

East Sussex and Brighton & Hove  
Waste & Minerals Development Framework

**Information Paper 3**  
Sustainable Resource Use  
and Management

October 2009

**IP3**

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## Introduction

1.1 This 'Information Paper' on Waste Management Methods and Technologies, is one in a series that has been produced to support the preparation of the Waste and Minerals Development Framework (WMDF). The WMDF will contain planning documents ('Development Plan Documents' (DPDs)) that will help decide how and where waste should be dealt with and minerals produced in East Sussex and Brighton & Hove in the future (up to 2026). More information about them can be found on the Councils' websites:

- [www.eastsussex.gov.uk/environment/planning/development/mineralsandwaste](http://www.eastsussex.gov.uk/environment/planning/development/mineralsandwaste)
- [www.brighton-hove.gov.uk/index.cfm?request=b1148434](http://www.brighton-hove.gov.uk/index.cfm?request=b1148434)

1.2 The Information Papers are being used provide the evidence for the development of the WMDF and to support consultation and discussion with members of the public and key stakeholders who are concerned with waste and minerals in East Sussex and Brighton & Hove.

1.3 The Papers are 'living drafts' which present the evidence as it stands at this stage and they will be periodically updated with any new information that comes to light. This will ensure the Councils' knowledge and understanding of waste and minerals remains robust and the evidence base for the WMDF is 'sound'.

1.4 The Information Papers were first published and consulted upon in July 2007, and were then revised in February 2008. This third version (October 2009) brings them up to date with new information and recent changes in legislation and policy.

1.5 Details of the other Information Papers that have been produced are included in Appendix 1.

1.6 If you would like to comment on or add to the WMDF evidence base that is presented in this Information Paper, please visit the consultation website <http://consult.eastsussex.gov.uk> and follow the instructions for the Information Papers. Alternatively you can send an e-mail to [wasteandmineralsdf@eastsussex.gov.uk](mailto:wasteandmineralsdf@eastsussex.gov.uk) or write to:

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## Introduction

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Please make sure that you refer to the section and paragraph numbers that your comments relate to.

## Sustainable Resource Use and Management

### Sustainable Resource Use and Management

#### The Need to Manage Resources Sustainably

2.1 As a society we are consuming resources at an unsustainable rate <sup>(1)</sup>. Negative environmental impacts result from our consumption and production patterns and natural resources such as fossil fuels are being exhausted. There is a need to manage resources more sustainably by developing products and services that use fewer raw materials, reduce waste and pollution, and break the link between economic growth and waste growth.

2.2 The Government has made various commitments intended to make the way we manage resources more sustainable. At the 2002 World Summit on Sustainable Development in Johannesburg, the UK Government committed to encourage and promote the development of programmes to accelerate the shift towards sustainable consumption and production <sup>(2)</sup>. 'Sustainable consumption and production' is one of four priority areas for action in the Government's Sustainable Development Strategy 'Securing our Future'. 'Sustainable consumption and production' is defined by Defra as "achieving economic growth whilst respecting environmental limits, finding ways to minimise damage to the natural world and making use of the earth's resources in a sustainable way."

2.3 Locally in East Sussex and Brighton & Hove, several programmes and strategies encourage sustainable use of resources, such as:

- The Betre programme – which provides free support to local small and medium-sized businesses to improve resource efficiency. Covers sectors from farming, hospitality, construction and financial services <sup>(3)</sup>;
- East Sussex Sustainable Business Partnership – promotes sustainable development and in particular waste reduction for local businesses.

#### Waste as a Resource

2.4 Planning for waste and minerals at the local level can reflect this international agenda and promote sustainable development in a number of ways. For example, minimising the negative impacts on air quality and climate change by appropriately locating facilities to reduce the transportation of waste, and promoting newer, cleaner waste management technologies that are less harmful to the environment. Damage to local ecology and water courses can be reduced through measures such as careful site selection and favouring technologies which minimise the emission of pollutants. Treating waste as a resource and reusing, recycling and recovering energy from it reduces demand for primary resources, helping to use the world's resources in the most sustainable way.

