

Government Review of Waste Policy in England 2011



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Ministerial Foreword



Waste affects us all. We all create waste, we care if our domestic refuse service does not work well, and we notice when flytipping or litter affects our local environment. The breadth and impact of waste and resource use policies is very broad. The way we behave at home, at work or as consumers has a real impact. We need, as a society, to value products and care about how they are made and used, and how we deal with them when we no longer need or want them. If not, we will not only increase costs at a time when we are facing real challenges in reducing the deficit, but we will also have a negative impact on our environment.

This Government recognises that waste policies matter to people. It is a front-line local service and, for many, their primary interaction with their local council. But it is more than that. Waste is a major contributor to methane emissions and, if not managed properly, can harm our environment and damage communities. Waste can also be a source of renewable energy, and a source of valuable materials to enable a more sustainable use of our material resources. That is why early in this Parliament we committed to a wide ranging review of waste policies. We are committed to working towards a zero waste economy as part of the transition to a green economy and our commitment to be the greenest government ever. We have looked at options across the field of waste – recognising that much of the legal framework we have to work within comes from Europe. We have engaged widely with interested parties on this review and have been really impressed by the positive engagement we have had.

The waste and resource management industry contributes a significant amount to the UK economy and employs over 100,000 people. It is an industry in transition and one whose continuing economic growth we want to support. For businesses of all shapes and sizes there are major savings for the bottom line from using resources more efficiently.

I am pleased to publish this document which sets out the results of our Review. I believe that there is no silver bullet to solve waste, rather that there are a number of changes to policies and practices across the community, a number of small levers which we can pull in order to deliver

Principal Commitments

As part of a more **sustainable approach to the use of materials**, delivering environmental benefits and supporting economic growth, we will:

- Prioritise efforts to manage waste in line with the waste hierarchy and reduce the carbon impact of waste;
- Develop a range of measures to encourage waste prevention and reuse, supporting greater resource efficiency;
- Develop voluntary approaches to cutting waste, increase recycling, and improve the overall quality of recyclate material, working closely with business sectors and the waste and material resources industry;
- Consult on the case for higher packaging recovery targets for some key materials;
- Support energy from waste where appropriate, and for waste which cannot be recycled;
- Work to overcome the barriers to increasing the energy from waste which Anaerobic Digestion provides, as set out in the new AD strategy;
- Consult on restricting wood waste from landfill and review the case for restrictions on sending other materials to landfill.

To improve the service to **Householders and Businesses** while delivering environmental benefits and supporting growth we will:

- Support initiatives which reward and recognise people who do the right thing to reduce, reuse and recycle their waste;
- Work with councils to increase the frequency and quality of rubbish collections and make it easier to recycle;
- Encourage councils to sign the new Recycling & Waste Services Commitment, setting out the principles they will follow in delivering local waste services;
- Protect civil liberties by stopping councils from criminalising householders for trivial bin offences, while ensuring that stronger powers exist to tackle those responsible for flytipping and serious waste crime;
- Support councils and the waste industry in improving the collection of waste from smaller businesses;
- Reduce the burden of regulation and enforcement on legitimate business, but target those who persistently break the law.

Executive Summary

Ambition and Case for Action

1 This Government is committed to being the greenest ever. How we deal with our waste is important for a range of broader concerns such as material security, energy, climate change and environmental protection. While good progress has been made over the last decade to reduce the volume of waste sent to landfill and increase recycling, we can and must go further and faster. If we do, we will see the benefits not only in a healthier natural environment and reduced impacts on climate change, but also in the competitiveness of our businesses through better resource efficiency and innovation, helping to create a new, green economy.

2 In conducting this Review we have been guided by the “waste hierarchy”, which is both a guide to sustainable waste management and a legal requirement. The hierarchy gives top priority to waste prevention, followed by preparing for re-use, recycling, other types of recovery (including energy recovery), and last of all disposal (e.g. landfill). In many cases, carbon acts as a good proxy for the overall environmental impacts of waste: generally speaking, the higher up the waste hierarchy waste is treated, the smaller the greenhouse gas impacts. **As part of this, we will promote resource efficient product**

design and manufacture and target those waste streams with high carbon impacts, both in terms of embedded carbon (food, metals, plastics, textiles¹) and direct emissions from landfill (food, paper and card, textiles, wood). We will promote the use of life cycle thinking in all waste policy and waste management decisions and the reporting of waste management in carbon terms, as an alternative to weight-based measures.

3 In driving waste up the hierarchy, we must ensure that the UK meets its EU obligations and targets on waste management. At the same time, we need to make it easy for people to do the right thing and get the balance right between the service householders and business receive, our environmental objectives and the costs and benefits of different policy options. **We will continue to help local communities develop fit for purpose local solutions for collecting and dealing with household waste and work with councils to meet households’ reasonable expectations for weekly collections, particularly of smelly waste.**

¹ In terms of the total of emissions from those waste streams rather than per unit of waste.

Sustainable Use of Materials

- 4 Waste is a resource. It is clear that for too long we have worried about how to dispose of waste, but not enough about how to minimise it, or the use we can make of it. At a time of material resource pressure – even scarcity in some areas – we need to consider waste more fully within broader material flows and sustainable material use.
- 5 Preventing waste wherever it occurs should be the shared priority of Government, business and civil society – it delivers the greatest economic and environmental benefits. We heard this repeatedly from those who responded to our Call for Evidence and with whom we discussed these issues.
- 6 **The Government will develop a comprehensive Waste Prevention Programme and in the meantime will work with businesses and other organisations across supply chains on a range of measures designed to drive waste reduction and re-use as part of a broader resource efficiency programme.**

Waste Prevention, Re-use and Recycling

- 7 We need to take an integrated approach to waste prevention, re-use and recycling – absolute prevention of waste is in many areas unrealistic, but we can prioritise prevention while seeking to re-use and recycle as much as possible of the waste which does arise. **On recycling, we must continue to increase the percentage of waste collected from both households and businesses which is recycled, at the very least meeting the revised waste framework directive target to recycle 50% of waste from households by 2020.** This will include overcoming some challenges ahead, particularly in urban areas and within a tight funding settlement for local authorities, and to ensure that smaller businesses have access to cost effective recycling services.

Responsibility Deals

- 8 One way of driving waste reduction and greater recycling will be through voluntary responsibility deals with business. Better environmental outcomes can, in many circumstances, be delivered in the least burdensome way through a voluntary approach, rather than legislation. **Building on the experience of existing successful agreements, we are now working closely with businesses to develop new voluntary responsibility deals in a range of sectors – including hospitality, retail, direct mail, waste industry – focussed on reducing and recycling waste.**

Food Waste

- 9 Tackling food waste is an example of where prevention and recycling/recovery go hand in hand. We need to cut down the estimated 16 million tonnes a year produced every year in Britain, while ensuring that much more of the food waste which is produced is not simply disposed of in landfill. **The Government will work with and support businesses, local authorities and third sector organisations to help reduce avoidable food waste – in the home, in supply chains, across the public sector and within businesses themselves.**

Packaging

- 10 Voluntary action is also an important driver of behaviour change on packaging. Survey after survey shows that consumers believe packaging is a big environmental problem. **The Government will work with business to encourage – where appropriate – greater use of recycled content in packaging, as well as to make packaging more recyclable.** Regulation on packaging has also played a valuable role in creating markets and driving behaviour change. **We intend to consult on increased recycling targets on packaging producers from 2013 to 2017. The scale of the increases we consult on will depend on our Impact Assessment, which will consider issues**

such as affordability for businesses and Government. We will also consult on establishing a sub-target for recycling of glass into re-melt applications. Government will make a final decision in the 2012 Budget.

Recycling on the Go

- 11** Recycling at home has increasingly become the norm, but recycling *'on the go'* – in the street and in public places such as stations, shopping malls, conference centres and sporting arenas – is nowhere near as easy. **WRAP will support councils who want to work with local businesses to explore how the necessary street infrastructure can be funded to allow recycling on the go to grow. WRAP will collate and disseminate information and good practice on recycling on the go and identify models for delivering improved facilities both on the street and in public places.**

Regulation and Enforcement

- 12** Waste legislation exists for a reason. It protects the environment and human health and can help to create markets, providing a level playing field in which legitimate businesses can operate. However, businesses also made clear that, at times, legislation and its enforcement can impose significant burdens on them.
- 13** We have listened carefully to these views. **Defra, BIS and the Environment Agency have set in train a programme of work – in partnership with industry – to identify how the burden of compliance on legitimate business can be reduced, with enforcement targeted even more clearly against those who consistently operate outside the law.** This work will look at measures aimed at allowing businesses to fulfil their obligations more easily and effectively, reducing unnecessary burdens and better integrating regulatory controls in the best interests of business and the environment.

- 14** At the same time, **we will ensure that enforcement bodies have sufficient powers to tackle illegal waste sites and flytipping. As part of this, we will introduce stronger powers to seize vehicles suspected of involvement in waste crime.** In addition, we will further examine a range of issues around prevention, detection and enforcement including sentencing guidelines, collaborative working and guidance to business.

Householders and Local Authorities Working Together

- 15** **The Government will be working with local councils to increase the frequency and quality of rubbish collections and make it easier to recycle,** and to tackle measures which encourage councils specifically to cut the scope of collections. Waste services are a matter for local authorities to develop fit for purpose local solutions. However the Government believes that better procurement and joint working can improve the efficiency of collections while improving the frontline service for the public in an affordable and practical manner. The Government understands that the public have a reasonable expectation that household waste collections services should be weekly, particularly for smelly waste.
- 16** The Government has already moved to remove Audit Commission guidance and inspections which marked down councils who do not adopt fortnightly rubbish collections; and to abolish Local Area Agreements imposed by Whitehall which created perverse incentives to downgrade waste collection services. The Government will also work with WRAP to monitor service levels to understand whether and how they are changing, keeping the quality, affordability and frequency of household waste collections under review.

- 17** We will encourage councils to sign up to the new Recycling and Waste Services Commitment, drawn up by the Local Government Association and representatives of local councils, working with Defra and WRAP.
- 18** Local authorities need to work with their householders, not against them. Enforcement powers and penalties available to local authorities should balance the need to respect individuals' civil liberties with the need to deal effectively with behaviours which have a negative impact on residents' local neighbourhoods. Enforcement must be targeted at those who deliberately and persistently break the law. Therefore we will introduce a 'harm to local amenity' test to tackle 'neighbours from hell' ensuring that enforcement is targeted at those who deliberately and persistently break the law. **We will remove criminal sanctions applying to householders and ensure that the level of fines local authorities can impose are appropriate. In addition, we are repealing certain powers of entry in England that currently enable local authorities to inspect household waste.**
- 19** We will also remove some of the burden and barriers which prevent local authorities from focussing on local priorities, including abolition of some data requirements, targets and legislation burdens, principally the Landfill Allowance Trading Scheme from 2013.

Litter

- 20** Litter remains at persistently high levels, despite increasing funding spent on street cleaning over the last decade. With this in mind, **Keep Britain Tidy will develop the Love Where You Live litter campaign; WRAP will work in partnership with Keep Britain Tidy to enable groups participating in Big Tidy-Up activities (many of which are school groups or charities) to recycle the materials they**

collect. WRAP and Keep Britain Tidy will pool their knowledge, and bring anti-littering and tidy-up messages and recycling on the go messages together under the same banner. We will also work with business and others to develop ways of tackling the problem of littering from vehicles, through encouraging changed behaviour and practical disposal solutions.

Business Waste Collection

- 21** In partnership with local authorities and private sector waste management providers we want to make it easier and more cost effective for SMEs to recycle. Households and businesses often produce similar types of waste and, where it makes sense to do so, materials should be collected and treated together. We will end the Landfill Allowance Trading Scheme to remove an important perceived barrier to local authority service provision in this area. We have found that SMEs are not always aware of their legal responsibilities, of available recycling services and indeed in some areas there is a lack of such services. **We are working with representatives of the waste management industry to develop a voluntary Responsibility Deal under which they will work to improve the experience and access of SMEs to cost-effective recycling services. We are also working with local authorities on a Business Waste Commitment to develop the recycling services offered to SMEs.**

Energy Recovery

- 22** Government supports efficient energy recovery from residual waste which can deliver environmental benefits, reduce carbon impacts and provide economic opportunities. Our aim is to get the most energy out of genuinely residual waste, not to get the most waste into energy

recovery. Anaerobic digestion offers a positive solution to food waste, and the Government is publishing separately a anaerobic digestion strategy. **We will work to remove barriers to other energy from waste technologies by ensuring information is available and readily understood. We will publish a guide to energy from waste to help all involved make decisions best suited to their specific requirements. While remaining technology neutral, we will look to identify and communicate the full range of recovery technologies available and their relative merits – right fuel, right place and right time. The Government will also provide the necessary framework to address market failures and ensure the correct blend of incentives are in place to support the development of recovery infrastructure as a renewable energy source.**

Landfill

- 23** Landfill should be the last resort for most waste, and particularly for biodegradable waste. The landfill tax – with increases maintained towards a floor of £80 per tonne in 2014/15 – will remain the key driver to divert waste from landfill and remains necessary to ensure we meet key EU targets in 2013 and 2020. As noted, we are removing the Landfill Allowance Trading Scheme as we no longer consider this an effective tool to ensure delivery of the EU landfill targets.
- 24** However, even with existing measures in place and new actions which will drive waste up the hierarchy, it is likely that some waste will end up in landfill that could be put to better use and which may warrant the introduction of additional, legislative tools, such as landfill bans or restrictions, to ultimately achieve our aim. **In 2012 we will consult on introducing a restriction on the landfilling of wood waste, with**

the aim of diverting the still substantial tonnages that end up in landfill to better uses up the waste hierarchy and delivering clear environmental benefits.

- 25** Building on this, **we will review the case for restrictions on sending other materials to landfill over the course of the Parliament, including looking specifically at textiles and biodegradable waste.**

Infrastructure and Planning

- 26** The Government continues to support local authorities in the provision of necessary waste infrastructure. We believe local communities should benefit from hosting waste infrastructure and be involved from an early stage in planning for infrastructure. **We will support this by providing advice and support for local authorities on science and technology, drawing together and publishing data on likely waste arisings and treatment capacity in future years, and supporting efforts by local authorities through effective contract management to generate further efficiencies in waste collection, reprocessing and treatment.** We will also seek to reduce commercial barriers to the effective financing of infrastructure.

The Case for Action

Vision

- 27** The Coalition Government made an early commitment to take a comprehensive look at all aspects of waste policy in England during the first year of this Parliament. We want to ensure that our policies and ways of delivering them are fit for purpose, meeting society's expectations while reflecting the Government's ambitions to be the greenest ever.
- 28** We need to move beyond our current throwaway society to a "zero waste economy" in which material resources are re-used, recycled or recovered wherever possible, and only disposed of as the option of very last resort. This requires a new public awareness in our attitude to waste. It means reducing the amount of waste we produce and ensuring that all material resources are fully valued – financially and environmentally – both during their productive life, and at 'end-of-life' as waste. We will see the benefits not only in a healthier natural environment and reduced impacts on climate change, but also in the competitiveness of our businesses through better resource efficiency and innovation – a truly 'green economy'.
- 29** Waste management in England has come a long way over the last 10 years: waste going to landfill has nearly halved since 2000; household recycling rates have climbed to 40%; waste generated by businesses declined by 29% in the six years to 2009 and business recycling rates are above 50%. But we need to go further.

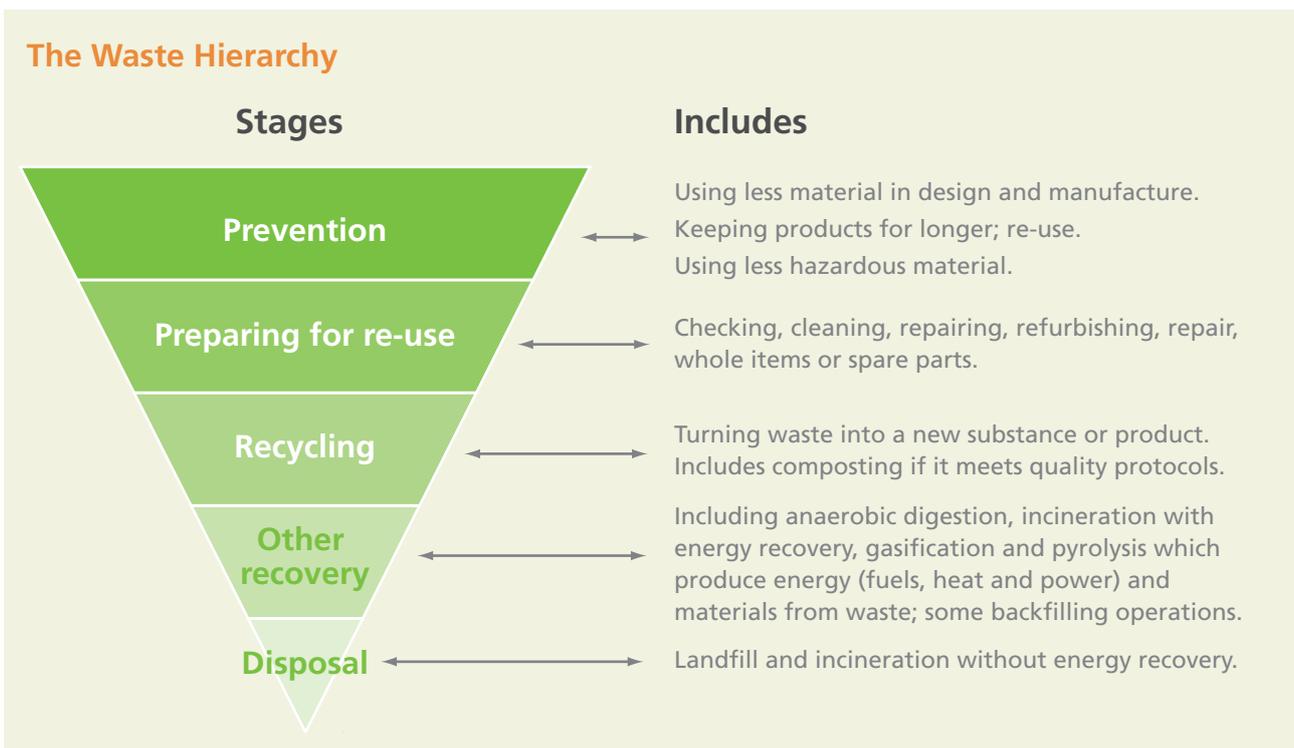
The Waste Hierarchy

- 30** In conducting this Review we have been guided by the 'waste hierarchy', which is both a guide to sustainable waste management and a legal requirement of the revised EU Waste Framework Directive, enshrined in law through the Waste (England and Wales) Regulations 2011.
- 31** The hierarchy gives top priority to waste prevention, followed by preparing for re-use, then recycling, other types of recovery (including energy recovery), and last of all disposal (e.g. landfill).

Principal Challenges

- 32** Key challenges if we are to realise our longer-term vision of a green, zero waste economy include:
- Preventing waste wherever it occurs. Preventing waste has the best environmental outcome. It can save businesses and consumers money, and avoids the costs to businesses and local authorities of dealing with it. It can also reduce the amount of virgin raw materials that has to be extracted to make new products, and reduces the hazardous substances that need to be managed as waste. Throughout the supply chain we need to reduce waste by changing the way products are designed, manufactured and used and consider the repair, re-use, and recyclability of products and their component parts.

- Helping local communities to develop and deliver fit for purpose local solutions for collecting and dealing with waste from households & businesses. It is crucial that we strike the right balance between customer service, the environment and cost, taking into account issues such as convenience and frequency of collection and the quality of recyclable material collected.
 - Continuing to increase the recycling of waste collected from both households and businesses, including meeting the revised Waste Framework Directive target to recycle 50% of waste from households by 2020.
 - Ensuring that our approach to extracting recyclables, such as paper and plastic, from our waste generates material of sufficiently high quality to meet the needs of reprocessors here and abroad and to comply with the international rules on waste shipments.
 - Establishing the right interface between energy from waste policies, renewable energy targets and delivering on our climate and broader environmental needs.
 - Continuing to drive waste away from landfill and ensuring that the UK meets the EU Landfill Directive targets for diverting biodegradable municipal waste from landfill in 2013 and 2020.
 - Ensuring an effective approach to tackling waste crime, reducing harm caused to the environment, human health, local communities and legitimate business.
- 33** While this waste policy review naturally focuses on our use of material resources and how we deal with them when they become waste, it does so with a very close eye on related areas such as climate change and energy policy, where we need to be clear about the potential contribution of energy from waste to the UK's target that, by 2020, 15% of our energy comes from renewable sources.



