

# The case against the South West Devon Waste Partnership (SWDWP) proposal to incinerate residual municipal waste

Geoffrey Hillier, for STIFLE, 11<sup>th</sup> December 2010

## Part 1 - Recycling and Climate Change

### 1 Reduce, Reuse and recycle – why not in Plymouth?

The SWDWP Information Paper dated August 2009 (**Ref. 1**) states that each authority waste management strategy determined that *“having increased recycling and minimised waste a thermal treatment solution was appropriate to deal with residual waste that could not be recycled or composted”*.

The German company MVV Umwelt which is putting forward a bid to construct and operate the incinerator in Plymouth has a promotional display which states that *“everything which can not be recycled will be incinerated”*. Germany recycles about 70% of its domestic waste in 2010, a figure which is almost double the 36% recycling level in Plymouth.

The SWDWP Briefing Paper dated October 2008 states (**Ref. 2**):  
‘We are aiming to reach a combined overall recycling rate of 50% by 2019-2020 (which is in compliance with the Waste Strategy for England 2007), with Devon aiming to achieve 60% by that time’.

At present the South Hams recycle almost 60% (**Ref. 3 and Ref 4**), and Torbay recycles above 60% (**Ref. 5**).

The planned 50% of the domestic waste which will be incinerated by the SWDWP will include waste which could be recycled. Plymouth is recycling far less than the South Hams and Torbay.

The statement *“everything which can not be recycled will be incinerated”* is misleading.

Recycling in other EU countries at present can reach 70% which indicates that far more than 50% can be recycled. The MVV Umwelt incinerator is planned to incinerate 240,000 tonnes per annum. The declared SWDWP recycling target of 50% would imply that at least 100,000 tonnes of waste each year which could be recycled would be incinerated.

If the proposed recycling level of 50% is maintained by the SWDWP then over the life of the incinerator the recyclable material incinerated will be of the order of 2.5 million tonnes. It is inconceivable that this will be the case. The 50% recycling level is already being exceeded in 2010 by Torbay and the South Hams. Plymouth recycling levels remain low at 36%.

The question has to be asked, why are Plymouth recycling levels so low?

### 2 Can Plymouth and the SWDWP recycle more?

On the 21<sup>st</sup> February 2008, as part of the examination of the Plymouth Waste DPD, a visit from Plymouth to the ‘state of the art’ Southampton Marchwood Energy from Waste incinerator was arranged by Government Inspector Douglas Machin. During that visit the view was clearly expressed by representatives of Plymouth City Council that the people living in Plymouth, the South Hams and Torbay, the area covered by the SWDWP, can not recycle more waste and

that it would take “one to two generations for habits to change”. The Government inspector agreed with this view.

It was clear that both the waste planners representing Plymouth City Council (and by inference representing the SWDWP) and Douglas Machin, the Government inspector, had formed the view that incineration of residual domestic waste was likely to be the best solution for the next one to two generations, or 25 to 50 years, partly on the assumption that people in the SWDWP, and in Plymouth, can not recycle more.

This view is already proving to be wrong, as is shown in the South Hams and Torbay by references 3, 4 and 5.

In addition this opinion expressed by Plymouth waste planners and the government inspector pre-judged the outcome of the public examination of Plymouth’s case for incineration and ruled out the possibility that high levels of recycling or even a zero waste option would be followed in Plymouth.

On 1<sup>st</sup> April 2008 the Government inspector approved the Plymouth Waste Development Plan Document for incineration of Plymouth’s waste.

Many urban districts in England are planning for ‘zero waste’. Indeed in 1993 it was an aspiration of Plymouth City Council to recycle 75% of domestic waste by 2000 (PCC newsletter, 1993). It is not known what happened to this aim of PCC.

### **3 The Waste Strategy for England**

The recommendation in the Waste Strategy for England 2007 is that a figure of 50% of Municipal Domestic Waste should be recycled by 2020. This aim is low compared to many other EU countries (for example Germany recycles 70% in 2010) and it is likely that the 50% target will be increased in the light of current levels of recycling being achieved in other parts of Europe and the UK, and the need to address the problem of climate change. It is likely that later editions, and certainly by 2020, of the Waste Strategy for England will have a stated aim to recycle far more than 50%.

