTE NOT THE RATES

Any parish or parish organisation is, if I understand the situation correctly, free to do its own selling of recyclables. But if it so desires it can send the recyclables to TTS. Payment could be made when the material is sold on, on say a 50/50 basis. In effect TTS is acting as agent for the parishes. An excellent example of States/parish co-operation.

This gives every parish an incentive to provide for and to promote separation. Collection can be by voluntary groups within the parish – it is likely that very high recycling rates could be achieved very quickly.

For residual waste the incentive needs to be to reduce what goes to the central area for (expensive) treatment. Here is a possible method. Calculate the average waste per household throughout the Island. From that calculate the “guideline” waste for each parish. If a parish sends less than their par amount to TTS then they get a rebate. And if they send more than the average then they get a little bill. TTS budget remains cost neutral: they give out as much as they get in. Repeat the following year – the amount will reduce as parishes compete to get the rebates.

This system needs tweaking for fairness, but the principle is, I believe, valid.

This method can be applied to individual households also, but this would require a substantial outlay in automatic measuring equipment on the carts. I believe it is preferable to use the motivation of the parish kitty.

COSTS

The overall cost of any alternative solution to the incinerator should ideally be comparable to the overall cost of the “incinerator solution.” The cost of any alternative has of course to include the costs of cancellation. Hence the haste with which this proposition has had to be brought.

Cost of the incinerator, the subject of this proposition

The cost of the capital element of the incinerator solution, so carefully planned in every detail, is in fact open-ended, despite assurances to the contrary. It is “upwards of £106 million’ Some of these costs are needed for

either solution, e.g. the decommissioning of the Bellozanne incinerator.

Cost of cancellation

This question is obviously crucial to the debate. To answer this question I asked the following written question of the Minister for Transport and Technical Services –

“Given that any cancellation costs would be contested and determined at arbitration, would the Minister advise the Assembly what the Transport and Technical Services Department estimates the cost to the Island would be if the contract for the new Energy from Waste Plant at La Collette was cancelled, set out and justified under as many clear headings as are necessary for the estimate to be verifiable by peer review, and outline the variations in potential liability to the States, if any, should the date of cancellation be taken to be 16th February 2009, or an earlier or later date?”

The answer included the words:

“Details of the Technical adviser’s calculation of this sum are available if required for peer review but are subject to commercial confidentiality under the contract.”

This sounds as if, once we find a suitable peer reviewer, the details will be made available, subject to a confidentiality agreement being made up in some way – they are “available if required.” But in fact when I emailed for the information at 2.19 on Tuesday 27th January, having located a suitable peer reviewer, I received the following reply –

“I cannot release documents of this nature to an unknown third party and some of the information that would be required is subject to a confidentiality agreement between the minister and CSBC. A quick review of their internet site does not provide any background to suggest that they have any experience in the waste/power/EfW markets.

It would be a matter for the Controller and Auditor General to review costs if he felt that was necessary.

Regards
John Richardson”.

The Auditor General was not looking into cancellation costs as far as I am aware. My written question refers clearly to the cancellation costs. The website did in fact demonstrate that there was the sort of experience within that company to do the task. And the first sentence denies the apparent spirit of the written answer.

After writing a long and comprehensive e-mail to counter this (sent at 22.04 that evening), Mr. Richardson replied next morning, a first e-mail at 9.01 stating at more length why it was not possible to release the document, and a helpful one 16 minutes later, finding a way round the problem– namely, to white out all the actual sums in the document.

I was only able to re-establish contact with my peer reviewer on the Friday. I hope that members will have his “speculative” review of the costs quoted by TTS, but apologies in advance if they do not. Members will see the difficulties we face and understand why the peer review may not be completed.

Opportunity cost

The foregone value of the development land at La Collette is of the order of approximately £400 million (see section on IMPACT ON LAND VALUE for full discussion) This is a SAVING of the alternative solution – enough land to create a village, without touching one green field or adding in any way to overcrowding in St. Helier, in fact permitting the Island to breathe at last.