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1 [Waste Strategy for England 2007](#)

2 Defra 2007 [www.defra.gov.uk/sustainable/government/index.asp](http://www.defra.gov.uk/sustainable/government/index.asp)

3 [www.betre.org.uk](http://www.betre.org.uk)

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2.5 In the UK waste has historically been viewed in negative terms as something to be disposed of in the easiest, cheapest way possible, resulting in land disposal being the dominant form of waste management. However this leads to negative environmental impacts as non-inert waste in landfill sites emits methane (a damaging greenhouse gas) as it degrades, and can result in leachate polluting local watercourses. They also represent an unsustainable use of resources since the materials and energy contained within the waste are wasted. These factors have resulted in a shift away from land disposal, driven by Government and European Union policy, which reflects the need to reduce the impact that waste materials have on the environment, firstly by minimising the creation of waste, and secondly by re-using, recycling and recovering energy from waste that does arise.

2.6 This represents a fundamental change in the way that we perceive waste. The existing approach to waste management tends to be a 'linear' approach where a product or material is bought, used and then disposed of. A 'circular' approach is now preferred, where products are bought, used, and passed on for reuse or processed into another material or product, reflecting how waste is now treated as a resource, rather than something to be disposed of. These concepts are illustrated by the following diagrams:

2.7

**Figure 1 The linear approach to waste management**



**Figure 2 The circular (or 'closed loop') approach to waste management (Defra, 2007)**



## Sustainable Resource Use and Management

2.8 Treating waste as a resource results in less waste to be managed, and using recycled materials means less primary natural resources are required in manufacturing and construction.

2.9 Using fewer primary materials, such as wood, aggregates and oil, means energy use in manufacturing and transport can be reduced, and help preserve finite resources such as oil. More efficient use of resources can also reduce the potential environmental and health impacts associated with extracting, processing and transporting new resources.

2.10 Some examples of the resource savings achievable are presented in the following table:

### Examples of Potential Resource Savings (adapted from More or Less, 2005)

Recycled material	Greenhouse gas	Energy	Water	Air	Materials
Paper/ card	Recycling 1 tonne newspaper saves 900kg of CO <sub>2</sub> equivalent	Consumes up to 70% less energy compared to use of new pulp (depending on transport distances)	Saves at least 300,000 litres water	Reduces emissions to air by up to 95%	Recycling 1 tonne newspaper avoids the need to fell 7 mature spruce trees
Glass	Recycling halves the CO <sub>2</sub> emissions. Recycling 1 tonne saves 300kg CO <sub>2</sub> equivalent	Saves 50% of the energy over new glass	Reduces water discharges by 50%	Reduces emissions to air by 20%	Saves raw materials (saves 1.2 tonnes of silica sand per tonne recycled)
Steel	Recycling 1 tonne saves 1800kg CO <sub>2</sub> equivalent	Uses up to 74% less energy	Uses 40% less water	Reduces emissions to air by about 30%	Saves raw materials (each tonne recycled saves 1.5 tonnes of iron ore)
Aluminium	Recycling 1 tonne saves 9800kg CO <sub>2</sub> equivalent	Uses 95% less energy compared to new aluminium	Reduces water discharges by 97%	Reduces emissions to air by about 95%	Saves raw materials (each tonne recycled saves 8 tonnes of bauxite and 4 tonnes of chemical products)

2.11 Locally, the East Sussex County Council highways maintenance contract is an example of how use of primary aggregates can be reduced through recycling. The contract includes measures such as:

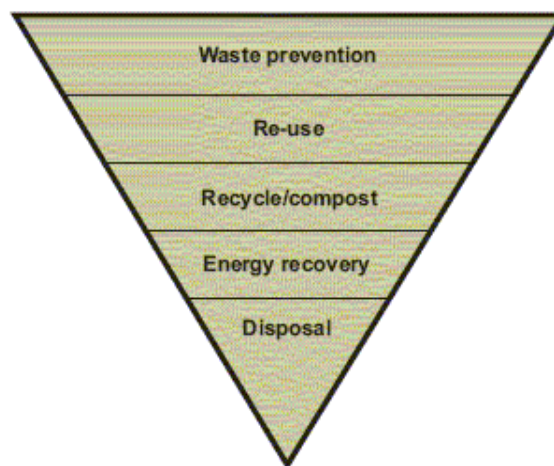
- Crushing and reusing concrete paving and kerbing in road foundations;
- Using state-of-the-art technology to ensure asphalt dug up from roads is reused in other roads or footpaths instead of being disposed of; and
- Using concrete made of 40% recycled materials in road repairs.