**Ref. 6** is the text of a speech given on 15<sup>th</sup> June 2010 by environment minister Caroline Spelman - ‘Waste – new thinking for a new economy’ which outlined a likely review of the Waste Strategy for England. She said ‘In the Coalition Programme, DEFRA is specifically charged with working towards a zero waste economy, encouraging paying people to recycle and working to reduce littering’.

The need to Reduce, Reuse and Recycle will become an imperative, and ‘zero waste’ will be the aim of developed societies. It will be shown that all waste can now be recycled, so a target of 50% recycling will be no longer acceptable.

### **4 Recycling by the SWDWP councils.**

The SWDWP Briefing Paper October 2008 (**ref 2**) states the recycling rates for Municipal Waste in Plymouth, Devon and Torbay as 36%, 50% and 29%.

The Herald article ‘Incinerator will save £7.5m’ on 11<sup>th</sup> November 2010 (**Ref 7**) states that Plymouth has ‘reached its highest monthly recycling and composting rate of 36%’ which turns out to be exactly the same as stated 2 years previously in the Briefing Paper.

The same article states that South Hams has a recycling rate of nearly 60%.

On 20<sup>th</sup> May 2009 Andy Baron of South Hams District Council said the council was currently second in the country with 57% of local household waste being recycled and composted 'thanks to South Hams residents' (**Refs 3 and 4**).

The bio-degradable waste which is collected in the brown bins by South Hams Council includes food waste i.e. meat and bones; bread and pastries; fish; fruit and vegetables; dairy products; tea and coffee grounds/bags, garden waste and brown cardboard which is transformed into compost and used as a soil improver which is used on local farms as a valued resource.

Andy Baron explained that 'if food and garden waste is not composted it is sent to landfill sites and creates methane which is 21 times more potent than carbon dioxide as a green house gas, so it makes sense for us all to send even less waste to landfill'.

Torbay Council announced (**Ref 5**) that:

'Another improvement introduced by TOR2 is the introduction of a weekly food waste collection to all residents in Torbay helping residents to recycle up to 85% of their waste. Food waste currently accounts for 47% of Torbay's residual waste, so this is an easy way for residents to help increase Torbay's recycling rate'.

In the case of waste collections in Plymouth recyclable items including plastics bottles, pots and tubs, newspapers and magazines including phone books, cardboard, aerosols, foil and drinks cans are collected in green bins. Garden waste is collected but sent to Exeter for composting.

In Plymouth at present all other domestic waste including food waste, glass, plastic bags and textiles are placed in the brown bins.

Plymouth however recycles only 36% of the municipal waste. These poor figures reflect the lack of any effort by Plymouth City Councils to increase the recycling, and reflects the view of Plymouth waste planners that Plymouth people can not recycle.

## **5 Recycling food waste**

Waste food collection is working in South Hams and Torbay as described in references 4, 5 and 6 but there seem to be no plans in Plymouth to collect food waste.

There have been no trial collections of commercial or domestic food waste in Plymouth. In the South Hams area domestic food waste is composted. Domestic food waste from Torbay is used to produce methane gas by Anaerobic Digestion (AD) located at Heathfield.

AD is used widely on farms to produce methane gas. There is no reason why domestic and commercial food waste should not be used by the councils of the SWDWP to produce methane gas which can provide income and the residue can be used as an organic soil improver. AD is preferred by DEFRA.

A short video of AD by the University of California, Biogas Energy Project, UC Davis and Onsite Power Systems, can be seen at **Ref. 8**.

In addition at present the disposal of all commercial waste including food waste is the responsibility of the producer so disposal of commercial food waste using AD by the SWDWP could provide an additional income and avoid land fill. The sources of food waste include restaurants, retail food outlets and supermarkets. Waitrose is using AD to dispose of their food waste and it is likely that any income derived from AD will encourage other waste food producers to use AD. It is possible that there will be competition between waste food producers to capture as much waste as possible for AD. In addition the residue from AD is a useful organic material and has value in agriculture and gardening.