The argument that it is already devalued by the fuel farm and that therefore this cost cannot be attributed to the incinerator is spurious. The fuel farm is an additional, separate and more easily soluble negative in the equation. It

can, and probably will be moved or even replaced by the pipeline solution mentioned in the draft Energy policy and now under discussion through Deputy Le Claire's Proposition.

The incinerator cannot be moved and its bad neighbour effect will last into the foreseeable future. It is to all intents and purposes, permanent.

Health costs

These apply to the incinerator. I am simply not able to quantify these in money terms. (See the discussion at section IMPACT ON HEALTH). There may be health costs for the alternative, and these would require rigorous assessment, such as was not done for the present incinerator.

Costs of collection of the two solutions

These are comparable, separation will entail some extra collections, but the figures from elsewhere, and from Jersey show first, that management may very well be as important a factor as the increase in collections, and second that authorities with increased recycling rates are only paying marginally more for their collections service. See above under "THE ALTERNATIVE SOLUTION section on Cost Comparison".

Capital cost of the alternative solution

Residual waste still has to be disposed of in the alternative solution. The cost of possible hardware to achieve this is listed at 2008 prices in Appendix 5.

Dealing with waste is a cost that the States can well do without, and a strategy that openly targets and promotes waste minimisation is clearly more likely to achieve this goal than a strategy whose centrepiece is a "bonfire in a box".

That said, if all the above points are taken into consideration, it is clear which is the financially more sensible option.

SOME VIEWS ON THE CURRENT CRISIS

From the right

The expansion of household debt relative to income created the illusion that the economy was sound. But the consumer economy was as much of a credit-based bubble as the real estate bubble and the financial sector bubble. The economy has lost its real basis.

Today it is difficult to stimulate consumer demand by lowering interest rates. Consumers are too heavily in debt to borrow any more. Financial institutions are too impaired to want to lend to anyone except those who don't need to borrow. As the Keynesian macroeconomists used to say, "you can lead a horse to water, but you can't make him drink."

And there's another problem. Much of what American consumers purchase today is made offshore. Stimulating consumer demand in America puts factories back to work, but those factories are located elsewhere in the world.

From Why America Can't Recover

Published 01/06/09 Paul Craig Roberts, former Secretary of the U.S. Treasury

From the left

Coming hyperinflation?

The total of such emergency Fed lending exceeded \$2 trillion on Nov. 6. It had risen by an astonishing 13 percent, or \$1.23 trillion, in the 12 weeks since Sept. 14, when central bank governors relaxed collateral standards to accept securities that weren't rated AAA. They did so knowing that on the following day a dramatic shock to the financial system would occur because they, in concert with the Bush Administration, had decided to let it occur.

That means once banks begin finally to lend again, perhaps in a year or so, that will flood the US economy with liquidity in the midst of a deflationary depression. At that point or perhaps well before, the dollar will collapse as foreign holders of US Treasury bonds and other assets run. That will not be pleasant as the result would be a sharp appreciation in the Euro and a crippling effect on exports in Germany and elsewhere should the nations of the EU and other non-dollar countries such as Russia, OPEC members and, above all, China not have arranged a new zone of stabilization apart from the dollar.

The world faces the greatest financial and economic challenges in history in coming months. The incoming Obama Administration faces a choice of literally nationalizing the credit system to insure a flow of credit to the real economy over the next 5 to 10 years, or face an economic Armageddon that will make the 1930s appear a mild recession by comparison.

From: Defining a Very Great Depression
F. William Engdahl

From the non-aligned corner

That said, expert opinion is divided on how we should react to the risk of collapse. Some feel we must stave it off at all costs, otherwise the whole economic edifice that provides for human well-being will come crashing down. Others feel collapse is inevitable, even necessary if the habits that most damage our fragile home are to change. They argue that the job now is to [manage collapse](#) and even use it constructively.

New Scientist editorial, April 2008

From the Telegraph.co.UK

UK banks face £70bn property bombshell

New research shows the commercial slump could trigger nationalisation for some lenders.