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(East Sussex Highways: Sustainability and recycling materials, 2006)

2.12 Waste Strategy for England 2007 sets out the Government's preferred methods of sustainably managing waste. It establishes various principles to guide the sustainable management of waste, including new higher recycling and composting targets of 50% by 2020 for household waste. A key concept of the Strategy is the 'waste hierarchy' (Figure 3).

**Figure 3 The Waste Hierarchy (PPS10, 2005)**



### Reduction and Prevention of Waste

2.13 The waste hierarchy determines that the most preferable way of managing waste more sustainably is to prevent it from occurring in the first place, for example by reducing excess packaging and encouraging re-use of products and materials.

2.14 Several nationwide programmes and initiatives have been developed to help support the shift to greater re-use, such as NISP (National Industrial Symbiosis Programme) which matches one operator's waste with another's raw material needs), Envirowise, BREW (Business Resource Efficiency and Waste programme), and WRAP (Waste and Resources Action Programme). Further information is contained in Appendix 5.

2.15 High profile national waste minimisation campaigns have had some success, for example a reduction of 48% in the number of single-use carrier bags given out by the UK's major supermarkets in 2009 compared to 2006 <sup>(4)</sup>. Locally in East Sussex and Brighton & Hove, there are organisations that promote re-use of products, particularly furniture, such as Magpie Recycling Co-Operative, Brighton YMCA, and Freecycle. There are also council-led initiatives such as the East Sussex "say no to junk mail" campaign, and the Brighton & Hove and East Sussex "Real Nappy Network"

4 [www.wrap.org.uk/wrap\\_corporate/news/new\\_figures\\_show.html](http://www.wrap.org.uk/wrap_corporate/news/new_figures_show.html)

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which promotes use of reusable nappies. Tiger Enterprises, based in Brighton, is a new business established to recycle and reuse building materials from major construction firms by selling them on to small businesses and individuals <sup>(5)</sup>.

### Recycling

2.16 Recycling (including composting) is the third most preferable option for managing waste in the waste hierarchy, after reduction and re-use. Recycling involves the reprocessing of materials to create a useable material or product. Materials that can be recycled include glass, paper/cardboard, aluminium, ferrous metals, plastics, and construction and demolition waste.

2.17 Although recycling can enable materials to be re-used many times, there is ultimately an amount which requires final disposal. Increasing the rate of recycling will not therefore eliminate the need for some final disposal but help to increase the life of materials.

2.18 Examples of waste recycling facilities in the Plan area include Materials Recycling/Recovery Facilities at Lewes, Uckfield, and Hollingdean; numerous Household Waste Recycling Sites (where householders bring waste for recycling); electronics recycling facilities at Southerham; skip waste recycling at Moulsecoomb; and numerous metals recycling facilities.

2.19 Recycling of construction and demolition waste requires different processes to commercial and municipal waste because of the different nature of materials involved (e.g. concrete, timber, and bricks). Recycling plants, using equipment such as concrete crushers, can enable the materials to be re-used in construction as secondary aggregates (in place of new primary aggregates) and other materials. The UK currently uses about 275 million tonnes of raw aggregates each year, 65 millions tonnes of which are derived from recycled or secondary aggregate sources <sup>(6)</sup>, but there remains increasing pressure to reduce the consumption of primary aggregates through switching to recycled or secondary aggregates. In 2003 the Government introduced an Aggregate Levy as an environmental tax on all primary aggregates to help make the use of recycled materials more economically viable by making them cheaper in comparison to primary aggregates. To increase the commercial viability and demand for recycled aggregates WRAP has carried out a study with the aim of providing evidence that such materials have comparable characteristics and levels of performance to primary aggregates <sup>(7)</sup>.

2.20 The benefits of using recycled and secondary aggregates (where they meet the legal specifications for purpose) can include reduced waste disposal costs, reduced haulage, reduced costs, conservation of finite resources, and reduced energy

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5 [www.reuseitdontloseit.co.uk](http://www.reuseitdontloseit.co.uk)

6 [www.aggregate.org.uk/sustainable.html](http://www.aggregate.org.uk/sustainable.html)

7 Detailed findings from the study have been incorporated into WRAP's technical guidance document - Specification and Quality Control of Foamed Concrete Incorporating RSA - available from [www.aggregate.org.uk](http://www.aggregate.org.uk)

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consumption and emissions from transport. East Sussex County Council and Brighton & Hove City Council have produced a Supplementary Planning Document which includes practical ideas about recycling and minimising construction and demolition waste <sup>(8)</sup>.