So the collection and processing by AD of food waste, both domestic and commercial, by the SWDWP could provide additional income.

WRAP (the government Waste and Resource Action Programme) estimates that households produce 8.3 million tonnes (mt) of food waste each year of which 0.69 mt is home composted, 1.8 mt is disposed of in sewers, and 5.3 mt is local authority collected (**Ref. 9**). Of this 5.3 mt a small proportion is sent to AD in the UK. Most AD systems in the UK use agricultural bio waste. The figure 5.3 mt is used in the estimates outlined below.

From these figures and the population statistics for the UK and the region of the SWDWP the following estimates of household food waste can be made (**Appendix 1**)

SWDWP	42,400 tonnes/year
Plymouth	22,790 tonnes/year
Torbay	12,190 tonnes/year
S. Hams	7,420 tonnes/year

According to these estimated figures 42,400 or 17.7% of the 240,000 tonnes municipal residual waste which the SWDWP plan to incinerate is food waste.

However, Torbay Council states that in Torbay 47% of the municipal residual waste is food waste (reference 6).

Clearly these figures do not correspond. Any meaningful estimates relating to food waste in the SWDWP council areas are difficult to make unless a proper survey is done. It is likely that no such accurate survey has been done by the SWDWP and therefore the assumption that incineration is the most economic solution of the residual waste problem can not be made, as food waste is an important element of that residual municipal waste.

In the UK the total food waste is approximately 18 million tonnes/year which mostly ends up in landfill. Approx 1/3 is from producers/supply chain, 1/3 from retail and 1/3 from households (**Ref. 10**). These figures approximately agree with the WRAP level of household food waste (**Ref. 9**).

The total food waste, including household and commercial food waste, in the council areas of the SWDWP can be estimated to be of the order 152,000 tonnes/year and the total food waste in Plymouth estimated to be 81,700 tonnes/year.

However as there are no firm estimates of domestic or commercial food waste within the area of the SWDWP, particularly in Plymouth, then it is not possible to plan for possible income from AD of food waste.

It is unlikely that Plymouth waste planners or the waste planners of the SWDWP have made any meaningful estimates of possible income from AD of food waste, both domestic and commercial.

It is therefore difficult to understand how incineration can be the best option for waste disposal by the SWDWP. Until meaningful estimates have been made of possible income for both domestic and commercial food waste AD then sensible planning for the next 30 years is impossible. For Plymouth and the SWDWOP to conclude that incineration is the best option is therefore based on inadequate information.

## **6 What exactly does go into the brown bins in Plymouth**

In Plymouth the waste planners do not know just what is put into their brown bins. In theory only domestic waste including food waste, glass, plastic bags, polystyrene and textiles are permitted

to go in the brown bins. Glass can be taken to any bottle bank but no household recycling collections are made in Plymouth.

Plymouth City Council have not carried out any surveys to analyse the contents of the brown bins, so no one knows just how much recyclable waste ends up in land fill, and will also end up in the incinerator. At present 64% of the waste collected in Plymouth (the residual waste) goes to land fill, and this waste will be incinerated. In Germany for example this figure is 30%, and in the South Hams and Torbay the figure is at most 40%.

Trials of separation of bio-degradable waste by households in Plymouth have not been carried out by the council.

The SWDWP plan for the reduction of brown bins waste content to 50% in 2020 which is a reduction of only 1.3%/year in 10 years. Meanwhile South Hams are already recycling nearly 60% Torbay Council says 47% of the residual municipal waste is food, and recycling is up to 85% as indicated in references 3, 4, and 5.

So why are the Plymouth recycling figures so poor? It seems that no one in Plymouth City Council are prepared to make effective efforts to increase recycling.

## 7 Plastics and climate change

In general incineration of waste can be thought of as a convenient means to get rid of the inconvenient waste which we produce.