By Ben Harrington

Last Updated: 7:47PM GMT 28 Dec 2008

Britain's banks face up to £70bn of losses on commercial property loans, enough to force some of them into a further round of taxpayer bail-outs.

Investment bank Close Brothers forecasts massive writedowns in light of its forecast 50pc-60pc slump in commercial property values by the end of 2009 compared to the market's 2007 peak. Most property experts believe such values have already dropped 30pc this year.

Such writedowns could again imperil banks' capital ratios, potentially forcing them once more to go cap in hand to the Government.

Close Brothers refers to a study by De Montfort University, which found that the country's leading banks have a total £250bn exposure to commercial property loans - twice the amount they had before entering the recession in the early 1990s. Some £83bn of the total was originated at the peak of the market.

Arguing that commercial property values could more than halve, Close Brothers said: "The fall is higher than most observers estimate. No available debt finance and a limited number of investors with equity capital for acquisitions means that anything sold will only realise distressed valuations."

From the peak oil corner

Now with the Collapse of 2008, economists are rushing to announce a new era of neo-Keynesianism: lack of regulation in the finance industry has led to a cataclysm of unimaginable proportions, and only massive government intervention can put us back on track.

Sadly, this time the tracks have been moved, maybe dismantled altogether. The two great economic paradigms of our age simply took too much for granted. They assumed that economies run on money and labour, whereas real economies also need energy and natural resources. They assumed that because population, resource extraction, and available energy had grown throughout the 19th and 20th centuries, they would continue to grow in perpetuity; all that was necessary was to properly adjust the relations between money, market forces, and government regulation. No one (within the economics profession) stopped to think that limits to Earth's supplies of fossil fuels, topsoil, water, and other resources might impose ultimate limits on economic activity.

The fields of ecological economics and biophysical economics have sprung up in the past two or three decades to fill in this enormous blind spot of conventional economic thinking, but both are currently marginalized to the point of irrelevance.

In the months and perhaps years ahead we will see a titanic battle to the finish between the free marketers and the state controllers over who is right about the economy, and about who is capable of restoring the beatific condition of perpetual growth. Sadly, neither camp has the answer this time around. Humanity has reached a significant physical limit to growth – Peak Oil – that will spell ruin to all economic philosophies that fail to take such limits into account.

"Economists Without a Clue" – submitted by Richard Heinberg on December 3, 2008



[The Oil Drum](#)

Discussions about Energy and Our Future

🔊 [DrumBeat: February 1, 2009](#)

[The Oil Drum](#)

Matt Mushalik: Links Between Peak Oil and Financial Crisis; also Updated Graphs

Posted by [Gail the Actuary](#) on February 1, 2009 – 8:39am

Topic: [Supply/Production](#)

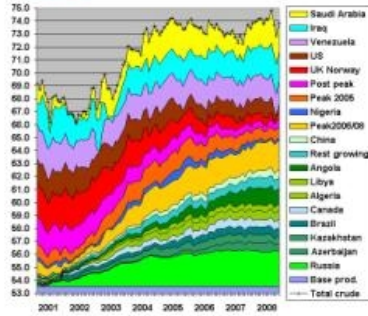
Matt Mushalik from Australia has in the past provided some graphs of crude oil production presented in an unusual way. The top of the graph is just what you would expect, but the layers within the graph show only recent changes in production for a given country. This post provides an update of two of Matt's graphs through October 2008, based on EIA data. It also shows a diagram Matt prepared summarizing connections between the peak oil and the financial crisis.

First, Matt's diagram showing his view of the connection between peak oil and the financial crisis. (Sorry, it is too big to fit in the header).