2.21 For further details of the types of facilities that are needed to support recycling see Information Paper 4 - Waste Management Methods and Technologies, and for details about recycling of aggregates see Information Paper 2 - The future need for minerals production and management.

### Composting

2.22 Composting is the decomposition of organic or biodegradable wastes using natural biological processes. It can be used to break down biodegradable waste streams into humus or soil conditioner.

2.23 Principal waste streams targeted for composting include wood, paper, garden (or 'green waste') and horticultural waste, waste food and vegetable matter. Composting operations can vary in scale from home composting to large scale strategic facilities. The most common practices are 'open windrow' and 'in vessel'-described in more detail in Information Paper 4. Because the decomposition of waste can generate gases and leachate, there are health and environmental concerns related to pollution of land, air and water. As a result sites are tightly monitored by the Environment Agency and regulated by the Animal By-Products Regulations 2003.

2.24 Recent policy directions by Government bodies may result in a significant increase in composting of waste. A 'quality protocol for compost' is being jointly produced by the Environment Agency and WRAP, with the aim of enabling registered producers to create compost that is no longer classed as a waste, making it more marketable because customers can spread it on the land without needing to register for a waste exemption license. This document has now been approved for release, subject to European Commission approval <sup>(9)</sup>. Also, the Waste Strategy for England (2007) highlights the contribution that commercial and home composting can make to sustainable waste management. In particular, it highlights that under the Landfill Allowance Trading Scheme (LATS), local authorities cannot claim the full benefit for biodegradable municipal waste diverted through home composting schemes in the same way as they do for separate collections of garden or kitchen waste for centralised composting. Defra is currently reviewing this.

2.25 The Waste Strategy for England also encourages local authorities and businesses to consider using anaerobic digestion. The digestate produced during anaerobic digestion has a range of potential uses on land (e.g. as a fertiliser or soil

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8 East Sussex and Brighton & Hove Supplementary Planning Document: Construction and Demolition Waste, 2006

9 Document available at

[http://www.environment-agency.gov.uk/static/documents/Business090210\\_AnaerobicDigestate\\_QP\\_v28.pdf](http://www.environment-agency.gov.uk/static/documents/Business090210_AnaerobicDigestate_QP_v28.pdf)

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improver) but the markets are currently limited. WRAP has been asked to investigate developing a market for waste-derived compost, and the Environment Agency is working on an operational protocol for digestate.

2.26 There are several green waste composting operations in East Sussex and Brighton & Hove such as those at Pebsham, Beddingham, Isfield and Stamner Park. An enclosed composting facility at Whitesmith (near Chiddingly) is currently under construction, and will have capacity to process 46,000 tonnes of green waste and 1,000 tonnes of food waste once operational.

2.27 Alongside this there are several schemes to support home composting in East Sussex and Brighton & Hove, including: subsidised composters, green Johannas, and green cones; the 'compost doctor' scheme in Lewes and Hastings; and the Brighton Community Compost Centre local collection service. An issue for any plans for expansion of home composting in the Plan area is that existing residential and commercial buildings in densely populated urban areas like Brighton & Hove and Hastings often lack appropriate storage space, although this is generally addressed in new developments.

### Energy Recovery and Thermal Heat Treatment

2.28 Energy recovery is the fourth most preferred option in the waste hierarchy.

2.29 Energy recovery facilities (ERFs) involve the recovery of energy from non-inert wastes. This differs from the recycling and composting discussed above, as it involves the treatment of residual waste including residues from recycling facilities, to recover energy in the form of electricity and where possible heat. Facilities that both produce electricity and utilise the heat produced to provide hot water and heating to surrounding buildings produced are known as Combined Heat and Power (CHP) plants. The potential for using CHP within the WMDF area is covered in a separate report. ERFs often raise concerns from communities regarding the health and environmental impacts of the emissions to air, however "modern... well-run and well-regulated waste management facilities operated in line with current pollution control techniques and standards should pose little risk to human health"<sup>(10)</sup>. The Environment Agency issues permits and monitors facilities to ensure they comply with emissions standards.

2.30 As well as conventional incineration, new technologies such as gasification and pyrolysis (known as advanced thermal treatment) can also be used to generate energy from waste. Anaerobic digestion is also sometimes considered a hybrid energy from waste technology. More details about the technologies are provided in Information Paper 4.