The Role for Government

34 We want to work in partnership with local authorities and businesses in all parts of the economy to encourage and spread best practice in waste prevention and resource management, and so reap the economic and environmental benefits for society and the economy. The Government will only intervene where necessary, where there are clear market failures and barriers. We will enable change by householders and businesses in the most effective manner possible, choosing the most appropriate and least burdensome instrument. With this in mind, the Government will:

- Reduce barriers to innovation wherever possible and the burden of regulation on compliant businesses. We will target enforcement against those who consistently flout the law;
- Drive innovation in the waste sector through signalling our long term ambition. We will set a clear policy direction and provide as much fiscal and regulatory certainty as we can;
- Provide leadership and demonstrate best practice in waste prevention and management. Intervene through a range

of policy tools including regulation only where strictly necessary;

- Support capacity building in local communities, and ensure that we leave them free to take the initiative in service design and provision;
- Challenge and support businesses to meet their responsibilities and be smart about investment in and management of resources.

Localism and Big Society

35 The Coalition Government wants to empower local communities as part of a power shift away from central Government, reinvigorating local democracy, understanding, accountability, and participation. We want to ensure that the barriers to participation are removed and that community and civil society engagement – the Big Society – can occur unhindered. Waste and resource use is a key area where we can find some of the best initiatives to build on, such as the role charity sector organisations often play in ensuring clothing or bulky items like furniture are re-used rather than thrown away.

Waste – The Economic Rationale for Action

The production of waste is a natural by-product of economic and social activity by business and consumers, and has been throughout human history. There are costs and benefits involved – the resources used in the production process and the benefits gained from consuming goods and services. The key is to ensure that the value we extract from resources is not exceeded by the costs of using them, and therefore that we do not produce excessive amounts of waste. It is also important to make sure that waste is optimally managed, so that the costs to society of dealing with waste, including the environmental costs, are minimised.

There may be market failures and other barriers that prevent this ideal situation from occurring. These include externalities – e.g. where the environmental cost of different options is not included in market prices – and information failures – situations where businesses and consumers do not have the right information to make the best choices.

There is a case for Government intervention where the market alone does not produce the optimal situation. The landfill tax is the most obvious example of an instrument which tackles externalities, through reflecting the environmental damage from landfilling, although there are also other interventions operating across the waste hierarchy. Intervening with the right instrument for the particular situation is necessary to deliver the desired outcomes in a cost-effective manner.

The potential for greater use of environmental taxes to deliver better environmental and economic outcomes is recognised in the Government's commitment to increase the proportion of revenues accounted for by environmental taxes. Market-based instruments such as taxes and trading systems are an efficient and cost effective way of pricing in the value of environmental resources. By giving certainty over the price of these resources, they create new opportunities for businesses in markets for environmental goods and services.

However, an environmental tax will not be the most appropriate policy instrument in every circumstance. For example, when the environmental risks are large, such as with hazardous wastes, or when the problem is fairly specific to a sector or waste stream, direct regulation could be more effective. Where appropriate, consideration will be given to taxes in waste policy that can support the implementation of the waste hierarchy – reflecting the environmental benefits of shifting waste up the hierarchy. Such instruments will be developed in the context of wider Government levers, such as voluntary agreements and regulations, ensuring that the approach is simple, efficient and cost effective while supporting growth and maintaining a sound fiscal position.

Waste and Climate Change

- 36 The energy impacts of material resource use and the direct greenhouse gas emissions from biodegradable wastes in landfill are significant, meaning that sustainable waste policies are an important part of tackling national and international climate change.
- 37 The Government's approach to avoiding the risk of dangerous climate change has at its heart the Climate Change Act 2008, which requires Government to reduce greenhouse gas emissions by:
- cutting emissions by at least 34% by 2020, and 80% by 2050, below the 1990 baseline;
 - setting and meeting five-yearly carbon budgets for the UK during that period; and
 - requiring that those carbon budgets be set three budget periods ahead – so that it is always clear what the UK's emissions will be for the next 15 years – and
- 38 The waste sector is estimated to account for around 3% of all direct UK emissions, and includes emissions of methane from landfill, emissions from the treatment of waste water and from the incineration of wastes without energy recovery. But the overall impact of waste policies on reducing carbon across the economy goes much further. Waste prevention activities can reduce emissions associated with the production of products and services. For example, preventing food waste avoids emissions associated with farming and the manufacture, transport, cooking and disposal of food; recycling materials reduces emissions and other impacts associated with both extraction of raw materials and waste disposal; and waste can be used to produce renewable energy reducing demand for energy from fossil fuels.
- 39 While there are many factors to take into account when considering the environmental impacts of waste
- setting the trajectory towards the 2020 and 2050 targets.

management, such as resource depletion and air and water pollution potential, in many cases carbon acts as a good proxy for the overall environmental impacts of waste. Generally speaking, the higher up the waste hierarchy waste is treated, the smaller the greenhouse gas impacts.

40 In particular, we are looking to:

- Target those waste streams with high carbon impacts:
 - For embedded carbon², food, metals (in particular aluminium), plastics, textiles;
 - For reducing direct emissions from landfill: food, paper and card, textiles, wood;

- Promote resource efficient product design;
- Promote use of life cycle thinking in all waste policy and waste management decisions;
- Promote the measurement and reporting of waste management in carbon terms, as an alternative to weight based measures.

41 In the Review's Action Plan we have tried to explain the carbon impact of particular policies and how the carbon calculation has been factored into policy choices.

The National Ecosystem Assessment

The National Ecosystem Assessment (NEA) looks at the status and trends of ecosystems across the UK and the services they provide. The NEA underlines the importance of sustainable waste management in a number of ways:

- 1. Integrated approach:** NEA recognises waste removal as an ecosystem service but highlights the need to continue to use this service in a sustainable way. Using resources more efficiently reduces waste and thus helps to minimise the impacts on the environment.
- 2. Valuation:** Valuing ecosystem services correctly ensures more balanced trade-offs in land use or management decisions which avoids the intensive use of one type of ecosystem service at the expense of another (e.g. poor management of waste applied to land, resulting in badly balanced nutrient cycling, the long term build up of pollutants in soil or having an adverse impact on surface waters).
- 3. Look for opportunities:** Closed waste sites offer opportunities for ecological restoration and therefore can be valuable parts of functioning natural systems if done well.
- 4. Engage a range of actors and use lots of levers:** NEA shows that waste offers important lessons on behaviour change which ensures people deliver more environmentally friendly outcomes.

The NEA underpins publication of The Natural Environment White Paper, a bold and ambitious statement outlining the Government's vision for the natural environment over the next 50 years, backed up with practical action to deliver that ambition.

² In terms of the total of emissions from those waste streams rather than per unit of waste

The Review

- 42** In conducting this Review we have looked at all aspects of policy development and delivery in England, but with a focus on commercial and household wastes. Where we have concluded that existing policy is suitably ambitious and its delivery well focussed, we have not made change for change's sake. For example, there is little said here about hazardous waste. This is because there is an existing hazardous waste strategy, and we are developing a new National Policy Statement on hazardous waste, which is subject to a separate consultation. Similarly, the Review does not cover waste from the mining and quarrying industries, which are covered by a specific EU directive.
- 43** It is important to acknowledge the role external parties have played in helping shape our views. To ensure that the Review takes account of what people really think, we have engaged extensively with a wide range of individuals, businesses and organisations across England, through a Call for Evidence which received over 300 submissions, an interactive website, online survey and numerous events. The level of interest has been high and all sectors have engaged enthusiastically. We have also drawn on the significant evidence base of research on what people are currently doing, what they tell us they are willing and able to do, why some people act and others do not, and the approaches that are more likely to be effective. We consistently heard a number of similar themes come through in discussions which are covered further in this document. These include:
- The need to focus on preventing waste as a priority, as a key component of broader resource efficiency;
 - The importance of treating waste as a resource and embedding waste policies into wider resource and material security policy;
 - The need to remove barriers which prevent greater integration of household and business waste policy and service delivery;
 - The importance of policies which continue to promote high levels of high quality recycling;
 - The need to continue to reduce the amount of waste going to landfill.
- 44** We will continue to work closely with all interested parties as we refine and implement our commitments and clear the way for individuals and local communities to play their part in our journey to a zero waste economy.
- 45** This is a Review of Waste Policies in England. Wales, Northern Ireland and Scotland, while working within the same EU legislative framework, are responsible for their own waste policies and delivery. However, all four parts of the United Kingdom work closely together on waste and we will take forward action in many of the areas covered in this document in agreement and partnership with the devolved administrations.

Measuring Success

- 46** The success of this Review of Waste Policy will be measured on a number of levels. But success will only be achieved if the various actions and policy measures are implemented in a timely way, with Government, business, local authorities and civil society working in partnership. In itself, a shared commitment and level of ambition from the different actors within the economy would be a success.
- 47** We will continue to assess our progress against a number of EU targets which are focussing action in specific areas. These are:
- EU Landfill Directive targets on the diversion of biodegradable municipal waste from landfill in 2013 and 2020;

- Waste Framework Directive target that 50% of waste from households is recycled by 2020;
- Waste Framework Directive target to recovery at least 70% of construction and demolition waste by 2020;
- A range of minimum producer responsibility targets covering packaging, Waste Electronic and Electrical Equipment (WEEE), End of Life Vehicles (ELV) and batteries.

48 We must *at least* meet these targets if a zero waste economy is to become a reality in the medium-term. We will also monitor our progress with reference to a range of benchmarks which will help us track progress.

Headline Indicators

49 A key aim of this review is the decoupling of waste from economic growth. We will therefore measure the total amount of raw materials used and waste produced, as well as measuring the amount of raw materials used and commercial, industrial and household waste produced per unit of Gross Value Added (GVA)³, to show how quickly we are moving along a pathway to a zero waste economy. Although information on waste arisings is available for England, information on use of materials is currently only available at a UK level.

50 We also need to know that the transition to a zero waste economy is being delivered in a way which improves our quality of life and makes it easy for everyone to do the right thing. Defra has therefore asked WRAP to create an annual update of performance benchmarks for recycling schemes and to develop a new measure of customer satisfaction or service quality in support of the Recycling and Waste Services Commitment.

51 As part of this, the cost of Local Authority waste management per household is a key indicator to show that money is being spent effectively. It is typically more cost effective to prevent waste or send it to markets rather than to landfill. The indicator is identified in the Defra Business Plan.

52 Delivery of a zero waste economy will require a vibrant re-use and recycling sector to maximise the use of available resources. We will also monitor levels of GVA and employment in the repair, maintenance and recycling sectors. Re-use activities are carried out by a range of organisations in the economy and further work is required to identify appropriate indicators here.

53 As well as Government, other organisations will also want to report on their environmental impact. The Government will publish guidance for businesses by 2012 on how to report their corporate environmental impacts. This will complement existing Government guidance on how to report on greenhouse gas emissions and will follow the same step-by-step approach, to ensure consistency and encourage those not already reporting. It will cover key areas such as waste minimisation and water use as well as impacts on natural resources and biodiversity. The guidance will aim to be consistent with international guidance and conventions where these exist.

³ GVA measures the contribution to the economy of each individual producer, industry or sector in the United Kingdom and is used in estimating Gross Domestic Product (GDP). Source: ONS

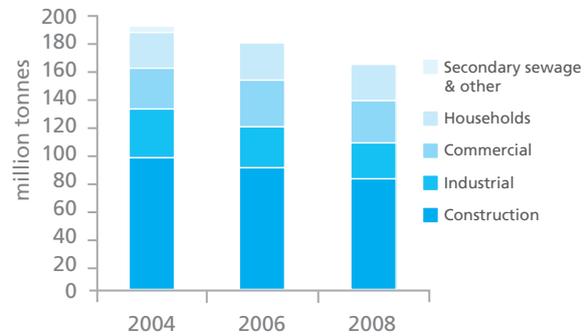
Waste in England

Total waste generation

A total of 165.1 million tonnes of waste were generated in 2008 by households, commercial & industrial businesses and the construction sector. This is a decrease from 191.9Mt in 2004 and 180.5Mt in 2006.

The largest contributing sector was construction, demolition and excavation which generated 81.4Mt of waste.

Source: Defra – Waste Statistics Regulation return to Eurostat, 2004 to 2008



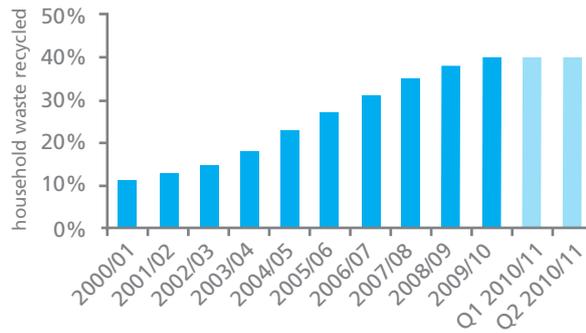
Household waste recycling

A total of 23.4 million tonnes of household waste were generated in the year to September 2010.

Of this, 40.3 per cent was recycled, re-used or composted. This is an increase from 39.7 per cent in 2009/10.

Per person, this equates to 452kg of waste generation per year, of which 182kg was recycled, composted or re-used.

Source: Defra



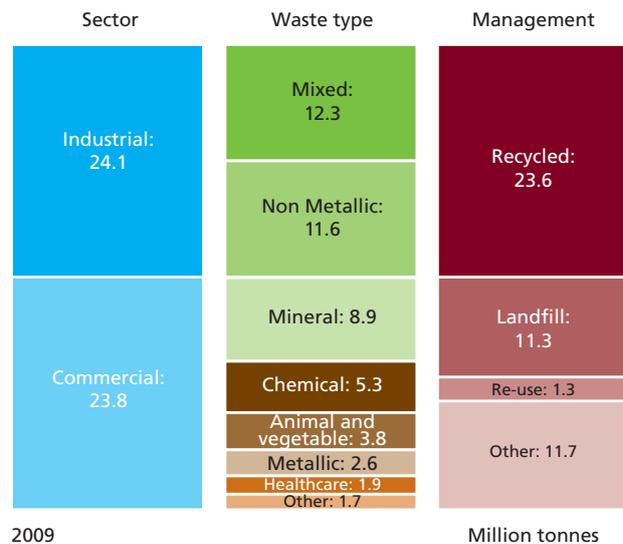
Commercial & Industrial Waste

In 2009, 47.9 million tonnes of waste were generated by businesses. The industrial sector accounted for 24.1Mt and the commercial sector 23.8Mt.

Estimates show that 52 per cent of C&I waste was recycled or re-used and 24 per cent was sent to landfill.

Small enterprises, with between 0 and 49 employees, produced 16.6 million tonnes of C&I waste in 2009, or 35 per cent of total C&I waste.

Source: Defra



These are the most recent waste statistics available. Waste data is compiled from a number of data sources over differing periods, mainly to reflect existing policy measures. Therefore the data in these charts is not strictly comparable, and may show apparent inconsistencies. The latest data is always published at www.defra.gov.uk/statistics/environment/waste.

The Waste & Resource Management Industry and Economic Growth

Dealing with waste more sustainably presents opportunities for growth across the UK economy.

Central to the Green Economy

A green economy is one in which value and growth are maximised across the whole economy while managing natural assets sustainably. Environmental damage will be reduced, while increasing energy security, resource efficiency and resilience to climate change. The green economy will be supported and enabled by a thriving low carbon and environmental goods and services sector.

Our vision of a Zero Waste Economy acknowledges that there will continue to be a long-term market in “waste” materials, with significant opportunities for growth in the collection, recycling, reprocessing and recovery of waste. The UK’s waste and recycling sector is currently valued at over £11 billion and is forecast to grow by approximately 3-4% a year for at least the next few years. The 2010 Energy & Utility Skills report estimated that the waste management and recycling industry would grow by 37% by 2020. These industries are central to the development of a green economy.

The waste industry is currently in transition from one traditionally focussed on disposal of waste to landfill towards much greater reuse, recycling and recovery of waste materials. So while some areas of the industry will continue to contract, others have significant scope to grow. This is above all true in the collection, sorting and reprocessing of key materials such as bio-waste, textiles, plastics, glass, paper and metals. There will be growth opportunities to both the waste management industry and the wider supply chain, including the repair, re-processing and remanufacturing sectors. Renewable energy needs provide an opportunity for strong growth in energy from waste and anaerobic digestion sectors. The UK waste industry’s adaptable and innovative world leading solutions can help to address waste management challenges across the globe. UK Trade and Investment supports UK companies in the industry to maximise business opportunities as part of a green export campaign.

Regulation

The waste and secondary materials market is governed by and, in many respects, created by regulation. Waste regulation exists for a reason – to protect the environment and human health from the adverse impacts of waste. Good regulation can also benefit business by overcoming market failure, encouraging innovation, and providing certainty for would-be investors. It helps to create a level playing field.

But when regulation is ill thought out, or when its enforcement is heavy handed, regulation can act as a significant barrier to growth. This Government is committed to reducing the burden of regulation, and to freeing up innovative businesses to create new value and jobs. As announced

in Budget 2011, we are conducting a public thematic review of legislation: we will consider the impact on growth of waste legislation as part of this exercise. We also set out in this Review a range of measures to reduce the burden of compliance on legitimate businesses

Employment

At present, these industries employ between 120,000 and 150,000 people according to the most recent studies. Opportunities for growth and employment exist in design, repair and reuse as well as in both infrastructure build and the consequent operation of waste treatment facilities. The extent to which in coming years there will be net 'new' jobs created, rather than jobs displaced from other aspects of waste management which are in decline, is not fully understood. But overall there is evidence that recycling operations are more labour-intensive than disposal operations.

The type of jobs created will change as the UK moves to more complex technological solutions to waste management. Jobs are likely to require an increasing level of competence – there will be a need for further growth of skilled labour, particularly in some professional and technical roles.

Infrastructure

In order to take advantages of the growth opportunities in this area, we need to ensure that the necessary infrastructure is built. Later in this document we discuss the barriers to the development of waste infrastructure and set out a range of measures to promote community acceptance of waste infrastructure. Central to this is the announcement at Budget 2011 setting clear expectations that local planning authorities, in developing grant consents, should prioritise growth.

Sustainable Use of Materials and Waste Prevention

Summary

Waste is a resource. Reviewing our approach to waste in this country, it is clear that for too long we have worried about how to dispose of waste, but not enough about the use we can make of it. At a time of material resource pressure – even scarcity in some cases – we need to consider waste more fully within the wider context of material flows and sustainable material use.

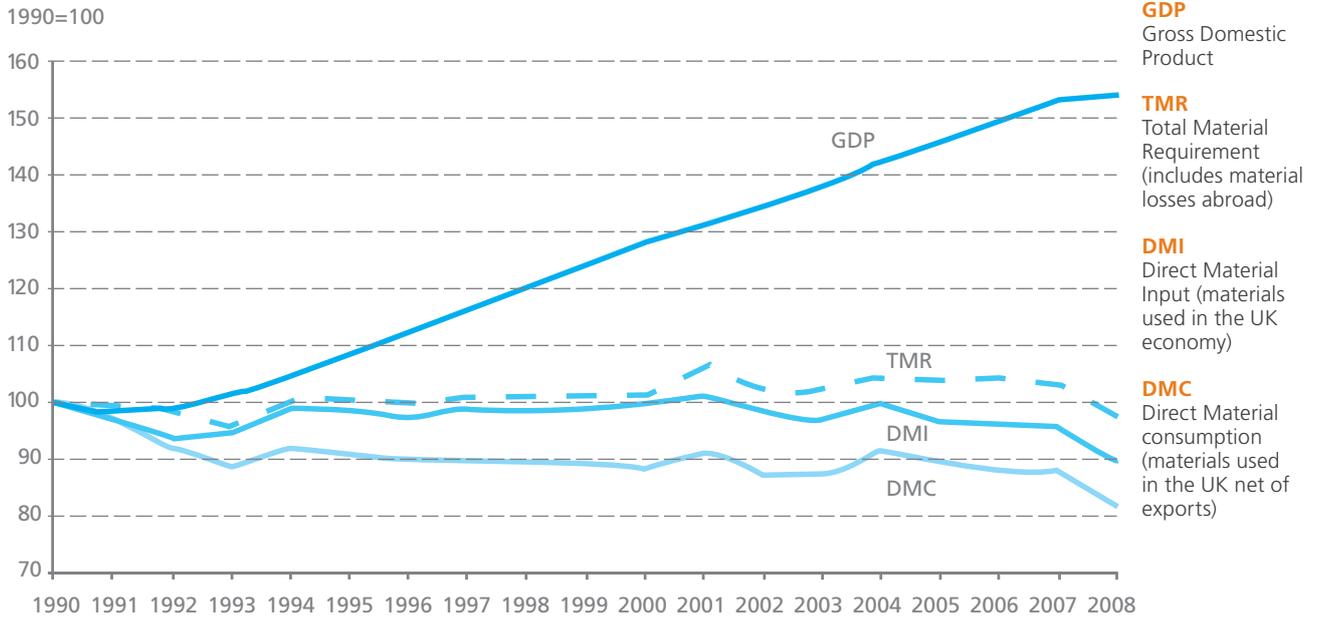
We need to prioritise action: this means focussing both on the recovery of critical materials, but also on those areas which have the biggest environmental – particularly carbon – impact, whether that be through embedded or direct carbon emissions.