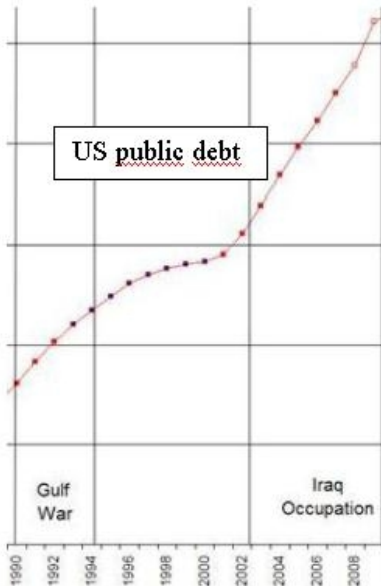
Connection Between Peak Oil and the Current Financial Crisis

Financial Crisis and Peak Oil
Simplified chain of **past**, **present** and **possible future** events

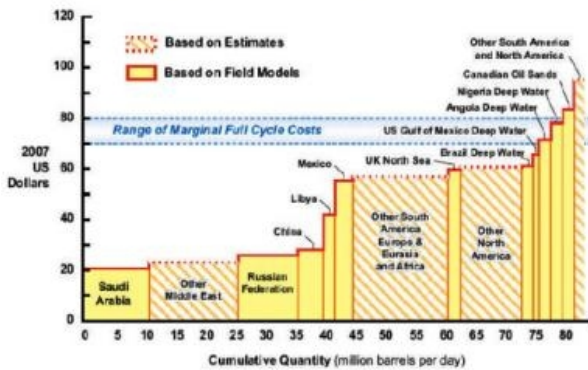
Crude peak 2005 – 2008
74 mb/d



Accumulated debt



US public debt



↑Marginal barrels cost \$70-80 by CERA quoted in <http://www.horizonoil.com.au/>

High gas prices in US suburbia and exurbia

Subprime mortgage crisis

Airlines and car industry in trouble

Falling house prices

Banking crisis

Credit crisis

Recession

Oil derivatives market failure

(OECD) Oil demand destruction

Lower oil prices and production cuts

Less investments in oil fields to offset natural decline

Oil production decline

Oil shortages and/or 2nd oil price shock

Other unforeseen events (e.g. oil price volatility destabilizes economy; expensive oil disappears from market; credit crisis damages oil sector itself oil import/export & regional imbalances)

Matt's diagram summarizing the connections between peak oil and the financial crisis (shown above) is in three colors. Black indicates past events; green indicates current events; and blue is some possible future events.

Most of us have heard about many of the events on the chart already, and speculation as to what may happen in the future. While the media is not aware of the various connections, there is considerable evidence that these connections are there, and are what have caused the current financial crisis. Of course, with peak oil as a cause, the financial crisis is likely to be far worse than anyone could ever have imagined. While the economy may cycle in the future, its long term direction is likely to be down.

There are three graphs down the side. The first one is Matt's "Graph 1d" of worldwide crude oil production based on EIA data. This graph is described in more detail below. This graph shows that worldwide crude oil production has been flat at about 74 million barrels a day, since 2005. The "peak", to the extent there is one, is in July 2008.

The second is a graph of US public debt. Debt of almost any kind has been escalating, so other types of debt, if graphed, would have also shown a pattern of rapid increases. Matt also notes the "Gulf War" and the "Iraq Occupation" on this graph, presumably also related to our oil related problems.

For more of this article and access to the rest of the site go to:

<http://www.theoil drum.com/node/5047#more>

Mr. Le Cheminant's first letter was not available at the time this had to go to press.

William Gardiner <W.Gardiner@gov.je> wrote:

If this e-mail has been sent in error, please notify us immediately and delete this document. Please note the legal disclaimer which appears at the end of this message.

Sent: Monday, 17 September, 2007 10:33:42 AM

Subject: Waste Management Query

Dear Mr Le Cheminant,

Your recent query – that you wish to discuss an offer of waste management and treatment – has been passed to me by our customer service centre.

For your information, waste management operations are currently delivered in-house by Transport and Technical Services. With regards to waste treatment, the island currently employs a waste to energy incineration plant as its primary means of disposal for non-inert waste. The Solid Waste Strategy Projects Team are responsible for the procurement of a replacement for this facility and we short listed four companies to submit tenders for a design and build contract in December 2006.