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2.31 There are a few small-scale thermal treatment facilities in the Plan area which are specialist facilities to deal with clinical or animal waste, such as at Horam and at Ringmer. There is a project operated by Magpie which produces biodiesel from waste vegetable oil from the local catering/hospitality industry.

2.32 A large-scale ERF is under construction at North Quay, Newhaven. Once operational this facility will be able to cater for 210,000 tonnes of waste per annum and in net terms generate enough electricity for 16,000 homes.

### Relevant Policies and Strategies in East Sussex and Brighton & Hove

2.33 In addition to the targets in national policy that are discussed earlier in this Paper, there are various plans and strategies in East Sussex and Brighton & Hove that set targets for sustainable waste management. These must have regard to the targets and principles established in national and international policy.

2.34 Significant documents are the Waste Local Plan, the Municipal Waste Management Strategies, and the emerging WMDF. The Waste Local Plan covers East Sussex and Brighton & Hove and its main role is to provide the land use planning framework and policies to enable sustainable management of all types of waste. Alongside it, Municipal Waste Management Strategies set out the strategy for managing municipal waste, and detail how the local authorities intend to meet Government targets for recycling and for diversion of municipal waste from landfill. Both East Sussex and Brighton & Hove are required to produce a Municipal Waste Management Strategy (MWMS). The East Sussex MWMS was adopted in March 2007<sup>(11)</sup>, and Brighton & Hove are currently consulting on a draft version of their MWMS.

2.35 The East Sussex and Brighton & Hove Waste Local Plan (Policy WLP1) sets targets for the plan area of recycling 33% of household waste and recovering 50% of municipal waste by 2010, rising to 40% household waste recycled and 67% municipal waste recovered by 2015. At the time of adoption, these targets exceeded those set at the national level. The table below sets out recent performance towards achieving those targets.

2.36 The WMDF can influence the sustainable use of resources in East Sussex and Brighton & Hove by providing a planning policy framework to support and enable efficient resource management and identifying the sites needed for the necessary facilities. Such policies are currently presented in the Waste Local Plan and Minerals Local Plan.

## Sustainable Resource Use and Management

### Current Rates of Recycling and Recovery of Municipal Waste in East Sussex and Brighton & Hove

#### Management of Municipal Waste in East Sussex and Brighton & Hove

	2003/04	2004/05	2005/06	2006/07	2007/08
<b>Recycled</b>	13%	14%	17%	19%	21%
<b>Reuse</b>	2%	3%	3%	3%	3%
<b>Composted</b>	7%	7%	8%	8%	9%
<b>Energy recovery</b>	0%	0%	1%	2%	10%
<b>Disposal to land</b>	78%	76%	72%	68%	57%

Source: East Sussex Annual Monitoring Report 2007/08: Waste & Minerals

#### Waste and Minerals Planning Policy and Sustainable Resource Use

2.37 Other factors influence how sustainably resources will be managed in the future. At the local level, the Waste Collection Authorities (WCA) play a significant role in operating kerbside collections of household waste. For Brighton & Hove, the City Council is the WCA, and in East Sussex the district and borough councils are the WCAs. Sustainable management of municipal waste is also influenced by targets and strategy options that are established in the Municipal Waste Management Strategies.

2.38 At the national and international level, changes in legislation and the ability of industry to respond and provide sufficient treatment capacity to allow resource recovery will also affect how resources are managed in East Sussex and Brighton & Hove. Details of national and international legislation and the planning policy framework are included in Appendices 2 and 3 respectively. The national Waste Protocols Project, run by the Environment Agency and WRAP, could also have significant implications for the recovery of waste. This aims to address the uncertainty over the point at which certain 'waste' materials are considered fully recovered and may be classified as a non-waste product<sup>(12)</sup>. This is important in enabling a resource recovery approach because some materials continue to be controlled by waste legislation beyond the point when waste controls are needed which can inhibit their use as a secondary or recycled product. The outputs from anaerobic digestion are a particular focus of this.