Preventing waste wherever it occurs should be the shared priority of Government, business and civil society – it delivers economic and environmental benefits. We heard this repeatedly from those who responded to our Call for Evidence and with whom we discussed these issues in conducting the Review.

The Government will develop a comprehensive Waste Prevention Programme by the end of 2013, but in the meantime will work with businesses and other organisations across supply chains on a range of measures designed to drive waste reduction as part of a broader resource efficiency programme.

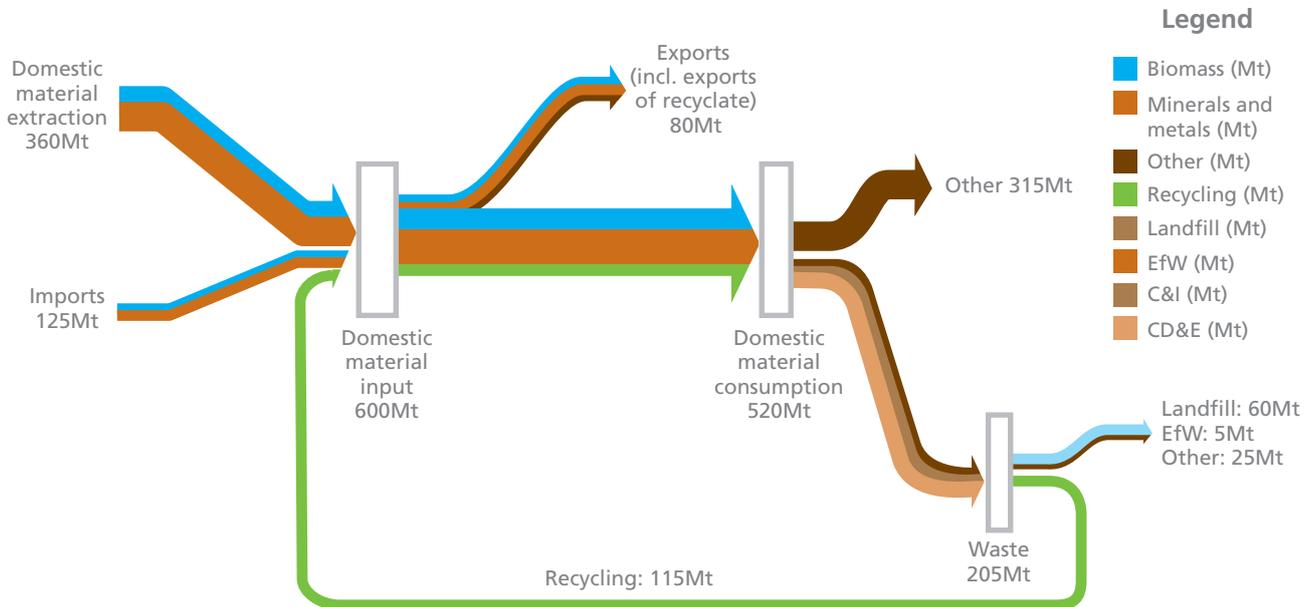
- 54** As the world economy grows, even under current economic conditions, consumption levels of many of our resources increase, with inevitable environmental and economic implications. We need to review the way in which we use materials and products in the UK to make most effective use of them.
- 56** While we have not increased our domestic use of materials since 1990, despite a significant growth in GDP, neither have we reduced our overall material consumption, meaning that we are increasingly reliant on goods produced using materials imported from abroad.
- 55** The Coalition Government has recognised this. Our 2010 *Strategy for Sustainable Growth* highlights a need to maximise our effective use of scarce natural resources, whilst the recent National Security Strategy identified a risk of short to medium term disruption in international supplies of resources essential to the UK (e.g. food and minerals).
- 57** At the same time as consuming such large volumes of material, the UK is still producing over 200 million tonnes of waste every year (excluding mining waste). Some of this material is recycled back into the economy or exported for economic use elsewhere, but a significant quantity is still sent to landfill.

Change In Resource Use 1990 – 2008



(Source: ONS, 2010)

UK Materials Flow



Notes:

1. Other outputs include food and drink consumption (est 25Mt) fixed assets and dissipative outputs to land and air.
2. Other disposal includes use on exempt sites (particularly for construction wastes).

Source: WRAP

Global Economy

- 58** The UK imports around 125 million tonnes of goods and raw materials from abroad each year, including food, electrical items, clothing and a range of other products (but excluding fossil fuels). This is an inevitable result of being in a global economy, and allows the UK to access goods which can be made more cheaply elsewhere, or from materials not available in the UK.
- 59** In turn, as well as exporting goods we export approximately 15 million tonnes of waste for recycling per year. This represents around one sixth of our non-fossil fuel exports by volume, but less than 2% by value and is key to ensuring that much of the recyclable waste collected by local authorities is ultimately recycled. It is natural in our economy, where consumption of goods far outweighs domestic manufacture, that a responsible 'closed loop' approach to products will involve the return of some materials from the UK for recycling and re-incorporation in manufacture overseas.
- 60** The goods we import are associated with environmental impacts in their country of origin. Greenhouse gas emissions associated with net imports to the UK were estimated to be 376 million tonnes in 2008.⁴
- 61** In turn, the global trade in waste for re-use, recycling and recovery generates significant benefits for global resource use, reducing carbon emissions globally and helping to meet recycling targets. In general terms the EU exports a considerable amount of recyclable waste material to the Far East, especially paper, plastics and metals, and the use of these waste materials in these countries leads to considerable savings in natural resources and greenhouse gas emissions from waste that might otherwise be landfilled. The UK also has a considerable trade in waste for recovery with other EU Member States. This is part and parcel of a healthy internal EU trade, and reflects the essentially free movement of waste for recovery within the EU. In contrast, there are more restrictions on the movement of waste for disposal and on household wastes, where EU legislation encourages each EU Member State to become self sufficient. In line with this, and subject to a limited number of exceptions, UK policy is not to export waste for disposal in other countries.

UK Imports and Exports of example raw materials, wastes and items for re-use 2010



⁴ CenSa, 2010

Critical Materials and Supply Risks

- 62** To deliver an economy where resources are used sustainably, we need to ensure that we are responsive to issues around the economic and environmental cost of materials and risks in their supply, and that we are resilient in the way in which we use and recover these materials.
- 63** It is essential that we strike the right balance between recovery and recycling in the UK and export of materials, to minimise risks to national supplies and maximise the environmental economic and social benefits.
- 64** The vast majority of critical materials are used in electrical items (including batteries), niche applications (e.g. aerospace) and in emerging technologies (e.g. fuel cells). Some, such as cobalt, are also used in colouring glass, ceramic and enamels. Research for Defra into resource risks faced by business identified security of supply concerns regarding lithium, aggregates, tin, lead, copper, palm oil, rare earth metals, timber, fish, phosphorus, cobalt and indium.⁵
- 65** For most materials action is best focussed at the top of the hierarchy, on reducing use and waste of these materials, and in
- extending the life of the products which contain them (e.g. through design for longer life, upgrading, re-use or repair). Research by WRAP suggests that action by business, government and others could reduce our reliance on some specific materials, such as rare earths, cobalt and lithium by 10-30% by 2020 through resource efficiency measures.⁶
- 66** The Government will continue working to shape relevant European Union Initiatives, particularly the Raw Materials Initiative and the Flagship Resource Efficiency Initiative, to help ensure that the significant resources of the Commission are directed to best effect in addressing resource efficiency and security. This includes development of robust indicators, improving understanding of materials flow and development of internationally agreed standards. WRAP and the Technology Strategy Board (TSB) will work to implement resource efficiency measures targeted on the resources most critical to the economy, engaging businesses on materials security (e.g. through the Knowledge Transfer Networks) and developing market demand for re-use (e.g. through understanding and addressing barriers to re-use).
- 67** Once a product becomes waste, direct recovery or recycling of industrial minerals may be feasible. For example, valuable materials can be recaptured at end of life from mobile phones and other electrical goods where the right facilities are available. Defra and BIS have asked the TSB and WRAP to explore options for improving recovery of these materials, from design for disassembly to designing systems to recover valuable materials where commercially viable. Electrical items and their constituent materials are priority products for action.

Did you know?

Every twenty minutes, we create enough scrap metal waste to equal the weight of the Angel of the North

⁵ DEFRA (2010) *Review of the Future Resource Risks Faced by Business and an Assessment of Future Viability* – EV0458 <http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=2&ProjectID=17161>

⁶ WRAP (2010) *Securing The Future – The Role of Resource Efficiency*. WRAP; Banbury <http://www.wrap.org.uk/document.rm?id=10014>

End of waste Quality Protocols

End of waste Quality Protocols make it possible for materials that are derived from waste, to be safely used (and marketed) as quality products. They help to encourage productive re-use of materials that would otherwise go to landfill.

- **Partnership** – The Quality Protocols project is a partnership between the Environment Agency, WRAP (Waste & Resources Action Programme) and industry, and is funded jointly by Defra, Northern Ireland Environment Agency, Welsh Assembly Government and industry as a business resource efficiency activity.
- **Waste protocols provide clarity and certainty for businesses**, removing layers of unnecessary regulation and supporting economic progress. The benefits from the first 12 materials alone will create an estimated £1 billion in business savings and increased sales of waste-derived products by 2020.
- **The protocols improve environmental outcomes**. By 2020, the first 12 materials should divert around 17 million tonnes of waste from landfill, preserve 14 million tonnes of raw materials and avert 2.1 million tonnes of carbon dioxide-equivalent emissions.
- **Recognised as good practice** – in 2009 the Quality Protocol Project won the ‘Better Regulation’ award at the National Business Awards.

Technological advances enable the transformation of many waste materials into valuable resources. The Quality Protocols Project specifically addresses if and how the ‘waste label’ can be removed where waste has been recovered, and creates a set of criteria which instil confidence in using materials. The project helps businesses to navigate often complex waste management regulations, and clearly explains what has to be done to produce safely a fully recovered, non waste quality product.

Preventing Waste

- 68** In talking to all interested groups as part of this Review, we heard repeatedly that preventing waste from arising had to be the overriding priority.
- 69** The greatest environmental benefits and cost savings to individuals, businesses, and local authorities will be delivered by producing less waste in the first place. Much of the environmental impact of a product arises in its manufacture and use, before it reaches end-of-life as waste, so consideration of the products we buy, and how we use them, is crucial.

Did you know?

UK businesses could save over £22 billion via low and no-cost resource efficiency measures.

- 70** Recycling is an easily recognised activity – a social norm – but waste prevention is less well defined or established. It includes a much wider range of considerations including how products are designed and manufactured, what we buy, how we use and maintain products, and what we do when we have finished with them. Research shows that people see these activities as separate things, and do not associate them as parts of an overall “waste prevention” picture.
- 71** We are seeking to extend people’s commitment to recycling towards wider actions to prevent waste. We want people to see the benefits of extending the life of things they own and use, and for them to think about repair and re-use before considering replacing them. We also want it to be easy for people to be able to borrow, hire or source second hand or recycled products. We recognise that to change people’s perceptions of waste and influence these behaviours we need to start where people are and work with a range of motivations. Some people act to help the environment, to save money, to improve the local environment, to avoid waste, and/or to increase their wellbeing. It will be critical to support the development of the business infrastructure and skill-set in business and householders to enable people to act.
- 72** Businesses cover a very wide range of activities, sectors and sizes – designers, manufacturers, retailers and service providers; small and micro businesses to global corporations. Each type of business will be able to take different actions to influence its supply chain, its own day to day operations, and the impacts of their products when used and disposed of by their customers. Assessing the impacts associated with a business and its supply chain requires time and resources, as does designing and implementing any changes. But, waste prevention activities have the potential to bring about a wide range of business benefits including:
- financial savings;
 - reduced exposure to materials supply risks;
 - better brand image and consumer perception;
 - competitive advantage from getting ahead of new environmental regulations;
 - environmental benefits including a reduction in hazardous substances needing to be managed as waste, and reduced greenhouse gas emissions, air and water pollution impacts; and
 - longer term customer relationships e.g. through moving from one-off sales into areas such as product maintenance, leasing or take-back.

- 73** It is not surprising, therefore, that many leading businesses already recognise that taking action to reduce waste and use resources more effectively not only helps the environment but saves them money and makes them more competitive.
- 74** But there is still much further to go. Important research completed by Oakdene Hollins and published by Defra in March – “*The Further Benefits of Business Resource Efficiency*”⁷ – identified potential annual no cost or low cost savings to business of up to £22.6 billion through greater resource efficiency, over half of which would be accounted for by reducing waste.
- 75** With preventing waste a priority, the Government commits to working with businesses, local authorities, civil society and others to deliver the follow actions:

Provide Information and Support to Businesses

- Create a Waste Prevention Fund – a small rotating fund to support organisations (including businesses, social enterprises and local authorities) undertake waste prevention activities. This Fund will be managed by WRAP;
- Encourage and facilitate the expansion of SME Waste minimisation networks;
- Enable continued development of waste prevention toolkits and training courses for particular sectors;
- Work with business organisations to develop case studies and pilot schemes to trial and demonstrate benefits of service based business models e.g. leasing, long term maintenance;
- Through WRAP, co-ordinate the industry Product Research Forum which will agree key environmental metrics, establish a methodology, and gather the necessary data on reducing environmental impacts – including waste impacts – from grocery and home improvement products.

Drive waste prevention through product design and standards

- Explore how waste prevention requirements might be incorporated into minimum mandatory standards for the design of energy using products;
- Work with standard setting organisations to encourage inclusion of more waste prevention requirements in voluntary and best practice product standards;
- Develop the business case for including further waste prevention requirements in Government Buying Standards (both minimum mandatory and best practice) and amend the standards to reflect this; and
- Identify barriers to re-use, for example those associated with fire and electrical safety requirements.

Encourage and Enabling Consumer Action

- Explore options for improving consumer confidence in product durability and the reliability of re-used products;
- Test innovative ways to encourage people to keep products for longer or extend the life of products including through a pilot project;
- Support partnership development between businesses and Civil Society organisations to make full use of products at end of first life and increase re-use activity;
- Establish with local authorities and civil society groups whether there are opportunities for re-use collection facilities to be provided at civic amenity sites; and
- Investigate provision of a database of repair and re-use services for consumers and businesses.

⁷ <http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=16943&FromSearch=Y&Publisher=1&SearchText=EV0441&SortString=ProjectCode&SortOrder=Asc&Paging=10>

Development of a Waste Prevention Programme

76 As well as delivering the actions listed above, we will develop a fuller Waste Prevention Programme for England by December 2013. This will continue the progress towards a zero waste economy by setting out detailed actions to enable better resource efficiency and waste prevention, and meet relevant obligations under the revised Waste Framework Directive. This broader programme could include further work on:

- Developing additional responsibility deals with businesses – in specific sectors – which include aspects of waste prevention;
- Exploring how householders could be rewarded for effectively preventing or reusing waste;
- Working with business organisations to promote the economic case for new business models which help to prevent waste; and
- Working with business on the design of products which enable easier upgrades, repair and recycling at end of life.

A Common Approach with Business

The Government wants to work in partnership with businesses in all parts of the economy to encourage and spread best practice in waste prevention and resource management, and so reap the economic and environmental benefits for society and the economy. Business and Government can take joint and complementary actions. There is also a role for local enterprise partnerships who can provide the vision, strategic leadership and support needed to enable businesses in their area to deliver these changes.

Government is looking for businesses to:

- Focus on preventing waste and using resources more efficiently;
- Design and manufacture goods that are more efficient, durable, repairable and recyclable;
- Explore new business models which can be profitable without using so many resources (e.g. leasing, servicing, upgrading, extended warranties);
- Re-use products and materials wherever possible, recycle where not;
- Take greater responsibility for the products they place on the market, from design to disposal, including through voluntary responsibility deals;
- Help their staff and customers reduce the waste they generate;
- Promote sustainable procurement throughout their supply chains;
- Where appropriate, invest in waste infrastructure;
- Send less of their waste to landfill;

- Ensure that their waste is managed legally and safely, through to final recovery or disposal.

For its part, Government will make it easier for businesses to do the right thing with their waste and resources by:

- Setting a clear policy direction;
- Providing as much fiscal and regulatory certainty as possible;
- Reducing the burden of regulation on compliant businesses;
- Bearing down on non-compliant businesses and illegal operators;
- Ensuring that businesses have access to user-friendly information about their own legal obligations alongside guidance on resource efficiency;
- Sharing evidence, research and best practice;
- Facilitating voluntary “responsibility deals” in key sectors;
- Practising sustainable procurement in its own operations.

Producer Responsibility

77 Businesses who want to be profitable, innovative and progressive will look to reduce the volumes of waste they produce, and think about what they do with the waste they produce. Increasingly, they will also think about the way their products are made and distributed, and what happens to them when they reach the end of their life. That is what Producer Responsibility is about. Action by individual companies is essential if progress is to be made in this area, and collective action can be particularly powerful at driving behaviour change and allowing businesses to meet certain standards, comfortable in the knowledge that their competitors are doing the same.

Did you know?

Businesses in England recycled & re-used 52% of their waste in 2009, up from 42% in 2002/03.

78 There are a range of statutory Producer Responsibility schemes currently in place covering waste electrical and electronic equipment, vehicles, batteries and packaging. Such schemes, derived wholly or in part from EU requirements, aim to ensure that those who make products are either partly or wholly responsible for the costs of dealing with their products in an environmentally sound manner once they have reached the end of their life. All four regimes seek similar outcomes, but there are significant differences between them which increase cost and complexity for regulators and regulated businesses. Working with the enforcement bodies we will look at whether and how existing Producer Responsibility regimes could be simplified to deliver reduced administrative burdens, lower costs and a reduced risk of inadvertent non-compliance for regulated businesses, especially for smaller producers who fall with the scope of more than one of the regimes.

Voluntary Responsibility Deals

- 79** While producer responsibility driven by regulation can be an influential driver of change, the Government believes that better environmental outcomes can, in many circumstances, be delivered in the least burdensome way through a voluntary approach. The potential advantages of a voluntary approach are that:
- It can help to secure corporate commitment to specific targets that are integrated into business strategy;
 - It can be targeted in areas of benefit both to the environment and the economy;
 - It encourages competition between signatories in delivering the targets;
 - It can stimulate growth and innovation in the desired field to ensure change is delivered cost effectively;
 - Businesses tend to deliver change that works well for their customers and works with the grain of their business.
- 80** We are now working closely with businesses to explore the potential for new responsibility deals in the sectors outlined below, covering products and materials identified as having high embedded carbon
- **Hospitality Sector:** As food and packaging account for the majority of hospitality waste, we are developing a responsibility deal with industry focussing on these waste types. This agreement will cover both prevention and sustainable use of the waste that still arises, for example greater composting or use of anaerobic digestion for food waste, more recycling for packaging. This is a large and complex sector, and voluntary initiatives will need to be tailored to the segment under consideration. The agreement will be with a wide range of businesses including contract caterers, hotels, pubs and restaurants.
 - **Waste management:** We are working with the industry on a responsibility deal through which the industry will take an active role in promoting the waste hierarchy with producers and will develop standards to ensure that outputs from Material Recovery Facilities are of consistent quality. This is covered later in the document, in the section on business waste collection.
 - **Paper:** The sectors involved are currently reviewing existing agreements with a view to developing them further. Any future agreement would have a greater emphasis on how the industry can reduce waste produced, and on the life cycle impacts of the manufacturing and use of paper products. Initial findings from a Defra project looking at the flow of paper through the economy indicate there are opportunities for improving the environmental performance of other sectors of the paper industry not already covered by an existing agreement, and the Government will look to initiate discussions with these sectors.
 - **On direct mail:** Defra has been discussing with the direct marketing industry how best to reduce waste through the development of an easy to use opt out process covering both addressed, and most unaddressed direct mail. This, in combination with better targeting techniques, will reduce the amount of unwanted direct mail produced and delivered, and therefore becoming waste. The direct marketing industry will also seek to develop a carbon calculator for the sector and a new Industry Standard for the sustainable production and distribution of direct mail.
 - **Textiles:** As part of ongoing work on the sustainable clothing roadmap, there are proposals for task groups to develop further, collaborative voluntary actions on a) design, focussing on how retailers and the supply chain can reduce impacts by changing design specifications and strategy; b) metrics, seeking to agree metrics and product category rules for

assessing resource impacts; c) clothing purchasing and use behaviours; and d) collection, re-use and recycling, seeking to increase the proportion of discarded clothing which is able to be re-used or recycled.

- **Construction Waste:** The existing Halving Waste to Landfill Commitment is on track to meet its 2012 target. While keeping the momentum going, there will be a greater focus on waste reduction at the earlier, design stages of construction projects as this is where the largest environmental and financial savings can be made. This will be part of a wider, ongoing programme of work with the industry including support for the Sustainable Construction Task Group Action Plan.
- **Packaging:** Through the second phase of the Courtauld Commitment and development of other existing agreements, we will continue to look for innovations in light-weighting, recycling and greater use of recycled contents.
 - Defra has invited relevant trade associations to join WRAP in a 'working group' on **toy packaging**, similar to a previous one which led to reductions in packaging for Easter eggs. Discussions with the British Toy and Hobby Association have highlighted the need for initial work on data;

- In the light of the 2011-12 figures on the use of **single-use carrier bags** in England, and the results of the proposed policy in Wales, the Government will decide whether and what further action might be needed.
- The Government will also explore responsibility deals to raise recycling levels for **metal and plastic packaging**.