However, we are always interested to hear of any new developments in the waste treatment market. so I will be happy to receive any background information about your company that you wish to provide.

This is the first contact my team have had from you so I would also be grateful if you would confirm who you contacted in Transport and Technical Services previously so we can ensure our communication transfer improves in future.

Regards

Will Gardiner
Director – Waste Strategy Project

From: Steve Le Cheminant steve177@talk21.com
To: William Gardiner W.Gardiner@gov.je
Sent: Monday, 17 September, 2007 1:43:33 PM
Subject: Re: Waste Management Query

Dear Mr Gardiner,

Thank you for your reply. I first contacted the States of Jersey through the States website, I sent the message to the members of the dept including Deputy Duhamel.

Total Waste is representing 3 of the world's largest manufactures of MRF, Bio Gas and Composting systems and waste management providers.

If tender documents have not already been dispatched we would be happy to receive the documents when tendering commences.

We feel confident with our partners we can deliver a very good offer.

Until we have the material types and tonnages it would be impossible to know what facilities would be required.

Total Waste is committed to using the best cutting edge technology to make waste a commodity rather than an expense, by realising the full potential of waste a profitable business can be built, meaning disposal costs can be drastically reduced or even removed completely.

Total Waste would ideally like to finance, build and operate our facilities and work on a price per tonne gate fee. However we would of course tender within the scope of the tender if other arrangements are preferred.

Thank You.

Yours Sincerely

Steve Le Cheminant

Total Waste

Airborne Pollution Threat:

The incinerator stands on the extreme south eastern corner of the reclamation area. The prevailing winds will blow the nano-particles from the stack across the area marked in red. It has been estimated that this will affect up to 55,000 people as well as the wetlands population of flora and fauna and the fish farming industry. To what extent? Well we don't know, as there is no Independent Environmental Impact Assessment data available. But 33,000 EU doctors (ISDE International Society of Doctors for the Environment) on 11th June, 2008 signed an appeal to the plenary of the European Parliament to condemn this type of plant which has been outlawed in other jurisdictions. An excerpt reads: ***“Several recent studies of wide samples of population continue to reveal the threat that incinerators pose to human health in Europe and around the world. Ultrafine particles emissions are still not monitored anywhere in Europe, even though the danger these particles pose is well documented.”***

International law is also starting to bear upon incineration. Three principles of international law – precaution, prevention and limiting transboundary effects – conflict with incineration. Precaution is cited in the OSPAR, LRTAP, Bamako and Stockholm Conventions and the Rio Declaration, among other documents. Because incineration is effectively an uncontrolled process, with unknown byproducts, and because many of those byproducts are already affecting human health, precaution argues that incineration should be avoided. Prevention and minimization are widely referenced in international law, most specifically in the Bamako Convention, which explicitly defines incineration as incompatible with prevention and Clean Production practices. The London, OSPAR and Bamako Conventions also place bans upon incineration at sea and in domestic waters."

The possible effects of fallout from dioxins in micro particles onto the oyster farming industry have not been addressed; the effects on lobster fishing and shellfish in general are also an imponderable since no efforts have been made by our Environment Department or Fisheries Department to look into them. TTS and Planning would seem to be relying on the contractors own report and assurances which can hardly be said to be independent.

We understand that this type of incinerator has been outlawed in Japan and California amongst other places. Though it complies with EU regulations, it is not modern technology and we are doubtful that such mass burn processes are in harmony with the Island's commitment to the Ramsar Wise Use Principle, i.e. "the maintenance of their [wetlands] ecological character, achieved through the implementation of ecosystem approaches, within the context of sustainable development". <http://www.ramsar.org/about/info2007-07-e.pdf>

Furthermore, surely the Precautionary Principle should be considered?