The SWDWP aims to recycle 50% of the municipal waste by 2020, but Torbay and South Hams are already exceeding that target as shown above. Many urban districts in England are planning for 'zero waste' and indeed in 1993 it was an aspiration of Plymouth City Council to recycle 75% of domestic waste by 2000 (PCC newsletter, 1993).

As explained above the exact contents of the brown bin waste in Plymouth, which will be incinerated, is not known. Therefore the plastic waste content, the biodegradable waste content, the glass waste content, the metal waste content, or any other waste content in the brown bins, which will be heading for incineration, is not known.

It is vital in planning any waste management system that the content of the waste is known.

So how much plastic is heading for the incinerator? What exactly can be recycled before incineration? The question has to be asked just how sustainable are these proposals being put forward by the SWDWP?

The supporters of incineration argue that it is environmentally friendly (and therefore sustainable) because energy is recovered from waste which would otherwise be lost. This argument is shown to be incorrect below.

Plastics, and other manufactured material all consume energy in manufacture and distribution. In the case of the manufacture of plastics large quantities of oil are used.

In the case of plastics the average energy input in manufacturing is 93 MJ/kg. The average energy output from the incineration of plastics is 36 MJ/kg (**Ref. 11**).

Taking into account the thermal efficiency of an EfW incinerator, which may be as high as 60% if both electricity is generated and the waste heat is used, or at best 30% if only electricity is generated, the energy output figures for the incineration of plastics fall to 22 MJ/kg at best and 11 MJ/kg at worst. An average figure could be taken to be 16.5 MJ/kg.

Recovering only (on average) 16.5 MJ/kg of the energy by means of incineration, then manufacturing more plastics to replace them using (on average) 93MJ/kg does not make sense.

Therefore the carbon footprint of incineration of plastics is unsustainably high.

The British Plastics Federation, BPF, (**Ref. 12**) states:

‘All plastics can be recycled. However the extent to which they are recycled depends upon both economic and logistic factors. As a valuable and finite resource, the optimum use for most plastic after its first use, is to be recycled, preferably into a product that can be recycled again’.

Recycling plastics is far more energy efficient than incineration.

Together with the BPF statement that all plastics can be recycled, and the diminishing supply of oil, the imperative will be to reduce the waste of plastics and to increase their recycling. Incinerating plastics will not be an option in order to generate relatively small energy levels at such a high primary energy costs and consumption of limited oil resources as indicated above.

The same argument can be applied to other waste. The energy used in manufacture is not recovered by incineration and recycling becomes the most sustainable option.

It should also be pointed out that the government inspector Douglas Machin had planned to hold the examination of Plymouth’s Waste Development Plan Document (DPD) over 2 days, the 6<sup>th</sup> and 7<sup>th</sup> February 2008 but the hearing was cut to 1 day, the 6<sup>th</sup> February, as there were few representations addressing climate change. Consequently the question of incineration relating to climate change and sustainability has never been properly addressed.

## **8 Conclusion**

1 The residual municipal waste in Plymouth, the brown bin waste, has a mixed content. Plymouth does not know exactly what goes into their brown bins but it is certain that if the residual waste level is 50% of the total municipal waste then approximately 100,000 tonnes/year of recyclable waste will go to incineration.

2 The government inspector pre-judged the outcome of the public examination of Plymouth’s case for incineration by ruling out the possibility that high levels of recycling or even a zero waste option could be followed in Plymouth.

3 It has been shown that Torbay and South Hams are recycling in 2010 far more than the 2020 target set by the SWDWP of 50%.

4 Household food waste is collected separately and recycled by Torbay and the South Hams. By recycling food waste using AD both the methane produced and the residue soil improver and compost are environmentally sustainable and non toxic products. In addition there is potential for treating all commercial food waste sustainably using AD, and a greater potential for derived income. This option has not been exhaustively examined by the SWDWP waste planners.

5 The British Plastics Federation states that all plastics can be recycled. Taking into account the concerns about climate change and the predicted reduction of the availability of oil, the most sustainable ‘end if life’ solution for plastics should be to find a use, not to burn it. The Waste Strategy for England emphasises Reduce, Reuse and Recycle. Reducing the use of plastics will become increasingly necessary as oil and energy supply become more expensive. It is likely that in future consumption of plastics will reduce and recycling will increase. Plastics are mostly non-biodegradable, so end of life use of plastics could be found in other industries, such as building. Storage for future use, or limited landfill of non biodegradable waste plastics are future options.