Did you know?

In phase 1, the Courtauld Commitment avoided £1.8 billion of food and packaging waste.

Packaging

- 81** Packaging fulfils an important role. It protects food and other goods on the journey from where they are made to where they are used. Its key role is to avoid spoilage and damage – which create waste – in the supply system and in the home.
- 82** Although in most cases the carbon footprint of packaging is dwarfed by that of the products it contains, it still uses enough resources to be worth making as efficient as possible. It is what consumers see when they have used the product. Survey after survey shows that consumers believe packaging is a big environmental problem.

Key packaging statistics

Over **10 million tonnes** are put on the UK market every year

Half ends up as waste in households
(about **1/5** of all household waste)

Half becomes waste in the commercial and industrial sector
(about **1/10** of all commercial and industrial waste)

Increases by around **1% a year**
(less than GDP and less than sales volumes, but still an increase)

- 83** Companies are by law required to use only the minimum amount of packaging necessary. Reducing packaging – without harming functionality – as well as using refillable and reusable packaging can save businesses money, reduce waste for them and consumers alike and deliver environmental benefits. We want to continue fostering innovation and more resource-efficient design, chiefly through responsibility deals with packaging manufacturers and users.

Example – ASDA saved over £10 million through their packaging reduction programmes in less than 18 months and invested these savings back into price reductions for the benefit of their customers.

Example – In partnership with Home Retail Group (Argos) a reusable packaging system (sofa bag) was developed and trialed for the distribution and delivery of upholstered furniture. Not only has this reduced packaging but it has also reduced damage rates and attracted substantial international interest. Home Retail Group has now adopted this packaging for deliveries of sofas from both Argos and Homebase, reducing the amount of packaging for customers to dispose of by 1,800 tonnes per annum.

- 84** Companies who are unwilling to reduce their packaging as a result of Trading Standards intervention can point to language in the text of the EU Packaging Directive⁸ which is open to interpretation. The Government would like to see clearer language in the Directive to aid enforcement. We have already raised this formally with the Commission, and will do so again when the Directive is reviewed.

Recycled Contents and Recyclability – Closing the Resource Loop

- 85** Where suitable, using more *recycled content* in consumer, display and transport packaging has a number of economic and environmental advantages:
- On average, the energy that goes into the manufacture of recycled materials is lower than that of virgin materials. In addition to their lower carbon footprint, recycled materials should in theory be less expensive, and their prices less volatile.
 - Using recycled materials also conserves natural resources, many of which are not renewable.
 - A growing demand for recycled contents could help ensure that the UK recycling system is more resilient to market changes (such as the sudden drop in demand on global markets seen in 2008/2009).

Example – Since March 2008 Sainsbury's Taste the Difference 250ml, 500ml and 1l fresh chilled juices have been packaged in 100% recycled plastic bottles – helping to save 375 tonnes of virgin plastic per year.

- 86** Respondents to both the Review's Call for Evidence and online questionnaire expressed a desire to see more recycled material used in packaging. The Government will work with stakeholders across the supply chain to encourage this. Designing packaging to be recyclable – for example avoiding certain closures, mixed materials and colours – helps make packaging more likely to be recycled at the end of its life, and more economic to treat.

⁸ Directive on packaging and packaging waste (94/62/EC, as amended), which is implemented in the UK through the Packaging (Essential Requirements) Regulations 2003 (as amended)

Example – United Biscuits changed the packaging for their Jacobs biscuits for cheese to a new carton board box which is 100% recyclable. It is also more widely collected for recycling than the previous box, made of plastic. The change has halved the weight of packaging used.

- 87** The Government, through WRAP, will work with the packaging supply chain to promote best practice in packaging recyclability, and suitability for specific forms of recovery (e.g. anaerobic digestion) where appropriate.

Recycling Packaging

- 88** Packaging recycling rates have doubled since 1997 to 62% in 2009, but the UK is only recycling 24% of its plastic packaging and 41% of its aluminium packaging. These happen to be the two most energy-intensive materials to manufacture, so there are big environmental gains to be had from recycling more. Recovery and recycling rates for wood and paper are already high. Strong demand and the effect of the landfill tax should continue to drive recycling. In greenhouse gas terms, in relation to the wider economy, the priorities are to recycle more plastics and aluminium packaging. Some of the initiatives proposed for aluminium would also benefit steel packaging recycling.
- 89** The challenge for glass is twofold: increasing the collection rates for this highly recyclable material and incentivising collection methods which allow the glass to be re-melted into containers or other applications rather than aggregates (as re-melt is much better in greenhouse gas terms).

- 90** The UK's statutory producer responsibility system⁹ has served it well so far. Since 2008, the UK has met, and in some cases exceeded, the minimum recovery and recycling targets set in the EU Packaging Directive. This has been achieved at relatively low cost to businesses which manufacture or use packaging (the 'producers'), and which are legally required to ensure that a proportion of what they place on the market is recycled.

- 91** However, there are continuing concerns about the transparency of this system for producers and local authorities. In addition, the current system is based on shared responsibility between producers¹⁰ and the final users of packaging (businesses, and local authorities on behalf of residents). Producer funding does not cover the full costs of collecting, sorting and recycling packaging waste; it provides a 'top-up' which incentivises the level of recycling necessary to meet statutory minimum targets. There are arguments for re-balancing these costs.

- 92** The EU Packaging Directive is due to be revised in the next few years. It would not make sense to make fundamental changes to the current producer responsibility regime ahead of this revision. Depending on the reach of a revised Directive, this could lead to two sets of changes in relatively quick succession, with the risk of excessive costs on business.

- 93** Instead, we intend to review the producer responsibility system in time for a new Packaging Directive (expected from 2014). A final decision on the future shape of the producer responsibility system will be taken in the light of the scope and requirements of the new Directive.

⁹ Set out in the Producer Responsibility Obligations (Packaging Waste) Regulations 2007, as amended.

¹⁰ Producers show compliance by obtaining evidence notes; 'Packaging Waste Recovery Notes' (PRNs), issues by accredited reprocessors, and 'Packaging Waste Export Recovery Notes' (PERNs) issued by accredited exporters. These notes have two functions. First, they can be used to work out the amount of recycling carried out. Secondly, if producers choose to buy them rather than do the necessary recycling themselves, they channel funding from packaging producers to others in the recycling chain.

- 94** We intend to consult on increased recycling targets on packaging producers from 2013 to 2017. The scale of the increases we consult on will depend on our Impact Assessment, which will consider issues such as affordability for businesses and government. We will also consult on establishing a sub-target for recycling of glass into re-melt applications. The Government will make a final decision in the 2012 Budget.
- 95** For most materials, the collection, sorting and reprocessing infrastructure is well established. Plastics are the exception. Of the estimated 5 million tonnes of plastics consumed in the UK every year, about 40% is used in packaging. According to industry data, 46% of plastic bottles were recycled in 2010. Ninety-two percent of local authorities collect plastic bottles for recycling. Clean film from commercial and industrial sources is readily recycled. Yet, overall, the UK only recycles 24% of its plastic packaging waste.
- 96** Over the next few years, we want to work with businesses across the packaging supply chain – ideally through one or a series of responsibilities deals – in order to:
- Ensure that a greater proportion of the plastic packaging on the UK market can be easily recycled (i.e. is easy to sort mechanically). WRAP will provide technical support for this;
 - Help increase participation rates, both by householders through partnerships with local authorities, and by SMEs.
 - Develop sorting and reprocessing capacity for non-bottle plastics. To assist this, WRAP will continue its Mixed Plastics Loan Fund for the next three years.
- 97** Some businesses who handle packaging have set out ambitions to work directly with local authorities, waste management companies and reprocessors to bolster the recycling of packaging. We welcome these developments, which are the truest form of producer responsibility. Working with the Environment Agency and WRAP, we want to assist such initiatives wherever possible, under the banner of responsibility deals with the sectors concerned.

Examples

- **Coca-Cola Enterprises** has invested £5 million in a new plastics reprocessing plant in Lincolnshire to more than double the total amount of food-grade recycled PET produced in Great Britain. This is a ten-year deal with their partner, Eco-Plastics. The deal is a first for the British drinks manufacturing industry. It will bring recycling in GB full circle, as used British packaging will be recycled in Lincolnshire, for re-use in packaging that will then be sold in Britain.
- **Marks and Spencer** is investing up to £1.25 million over five years in partnership with Somerset Waste Partnership to add plastics and cardboard to the materials councils collect. Three other partnerships with local authorities are planned.
- **Metal matters** is a partnership between the UK drink can manufacturers, the recycling industry, WRAP, and local authorities. The programme supports kerbside collection schemes for steel and aluminium packaging, to encourage the public to recycle more often. In two pilot local authorities, covering 60,000 households, information to householders on the benefits of recycling successfully increased recycling rates.
- **Every Can Counts** is a programme funded and developed by a consortium of businesses with an interest in aluminium and steel packaging. It is designed to increase the recycling rates for cans consumed on-the-go, and also supports can recycling in the workplace. There are over 4,000 *Every Can Counts* collection points across the UK, in public places and at major events.

Deposits

- 98 Many individuals, businesses and organisations have commented on whether a deposit and return system for beverage containers should be established in England. The Campaign to Protect Rural England (CPRE) published a report¹¹ advocating the establishment of such a scheme in September 2010. A large number of e-mails were received in support of this idea.
- 99 However, representations were also received from retailers, drink manufacturers and packaging manufacturers. A number of them had operations in countries where deposit schemes operate. They raised issues about the cost of establishing such a system in the UK, compared to using the existing collection systems better.
- 100 We have analysed the economic model compiled on behalf of CPRE and we have concluded that:
 - A deposit system could increase packaging recycling rates.
 - It has the potential to reduce the littering of drinks containers, though the extent of this is not clear;
 - It could save local authorities some money, although they would still have to provide the bulk of recycling services for other types of packaging;
 - However, the estimated running costs of a deposit system are very high, including to business, and much higher than alternative measures.
- 101 The annual cost of a UK deposit system was estimated in a report for the Campaign for the Protection of Rural England at £1.4bn. Of this, £944m would fall to consumers in the form of uncollected deposits. The benefits relating to an increase in recycling of drinks containers are estimated as £437m, comprising savings to local authorities from avoided collection and cleaning costs, as well

11 Enomia (2010): Have we got the bottle?, CPRE, www.cpre.org.uk/filegrab/Havewegotthebottle.pdf?ref=4438

as overall financial benefits to commerce. The benefits relating to litter avoidance were estimated by Eunomia as £1.2bn a year, but they come with two caveats. Firstly, this figure was arrived at by extrapolating the results of an Australian study, and it is not possible to say to what extent they could be replicated in England. Secondly, in order to see whether a deposit system would represent good value for money, we would need to compare it with alternative options aimed at reducing litter, rather than increasing recycling.

- 102** Taking all of this into account, we have decided not to take the option of deposits forward for the time being, and concentrate on other ways to increase recycling and address litter (see later section). However, we will publish the details of our analysis in our planned consultation on packaging recycling, and seek views on all its assumptions.
- 104** The Government is committed to tackling its own waste and leading by example. We have set ourselves the Greening Government Commitments, including a commitment to cut the waste we produce by 25% by 2014/15 (from 2009/10). In support of this we will be cutting our paper use by 10% in 2011/12, and ensuring that redundant ICT equipment is re-used or responsibly recycled, as well as looking to tackle waste that is currently sent to landfill.
- 105** The Government will develop approaches that ensure all waste it generates is kept within the legal waste management sector right through to final recovery or recycling or, where not possible, final disposal. The Government will promote this approach across the wider public sector to minimise the risks of any waste generated or collected by public authorities ever being subject to illegal treatment here or abroad.

Government Estate

- 103** While our expectations of business are high, we recognise that central government departments and the wider public sector have a responsibility to manage the efficient and sustainable operations of the government estate. In support of our wider policy goals on reducing and managing waste more efficiently the Government needs to be doing at least what it demands of others and, ideally, leading by example. The Greening Government Action Plan published in October 2010 sets out our priorities around leadership, efficiency, transparency and accountability that will underpin the reform of Government's operations and procurement.

Regulation and Enforcement

Summary

Waste legislation exists for a reason. It protects the environment and human health and can help to create markets, providing a level playing field in which legitimate businesses can operate. However, businesses also made clear that the enforcement of waste regulation can impose significant burdens on them: enforcement needs to focus on those operating outside the law, rather than those with a good track record of compliance.

We have listened carefully to these views. Defra, BIS and the Environment Agency have set in train a programme of work – in partnership with industry – to identify how the burden of compliance on legitimate business can be reduced, with enforcement targeted even more clearly against those who consistently operate outside the law and risk harm to health or the environment. This work will consider measures aimed at:

- allowing businesses to fulfil their obligations more easily and effectively and reduce unnecessary burdens;
- better integrating regulatory controls in the best interests of people and the environment;
- rebalance the approach taken to regulation so as to more markedly enforce against non-compliance.

In addition, we will look at a range of issues around prevention, detection and enforcement of illegal waste sites and flytipping, from available penalties and sentencing guidelines to collaborative working and guidance to business. We will introduce stronger powers to seize vehicles suspected of involvement in waste crime.

Better Regulation and Enforcement

106 Regulation can provide public reassurance that human health and the environment are being protected. It establishes minimum standards below which practice will not be tolerated. In this way it supports legitimate businesses in their activities and provides a level playing field for those who wish

to adopt higher standards without unfair competition. Good regulation can also benefit business by overcoming market failure, encouraging innovation and providing certainty for would-be investors.

107 We need to enable change by households and businesses in the most efficient manner possible, which requires a clear and stable regulatory framework. A business environment that supports long term

investment and sustainable growth will benefit the whole economy.

108 Waste regulation should protect human health and the environment while making it as easy as possible for people to do the right thing. In particular, waste regulation and its enforcement should:

- be proportionate to the risk posed and applied consistently, reflecting the needs of the very different businesses and sectors operating with waste;
- be implemented in a way which makes compliance as easy and cost-effective as possible;
- encourage industry to take ownership of waste from cradle to grave and responsibility for legal compliance by developing and sharing the standards, tools, guidance, and codes of practice appropriate to a given business sector or environmental practice;
- eliminate wilful non-compliance and illegal operation as far as is reasonably practicable by targeting those who flout the law – so that legitimate businesses can operate on a level playing field;
- be evidence based.

109 Better regulation principles have already had a significant impact on improving waste regulation, such as in the replacement of the waste management licensing regime with environmental permitting in April 2007 and a new schedule of waste operations that are exempt from the need for an environmental permit in 2010. However, it is often the detailed mechanisms for meeting legislative requirements, rather than the legislation itself, that businesses and particularly small businesses find difficult to comply with. It can be the application of the regulations which imposes the burdens.

110 In a number of areas, the Environment Agency and other regulators have been able to reduce burdens on businesses by freeing low risk activities from regulation;

by improving the clarity of application forms and guidance, and by reducing the inspection of those who are already demonstrating that they are meeting the standards in accreditation schemes. We would like to extend the principle of reducing scrutiny of businesses who meet agreed third party standards. In January 2011 BIS and Defra Ministers, working with the Environment Agency, published a joint statement launching work to explore the potential for standards and accreditation to play a larger part in regulation and enforcement.

111 There are also examples of good regulatory practice that have made it easier for businesses to comply with legislation such as those adopted in applying waste controls to the agricultural sector through the Whole Farm Approach. This process will continue to develop. In so doing we will take into consideration the recommendations of the Farming Regulation Task Force.

112 Better regulation is of course not confined to waste. Defra is looking across a range of policy areas at opportunities to deregulate or simplify environmental regulation. This includes examining whether there is a case for changes to the balance of regulatory responsibilities between local authorities and the Environment Agency and opportunities for greater co-operation between regulators.

113 Regulators operating in isolation can only ever be partly successful at tackling the worst excesses of illegal activity and poor performance. That is one reason why the Government has come together with the Environment Agency and the Environmental Services Association to agree a responsibility deal which has been shaped with input from the Local Government Association and Federation of Small Businesses (see later section on business waste collection). By sharing information and intelligence and by helping the regulator to identify where in the supply chain to intervene, we can

all ensure that limited regulatory effort is deployed to maximum effect to protect legitimate businesses, communities, and the environment.

114 We have identified four main areas of waste regulation where we believe there is scope to make things easier for business while maintaining the integrity of environmental controls.

i. Measures that will **allow businesses to fulfil their obligations more easily** and effectively and reduce unnecessary burdens.

- We will improve Environment Agency online systems for businesses across a range of waste related processes. We will be looking to reduce the need for and nature of data and information demands on regulated businesses, and integrating reporting mechanisms wherever possible, to reduce the overall administrative burden. Information and data will be made available to help businesses with their own compliance through more accessible and intelligent public registers;
- In conjunction with BIS, we have tasked the British Standards Institution to work with businesses, other standard setting bodies, government departments and the Environment Agency to assess the current provision of standards in this area and produce a strategic roadmap to be agreed by Government. This roadmap will show how businesses, large and small, can take greater responsibility for their performance and be certified or permitted effectively, according to the level of assurance needed to demonstrate compliance. Defra will be tasking the Environment Agency, working with businesses, the UK Accreditation Service (UKAS) and other accreditation bodies to bring forward a strategy for businesses to earn greater levels of freedom from regulatory inspection;

- We will encourage the Environment Agency's move towards more sectoral-based approaches to regulation whereby forms and guidance can reflect the particular needs of a sector or activity. Agency lead contacts and specialists will increasingly identify common compliance issues in a given sector and work with industry to identify solutions.

ii. Measures that will **better integrate regulatory controls in the best interests of people and the environment.**

- In conjunction with the Home Office and the members of the ACPO Conductive Metal Theft Working Group we will examine the case for streamlining the overlapping powers, controls and obligations on businesses as currently set out in the Scrap Metal Dealers Act 1964, and the record-keeping requirements of waste legislation, with a view to improving enforcement and reducing opportunities for criminals;
- We will examine the case for better integration of controls on specific types of operation in order to improve environmental outcomes. For instance, commercial and industrial waste spread on land is regulated by different bodies under environmental permitting, animal by-products and sewage sludge regulations, with insufficient evidence on the cumulative impact on the receiving environment;
- We will look at closing perceived gaps in the evidence base so that the regulatory requirements applied to businesses, and the way compliance is assessed and secured, is based on best available evidence. For example, research into the risks to health from bioaerosols generated during composting operations will help better determine the need for site risk assessments and monitoring, and the circumstances in which risk mitigation measures are needed;

- We will continue to monitor the interface between the granting of planning permission and environmental permits, including the impact of the proposed protocol for local authorities and the Environment Agency (to be published later this year), and the recommendation of the Penfold Review¹² to consider the sequencing of planning and permitting;
 - We will review the Site Waste Management Plans Regulations 2008, examining how effective the regulations have been in reducing costs for businesses, embedding resource efficiency and reducing the flytipping of construction waste. The review of the regulations will be completed later in 2011.
- iii. Measures that will rebalance the approach taken to regulation to more markedly **enforce against non-compliance and those who risk harm to health or the environment, or cause nuisance**. This will allow businesses to feel protected and believe they can be innovative and can operate on a level playing field with long-term certainty, without unfair competition from the illegal or unscrupulous operator. It is estimated that for every ten legitimate and permitted waste sites in England, there is one illegal site, operating outside of the law and undermining and undercutting the market for legitimate operators.
- The Environment Agency's well recognised risk based approach to permitting and compliance assessment will continue to be developed to focus effort on areas where compliance will deliver significant environmental benefits such as (a) best practice to promote high standards of landfill gas capture and utilisation, and (b) securing the most favourable outcome for individual waste streams by driving up the quality of outputs and turning them into new products;
- At the other end of the spectrum the risk based approach to regulation will focus on enforcement against those who, through poor management or inadequate infrastructure are repeatedly non-compliant and cause nuisance such as dust and odour or risk harm to health and the environment.
- iv. Measures to ensure that sanctions available act as **a real deterrent to those responsible for waste crime** and who operate to a significant extent outside of the regulatory regime.
- The Government will bring into force stronger powers for local authorities and the Environment Agency to seize vehicles suspected of involvement in flytipping and waste crime;
 - We are asking the Environment Agency to take robust, targeted enforcement action to eliminate the high proportion of illegal waste management sites, many of which cause greater damage to the environment and are associated with other criminal activity;
 - We will encourage the enforcement agencies to work closely together to share intelligence and best practice in order to reduce waste crime;
 - We will work with the Police, the Home Office and the Environment Agency in particular to help deliver a more strategic national intelligence-led approach to tackling metal theft, targeting illegal traders whilst ensuring that law abiding businesses can trade in safety;
 - We will work with the Environment Agency and local authorities to examine how to strengthen enforcement of the waste carrier regime, including revocation of registration, against those businesses who repeatedly flout the waste carrier registration rules and undermine legitimate businesses.