Advice from The Joint Nature Conservation Committee (JNCC), statutory adviser to the UK Government on national and international nature conservation:

"The Precautionary Principle is one of the key elements for policy decisions concerning environmental protection and management. It is applied in the circumstances where there are reasonable grounds for concern that an activity is, or could, cause harm but where there is uncertainty about the probability of the risk and the degree of harm." <http://www.jncc.gov.uk/page-1575>

"Uncertainty about the probability of the risk and the degree of harm" - to a site which qualifies under no less than six of the Ramsar Convention's nine Criteria. It should be remembered that our Island's activities as relate to the Ramsar Convention on Wetlands of International Importance are ultimately the responsibility of the UK Government.

This extract is from Deputy Rob Duhamel's alternative circulated to States members before the July 2008 debate.

“An integrated approach between the parishes, the States and the private sector should be agreed at the earliest opportunity to provide a source segregated collection of dry recyclables and kitchen waste, in order to drive forward recycling opportunities and the minimisation of residual waste. Collection techniques are now well advanced in the UK. A separate weekly collection of food waste ensures that the residual waste is much easier to handle and less of a health hazard.

Dry recyclables should be sorted and baled in a Materials Recycling Facility for export and sale. Several States members have seen this type of facility in operation during their visit to the MRF in Cardiff. The panel has investigated shipping costs and received evidence from three separate shipping companies, confirming that dry recyclables can be exported to the UK for between £25 and £30 per tonne, and to mainland Europe for approximately £20 per tonne. There is sufficient existing spare capacity on these routes to export all the Island's recycled materials several times over.

Kitchen waste should be either co-composted with green waste using in-vessel composting technology or processed through anaerobic digestion. Anaerobic digestion as used in Europe is more than 85% energy efficient, (by comparison, electricity production through EfW is less than 27%). The biogas generated could be used in transport systems. Connex run the largest fleet of biogas buses in Sweden.

On 8th April 2008, the Environment Agency & WRAP released their joint consultation on the Quality Protocol for Anaerobic Digestate. The AD Protocol forms part of the waste Protocols Project for composts, food oils and plastics. Each protocol defines the point at which a material ceases to be a waste and instead becomes a product.

Whole digestate, separated liquor and separated fibre derived from source segregated biodegradable materials under the BSI PAS 110 standard will be able to be used in agriculture and soil grown horticulture, forestry and land restoration.

The UK government is working closely with the National Farmers Union and major supermarkets to encourage the use of AD products on agricultural land.

The Environment Scrutiny Panel concurs with Juniper that there should be a move away from mass burn incineration towards source separation and, in relation to the residual fraction, a combination of a simple fuel preparation/sanitisation process and a far smaller EfW using modular, small-scale technologies.

The technologies involved in the Panel's recommendation are available “off-the-shelf” and can be procured individually or as part of a package. Whereas the proposed EfW plant will take up to three years to build and commission, these technologies can be up and running in a much shorter timeframe.

In vessel composting equipment to deal with both green waste and kitchen waste will have a capital cost in the order of £4M.

Anaerobic digestion plant to deal with food waste will have a capital cost in the order of £6M.

A Materials Recycling Facility will have a capital cost in the order of £5M.

The capital costs of the residual treatment facility in the order of £20M to £30M.

Alternatively, if these technologies are procured as a “package”, the total cost will be in the order of £35M.”