- 6 By recycling glass, plastics, waste food, paper and cardboard, and sending any residual non biodegradable waste to land fill, then the case for incineration is removed.
- 7 The only sustainable action is to Reduce, Reuse and Recycle, not to incinerate.
- 8 The concern must be that during the life of the proposed incinerator as recycling of domestic and commercial waste increases for environmental and sustainability reasons, the SWDWP will not be able to find 240,000 tonnes every year from both the domestic waste and commercial waste streams.
- 9 The question of climate change and sustainability in relation to incineration has never been properly examined. It is the view of STIFLE that the issues of recycling and climate change should now be properly examined.

## References

- 1 South West Devon Waste Partnership Briefing Paper October 2008
- 2 South West Devon Waste Partnership Information Paper, August 2009
- 3 South Hams District Council press release, [www.southhams.gov.uk/print/index/council\\_index/kps-pree-office-index/spec-press-releases.htm?newsid=26299](http://www.southhams.gov.uk/print/index/council_index/kps-pree-office-index/spec-press-releases.htm?newsid=26299)
- 4 This is Cornwall report, South Hams Recycling Rate Twice Plymouth Figure, [www.thisiscornwall.co.uk/news/South-Hams-recycling-rate-twice-Plymouth-figure/article-1491464-detail/article.html](http://www.thisiscornwall.co.uk/news/South-Hams-recycling-rate-twice-Plymouth-figure/article-1491464-detail/article.html)
- 5 Torbay Council announcement, 'Food Waste Collection', [www.torbay.gov.uk/index/.../waste/recycling/foodwastecollection.htm](http://www.torbay.gov.uk/index/.../waste/recycling/foodwastecollection.htm)
- 6 Caroline Spelman speech at Futuresource, Excel Centre – 'Waste – new thinking for a new economy' – 15 June 2010  
<http://ww2.defra.gov.uk/news/2010/06/15/caroline-selman-waste/>
- 7 Incinerator will save £7.5m, ' The Herald, 11<sup>th</sup> November 2010
- 8 Video of AD, University of California, Biogas Energy Project, UC Davis and Onsite Power Systems: [http://www.youtube.com/watch?v=CHK\\_qfjkYg8&feature=related](http://www.youtube.com/watch?v=CHK_qfjkYg8&feature=related)
- 9 WRAP, Household Food and Drink Waste, October 2009  
[www.wrap.org.uk/document.rm?id=8048](http://www.wrap.org.uk/document.rm?id=8048)
- 10 Food Aware Community Interest Company [www.foodawarecic.org.uk](http://www.foodawarecic.org.uk)
- 11 EDIP database, Eco-Design Guidelines  
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- 12 British Plastics Federation (BPF) web site,  
[http://www.ecodesignguide.dk/html\\_pages/guidelines/guide\\_materials1.html](http://www.ecodesignguide.dk/html_pages/guidelines/guide_materials1.html)
- 13 General information, Waste Technology web site [www.mbt.landfill-site.com/index.html](http://www.mbt.landfill-site.com/index.html)

## APPENDIX

### 1 DEFRA Review of Waste Strategy for England, 15<sup>th</sup> June 2010

DEFRA Department of Environment Faming and Rural Affairs

Caroline Spelman speech at Futuresource, Excel Centre – ‘Waste – new thinking for a new economy’ – 15 June 2010  
[www.defra.gov.uk/2010/06/15/waste-policy-review](http://www.defra.gov.uk/2010/06/15/waste-policy-review)

Thank you and thanks to everyone here. Today I want to explain the new Government’s approach to waste in the years ahead.

The Prime Minister fired the starting gun when he said he wanted this to be the greenest government ever. That’s a pretty unequivocal commitment.