¹² Reference Penfold Review

In addition, we will consider:

- Whether the current levels of fines and sentencing are sufficient to disrupt illegal operations and provide a sufficient deterrent, particularly for more serious, persistent and organised waste crime. This will include working with the Environment Agency and Local Authorities on the effectiveness of the Proceeds of Crime Act 2002, and whether it could be used to better effect;
- Whether successful prosecutions are sufficiently visible, and whether Magistrates have enough information or training about sentencing for waste crime. We have provided evidence to the Sentencing Council who are considering whether sentencing guidelines need amending on waste crime;
- Whether to roll out more widely the pilot run by the Environment Agency and the Probation Service in which offenders, including some waste crime offenders, have been involved in environmental projects, including cleaning up fly tipping;
- How we can raise awareness amongst businesses, particularly small and medium sized enterprises, of their obligations to pass their waste to a legitimate and registered waste carrier so as not to inadvertently facilitate flytipping;
- How we can most effectively reduce the risk of fly tipping on private land, by working with landowner organisations such as the NFU, CLA and the National Trust to increase reporting of fly tipping incidents, and share best practice on how to reduce the risk of fly tipping, for example, through improved security and sharing intelligence;
- How best to collect flytipping data on a minimum burden basis for the future, including revisiting the requirement for local authorities to report flytipping data to central government;
- Whether Fixed Penalty Notices would be appropriate for flytipping and duty of care offences in some circumstances;
- Whether there are better ways of partnership working and intelligence sharing e.g. a national shared database for local authorities of all legal proceedings, linked to the police and Environment Agency;
- Whether registered waste carriers should be required to display proof of their registration.

Export Controls

- 115** We are also committed to cracking down on illegal waste exports. There are clear controls and restrictions on what waste can be exported. For example, waste cannot be exported for disposal such as landfill or incineration without energy recovery, and no hazardous waste may be exported to developing countries. These controls are in place to protect the environment and human health, and ensure that waste is managed in an environmentally sound manner.
- 116** The Government will continue to encourage the Environment Agency to prioritise combating the illegal trade in waste using their pioneering techniques and an intelligence-led approach to target effort and resources onto suspected unlawful operators. This will help to prevent and disrupt illegal activity and prosecute offenders. In taking this work forward, the Agency will work closely with UK customs authorities and other environmental agencies, the shipping lines and overseas regulators, and Government will assist with the provision of a necessary legal gateway to enable the sharing of information between the authorities.

- 117** The Government also recognises the important role waste producers can play in reducing illegal waste exports. Some waste types, such as waste electrical and electronic equipment and mixed dry recyclables, are at particular risk of illegal export. Waste producers should exercise extra vigilance to ensure the waste they produce, or are responsible for collecting, is treated in a responsible manner throughout the chain of management and the risk of subsequent illegal export is minimised. Government departments, local authorities and other public sector organisations are well-placed to be exemplars of best practice.
- 118** In line with our aim to be an international leader on environmental issues, the UK will continue to give strong support to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, the most comprehensive global environmental agreement on hazardous and other wastes. At the global level electronic waste or e-waste has been identified as a growing waste stream requiring priority action and better management. The UK will continue to play an important role in the Partnership for Action on Computing Equipment (PACE), established under the Basel Convention, which is a unique global partnership between Governments, industry and NGOs, developing tools, guidance and projects to help promote the environmentally sound management, refurbishment, recycling and disposal of used and end-of-life computing equipment throughout the world.

Empowering Local Communities

Summary

The Government will be working with local councils to increase the frequency and quality of rubbish collections and make it easier to recycle and to tackle measures which encourage councils specifically to cut the scope of collections. Waste services are a matter for local authorities to develop fit for purpose local solutions. However the Government believes that better procurement and joint working can improve the efficiency of collections while improving the frontline service for the public in an affordable and practical manner.

The Government understands that the public have a reasonable expectation that household waste collections services should be weekly, particularly for smelly waste. The Government has already moved to remove Audit Commission guidance and inspections which marked down councils who do not adopt fortnightly rubbish collections; and to abolish Local Area Agreements imposed by Whitehall which created perverse incentives to downgrade waste collection services. The Government will work with WRAP to monitor service levels to understand whether and how they are changing, keeping the quality, affordability and frequency of household waste collections under review.

The Government has reviewed a range of enforcement powers and penalties to ensure that there are proportionate, necessary and fair. As a result we will be replacing some criminal offences with civil sanctions and reducing the level of fines available and we are proposing to set 'harm to local amenity' as a test before a civil penalty can be imposed by a local authority. We have also committed to remove some of the burden and barriers which prevent local authorities from focussing on local priorities, including abolition of some data requirements, targets and legislation burdens.

In partnership with local authorities and private sector waste management providers we want to make it easier and cost effective for SMEs to recycle. Households and businesses often produce similar types of waste and where it makes sense to do so, materials should be collected and treated together. The Government's decision to end the Landfill Allowance Trading Scheme from 2013 removes an important perceived barrier to local authority service provision in this area. We have found that SMEs are not always aware of their legal responsibilities, of available recycling services and indeed in some areas there is a lack of such services. We want to address these issues in a number of ways including through voluntary commitments with service providers.

Householders and Local Authorities Working Together

- 119** Over the last ten years, householders and local authorities in England have together transformed household waste collections. On average, 40% of household waste is now being recycled and in many areas it is much higher. People care about waste. Many of us are now committed recyclers and want to play a part in protecting the environment.
- 120** The Government will be working with local councils to increase the frequency and quality of rubbish collections and make it easier to recycle, and to tackle measures which encourage councils specifically to cut the scope of collections. Waste services are a matter for local authorities to develop fit for purpose local solutions. However, the Government believes that better procurement and joint working can improve the efficiency of collections while improving the frontline service for the public in an affordable and practical manner. The Government understands that the public have a reasonable expectation that household waste collections services should be weekly, particularly for smelly waste.
- 121** The Government has already moved to remove Audit Commission guidance and inspections which marked down councils who do not adopt fortnightly rubbish collections; and to abolish Local Area Agreements imposed by Whitehall which created perverse incentives to downgrade waste collection services. The Government will also work with WRAP to monitor service levels to understand whether and how they are changing, keeping the quality, affordability and frequency of household waste collections under review.
- 122** Across the country, many local authorities attract good levels of householder satisfaction when they ask about collection regimes. However some people – while wanting to do the right thing – can be discouraged by the complexity of collection regimes and find it hard to understand why they differ in neighbouring areas. They express doubts about whether the materials they put out for recycling really are recycled. Most importantly they want to know that their behaviour counts.
- 123** Innovation in collection systems has led to a variety of services which can be designed to suit local needs and circumstances. We know that one size does not fit all but we want to see good quality services wherever people are. All local authorities need to remain responsive to the needs and wishes of their householders and actively seek their views when designing and delivering waste services. They should provide opportunities for householders who want to do more than the minimum in recycling and waste reduction and keep householders informed about what happens to their waste.
- 124** We have already announced that we are abolishing proposals to introduce new bin taxes for householders based on the amount of waste they produce. The Government believes bin charging is counter-productive and would harm the local environment by fuelling flytipping. This includes ensuring that householders have access to civic amenity sites where they can deposit their waste and recycling free at the point of use. The Government is committed to this important principle and is opposed to charging for the mainstream collection and disposal of waste from householders.
- 125** In 2009, WRAP, in partnership with local authorities, drew up the *“Waste Collection Commitment”* which set out the principles of how local authorities would work with householders and keep them informed about waste collection arrangements in their area. This Commitment was launched in September 2009 and over 100 authorities have signed up. Over the past few months Defra, WRAP and the Local Government Association have been working with local authority representatives to develop this Commitment further, to ensure that it clearly puts the householder at the heart of what they do and enables those councils who work hard to meet their householders’ needs to share good practice.

126 The result of this work – the new *Recycling and Waste Services Commitment*, to be published shortly – is a stronger statement by local authorities of a willingness to consult fully, to listen to and work with householders; to provide information about recycling and re-use; and to make it easier for householders to do the right thing. It is accompanied by best practice examples and sources of advice for local authorities putting the principles into practice. Residents will be able to hold their local authorities to the principles set out in the Commitment and challenge those authorities who, for whatever reason, choose not to sign up.

Local Authority Enforcement Powers

127 Local authorities need to work with their householders, not against them. Supporting them in their efforts to do the right things can be far more effective than imposing penalties. The enforcement powers and penalties available to local authorities should balance the need to respect individuals' civil liberties with the need to deal effectively with behaviours which have a negative impact on residents' local neighbourhoods. Enforcement must be targeted at the small minority who harm the local environment and local amenity due to their irresponsible behaviour.

128 As part of the Protections of Freedom Bill 2010/11 we are repealing certain powers of entry in England that currently enable local authorities to inspect household waste under Section 108 of the Environment Act 1995. We want to reduce intrusion into the lives of individuals by repealing powers that allow entry into domestic premises and evidence gathering activities to determine whether householders have failed to comply with requirements for placing household waste for collection in specified receptacles. We do not consider these powers to be an appropriate way of dealing with relatively

trivial issues. This builds on the reminder issued last year that guidance for local authorities on conducting compositional analysis of household waste is no longer current and should not be followed.

129 We have reviewed the remaining suite of enforcement powers and penalties available to local authorities to check that these are appropriate. We want to make sure that any penalty is proportionate, necessary and fair. It cannot be right for example for an individual to risk receiving a higher fine for not closing a bin lid than that levied on a convicted shoplifter for theft. We are reforming the Regulation of Investigatory Powers Act, restricting the use of directed surveillance by local authorities to serious criminal offences and requiring a magistrates' warrant – this will allow councils to tackle commercial flytippers, but prevent routine spying on households. Surveillance is not needed to tackle any litter and rubbish that harms local amenity outside someone's home.

130 As a result we have decided that:

- a) We will remove the prospect of criminal sanctions applying to householders who present their waste for collection incorrectly. We intend to replace these with civil sanctions.
- b) We will ensure that level of fines are appropriate, and are in line with penalties for similar offences. Pending the removal of criminal sanctions we will reduce the maximum level of fines applying under the current regime.

131 In particular, Section 46 of the Environmental Protection Act 1990, allows local authorities to specify how householders present their waste for collection. Currently, householders who fail to comply could face a criminal conviction and a fine of up to £1000. It is clearly disproportionate for criminal sanctions, and this level of fine, to be an option when a householder fails to present their waste for collection correctly. We understand this power is very rarely used but it is widely quoted by local authorities and it

cannot be right for this kind of threat to be hanging over householders. We will repeal this provision to remove this option from local authorities.

- 132** As an alternative to the criminal conviction and fine of up to £1000, local authorities have the option to issue a fixed penalty notice at a lower level (between £75-£110). While this is a more suitable approach, we will review the level of any fines as part of our consideration of a potential replacement civil sanctions regime. It will take time for these changes to be made as they require primary legislation but, in the meantime, we will reduce the maximum level of fine applying under the current Fixed Penalty Notice regime to a fairer level.
- 133** We are aware that householders want serious, repeat offenders whose behaviour has a detrimental impact on their neighbourhood to be dealt with effectively. Equally, there is public concern about the heavy-handed use of fixed penalty notices. A civil sanctions regime will enable local authorities to more effectively target those who persistently disregard the law. To ensure local authorities use enforcement powers appropriately we are proposing to set 'harm to local amenity' as a test before a civil penalty can be imposed by a local authority in all cases. This will allow action to be taken against the small number of people who blight the majority of the public's lives – 'neighbours from hell' and the irresponsible minority who litter their neighbourhoods.
- 134** In addition, we have been considering local authorities' behaviour on the ground, to find out whether the enforcement powers are being used appropriately in practice. We recognise that this is a complicated area of legislation and we will look to improve Section 46 of the Environmental Protection Act, so that it is clearer to local authorities what the extent of their powers in this area are. This should help to improve understanding of the range of options available to local authorities, and we want

to identify and share best practice. We will take this forward as part of the reworked Recycling and Waste Services Commitment. One example of best practice in this area is provided by South Oxfordshire & Vale of White Horse, who work closely with their householders. They use a light-hearted approach with householders who present the wrong bin, for example, handing out notices saying "Oops...Sorry we couldn't take your waste today." The local authority also makes use of volunteers as local recycling champions. Persistent offenders are dealt with by education teams to ensure people know what to do or find out reasons for problems.

Rewards and Recognition

- 135** If we are to encourage people to do the right thing, whether at home, work or out and about, we need to make it easier for them. Rewarding and recognising people for doing the right thing can encourage a range of positive behaviours – including recycling, re-use and donation.
- 136** More than half of us would recycle more if we were given a reward, or were recognised and thanked by the council for our effort. There are many ways councils can do this, according to their local circumstances and the wishes of their residents, which of course they must take into account.
- 137** Some councils and businesses have already introduced schemes which reward positive behaviour. The Recyclebank schemes in Windsor & Maidenhead, Halton, and Lambeth provide points to incentivise and reward householders for recycling which can be exchanged for a range of retail vouchers and discounts. Some local authorities, such as Ealing, are providing rewards on a community level. Local Green Points is due to launch London Green Points, its first waste and recycling rewards scheme, in Bexley from Summer 2011.

138 Reward schemes don't have to be just about recycling. We want to work with local authorities and other partners to develop new ways to reward people for doing the right thing with their waste.

- We are removing powers via the Localism Bill for councils to charge householders based on the amount of waste they produce. Removing the legislation will free up councils to run schemes which reward householders for producing less waste.
- We will launch a grant funding scheme for innovative reward and recognition schemes, available to community groups, civil society organisations and local authorities.
- We want to support and recognise those communities that go further on addressing waste issues in their area. We will offer local communities a toolkit of ideas, best practice and promotional material to use in their area to stimulate local action. Actions taken will be recognised with a tiered system of bronze, silver and gold awards.

139 We have also commissioned research into the most effective methods of rewarding people, which we will share with Local Authorities. We will continue to work through WRAP and the LGA to develop expertise to support Local Authorities considering reward schemes.

Supporting Local Authorities

140 With local authorities facing strict funding constraints it is particularly important that we work together to find efficiencies through better procurement, shared services, and combined decision-making. Joint working will give authorities stronger bargaining power when setting up contracts and allow for economies of scale, such as in procuring collection fleets. Local authorities need to have the tools and expertise to procure services better, both by working together to achieve economies,

and by using framework contracts based on minimum service standards, around which details can be negotiated to fit local needs.

141 Defra already works closely with iESE (Improvement and Efficiency South East, the lead Regional Improvement and Efficiency Partnership on waste) to support partnership working, and funding has already been given to a number of developing partnerships across the country. Nearly every local authority in England now accesses the Waste Improvement Network, administered by iESE with Defra support, and many rely either on WRAP advice on the provision of cost-effective waste services, or iESE expertise and advice on procurement, partnership creation or on conducting efficiency health checks.

142 We have been working with these organisations on development of a route map to help local authorities through the stages involved in setting up waste partnerships, including the legal issues. The Government is also supporting the work of iESE and WRAP to improve procurement skills, tying in with the work of the Local Government Group's "Local Productivity Programme", especially their work on achieving efficiencies through better procurement.

143 At the same time as encouraging joint working, we are committed to removing some of the bureaucracy and burdens which have hindered local authorities' delivery of front line services for too long. We have already confirmed the removal of inappropriate targets:

- As part of the wider Government agenda, the waste National Indicators 191, 192 and 193 ended in March 2011, freeing local authorities to focus on local priorities and provide services in the most environmentally and economically sustainable way for their area.
- We are in the process of replacing the Controlled Waste Regulations (1992) in order to remove market distortions, clarify terminology and responsibilities,

and allow local authorities to improve the services they can provide to non-domestic properties at reasonable cost.

144 We have decided to take these principles of burden reduction further and remove measures that constrain local authorities' flexibility to deliver the right outcome by:

- Ending the Landfill Allowance Trading Scheme (LATS) at the end of the 2012/13 scheme year. While LATS has undoubtedly been effective in kick starting significant efforts to divert waste away from landfill, the rising level of Landfill Tax means it is now by far the more significant driver. This is demonstrated in our modelling and confirmed to us by local authorities. In addition, the scheme only addresses the local authority proportion of municipal waste, and does not act on the commercial waste element managed by the private sector. As a result the scheme is no longer considered to be the most appropriate means of ensuring that England meets its share of the UK Landfill Diversion targets. Rightly or wrongly, the scheme is regularly identified as a barrier to local authorities providing enhanced services to small businesses, so ending the scheme will remove this.
- Consulting local authorities on the statutory duty to produce Joint Municipal Waste Management Strategies (JMWMS). Although the Waste and Emissions Trading Act 2003 contains a statutory duty to produce JMWMS, the Act also exempted many authorities from producing them based on their performance in meeting recycling targets and obtaining an "excellent" in their Comprehensive Performance Assessment. These exemptions are no longer valid and we will consult local authorities on options for the future of JMWMS, including the possible removal of the statutory duty.

145 In parallel to removing targets from local authorities, we are looking to reduce

the amount of information we ask local authorities to report. Since its introduction in 2004, Waste Data Flow (WDF) has led to a step change in the reliability and availability of data on waste managed by local authorities. It is highly regarded both by central and local Government, as well as the wider community interested in waste data. However, it is only right that we review the system to ensure that we minimise the burden of data entry placed on local authorities. At the same time, we need to ensure the reports produced by the system are clear and useful, and aid transparency and the ability to hold Government to account. As a result we have been considering possible changes to WDF, taking into account whether different elements of data are:

- necessary for EU legislation;
- very useful for local authorities, the general public or central government; or
- not at all useful and therefore could be deleted from the system.

146 We have had a number of discussions on the future requirements of WDF with local authorities and key users of the data, and over 450 responses to an online survey of WDF registered users. In addition, over 30 formal responses to the CLG single data list consultation have been considered. As a result:

- We have identified a number of questions which are no longer required or can be moved to an annual reporting cycle. These changes were implemented in April 2011;
- From April 2011 to March 2012 we will work on implementing any question changes and usability enhancements which require more time to develop, based on almost 900 specific comments received in the feedback exercise. More details of all these changes are published on the WDF website (www.wastedataflow.org)

- 147** Existing targets and data collection to date have focused on weight based measures of performance, and WasteDataFlow collects data in this format. This will clearly remain necessary for some purposes, for example in recording performance against the recycling target in the Waste Framework Directive. At the same time the impacts of waste management are increasingly considered in carbon terms as a more accurate measure of environmental impact than weight, and as we move forward this will become more and more significant.
- 148** We will promote the use of a carbon metric reporting tool for use by Defra and local authorities to measure and report on waste management. Such tools exist already and we will build on the existing work in this area. We do not anticipate this requiring any additional data collection or reporting, but rather working as a conversion calculator from existing reporting. This could include linking carbon reporting into the WasteDataFlow system. We will work with local authorities and others to develop this tool to maximise its utility as a means of providing improved reporting and an increased profile and transparency for assessing waste management in carbon terms. However, in the short term we recognise the need to continue reporting by weight to ensure the necessary efforts are made, and data is available, to report against EU waste targets.
- 149** In removing all of these legislative and data burdens we will be freeing local authorities – and the private waste contractors they often work with – to develop more comprehensive and cost-effective collection services which cover both households and small businesses, bringing benefits to individual companies and efficiency savings to the service provider themselves.

Working in Partnership – the South East 7

The 'South East 7' (SE7) are top-tier councils comprising East and West Sussex, Hampshire, Kent and Surrey, and the unitary councils of Brighton & Hove and Medway. The SE7 serve the interests of over 5.5 million citizens – a population greater than Denmark. In 2009/10 over 2.87 million tonnes of household waste was generated in the SE7 area, equating to 11% of England's total. Of this, 42% was recycled or composted, 35% generated energy from waste, and 33% was sent to landfill. The combined net revenue disposal costs in 2009/10 were around £250 million. Together with collection costs for 44 district councils, a projected spend of over £3 billion is forecast for the next ten years. By any assessment, the numbers for the SE7 are big. The potential to do much more to support growth of the green economy and the needs of taxpayers is significant.

Together, SE7 Leaders are setting a vision for the entire region where the economic and environmental value of discarded materials as a valuable resource is placed at the forefront of their thinking. Waste prevention has a strategic place at the heart of policy to reduce costs to taxpayers and impacts on the environment. Security of supply of materials based on 'closed loop' thinking will mean reconfiguring 20th century methods of waste management for the new economic agenda. Infrastructure will be planned jointly as the need to focus on outcomes for taxpayers requires overcoming traditional barriers such as local authority boundaries. The goals by 2020 are to reduce household waste tonnages and avoid some £200 million of costs; to recover value from 90% of all discarded materials from household waste streams; to put in place closed loops for as many organic and dry recyclable material streams as is possible; and to rewrite how resources are managed in the south east to reduce use of virgin materials in the economic cycle.