La Collette

<http://www.axiomci.com/press/lacollette94hi.jpg>

EfW Plant – proximity of incinerator to fuel farm

<http://www.axiomci.com/press/madnesshi.jpg>

Violet Bank

<http://www.axiomci.com/press/violetbankhi.jpg>

Ramsar Designated Wetland

<http://www.axiomci.com/press/maphi.jpg>

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- [1] The Aftermath of Financial Crises, December 2008. www.economics.harvard.edu/faulty/rogoff/files/aftermath.pdf
- [2] <http://www.sd-commission.org.uk/pages/about-us.html>
- [3] <http://www.neweconomics.org/gen/>
- [4] Senior economist, environment department, World Bank, 1988-1994, now Professor of Ecological Economics, University of Maryland
- [5] Strategic Plan page 14 paragraph 1.1: “Show the world that economic and environmental success can work together. Indicated by: [.....] targets and timescales for reductions in greenhouse gas emissions that reflect global commitments”.
- [6] SWS p.48
- [7] And if it is argued that it is difficult to predict what is going to happen in materials technology over such a long time-span, then that makes the case: incineration is too expensive and too monolithic a solution for times which are changing.
- [8] Paragraph 1.3.2 of the Executive Summary, page 3
- [9] WR paragraph 7.1.3, page 45
- [10] WR paragraph 7.1.4
- [11] Established as a not-for-profit company in 2000, WRAP is backed by government funding from England, Scotland, Wales and Northern Ireland. <http://www.wrap.org.uk/index.html>
- [12] “Press reports threaten the hard work of the UK public” Posted by Liz Goodwin, Chief executive, 29th January 2009 http://www.wrap.org.uk/blog/press_reports.html
- [13] http://www.wrap.org.uk/downloads/Recycling_LCA_Report_Sept_2006_-_Final.28f0f863.2838.pdf
- [14] Quoted in WR para. 7.2.5 page 52
- [15] 2005 states on page 21, 2nd paragraph
- [16] Source for all the above: *The Scottish Government website: News release: new Vision for Waste* 24/01/2008^[16]
- [17] Source: *JERSEY WASTE STRATEGY – FEB. 2005 MODEL UPDATED TO INCLUDE 2007 ACTUAL DATA*
- [18] http://www.letsrecycle.com/do/ecco.py/view_item?listid=37&listcatid=326&listitemid=10187
- [19] WR page 42

- [20] Source: EEA: CSI 017 – Generation and recycling of packaging waste – Assessment published Jan 2008
- [21] (All taken from written, prepared responses by the candidates, JEP 1st October 2008)
- [22] JASS 2008 Key Findings, page 4
- [23] WR page 108-110
- [24] (the Housing Department!)
- [25] From my notes and memory of a meeting of environment scrutiny with leaving officers and Minister and AM of Planning and Environment, 22nd January 2009.
- [26] See <http://www.battlemccarthy.com/profile/awards.html>
- [27] All personal communication
- [28] See below for full discussion of the health risks posed by incinerators
- [29] See picture in pictures Appendix
- [30] From “JERSEY’S LAST WILDERNESS – PROTECTED BY THE RAMSAR CONVENTION, OR NOT?” report sent to all States members by the Save Our Shoreline committee dated 6th December 2008
- [31] From my notes of telephone conversation, December 2008
- [32] SOS Jersey Last Wilderness, Dec 06 2008
- [33] Covering letter by David Cabeldu for dossier sent to Environment Scrutiny, 4th January 2009
- [34] http://www.ecomed.org.uk/content/IncineratorReport_v2.doc
- [35] I do not give details of all the references within this document – there are many, it is a research review document
- [36] Committee of Inquiry: Toxic Incinerator Ash Dumping in the St. Helier Waterfront Land Reclamation Schemes, Project Stuart Syvret, June 10th 2008
- [37] SWS p.21 3rd Para.
- [38] SP 2006-2011, p.31
- [39] Personal communication Christopher McCarthy <http://www.battlemccarthy.com/profile/index.html>
- [40] How to Comply with the Landfill Directive without incineration – Greenpeace 2001
- [41] Keith Kondakor, personal communication
- [42] SWS page 18
- [43] Environmental Benefits of Recycling, WRAP (2006) <http://www.wrap.org.uk/document.rm?id=2838>
- [44] Environmental Benefits of Recycling, WRAP (2006) <http://www.wrap.org.uk/document.rm?id=2838>
- [45] Life Cycle Analysis of Municipal Recycling Targets for Wales Headline Results: An analysis of the global warming potential and resource depletion impacts of future recycling targets using WRATE. Report for the Welsh Assembly Government: Environment Agency, Wales
- [46] WR 8.2.3
- [47] WR 8.2.4
- [48] WR 8.2.1