In the Coalition Programme, DEFRA is specifically charged with working towards a zero waste economy, encouraging paying people to recycle and working to reduce littering. We’ll also be working with DECC to send a much greater volume of our biodegradable waste through anaerobic digestion – generating renewable energy and bringing down levels of greenhouse gases from landfill.

These responsibilities put DEFRA at the heart of our green government. It’s a task I’m relishing – but I do not underestimate the scale of it for one moment.

Due to the sheer hard work of so many organisations – including many of you here today – significant progress has already been made to tackle our waste mountain. The amount of waste sent to landfill has gone down by over a third since 2001.

Nationally, households now recycle over 38% of their waste, compared to only 9% ten years ago. And recycling from green waste has gone up 13% in the last decade.

We have been slowly moving in the right direction. The direction of travel is right. It’s the pace that’s the problem. We need to go faster and we need to go further.

Waste is one of the biggest economic and environmental challenges we face. At every part of the waste hierarchy we want and need to do more. We will also have to do it differently and we all know why.

We are a nation which has inherited the biggest peacetime deficit ever. Continuing with current approaches at the current pace is something we cannot afford – either environmentally or economically. We need a new approach to waste – one which works for the new economy. We need an approach which recognises its cost to business, to households, to local and central Government, and the environment alike.

We cannot keep putting recyclable and biodegradable material into landfill. It threatens the environment and wastes what are incredibly valuable natural resources. Landfill is expensive and we are pay twice when we bury resources like aluminium in landfill, when used aluminium fetches around £800 a ton.

The landfill tax has been an important factor, and will continue to be – not only in reducing landfill – but in achieving recognition that what we call waste is actually a resource, and a valuable one too. It’s the awareness of this value that we need to build on as we create our new leaner, greener economy. Because if getting to grips with our problem is one of our biggest challenges, it also provides some of our biggest opportunities – using resources more efficiently and helping create the new green jobs of the future.

This green Government will help deliver the green jobs, the green technologies and the greener economy we must achieve to ensure a future that is both secure and sustainable. Finding ways not just to use less energy, water and natural resources – but by using the waste we do produce as the valuable raw material it actually is. To do this we need to start thinking now about our future infrastructure needs, including greatly increasing our anaerobic digestion capacity.

That is why we are supporting local authorities with a major PFI programme as they modernise their recovery and disposal facilities away from landfill and in line with our EU commitments.

It is time to drive forward the delivery of our zero waste economy. And I'd like to unpack what we mean by 'zero waste'. We are not talking about an economy where no waste is produced. We are not talking about a society where, overnight, everyone will become a green saint. I, for one, know I'm very far from achieving that hallowed state.

What we are talking about is a society where resources are fully valued – financially and environmentally – throughout the economy. Where one person's waste is another's resource. Where nothing is actually 'wasted'. And where, over time, we get as close as we possibly can to zero landfill.

To get there, I want to see the creation of a new type of public consciousness about waste. Where consumers make deliberate decisions about preventing waste in the first place; where they buy only what they need and recycle or re-use what's left.

But first, everyone involved in the product supply and waste and management chain – and Government – needs to be better at communicating with consumers than we have in the past. We need to help people make the vital, behaviour changing connection between what they buy and recycle and its impact – both on landfill and on their local environment. We need to get better at explaining the link between that collection van trundling away from your street and the final destination of its contents.

Because knowing that your recycling choices decide whether that destination is an expensive hole in the ground or reincarnation as green energy, a new product or as compost is a powerful incentive to make the right choice. And I want business and manufacturers to redouble their efforts to drive down the waste generated by production and the amount of packaging they use – some of which is, if we're honest, actually marketing material.

Because, as with so much else when it comes to waste, doing the right thing makes sound economic sense. Major retailers now report on their environmental performance to consumers and investors alike. Posters on the tube trumpet light-weight beer bottles. Utility companies use energy efficiency to sell their services.

And, at a time when consumers are tightening their purse strings and investors are erring on the side of caution, what savvy business wouldn't choose to save money while enhancing their corporate reputation? Businesses – inevitably – produce more waste than households.