2.39 Other factors that may affect the ability of the waste management industry to provide a timely and adequate capacity of waste management facilities include:

#### Wider economic conditions

12 Environment Agency website, Waste Protocols Project

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2.40 The strength of the market for reprocessed/recycled products influences whether waste companies recycle or use other waste management methods. For example, currently there are markets for some types of recycled plastic but not for others, and also it is only efficient to recycle plastic if it is sorted into specific types – if it is mixed then it may be more efficient to recover the energy instead. Recent economic turbulence has also led to a decline in market demand for some recyclables, with research by WRAP showing that markets for higher quality recyclables have suffered less. Similarly, developers are less likely to voluntarily adopt sustainable construction methods if it costs extra time or resources without any direct benefits to them in return. The Regional Economic Strategy recognises these issues and supports delivery of resource recovery facilities in order to extract maximum value from waste <sup>(13)</sup>.

2.41 Government interventions in the market can help to counter these disincentives to recycle. The landfill tax escalator and the introduction of the Landfill Tax Allowance Trading Scheme (LATS) has created sharp incentives to divert waste from landfill. Landfill tax is currently £32 per tonne and is set to increase by £8 per tonne per year at least up until 2010/11 <sup>(14)</sup>. The ability of the waste management industry to respond to these changing economic conditions will be realised over the next few years, but it could push industry to simply choose the next cheapest management option rather than the most sustainable.

### Market conditions

2.42 Creating favourable conditions for the necessary investment in facilities and infrastructure to deal with commercial and industrial wastes is a major challenge <sup>(15)</sup> and will influence the delivery of timely and appropriate new waste management facilities. Capital investment in facilities contracted to deal with municipal waste can be underpinned by long-term waste service contracts with local authorities, but there are no such guarantees for commercial and industrial waste streams and it is, therefore, a higher business risk for waste management companies. Although the WMDF can provide the planning policy framework to deliver sites, market uncertainties can prevent facilities from coming forward especially for commercial and industrial waste streams.

### New technologies

2.43 In recent years numerous new waste management technologies have been developed. Many of these are as yet unproven in the UK, or have no guaranteed long-term outlets for their by-products, although some are operating successfully in other countries <sup>(16)</sup>. However, those countries operate under different legislative, tax and regulatory regimes to the UK, and technologies need to be established and

13 Regional Economic Strategy 2006-2016: A framework for sustainable prosperity, SEEDA 2006

14 [http://www.aggregain.org.uk/waste\\_management\\_regulations/background/landfill\\_tax.html](http://www.aggregain.org.uk/waste_management_regulations/background/landfill_tax.html)

15 Waste Strategy for England 2007

16 See information Paper 4 for further information on new technologies

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proven in the UK before investors gain confidence. It may be difficult therefore for waste management companies to attract the necessary investment to build facilities utilising these new technologies, although Government schemes such as Defra's New Technologies Demonstrator Programme<sup>(17)</sup> aim to increase the evidence base for unestablished technologies and encourage commercial investment in them. An implication of this uncertainty for the WMDF is whether it is appropriate to leave the choice of technology to market forces, or specify particular technologies in planning policies.

### **National demand for aggregates**

2.44 The Government assesses the national need for different minerals and then directs each region as to the amount they should supply. The regional planning bodies then split that figure into 'apportionments' for each minerals planning authority. Currently, the apportionment must be met from land-won supplies of aggregates only (as opposed to marine dredging)<sup>(18)</sup>. The apportionment is being reviewed by the South East England Regional Assembly in 2007/2008. In addition to an apportionment for primary aggregates, Policy M2 of the South East Plan also sets out an apportionment for production of recycled and secondary aggregates.

### **Culture change and public perception of risk**

2.45 Sustainably dealing with waste in East Sussex and Brighton & Hove requires joined-up action from local authorities, businesses, individuals, retailers and the waste management industry. There is still much concern from communities about development of the waste facilities required to enable diversion from landfill to occur. Health risks from emissions, particularly from thermal heat treatment, are often a concern for local communities, however modern facilities must meet stringent emission standards to protect health and the environment that are set and regularly reviewed by the EU, and monitored by the Environment Agency. Effective community engagement and education can go some way to addressing these concerns.