Delivering EU Targets in Partnership

- 150** Despite the changes we are making to the obligations and burdens on local authorities, their performance will remain central to UK delivery of two key waste targets in 2020 set by EU Directives; the Landfill Directive requires us to divert biodegradable municipal waste from landfill and the revised Waste Framework Directive sets a 50% recycling target for waste from households. To ensure England delivers its share of the UK target, Government must continue to work closely with local authorities.
- 151** Our current modelling indicates that we are on track to meet the revised Waste Framework Directive target to recycle 50% of waste from households by 2020. Clearly we will need to monitor this closely, including the cumulative impact of the measures set out in this Review. We cannot be complacent that we will achieve this target easily. There are real challenges ahead in increasing recycling rates, particularly in urban areas, within a tight funding settlement for local authorities. While many local authorities are already recycling in excess of 50% there are many more who are not. This reflects the diversity of circumstances that local authorities face and while we want, and expect, recycling rates to continue to improve across the board it is not the intention to use the UK Waste Framework Directive target to set a 50% recycling benchmark for every local authority.
- 152** The 2010 Landfill Directive Target target has been met, and we remain on course to meet the 2013 target. We have carried out a detailed analysis of future waste arisings and the future treatment capacity required to meet the diversion target in 2020. This has included a) work to understand the impact of revising the interpretation of municipal waste to include a substantial amount of commercial waste managed by the private sector; b) updated information on waste arisings and modelling of future levels of growth, both of which are much lower than in earlier modelling; and c) economic and risk forecasts.
- 153** This assessment has fed into the decisions both to end the Landfill Allowance Trading Scheme and that seven waste infrastructure projects should no longer be eligible for PFI credits which had provisionally been allocated to them. As with the revised Waste Framework Directive we will need to monitor progress towards meeting the Landfill Diversion target closely. In removing LATS we have confirmed that we no longer think that setting individual obligations on waste disposal authorities is a necessary or appropriate way to meet the overall national target. If further action is deemed necessary to provide additional confidence that the target will be met then it will be for Defra to lead at a national level to ensure that England as a whole meets the target. However, the assessment undertaken has provided confidence that based on reasonable assumptions, and scenario tested for a range of potential risks, England will meet its share of the UK's 2020 target.

In partnership with local authorities and private sector waste management providers we want to make it easier and cost effective for SMEs to recycle, while also encouraging them to scale the waste hierarchy. Households and businesses often produce similar types of waste and where it makes sense to do so, materials should be collected and treated together. The Government's decision to end the Landfill Allowance Trading Scheme from 2013 removes an important perceived barrier to local authority service provision in this area. We have found that SMEs are not always aware of their legal responsibilities, of available recycling services and indeed in some areas there is a lack of such services. We want to address these issues in a number of ways including through voluntary commitments with service providers.

Business Waste Collection

- 154** The focus to date in England has been on improving recycling services to householders. As well as focussing more on waste prevention, we also need to have a similar focus on recycling services to businesses. We are taking steps to improve the waste and recycling services that business, particularly SMEs, can expect from either their local authority or a private waste management company. Businesses are continuing to achieve higher recycling rates than households, but households are catching up. The 2010 Defra survey of Commercial and Industrial Waste Arisings¹³ revealed an overall recycling rate (including re-use) of 52%, up from 42% in 2002/03, compared to a household waste recycling of 40% today, up from 11% in 2000/01.
- 155** Further improvements in the management of business waste will be a critical part of the move towards a zero waste economy. Our Call for Evidence identified a range of problems and barriers, particularly in relation to waste and recycling services provided to SMEs, which will need to be addressed if we are to make the desired progress. These include:
- A lack of facilities for businesses to take their waste and recycling (as opposed to having it collected from their premises);
 - A lack of recycling services in some areas and in relation to some materials (particularly food waste);
 - High cost of service to the business user and lack of convenience;
 - A lack of awareness amongst SMEs of their legal obligations. It is likely that many micro businesses are using household services without prior agreement or payment; and
 - A lack of awareness amongst SMEs of services available in their area.
- 156** All businesses, from the micro-business to the multi-national, should have access to regular, efficient and affordable waste collection and recycling services, whether provided by the private sector or their local authority. A barrier (perceived or otherwise) to local authorities in supplying waste and some recycling services is the Landfill Allowance Trading Scheme. Abolishing this will now help them to provide a service that meets the needs of their local businesses.
- 157** We want to help smaller businesses to recycle by using existing infrastructure more effectively, which will impact positively on the cost and convenience of services. In particular, we want to encourage local authorities to consider whether Household Waste Recycling Centres (HWRC), and other bring bank recycling facilities, could be adapted to accept business waste and recycling at an affordable cost to the business user. Accepting business waste and recycling at HWRCs may also have a subsidiary benefit to local authorities and household residents; a number of sites are currently under threat of closure due to financial pressures, but the revenues generated from accepting business waste could help provide the funds needed to keep the sites open. Through WRAP, we will provide guidance to authorities on how they can resolve practical issues associated with adapting HWRCs and ensure charging is fair, easy to understand and transparent to business.
- 158** We also want to see further infrastructure development for collecting and treating business waste. An initial evaluation by WRAP of two pilot trade waste bring bank schemes set up on business parks and near “cash and carries” highlighted that the cash and carry bring bank model has a great deal of potential. The company leading this is considering whether to roll it out elsewhere.

¹³ <http://www.defra.gov.uk/statistics/environment/waste/wrfg03-indcom/>

Through WRAP, we will encourage and support development of successful delivery models like this which offer smaller businesses a financially sustainable model for sending their waste for recycling.

- 159** Our Call for Evidence identified the need for further education of SMEs and for the promotion of services and approaches to securing good services. We want to work with a range of organisations – local authorities, Chambers of Commerce, LEPs, Business Improvement Districts, local trade associations – to:
- a. raise awareness amongst SMEs of their waste responsibilities, particularly around the waste duty of care and application of the waste hierarchy;
 - b. encourage SMEs to participate in collectively procured recycling contracts. We believe these types of contract have the potential to make recycling services more cost-effective and convenient by enabling SMEs to share the cost of procurement and contract management, and by providing economies of scale to the waste collector which can be reflected in the cost of the service.
- 160** In pursuing our agenda to improve business waste and recycling collections, we will work with private waste management companies, and with local authorities, to put the needs of business customers at the heart of what they do and to improve the access of SMEs to cost-effective recycling services.
- 161** As part of our discussions with local authorities to date – and linked to development of a Household Recycling and Waste Services Commitment – we have been working on a specific Business Waste and Recycling Collection Commitment. This will set out the principles of how they can help local businesses meet their waste management responsibilities and recycle more. This will be published in the summer of 2011, and we will encourage local authorities to sign up to these principles.
- 162** Similarly, in recognition of the key role private waste management companies play in collecting business waste, Defra has been working with the Environmental Services Association – the trade association for this sector – and with the Federation of Small Businesses, Local Government Group and Environment Agency, to develop a voluntary Responsibility Deal, the objective of which is to improve the management of waste as a resource in the economy through an agreed set of commitments.
- 163** The responsibility deal will cover a range of issues, including:
- Raising awareness of waste prevention and sustainable waste management;
 - Exploring ways to increase take up of recycling services by SMEs;
 - Government and industry to work together to improve the data available on commercial and industrial waste.
- 164** The responsibility deal with the waste management industry will also promote quality in the way recyclable materials are sorted, particularly at Material Recovery Facilities, through an industry-led Code of Practice. This is key to maintaining the credibility of co-mingled collections under the revised Waste Framework Directive as well as future markets for recyclable materials, in the UK and abroad. The Code will include requirements for the measurement of the quality of the input and output material, which will give the MRFs' clients (LAs, businesses, reprocessors) confidence in the quality of recyclates and contamination levels. With input from the ESA and industry, Defra will urgently draw to a conclusion its work to explore ways of maximising uptake of the Code, including the possibility of making it mandatory.

Involvement of Civil Society

- 165** The government is committed to building a Big Society, bringing about lasting change for communities by empowering communities, individuals and institutions to take more responsibility to transform problems and opportunities, thereby reducing the need for Government intervention. Along with the actions that individuals can take to improve waste management, we see a growing role for civil society organisations to build upon the often excellent work that is underway already, leading the way in many aspects of waste management that we now take for granted.
- 166** In particular, there is a strong group of organisations involved in preventing and reusing waste, whether charity shops or organisations like the Furniture Re-use Network. However, sometimes such activities struggle to be sustainable. As communities take advantage of the opportunities available, central and local Government have roles to play in enabling this activity to take place through removing unnecessary barriers and facilitating action.
- 167** Through our engagement with civil society and community groups, we have identified a number of potential barriers to their activities:
- **Policy and regulation:** where Government policies and regulation limit the ability of civil society to take action or create an uneven playing field;
 - **Financial barriers:** where limited funding for activity makes supporting action by communities difficult;
 - **Skills and capacity:** where organisations trying to deliver objectives in waste do not have sufficient skills or capacity to meet their needs; and
 - **Education and information:** where community groups lack key information to be able to develop and deliver their own outcomes.
- 168** Sometimes perceived barriers exist for good reasons, such as to protect human or environmental health, while others are best addressed by civil society or by the private sector, rather than by Government. This will be a long term process. In the shorter term, we will:
- Consider opportunities for greater civil society engagement with work delivered by WRAP and the Environment Agency;
 - Engage civil society groups more coherently with policy development and delivery, such as on waste prevention, and tackling fly-tipping;
 - Consider how to build on best practice examples of partnership working between civil society and the public sector;
 - Encourage businesses to follow best practice examples of partnership working with civil society and communities on waste issues;.
 - Make it easier for civil society groups to provide waste services, including through the Recycling and Waste Services Commitment.
- 169** We encourage civil society and community groups to continue to work with local communities as well as with government. Parts of civil society are well placed to work with communities on a wide range of waste issues, including: helping to educate people about how to reduce waste and manage it more effectively, including through participating in wider campaigns on waste; developing networks around particular locations or services; facilitating volunteering; and working with communities to increase their participation in local decision-making on waste issues.
- 170** One example of community action is composting. All over the country, communities are turning their food and garden waste into compost. When green and food waste breaks down in landfill,

it can give off methane. However, when this same waste is composted above ground at home, oxygen helps the waste to decompose aerobically which means hardly any methane is produced. Also, the compost that is produced is a nutrient-rich food product for the garden and helps improve soil structure, maintain moisture levels, and keep the soil's PH balance in check while helping to suppress plant disease.

- 171** More than a third of household rubbish is food or garden waste and most of this ends up in landfill. Many households in the UK compost their green and food waste, and this number is growing. However, even for households that are already composting, recent research has found that almost half of the food waste in their rubbish bins could have been composted.
- 172** Community composting can be good for the local environment, economy, and even help improve the social fabric of a neighbourhood. The Government continues to support and encourage community composting. As part of this, Defra, WRAP and the Environment Agency will work with community composters to help to ensure that regulatory requirements are met, and will consider the issues around setting appropriate quality standards.

Did you know?

Home composting for just one year can save the equivalent to all the CO₂ one kettle produces annually, or a washing machine produces in three months.

Composting

The composting industry has grown rapidly in recent years. To continue its sustainable growth, we support WRAP's work in developing markets for compost and recognise the importance of BSI PAS 100 quality protocol, which gives confidence to customers that compost produced is safe, reliable and of a high standard. We recognise that different composting techniques and technologies – windrow, in-vessel and simple home composting – have a role to play in sustainably managing our food and garden waste, and producing a quality product. If composting is carried out in appropriate facilities, quality compost can be produced, and any risk to environmental pollution and human health can be minimised.

We have recently reviewed and implemented a number of changes to the legislation that regulates the environmental impact of composting activities e.g. revised exemptions from the need for an environmental permit and we expect the composting industry to continue to work closely with Government and the Environment Agency to ensure that regulation is proportionate to risk and also encourages the delivery of quality composting operations at all scales. Defra has recently commissioned research into the risks to health from bio-aerosols generated during composting operations to reduce uncertainties in the level of risk posed by bio-aerosols and odours at composting sites. This will help to ensure that regulatory requirements applied to businesses, and the ways compliance is assessed and secured, are based on best available evidence.

Recycling on the Go

173 Recycling at home has increasingly become the norm, but recycling ‘on the go’ – in the street and in public places such as stations, shopping malls, conference centres and sporting arenas – is nowhere near as easy. Initiatives such as the BSI standard on sustainable event management and local partnerships on litter and recycling have helped raise performance in certain areas, but this has not taken off nationwide.

174 Products consumed ‘on the go’ are chiefly drinks, food, newspapers and magazines. They may make up a relatively small waste stream in overall tonnage terms, but their recycling contributes towards a move to a zero-waste economy and society. If people cannot recycle when out and about, it breaks the link in the behaviours they practice at home and undermines our wider ambition to make full use of the resources we produce.

175 Everyone has a role to play in recycling on the go:

Business

- Manufacturers and sellers of on-the-go products. Invest in on-the-go infrastructure as part of their producer responsibility or corporate social responsibility obligations;
- Employers: set up a workplace recycling system.

Local Authorities

- Provide and maintain recycling bins on the street and in public places;
- Make sure the markings on bins, and where bins are placed, make it easy for consumer to do the right thing.

Central Government

- Provide information, guidance and incentives:
 - Defra Code of Practice on Recycling in Public to help businesses provide recycling bins for visitors;

- BSI Standard on sustainable event management;
- Landfill tax, packaging recycling commitments.

Consumers

- Use the facilities on the street and in public places – and put the right waste in the right bin to minimise contamination;
- Ask employers and managers of public places to set up recycling bins.

176 In a period when local authority budgets are under significant pressure, they cannot be expected to sort this situation out alone. WRAP will use its technical expertise to support councils who wish to work with local businesses, particularly those in the quick-service sector, to explore how the necessary street infrastructure can be funded to allow recycling on the go to grow. WRAP will collate and disseminate information and good practice on recycling on the go and identify models for delivering improved facilities both on the street and in public places.

177 Some businesses are already taking the lead in this area. Initiatives which are helping to strengthen recycling on the go capacity include:

- Aluminium recycling trade association Alupro and Beverage Can Makers Europe are running a campaign to boost recycling at work and at big sporting or leisure events on behalf of its members.
- Coca-Cola has invested in recycling on the go infrastructure through its ‘Recycle Zone’ programme in 125 high-footfall areas such as shopping centres, airports and universities, collecting more than 320 tonnes of material for recycling.
- Tesco is trialling reverse vending machines for drinks containers at 10 of its small format stores in England.

- 178** From 2012, Government will work with the packaging compliance schemes who act on behalf of businesses who 'sell' packaging (including retailers), and those 'sellers' who are not scheme members. These businesses have a legal obligation to inform consumers of how they can recycle packaging. Together, we can make sure that the information provided encompasses recycling on the go as well as at home.
- 179** WRAP will work in partnership with Keep Britain Tidy to enable groups participating in Big Tidy-Up activities (many of which are children / school groups, charities etc.) to recycle the materials they collect – something which groups have wanted to do for many years. 25 local authorities in England will trial recycling as part of Tidy-Up events in 2011/12.
- 180** WRAP and Keep Britain Tidy will pool their knowledge, and bring anti-littering and tidy-up messages and recycling on the go messages together under the same banner. They will work together to ensure that the *RecycleNow* and *Love Where You Live* campaigns are used to encourage consumers to effectively participate in recycling on the go. We want to encourage people to put their waste in a bin rather than dropping it, and we want to make it easy for them to recycle it rather than send it to landfill.

Case Study – Recycling on the go in the Olympics

To deliver their vision for a zero waste Games, The London Organising Committee of the Olympic Games (LOCOG) have identified ten critical success factors which they have turned into action plans. A number of these relate to recycling on the go:

- The development of tools and guidance for design teams and contractors to support the advance identification of options for re-use or recycling of materials and products used for temporary venues and overlay;
- The use of food catering packaging systems that maximise the potential for recycling and recovery and minimise the potential for contamination and ultimately landfill;
- The use of a simple-to-use, consistent and attractive system for waste and recycling collection across all venues;
- The integration into the collection system design of a simple icon- and colour-based communication scheme to help visitors deposit items for recycling;
- The development of a fully integrated communications package that encourages recycling during Games time, and builds awareness of recycling before arrival at the Games;
- The development of an approach for involving trained volunteers in the delivery of the communication and collection systems during Games time.

Litter

- 181** Litter represents a small proportion of total waste arisings, but its impact is far greater. Litter, along with other features of local environment quality such as graffiti, dog fouling and fly-posting, regularly features in the top two or three concerns raised in opinion polls. The appearance of their neighbourhood is a major factor in how people assess their quality of life.
- 182** Studies show that badly littered and untidy places make people feel unsafe in their own neighbourhoods and can dissuade people of all ages from taking exercise outdoors and enjoying nature, undermining their physical and mental health and wellbeing. Litter affects the natural and the built environment, spoiling the visual beauty of valued landscapes and waterways as well as injuring and killing thousands of animals each year.
- 183** The economic impact of litter and poor local environment quality goes wider than the costs to society of cleaning up. House prices, inward investment and business activity can be undermined in areas with poor environmental quality and high levels of litter. Much of the litter that is swept up or collected from street bins ends in landfill but is material that could be suitable for recycling and therefore represents a loss of resource. Local authorities are in the forefront of dealing with litter. They have a legal duty to clean and keep land under their control clean and have powers to fine or prosecute those responsible for littering.
- 184** Levels of litter have remained stubbornly persistent. The Local Environment Quality Survey of England has been carried out annually Keep Britain Tidy on behalf of Defra since 2001. Some 10,600 sites across a sample of 54 local authority areas are surveyed and graded for litter and other factors. This shows that since 2001, the percentage of areas graded poor or unsatisfactory is only slightly better in the most recent survey than in the first survey.
- 185** High levels of litter persist despite local authorities spending more on street cleaning in recent years. In 2008-09, authorities in England spent £858 million on street cleaning and costs are also incurred by the Highways Agency, Network Rail, British Waterways and other public and private land managers.
- 186** The Government has made reducing litter a priority and has led the development of a cross-sectoral approach. It is never acceptable to litter and individuals must take personal responsibility for their actions but there are things that partners from all sections of society can do to improve the situation and reduce litter.
- 187** Businesses, big and small, have a central role to play, whether that is at source by reducing unnecessary wrapping that might end up as litter, directly assisting local authorities with litter collection and cleansing, supporting their communities in taking action locally or contributing to behaviour change campaigns on a wider scale. For example, littering from vehicles can present particular difficulties for local authorities to deal with. We will work with business and others to develop ways of tackling this problem through encouraging changed behaviour and practical disposal solutions.
- 188** Local authorities retain their role at the forefront of dealing with litter through street cleaning and enforcement. But increasingly local authorities realise that tackling the issue of litter at its root, through behaviour change is key. And in that respect enlisting the engagement and support of communities will be a vital component if lasting improvement are to be secured.

189 Civil Society groups like Keep Britain Tidy are often able to provide information and insights into what works in securing change and can help with the 'how to' and campaigning groups can lead effective behaviour change. All these components come together in a new initiative called *Love Where You Live*. Working to reduce litter forms part of the Government's

ambition to move towards a zero waste economy. By formulating a new single message on litter, encouraging partnership and shared responsibility and facilitating the sharing of best practice *Love Where You Live* can make an important contribution to that ambition.

Love Where You Live

In a good example of Big Society in action the Government is working closely with business, local authorities and civil society groups to develop a new approach to tackling litter through sustained behaviour change. It is never acceptable to litter: taking personal responsibility is essential. Through collaborative action involving all sectors of society, real and lasting improvements to the cleanliness of our cities, towns and countryside can be made.

In December 2010 over 120 representatives from business, local authorities and civil society groups came together to debate litter issues, share examples of best practice and agree a set of principles in tackling litter. The new initiative, *Love Where You Live*, was announced with the aim to substantially reduce the amount of litter in England by 2020. *Love Where You Live* will launch publicly in June 2011 with partners progressively adopting the new branding and single message on litter, developing partnerships and taking action to reduce litter and sharing experiences and best practice.

In time, *Love Where You Live* will also provide a framework into which existing activity to tackle litter can be integrated. Defra is involved in programmes operated through its grant with Keep Britain Tidy including:

- The Big Tidy Up which helps community groups and individuals who want to get involved in local action to clean up their neighbourhood;
- Changing Places: collaborating with the London Organising Committee of the Olympics Games (LOCOG) to assist communities to improve and maintain their local environment ready for the London 2012 Olympics and beyond;
- The Chewing Gum Action Group which brings together partners from local authorities, trade associations, civil society, the Scottish Government and Welsh Assembly with funding from manufacturers to campaign on gum litter.