For too long, Government attention has been focussed on domestic waste, rather than giving businesses the encouragement they need. Not by tying you up in red tape or by stifling you with regulation. But by supporting you in ways that protects the environment and consumers while encouraging action.

Using the idea of Responsibility Deals, for example, we will work together with retailers and the business community to continue to drive down food waste and unnecessary packaging. You have our support when it comes to both reducing the amount of waste you produce and in ensuring you have the facilities and opportunities to recycle what's left.

For decisions to work, they need to be taken as close as possible to the people and businesses involved. Some of our waste and resource policies of course, have to be decided at a national, European and even a global level.

My Ministerial team and I, including the tireless Oliver Henley, who leads for us on waste and has been visiting exhibitors this morning – will be active at every level. We recognise that local government needs the freedom to interpret the information and advice that comes from central Government based on the needs of their local populations and infrastructure. Clearly local authorities will have different circumstances which determine how they develop their waste strategies.

But people feel strongly about reductions in frontline services like bin collections, particularly when they have seen their council tax bills double – I know because I when I Shadowed CLG it was regular theme of emails and letters! So as part of the review I will be liaising with my colleagues in other departments to see how we can help councils deliver the quality and frequency of services their customers want whilst delivering our commitment to waste reduction.

When it comes to motivating waste reduction, this Government believes firmly in providing incentives.

We are not in the business of threatening people with penalties and fines. In fact, one of our first announcements was to reject the very concept of bin taxes. Our approach is based on encouraging incentives which work for taxpayers, businesses and the local environment alike.

Last Monday, I attended the launch of RecycleBank in Windsor. Recycling bins, fitted with small electronic tags, weigh how much recycled material a household puts in them and, based on the amount recycled, points are awarded. These points can then be used to buy goods from participating businesses like M & S and Magnet, used in Windsor Leisure Centres or donated to charities like Fairtrade. And it works. The pilot scheme showed residents in the trial increasing their recycling rates by 35%.

I think this is a great example of a local authority, its waste contractor and local businesses coming together to achieve significant improvements in recycling rates, keeping council taxes down and supporting the local economy. And not a penalty in sight.

Today, I have deliberately highlighted specific steps we will take at every level of the waste hierarchy because we can only genuinely start making a difference if we address each of the five parts of that hierarchy. There is no point in tackling household waste, local authority services, energy from waste or business behaviour in isolation. Like the five fingers of one hand, they work best when they work together.

So I am pleased to take this opportunity to announce that today we are starting a review of all existing waste policies. This will be a fundamental review to ensure all Government policies and interventions are the right ones to meet the challenges I've been discussing. We will be seeking extensive input from both Government Departments, such as CLG, BIS and DECC, and our partners outside government, including the waste management industry, local authorities and many of you here today.

Our review will look at every aspect of waste policy and waste management delivery in England, including household and business waste and recycling services. Its aim will be to maximise the contribution waste prevention and management in England can make to the green economy, including the impact on the finances of households and businesses alike, on the vast potential for job creation and on green industries themselves.

The results of the review will be used to ensure that we are ready and able to deliver on our ambitions for a zero waste economy. We will be asking for evidence from industry, business, environmental experts and local government in the coming weeks. Our aim is to produce preliminary findings by next Spring.

We are living in unprecedented times. Unprecedented levels of debt, yes. But unprecedented co-operation across Government too, with joint agreement on the ways and means to achieve our goals. And an unprecedented opportunity to create the green jobs, green growth and take our share of the green industries of the future.

Thank you.

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## **2 Food Waste and population statistics**

WRAP estimate of UK domestic food waste 5.3 million tonnes per year (ref

Food Aware Community Interest Company estimate of UK commercial food waste 18 million tonnes per year (ref

Population statistics 2010:

Plymouth 253,000, Torbay 134,000, South Hams 83,500, Total 470,500  
UK 58.8 million, England 49.1, Scotland 5.0, Wales 2.9, NI 1.7 million

Population percentages of UK:

SWDWP 0.8%, Plymouth 0.43%, Torbay 0.23%, South hams 0.14%)