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17 <http://www.defra.gov.uk/ENVIRONMENT/waste/wip/newtech/dem-programme/>

18 Regional Planning Guidance for the South East (RPG9): Waste and Minerals (June 2006)

# Sustainable Resource Use and Management

## Appendices

### Appendix 1: List of Other Information Papers Prepared

1. The Future Need for Waste Management
2. The Future Need for Minerals Production and Management
3. Sustainable Resource Use and Management
4. Waste Management Methods and Technologies
5. Residual Waste Disposal
6. Spatial Portrait of East Sussex and Brighton & Hove
7. Hazardous Waste
8. Transportation of Waste and Minerals
9. Climate Change and Waste and Minerals
10. Wastewater and Sewage Sludge Treatment

### Appendix 2: Relevant National and International Legislation

- Landfill Directive (1999/31/EC)
- Directive on Packaging and Packaging Waste (94/62/EEC)
- End of Life Vehicles Directive (2000/53/EC)
- Directive on Waste Electrical and Electronic Equipment (WEEE) (2002/96/EC)
- EU Thematic Strategy: Prevention and Recycling of Waste (2005)
- EU Thematic Strategy on Natural Resources (2005)

### Appendix 3: Relevant Planning Policy

- Minerals Policy Statement 1 (MPS1) Planning and Minerals (2006)
- Planning Policy Statement 10 (PPS10) Planning for Sustainable Waste Management (2005)
- Planning for Sustainable Waste Management: A Companion Guide to PPS10 (2006)
- Waste Strategy for England (Defra 2007)
- South East Plan (SEERA, 2009)
- East Sussex and Brighton & Hove Waste Local Plan (2006)
- Municipal Waste Management Strategy, East Sussex County Council and the Boroughs and Districts of Eastbourne, Hastings, Lewes, Rother and Wealden (2007)
- Draft Brighton & Hove Municipal Waste Management Strategy (Cityclean, 2009)

### Appendix 4: Further References and Information Sources

- Brighton & Hove Sustainability Strategy: Local Agenda 21 in Brighton & Hove, available at [www.brighton-hove.gov.uk/downloads/bhcc/environment/sus\\_strat.pdf](http://www.brighton-hove.gov.uk/downloads/bhcc/environment/sus_strat.pdf)
- BHCC (2007) Brighton & Hove Annual Monitoring Report 2007-2008
- Defra (April 2007) Economies of Scale – Waste Management Optimisation Study by AEA Technology  
[www.defra.gov.uk/environment/waste/localauth/partnerwork/documents/economies-scale.pdf](http://www.defra.gov.uk/environment/waste/localauth/partnerwork/documents/economies-scale.pdf)

## Appendices

- ESCC (2007) East Sussex Annual Monitoring Report 2007-2008
- ESCC (July 2006) East Sussex Municipal Waste Management Strategy – draft for consultation
- HCC (March 2005) More from Less, Hampshire County Council
- Sustainable Development Commission (2005) Securing Our Future: UK Government Sustainable Development Strategy
- Sustainable Development in Government  
[www.defra.gov.uk/sustainable/government/](http://www.defra.gov.uk/sustainable/government/)

### Other useful websites:

- Waste and resources action programme [www.wrap.org.uk](http://www.wrap.org.uk)
- Sustainable aggregates information service [www.aggregain.org.uk](http://www.aggregain.org.uk)
- National Industrial Symbiosis Programme (NISP) [www.nisp.org.uk](http://www.nisp.org.uk)
- Waste Protocols Project  
[www.environment-agency.gov.uk/business/topics/waste/32154.aspx](http://www.environment-agency.gov.uk/business/topics/waste/32154.aspx)

### Appendix 5- Programmes and Initiatives Supporting Sustainable Waste Management

- WRAP- helps individuals, businesses and local authorities to reduce waste and recycle more, making better use of resources and helping to tackle climate change. This is achieved by providing technical and financial support to develop new technologies and markets for recyclables, refining best practice to increase the efficiency of recycling programmes and facilities, and pro-actively engaging with industry to encourage waste minimisation. See [www.wrap.org.uk](http://www.wrap.org.uk)
- BREW- Defra's BREW (Business Resource Efficiency and Waste) Programme uses money derived from increases in Landfill Tax to encourage, support and help businesses improve their resource efficiency.
- Envirowise- offers free, independent support to businesses helping them to become more resource efficient. See [www.envirowise.gov.uk](http://www.envirowise.gov.uk)
- NISP (National Industrial Symbiosis Programme)- brings together companies from all business sectors with the aim of improving cross industry resource efficiency through the commercial trading of materials, energy and water and sharing assets, logistics and expertise. It engages traditionally separate industries and other organisations in a collective approach to competitive advantage involving physical exchange of materials, energy, water and/or by-products together with the shared use of assets, logistics and expertise. See [www.nisp.org.uk](http://www.nisp.org.uk)

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