Find out more about *Love Where You Live* on the website: www.lovwereyoulive.org

Food Waste

- 190** We have already identified food waste as a priority waste-stream for action as it goes to landfill in considerable quantities, and accounts for almost half of all waste CO₂eq emissions. The total annual food waste arisings in Britain are estimated at around 16 million tonnes with at least 40% of this disposed to landfill.
- 191** For households and businesses alike, throwing away food and drink that could have been eaten costs money: £12 billion of good food and drink is discarded by UK householders annually (costing the average household £480 per year), whilst waste in supply chains to retail is estimated at £5 billion annually.
- 192** There is also the cost to the environment of producing, transporting and ultimately disposing of food that ends up being needlessly wasted. Recent research suggests, for example, that 20 million tonnes of CO₂eq emissions are created and 6.2bn cubic litres of water are used to produce food wasted by UK households that could have been eaten every year; this equals 3% of the UK's domestic greenhouse gas emissions and 6% of its global water footprint. In landfill – still the destination for a large proportion of the UK's food waste – food waste degrades over many years, giving off methane, which is a greenhouse gas 21 times more powerful than carbon dioxide.
- 193** Our overall, long-term, vision is that:
- We substantially reduce the amount of food wasted;
 - Food waste that does arise is recognised as a valuable resource, and is processed to produce renewable energy and a bio-fertiliser so that nutrients are returned to the soil;
 - No food waste goes to landfill.
- 194** Preventing avoidable food and drink waste from arising in the first place offers the most substantial environmental and economic gains; much more than any form of treatment currently available. Compared to landfilling, each tonne of food waste prevented means 4.2 tonnes of CO₂eq emissions are avoided, while only around 500kg is avoided for each tonne processed through anaerobic digestion, the best currently available treatment option, and even less for other options such as composting or energy recovery. So prevention has to be our priority.
- 195** However, some food waste is unavoidable, either because of circumstance or its nature, e.g. teabags, bones and banana skins. It remains a key issue to ensure that this waste, along with any avoidable food waste that we are not managing to prevent, is kept out of landfill and treated in the most sustainable way, minimising GHG emissions and other environmental impacts.
- 196** Our evidence base shows that of the main options for the treatment of food waste, anaerobic digestion offers the greatest environmental benefit, followed by composting and then incineration with energy recovery. These different treatment options have different implications for how food waste needs to be collected. To be treated by anaerobic digestion, it is best if

food waste is collected separately at source; to be treated by composting, it must either be separately collected at source or with green waste; and to be treated by incineration, it can be as part of residual waste.

Food Waste from Manufacture, Distribution and Retail

- 197** Around 50% (8.3Mt) of all UK food waste comes from households. At least 60% of this waste is avoidable and could have been eaten at some point. Almost 25% (3.57mt) of UK food waste comes from manufacture, distribution and retail. Significant opportunity exists to prevent this waste, estimated to cost businesses £5billion annually. WRAP are already working with industry to deliver against Phase Two of the Courtauld Commitment (2010-12) which includes a supply chain waste prevention target for the first time.
- 198** A relatively small proportion of this waste (around 20%) goes to landfill, but evidence suggests that spreading to land is still a dominant disposal method, rather than it being treated higher up the waste hierarchy. Current levels of provision and high costs of food waste collection services continue to be a barrier to SMEs diverting their food waste from landfill, although recent WRAP research suggests an opportunity exists to integrate SMEs into household food waste collection schemes cost-effectively.
- 199** Businesses have a key role to play in the drive to reduce food waste. There are a number of innovative measures which can help businesses and their customers reduce food waste including further product and packaging solutions, more varied pack sizes, clear storage and cooking instructions and promotion of the use of leftovers. For example, bread manufacturers have introduced half-sized loaves, based on evidence from household food waste research that consumers frequently threw away part-loaves of bread.

- 200** Restaurants, cafes, hotels and fast food outlets also have a part to play, by offering more flexible portion sizes, offering customers the option to take home uneaten food and supporting the development of food waste minimisation skills amongst food service sector staff.

Food Waste from the Public Sector

- 201** We do not yet have a detailed understanding of the quantities of food waste arising across much of the public sector, including government buildings, hospitals, prisons etc. Available evidence on food waste in schools suggests, however, significant opportunity for prevention, and this is likely to be the case across the public sector. As a starting point, WRAP have published guidance on interventions schools can adopt to help them waste less.

Household food waste

- 202** A number of existing initiatives have helped drive down household food waste generation. For example, WRAP's Love Food Hate Waste (LFHW) campaign has helped millions of consumers to make small changes to get more from the food they buy, and has had strong support from local government, industry and civil society partners. We have seen a wide variety of innovative initiatives by retailers and local authorities working together – a type of partnership which at a local level can be extremely successful in reducing household food waste.
- 203** WRAP research has highlighted how much food we are wasting, and why, and galvanised action by government, business, civil society organisations and individuals. Developing a detailed understanding of the causes of food waste has allowed us to develop effective, targeted solutions and engage and inspire diverse stakeholders to

take action. For example, food retailer and manufacturer signatories to the Courtauld Commitment have contributed by improving the way food products are packaged, labelled and sold. Between 2005 and 2009, 670,000 tonnes of food waste have been prevented in the UK. Phase Two of the Courtauld Commitment, launched in 2010, maintains the focus with an ambitious new target on household food waste.

- 204** It is important to treat food waste as high up the hierarchy as possible, through anaerobic digestion or composting. Where food waste is collected separately, this can act as a feedstock for anaerobic digestion or in-vessel composting.

Did you know?

One third of household bread and one quarter of vegetables in the UK that could have been eaten is thrown away.

- 205** We know that some consumers do not like separating out their food waste. Local circumstances – whether the character of an area, local authority logistics, or simply providing the service that local people want – will all influence local collection arrangements. There are a number of ways in which households themselves may be able to treat some of their food waste, including composting, food waste digesters or at sink disposal units – again local circumstances will influence choices.
- 206** So we know there are opportunities to do more to prevent food waste arising from all sources, and to make sure that the food waste we are unable to prevent is treated sustainably.
- The Government will continue to support development of the evidence base on food waste, to help all of us design targeted solutions to reduce food waste and ensure that it is treated sustainably.

- The public sector will lead by example across its own estate, reducing the amount of food wasted and increasing the proportion of food waste that is diverted from landfill and treated more sustainably. We have been developing minimum buying standards for Government Departments and their agencies for the procurement of food and catering. We will look to raise these standards as the evidence base develops.
- The Government will explore further the role of incentives in both reducing food waste and ensuring it is managed in the most sustainable way possible.
- The Government will encourage local authorities to sustainably manage their food waste, providing technical support and advice on collections and treatment options that meet local needs.
- The Government will develop a new Responsibility Deal with businesses in the hospitality and food service sector, to reduce food waste and ensure that unavoidable food waste is managed sustainably.
- The Government will establish the potential for a successor to Courtauld 2 with businesses in the food retail and manufacturing sector.
- Government will continue to make it easier for business and consumers to reduce and sustainably manage their food waste by, for example: sharing evidence, insight and best practice; improving product design and retail/supply chain practice; engaging consumers; encouraging innovative local partnership approaches to food waste prevention amongst businesses, local authorities and civil society; and providing information and access to skills.

Biowaste

Biowaste is the organic and biodegradable fraction of the waste stream. Definitions are varied, but it is produced by both domestic and industrial sources and amounts to around 100 million tonnes a year in the UK. While different waste streams have different regulatory and management frameworks and can be treated using a range of different treatment and recovery methods, biowastes as a group do have particular characteristics.

- When treated via anaerobic digestion (or through composting when heat generated can be recovered), they can have the potential to be good sources of renewable energy;
- Many carbon rich composts and digestates that are derived from the treatment of biowastes can be used beneficially in agriculture to improve soil structure;
- Biowastes may also be used to partly or wholly replace the requirement for inorganic fertilisers.

Thus when treated to the right standards and used in the right way, biowastes can be used as a valuable renewable resource. This means that there must be careful consideration of the source of the biowaste materials before they are used on land and appropriate controls on their use, depending on their potential to contain contaminants. For example, when treated according to the requirements of the quality protocols, some biowastes may be used as products. Other materials may be used on land under the terms of an exemption or under the conditions laid out in waste management permits. The level and degree of control over their use will depend on the potential risk to the environment that they carry.

The management of biowaste is a fast developing area and cuts across a number of government departments and policy areas; farming, food security, water industry, renewable energy, climate change, soil, waste strategy and regulation. Overlapping regulatory frameworks can also apply, for example, the Waste Framework Directive, Animal By-Product Regulations, Industrial Pollution Prevention and Control, The Sewage Sludge Directive, and The Urban Waste Water Treatment Directive. We therefore believe that there is scope to consider the consistency of the policy and regulatory framework with regard to biowaste, and we will be working with the Environment Agency, WRAP and others to make progress on this.

Energy Recovery

Summary

Government supports efficient energy recovery from residual waste which can deliver environmental benefits, reduce carbon impacts and provide economic opportunities. Our aim is to get the most energy out of waste, not to get the most waste into energy recovery. Anaerobic digestion offers a positive solution to food waste. We will work to remove barriers to other energy from waste technologies by ensuring information is available and readily understood. In particular we will:

- Work with industry to implement our joint Anaerobic Digestion Strategy;
- Overcome barriers to development of markets for outputs from energy from waste;
- Identify and communicate the full range of recovery technologies available and their relative merits – right fuel, right place and right time;
- Publish a guide to the full range of energy from waste technologies available to help all involved make decisions based on their specific requirements;
- Provide the necessary framework to address market failures in delivering the most sustainable solutions, while remaining technology neutral;
- Work to identify commercially viable routes by which communities can realise benefits from hosting recovery infrastructure to help support community acceptance;
- Ensure the correct blend of incentives are in place to support the development of recovery infrastructure as a renewable energy source;
- Support the development of effective fuel monitoring and sampling systems to allow the renewable content of mixed wastes to be accurately measured; and
- Ensure that waste management legislation does not have unintended consequences on the development of the energy recovery industry.

207 The government supports energy from waste as a waste recovery method through a range of technologies, and believes there is potential for the sector to grow further. At present, we cannot prevent, re-use or recycle all of our waste. However, some of our residual waste has value in the form of recoverable energy and other by-products, such as soil conditioners. Through effective prevention, re-use and recycling, residual waste will eventually become a finite and diminishing resource; but we need to deal with this waste effectively for the foreseeable future.

208 The benefits of recovery include preventing some of the negative greenhouse gas impacts of waste in landfill. Preventing these emissions offers a considerable climate change benefit, with the energy generated from the biodegradable fraction of this waste also offsetting fossil fuel power generation, and contributing towards our renewable energy targets. Even energy from the non-biodegradable component, whilst suffering from the negative climate impacts of other fossil fuels, has additional advantages in terms of providing comparative fuel security, provided it can be recovered efficiently.

209 The revised Waste Framework Directive allows for deviation from the waste hierarchy where it can be clearly demonstrated there is a better environmental outcome from doing so, which may be the case for energy recovery from certain waste streams. Conversely, while energy from waste has the potential to deliver carbon and other environmental benefits over sending waste to landfill, energy recovery also produces some greenhouse gas emissions. It is important to consider the relative net carbon impact of these processes, and this will depend on the composition of feedstocks and technologies used.

210 Energy from waste covers a range of complementary processes which recover additional value from the waste, some of

which extract the energy directly while others convert residual waste into different types of fuel for later use. We need to understand how different technologies can work together and with the different feedstocks available.

Did you know?

In 2009 enough electricity was generated from biodegradable municipal waste to supply all the households in Leeds.

211 We will need to have sufficient infrastructure in place to support increasingly efficient recovery that is flexible enough to adapt to changing feedstocks over time. As we recycle more, we need to understand how we can adapt to recover the best value from what is left, while delivering the best environmental outcomes. We are aiming to get the most energy out of the residual waste, rather than to get the most waste into energy recovery.

212 Our overarching goals are to ensure that:

- Recovery of energy from waste and its place in the waste hierarchy is understood and valued by households, businesses and the public sector in the same way as re-use and recycling.
- Energy is recovered in a variety of ways, using the best technology available for the circumstances. The resulting electricity, heat, fuel or other products are seen as commodities with real economic value. Where necessary incentives and regulation are aligned to reflect this value.
- Recovery of energy from waste makes an important contribution to the UK's renewable energy targets, minimising waste to landfill and helping to meet UK carbon budgets.

- With increased trust in energy from waste and innovative incentives, recovery infrastructure is generally accepted, and industry and communities make use of energy from waste to routinely meet a proportion of their energy and waste management needs.

Renewable energy from waste

213 In 2009/10, 13.6% of local authority collected waste was used for energy recovery and 46.9% was landfilled. Figures from the 2010 survey of commercial and industrial (C&I) waste arisings in England show that while 52% of C&I waste was recycled, re-used or composted, only 2% was incinerated with energy recovery.

214 Energy recovery is an excellent use of many wastes that cannot be recycled and could otherwise go to landfill. It can contribute secure, renewable energy to UK demand for transport, heat, biomethane and electricity and is generally the best source of feedstocks for UK bio-energy needs. Our horizon scanning work up to 2020, and beyond to 2030 and 2050 indicates that even with the expected improvements in prevention, re-use and recycling, sufficient residual waste feedstock will be available through diversion from landfill to support significant growth in this area, without conflicting with the drive to move waste further up the hierarchy. Maximising the potential for growth in continuous generation available from energy from waste will require both better use of the available residual waste and development of high efficiency flexible infrastructure.

215 Based on the capacity forecast published in support of the 2010 Spending Review assessment of waste PFI, waste derived renewable electricity from thermal combustion in England is calculated to

grow from the current 1.2TWh to between 3.1TWh and 3.6TWh by 2020, depending on how much of the solid recovered fuel produced is utilised in the UK. Similarly it is projected that sufficient food waste will be available to help deliver the Government's ambition for sustained growth in anaerobic digestion.

216 The potential for deploying more efficient electricity generation could further enhance the renewable energy derived from this waste. Better use of heat, both directly and through continued growth in the market for refuse derived fuels going to industrial Combined Heat and Power users will also play an important part in ensuring that we extract the maximum value from residual waste. The introduction of the Renewable Heat Incentive (RHI) is expected to bring forward an increase in the combined and dedicated generation of renewable heat from waste as well as production of biogas for heat production and the injection of biomethane into the gas grid.

217 Research indicates that when used for heat, biomethane generated from residual wastes could produce greenhouse gas savings of between 66% and 92% compared to natural gas¹⁴. Waste provides a potentially valuable source of biomethane through number of technologies including anaerobic digestion, gasification and pyrolysis. Similarly transport biofuels from waste can deliver higher lifecycle greenhouse gas savings and have good sustainability characteristics compared to crop-based biofuels.

218 The Government recognises that many of the technologies required to deliver more complex forms of energy recovery such as biomethane are less mature than other forms of energy recovery, with technical challenges to overcome, and the consequential difficulties associated with

¹⁴ Analysis of the Greenhouse Gas Emissions for Thermochemical BioSNG Production and Use in the UK-E4 Tech ñ June 2010- see Appendix Jt (weblink: http://www.nnfcc.co.uk/metadot/index.pl?id=10772;isa=DBRow;op=show;dbview_id=2539)

obtaining funding for early commercial technology. Government will continue to take action to help address these issues. In particular we will implement the approaches set out in the Anaerobic Digestion Strategy and consider more focused innovation funding. DECC has provided grant funding for anaerobic digestion and advanced gasification projects and is currently considering options for possible future bioenergy/energy from waste demonstration programmes based on technology needs assessments. Collaborative R&D and demonstration work has also been carried out by other organisations such as the Carbon Trust and Energy Technologies Institute. Anaerobic digestion, gasification and pyrolysis are eligible for financial support under the Renewable Heat Incentive and Renewables Obligation, and the Department for Transport has recently consulted on proposals to implement the transport elements of the Renewable Energy Directive which include introducing double certification for biofuels produced from waste to reflect their relative benefits. The proposed change will give twice the financial support to these biofuels compared to crop-based biofuels.

219 There is clearly a gap between the potential of energy recovery from waste and the delivery, resulting in valuable resources going to landfill. There are a number of reasons why more residual waste is not currently diverted from landfill and value recovered from it. The role of Government is to help overcome these barriers by facilitating change through the delivery of information and support. The forthcoming Bioenergy Strategy forms the best opportunity to explore various bioenergy uses in more detail, and draw conclusions about Governments role in promoting these.

Anaerobic Digestion

- 220** Anaerobic digestion can play an important role as a means of dealing with food waste and avoiding, by more efficient capture and treatment, the greenhouse gas (GHG) emissions that are associated with its disposal to landfill. The technology also offers other benefits, such as recovering energy, producing valuable bio-fertilisers, and maintenance and use of nutrients.
- 221** The principal purpose of consigning waste to anaerobic digestion is to recover energy from it. This means that in most cases the anaerobic digestion of waste will be classified as “other recovery” for the purposes of the waste hierarchy. For certain waste, such as food waste, the use of anaerobic digestion, is considered to deliver a better overall environmental outcome than recycling the waste, taking into account the local economic and environmental considerations.
- 222** Anaerobic digestion also has a number of advantages over other renewable energy technologies. The energy is generated constantly and can be delivered to the grid in the form of electricity or stored in the grid (in the form of gas). Methane is one of the few renewable fuels suitable for Heavy Goods Vehicles (HGVs), and has the potential to reduce reliance on imported gas. The digestate produced by anaerobic digestion is a valuable low carbon fertiliser and helps deliver a sustainable farming sector, where resources are re-used on farm to reduce GHGs.
- 223** The plants can be designed to meet local requirements for feedstock or outputs and can range in size from large facilities treating sewage sludge or municipal waste, to smaller ones handling materials from a farm or small community. There

are currently around 145 MWe or approximately 1.08 TWh of installed capacity in the UK. The potential growth over the coming 10 – 20 years is difficult to quantify at this point in time. But given the current low level of deployment and the quantities of feedstock likely to be available, there is no doubt that the industry has the capacity to grow.

224 Work is being carried out to establish baseline data on the quantities and location of available feedstocks and then to map these with current and potential projects. It is estimated that approximately 7 million tonnes¹⁵ of food waste a year are sent to landfill and that UK agriculture produces roughly 90 million tonnes¹⁶ of slurry and manures per year. Potentially, by 2020, and allowing for Government policy on reducing the amount of food waste in general, a reasonable expectation for England could be around 5 million tonnes of food waste and around 20-60 million tonnes of animal waste to be available for anaerobic digestion.

225 If this 5 million tonnes of food waste was digested this would replace 47,500 tonnes of Nitrogen (N), 14,720 tonnes of Diphosphorus Pentoxide (P_2O_5) and 20,400 tonnes of Potassium Oxide (K_2O), saving a total of 386,000 tonnes Carbon Dioxide (CO_2) equivalent in GHG emissions. Combined with 40 million tonnes of manures this gives the potential to generate approximately 3.5 TWh of electricity: enough to supply 913,000 households and saving 1.8 million tonnes of CO_2 equivalent GHG¹⁷ from grid-based electricity production.

226 Based on the current estimates of available feedstocks, and assuming that the barriers to deployment are overcome, the forecast potential for anaerobic digestion deployment for electricity could reach 3-5 TWh by 2020, enough for approximately 3 million people.

227 In order to overcome the real and perceived barriers to anaerobic digestion, the Government has worked with industry and others to draw up an Anaerobic Digestion Strategy and Action Plan. This sets out a shared programme of work to be delivered jointly by industry, Government, its delivery agencies, and others to tackle the barriers to deployment. This Strategy is published separately.

Maintaining Innovation and Supporting Growth

228 Energy from waste continues to be a rapidly developing area, the need to reduce waste going to landfill and develop renewable energy sources as well as innovation in the sector provide a significant opportunity for growth. The Government's role is to ensure this opportunity can be realised either indirectly through facilitating the development of infrastructure and continued growth in markets for outputs, e.g. heat and solid recovered fuel; or directly by avoiding unintended regulatory burdens.

229 Aside from anaerobic digestion the principal technologies available for recovering energy from waste are Direct Combustion, Gasification, Pyrolysis and Plasma Arc. There are also intermediate technologies such as Mechanical Biological Treatment and Autoclaving which can prepare a waste for treatment by the technologies referred to above.

230 Waste infrastructure has a long lifetime and therefore changes in the composition and potential volumes of waste in the future cannot be ignored in the development and selection of technologies now. There is a need to ensure that innovation, technology mix and flexibility is encouraged and optimised to ensure the right long term capacity, while considering the

¹⁵ Farm Digestion' Towards Economic and Environmental sustainability, Professor Charles Banks, Southampton University.

¹⁶ Household food and drink waste in the UK, WRAP 2009; Food waste in schools, WRAP; Waste arising in the supply of food and drink to households in the UK, WRAP 2010; C&I waste survey, EA 2003; Defra Municipal waste management UK 2006.

¹⁷ Accelerating the uptake of Anaerobic Digestion in England': An Implementation plan, Defra 2010

energy outputs and carbon impacts of technologies. Maintaining the contribution of energy from waste to UK renewable energy generation will require the increased deployment of higher efficiency approaches such as combined heat and power (CHP).

- 231** The broad range of technologies covered by energy from waste and their place in the hierarchy are not well understood by the public, and perceptions are often shaped by outdated or incomplete information. These information gaps and the uncertainty they engender mean there can be very emotive negative responses to proposals for energy from waste infrastructure – particularly larger scale facilities – from the local community. These concerns act as barriers to the acceptance of energy recovery infrastructure and lead to objections and delays in planning and development.
- 232** Overcoming these barriers is key to the development and growth of energy from waste and requires both significant community engagement and a strong, credible evidence base that puts any uncertainties into a meaningful context. Ensuring information is available, trusted and easily understood is a key step to gaining acceptance. This is particularly important in addressing concerns on health impacts where science by its nature is often unable to deliver the definitive answer, but can demonstrate relative risks to allow people to make informed decisions.
- 233** There are roles for government, local authorities, waste management companies and developers in ensuring that clear, complete and trusted sources of information are available, and that the concerns of the community are addressed. Civil society can also help to address concerns and engage the local community.
- 234** Historically growth in energy from waste has focussed on local authority waste, primarily due to the ability to finance infrastructure based on the certainty of long term contracts. However, significant opportunities for growth in energy recovery exist for commercial and industrial (C&I) waste, for example residual mixed 'household like' commercial waste and individual waste streams where recycling is not currently viable such as treated wood. There are also opportunities for businesses themselves to recognise and exploit the value in their waste. For example, there is the potential for individual businesses or groups of businesses to use their residual waste to power and/or heat their premises, using one of a wide range of technologies.
- 235** High energy using industries – such as cement kilns – do and could use more waste derived fuels as a substitute for fossil fuel. This often gives high conversion efficiencies as both heat and power can be used. Both C&I and household waste can be processed for use in this way and local authorities and businesses should consider how to exploit industrial use of waste as a fuel where this would provide the best environmental outcome.
- 236** Benefits for business of using energy from waste include cost savings on waste management, reduced fuel costs and reduced volatility of prices as these are decoupled from fossil fuel prices. Adapting existing processes to run on waste derived fuel may be less costly and easier to finance than building new infrastructure, which in turn may be reflected in lower costs to local authorities and businesses who recover their waste in this way.
- 237** Experience to date with CHP infrastructure has highlighted a potential difficulty in securing long term customers for heat ahead of construction of the plant. Without heat offtake, the lower efficiencies achievable from electricity only generation could waste valuable opportunities to help decarbonise the heat sector. This is a particular opportunity for business, particularly larger firms, through the greater exploitation of CHP for commercial and industrial premises.

238 Whatever their size, businesses as employers are a key part of the community and reducing their waste management and energy costs may help them operate more competitively securing jobs and their own growth. This is not the only way businesses can deliver a mutual benefit, businesses also need to engage in discussions within the community to look for synergies, e.g. through using combined heat and power from waste to supply homes, businesses and public buildings.

Government's Role

239 The role of government is to facilitate informed decisions by communities, local authorities and businesses about how they recover value from their residual waste. To do this we will:

- Support the role of energy recovery from waste within the waste hierarchy and aim to improve understanding of this role.
- Provide a clear position on the health implications of the recovery of energy from waste, based on the best available evidence, to support a reasoned, evidence based evaluation of risks and benefits.
- Work with all involved to identify commercially viable routes by which communities can realise benefits from hosting recovery infrastructure;
- Work to identify and communicate the full range of recovery technologies available and their relative merits – right fuel, right place and right time. As part of this we will publish a guide on energy from waste to help all involved make decisions best suited to their specific requirements.
- Not 'pick winners' but we will provide the necessary framework to address market failures and deliver the most sustainable solutions.
- Ensure the correct blend of incentives are in place to support the development of recovery infrastructure as a renewable energy source that can make an effective contribution to renewable energy targets and carbon reduction commitments.
- Work with industry and delivery partners to develop effective fuel monitoring and sampling systems which allow the renewable content of mixed wastes and waste derived energy to be accurately measured to help facilitate an effective market.
- Ensure that waste management legislation and regulation provides a safe well monitored sector but does not have unintended consequences on development of energy recovery industry through unnecessary barriers or burdens.

Landfill

Summary

Landfill should be the last resort for biodegradable waste. The landfill tax will remain the key driver to divert waste from landfill and remains necessary to ensure we meet key EU targets in 2020. However, even with this push it will still be likely that some waste will end up in landfill and may warrant additional, legislative tools, such as landfill bans or restrictions.

We will:

- Maintain the landfill tax increases towards a floor of £80 per tonne in 2014/15;
- In 2012 we will consult on introducing a restriction on the landfilling of wood waste;
- Building on this, we will review the case for restrictions on sending other materials to landfill over the course of the Parliament, including looking specifically at textiles and biodegradable waste.
- Set the right mix of incentives as part of energy from waste generally and remove barriers to new technologies;
- Urge local authorities as owners of historic sites to look at capture of methane alongside remedial measures.

240 Given the picture of material resource use in England, it is **clearly wrong** that we still send so much material to landfill in England that is a potential resource. While the overall volume of waste disposed of in landfill has reduced at a significant rate in recent years – a 45% fall since 2000/01 – in 2009 we still landfilled 44 million tonnes of waste in this country. Our vision for the zero waste economy is that landfill should be the waste management option of last resort and only for wastes where there is no better use.

241 The actions set out in this Review, at each level of the waste hierarchy, will

all contribute to reducing the volume of material that ends up in landfill. To date the primary disincentive to landfill has been landfill tax. The standard rate is currently set at £56 per tonne in 2011/12 and will rise by £8 per annum, to £80 by 2014/15, with a minimum floor under that level of tax until at least 2020. Modelling of existing policies through to 2020, primarily increasing levels of landfill tax, suggests that the proportion of waste landfilled will continue to fall significantly. However, around a quarter of household and commercial & industrial waste is still projected to end up in landfill.

242 And there will be some wastes for which landfill remains the best or least worst option. These are likely to include:

- some hazardous wastes – such as asbestos – and low level and very low level radioactive waste;
- some “inert” materials and wastes, to restore quarries and mineral workings;
- certain process residues, such as pre-treated industrial wastes from which no further resources can be recovered; and
- waste for which the alternatives to landfill are not justified by economic cost, or environmental and resource efficiency benefits.

243 The challenge for Government is how to move beyond the existing trajectory to deliver the vision that landfill is only used for wastes for which there is no better use. The measures outlined in other parts of the Review will play a substantial role in pushing wastes up the hierarchy and away from landfill by encouraging the right infrastructure, markets and culture that will enable us to more fully treat waste as a resource. However, even with this push it will still be likely that some waste will end up in landfill that could be put to better use and which may warrant the introduction of additional, legislative tools, such as landfill restrictions or total bans, to ultimately achieve our aim.

244 As a starting point, in 2012 we will consult on whether to introduce a restriction on the landfilling of wood waste, with the aim of diverting the still substantial tonnages that ends up in landfill to better uses up the waste hierarchy and delivering clear environmental benefits.

245 Building on this we will review the case for restrictions on sending other materials to landfill over the course of the Parliament, including looking specifically at textiles

and biodegradable waste. Before bringing forward proposals on restricting other materials the Government will need to be content restrictions are the best value way of moving material up the waste hierarchy and that the costs to businesses and the public sector are affordable.

Landfill Diversion Targets

246 More immediately, we need to ensure that we remain on track to meet Landfill Directive targets to divert biodegradable municipal waste from landfill. In 2010, the UK revised its interpretation of municipal waste to include a much greater proportion of commercial and industrial waste. This change, plus the most recent data has been combined to review England’s approach to meeting these targets. As a result:

- It was confirmed that the UK met its 2010 landfill directive target;
- The redefinition was also a factor in the decision made as part of the spending review that seven local authority projects which had been provisionally allocated PFI credits should not receive them. This decision was made on the basis that, on reasonable assumptions, these projects would no longer be needed in order to meet the 2020 landfill diversion targets set by the European Union.

247 In addition – as already outlined – we have decided following wide consultation to end the Landfill Allowance Trading Scheme. Economic analysis, and feedback from stakeholders, strongly indicate that landfill tax has superseded the scheme as a driver on local authority behavior. Therefore we will bring forward legislation to end the scheme in England after completion of the 2012/13 scheme year

Capturing Methane at Landfill Sites

- 248** Reducing the amount of biodegradable waste we send to landfill is one important way of reducing greenhouse gas emissions: if there is no biodegradable material decomposing, no landfill gas will be produced. However, biodegradable waste can take years, even decades, to fully decompose. This means significant amounts of methane are still being generated from organic wastes already in landfills and will continue to be for years to come. Methane emissions from landfill were estimated to account for around 3% of the UK's total greenhouse gas emissions in 2009.
- 249** The Landfill Directive requires operators of landfill sites taking biodegradable waste to capture the landfill gas produced and dispose of it, preferably by utilising it (e.g. converting to electricity) or, where that is not possible, by flaring it in approved equipment. This, along with other existing measures such as financial incentives for energy produced from landfill gas, has led to a large investment in landfill gas infrastructure over the last two decades, and we are now in a position where we believe the majority of landfill gas produced at operational sites is captured (though the exact figure is uncertain).
- 250** However, there is still a significant opportunity to do more: the Landfill Directive does not cover landfill sites closed before 2001, of which there are many, and which have little or no landfill gas infrastructure; we are also learning more about how methane is generated at landfills and how landfill gas management practices affect methane emissions; and new technologies are already in development or on the horizon that could potentially exploit ever smaller quantities of methane.
- 251** The high calorific content of methane also means that landfill gas is a valuable source of renewable energy. Therefore successfully exploiting these opportunities would lead to greenhouse gas savings, contribute to the UK's renewable energy goals, and help grow the green economy.
- 252** To ensure this happens Government and business need to:
- Continue to develop, promote and adopt best landfill management practices, but at a faster pace;
 - Continue the advances in science and understanding around methane generation, oxidation and emission from landfills and where the best economic opportunities are for capturing it.
- 253** Going further:
- Government and business need to work together to encourage the development and commercial deployment of new technologies, such as micro-turbines or bio-methane injection into the grid;
 - Government will ensure the right mix of incentives are in place as part of the broader energy from waste strategy and look at removing barriers to the successful take up of new technologies and practices;
 - Local authorities also have a key role to play as owners of many historic landfill sites. Where these sites are releasing methane, they could look to solutions that could not only remediate the land but also capture and use that methane.

Infrastructure and Planning

Summary

Government continues to support local authorities in the provision of necessary waste infrastructure. We believe local communities should benefit from hosting waste infrastructure and be involved from an early stage in planning for infrastructure. A better understanding of the impact of technologies is needed.

We will do this by:

- Providing advice and support for local authorities on science and technology;
- Working with the Environment Agency, local authorities and industry to draw together and publish data on likely waste arisings and treatment capacity in future years;
- Supporting efforts by local authorities through effective contract management to generate further efficiencies in waste collection, reprocessing and treatment;
- Seeking to expand capacity to treat C&I and C&D waste through improved information and developing supply chains for recyclates and solid recovered fuel;
- Working to help reduce commercial barriers to the effective financing of infrastructure.

254 The Government's first National Infrastructure Plan (NIP), prepared by Infrastructure UK and published in October 2010, began to set out a consistent and coordinated policy towards national infrastructure, including waste infrastructure. A more detailed explanation of our policy on waste infrastructure will be set out in the revised NIP, due to be published in autumn 2011.

255 Within the context of the regulatory framework and the planning system, waste infrastructure provision is largely left to market mechanisms and local government contracting and procurement. The one major exception to this is the reducing provision

of PFI credits. Rather than direct further intervention, Government aims to ensure that there are not unnecessary barriers to the market delivering the necessary infrastructure – either as a result of market failures or wider government policy.

256 The Government's ambitions for waste highlight the importance of putting in place the right waste management infrastructure at the right time and in the right location. Our ambition is to have appropriate waste reprocessing and treatment infrastructure constructed and operated effectively at all levels of the waste hierarchy to enable the most efficient treatment of our waste and resources. This infrastructure must be

responsive to changing waste streams, and make the best use of innovations in science and technology. We want infrastructure to be developed in partnership between developers and communities, to balance community and national needs while maximising the value recovered and ensuring commercial viability. This will take time to develop, meaning that some of the technologies that need to be used in the short and medium term will be replaced in the longer term as technologies advance and our ability to manage our resources becomes better developed.

Planning

- 257** The planning system plays a critical role in delivering our ambition. A good planning system is essential for the economy, environment and society. The Government, however, recognises that there are some flaws in the planning system as it stands. Planning does not give members of the public enough influence over decisions that make a big difference to their lives. Too often, power is exercised by people who are not directly affected by the decisions they are making. This means, understandably, that people often resent what they see as decisions and plans being forced on them. The result is a confrontational system where many applications end up being fought over.
- 258** It is perhaps not surprising therefore that, although most applications are successful, the planning process is often cited as one of the most significant and time consuming barriers to the delivery of waste management infrastructure. Communities often do not perceive any direct benefit from hosting waste infrastructure yet feel that they have to bear the environmental cost (such as increased traffic, visual impact and noise but also pollution and health concerns). Too many decisions, particularly for specific types of waste infrastructure, are still determined by appeal, which costs both developers and councils significant time and money while resulting in decisions being made by people remote from the affected communities rather than the communities and their elected representatives.
- 259** Yet at the same time, the planning system plays a key role in rebuilding our economy by ensuring that the sustainable development needed to support economic growth is able to proceed as easily as possible. The Government is committed to replacing the adversarial system, remote from communities, with a collaborative one where close working with communities is the norm, and which acts as a driver for growth.
- 260** The Government clearly wants an efficient planning system with the right proposals to come forward in local areas so they are approved first time. This will involve co-operation and behaviour change between the key partners in the planning process: the local authority, the waste management industry and the local communities. There is considerable good practice being demonstrated, by local authorities and the waste management industry, in engaging with each other and with local communities. However, the Government considers that more must be done to challenge and change existing behaviours.
- 261** The waste management industry, working with local authorities, must strive even more to understand the needs of the communities it serves across the whole waste hierarchy through direct engagement with the whole community; making the link between their waste and the solutions on offer; setting out the evidence; ensuring there are real options available; and being transparent about these options and compromises required to meet community desires, for example between cost and scale. Similarly the community must be prepared to engage in these discussions, working to find the best solutions while acknowledging the need for their waste to be managed in a way that meets their desires.

- 262** Local authorities remain responsible for developing local authority waste plans as part of their wider strategic planning responsibilities, in support of the National Waste Management Plan, and for letting contracts to achieve the collection and treatment technology outcomes that best meet the need of the local people they serve. They should consider the infrastructure needs of their community from the earliest stages of developing their local policies and plans, where it is vital that there is effective early engagement between local authority planners and waste officials, and with their community. This can help to manage expectations and facilitate constructive dialogue of later specific proposals.
- 263** As part of this process there is the need for councils to work together and look at waste management needs across different waste streams and across administrative boundaries. The Localism Bill will introduce a duty to cooperate for local authorities which will help ensure that opportunities to explore such trans-boundary options are not missed. There is no requirement for individual authorities to be self sufficient in terms of waste infrastructure and transporting waste to existing infrastructure to deliver the best environmental solution should not be considered a barrier.
- 264** The principle that those most impacted should benefit most should operate across all scales from street to neighbourhood to local authority. How to achieve this should be part of an ongoing dialogue between communities, local authorities, waste management companies and developers. Other industries, for example wind generation, have addressed this issue through the development of industry protocols for providing community benefits in relation to infrastructure development, and we will explore with the waste management industry whether such approaches could be suitable for waste infrastructure. We are also considering, through the Local Government Resource Review, how we can deliver incentives, through the business rates system, for local authorities to promote growth.
- 265** Localism imparts greater responsibility on local politicians to make decisions, and on their community to hold them accountable, based on clear evidence. We want to reach a stage where, as a result of effective engagement, applications which reach the formal planning process should present local politicians with the best possible evidence and a less polarised debate. With more informed debate there will also be a greater expectation that local politicians will take responsibility for these difficult decisions to ensure the waste produced by their communities is properly managed. Waste infrastructure is of national importance, to ensure we meet our commitments on waste and climate change. However, in the majority of cases, decisions on delivering that infrastructure should remain at the local level. To this end we will not seek to lower the 50MW threshold at which planning applications for energy from waste go through the central major infrastructure planning process.
- 266** The Government will continue to set the overall national framework through legislation and regulation, and therefore to facilitate discussions at more local levels, not direct them. This includes setting national strategy (e.g. National Waste Management Plan, National Infrastructure Plan, Waste Review), and ensuring that the regulatory framework promotes the waste hierarchy.

Availability of Information

- 267** Lack of information, particularly in terms of understanding of different technologies and data on waste arisings, is often cited as a potential barrier to delivering the correct waste infrastructure mix, making it more difficult to ensure that the most appropriate reprocessing and treatment technologies are selected to meet local needs. This can be particularly acute given that the lifetime of infrastructure means local officials will often only make such choices once or twice in their careers. Much work has already been done to address this through greater education and communication as technology develops, for example through Defra's New Technologies Demonstrator Programme, and through the advice and support provided by Defra's Waste Infrastructure Delivery Programme. We will continue to build on this work to improve understanding.
- 268** The Review's Call for Evidence has highlighted concerns that the data available to support strategic decisions on investment in waste infrastructure is limited. Speculation about such development can cause uncertainty about the need for local authorities to make their own arrangements to deal with the waste they collect. To address these barriers we will:
- Publish data on likely waste arisings and treatment capacity in future years, working with the Environment Agency, local authorities and industry;
 - Provide advice and support for local authorities on science and technology, including the full range of technologies available and their relative merits;
 - Support efforts by local authorities to deliver better value for money through effective contract management and by working together to generate further efficiencies in waste collection, reprocessing and treatment.

Finance

- 269** To demonstrate their viability and attract funding, waste management proposals need the feedstocks, the technology and the market for the outputs – be they recyclates, energy or other products.
- 270** The range of options and different pros and cons make decision making on which technology route to follow particularly complex. Finance risk is closely related to the technology: it is much more challenging to attract finance for the less well proven technologies. This potentially creates a vicious circle where it can then be challenging to prove new technologies.
- 271** Historically, PFI has been a key funding model for waste infrastructure, but many other facilities are entirely funded by the market. Local authorities have tended to offer large long term waste management contracts under which authorities commit to supply waste and private sector contractors commit to treat and dispose of waste for an agreed gate fee. These long term waste contracts can maximise the use of debt, enabling gate fees to be kept at affordable levels as debt is cheaper than equity.
- 272** To enable the use of debt to finance the investment of facilities, contractors need to convince the banking industry to support projects. The current structure of the market with significant quantities of waste tied up in long term local authority contracts can make it difficult for new entrants to secure sufficient feedstocks. Despite these barriers, there remains a range of opportunities for smaller waste management companies, technology suppliers and operators, particularly in relation to commercial and industrial, and construction and demolition wastes.

273 To address these barriers we will:

- Seek to expand capacity to treat C&I and C&D waste through improved information on waste supply and composition and developing further the supply chains for recyclates and solid recovered fuel.
- Work with all parties to help reduce commercial barriers to the effective financing of infrastructure and in particular ensure that waste sector needs are considered in development of the Green Investment Bank's early sectoral priorities.

274 The Government has committed to establish a new Green Investment Bank (GIB), which it will capitalise with £3bn funding. The Bank will make a radical contribution to increasing private sector investment in green infrastructure, including from new types of investor. Its mission will be to accelerate private sector investment in the UK green economy, with an initial remit to focus on relatively high risk projects which are otherwise likely to proceed slowly or not at all. It will work to a 'double bottom line' of both achieving significant environmental impact and making financial returns delivering value for money. Three sectors illustrate the case for where GIB investments may take place: offshore wind, non-domestic energy efficiency and waste management, particularly in the commercial and industrial waste sector. However, these are illustrative and no decisions on priorities have yet been made.

Next Steps

- 275** This completes the Government's commitment to a Review of Waste Policies in England and outlines our findings. The analysis we have undertaken across the breadth of policies will now guide the decisions and actions of this Government. The commitments and actions described in the preceding chapters are summarised in the separate Action Plan.
- 276** We will work closely with local government, businesses and civil society in driving this work forward to set priorities and monitor action. We will assess our progress in implementing this work in March 2012.
- 277** Many of the new policies and commitments have, or will result in, accompanying documents which set out the detail of that particular commitment – for example the Anaerobic Digestion Strategy, or the Recycling and Waste Collection Commitments.
- 278** In addition, we tried to make a complex area accessible to non-expert readers through short factsheets which can be found via the Defra website at www.defra.gov.uk alongside all other Waste Review documents. Further information is also available at Directgov (www.direct.gov.uk) and Businesslink (www.businesslink.gov.uk). As the world economy grows, even under current economic conditions, consumption levels of many of our resources increase, with inevitable environmental and economic implications. We need to review the way in which we use materials and products in the UK to make most effective use of them.



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