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Briefing: England's waste strategy: waste or resource management?

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In January 2006 the Institution of Civil Engineers (ICE), in conjunction with the Institution of Mechanical Engineers (IMechE), published *The Case for a Resource Management Strategy*, proposing that the national waste management strategy be repositioned as a resource management strategy, making up one element of a wider sustainable consumption and production agenda. The ensuing debate and stakeholder interest established support for England to adopt a material resource economy and a follow-up report *How to Deliver a Resource Management Strategy* was published in March 2007. This briefing outlines the blueprint set out in that document, summarises the government's response and assesses the extent to which the government's response reflects the resource management approach.

1. INTRODUCTION

In January 2006 the Institution of Civil Engineers (ICE), in conjunction with the Institution of Mechanical Engineers (IMechE), published a report, *The Case for a Resource Management Strategy*,[1] which proposed that the national waste management strategy should be repositioned as a resource management strategy, forming one element of a wider sustainable consumption and production agenda. The publication was timely given that the review of England's waste management strategy was then underway.

The Case for a Resource Management Strategy argued that there were sustainability benefits in returning wastes from all sectors back into the economic cycle as materials or energy, using a common measure, such as carbon dioxide (CO_2) emissions, to compare various waste management options. The report concluded that, on the basis of available evidence, decisions taken from a waste management perspective can be different to those based on resource management priorities leading to sub-optimal solutions, including negative or negligible benefits in terms of CO_2 outcomes. Significant investment, possibly as much as £10 billion, was needed to create the required materials processing infrastructure together with a strategic approach to its provision underpinned by strong government decision making and leadership.

The ensuing debate and stakeholder interest established support for England adopting a material resource economy and a follow-up report, *How to Deliver a Resource Management Strategy*,[2] was published by ICE and IMechE in March 2007.

The government's response via the new national waste strategy for England was published in May 2007. The content of the strategy is summarised and the extent to which it reflects the resource management approach discussed.

2. 'HOW TO DELIVER A RESOURCE MANAGEMENT STRATEGY' BLUEPRINT

2.1. Towards a material economy

How to Deliver a Resource Management Strategy highlights that the UK will be part of a European and perhaps global recovery economy by 2020. This is being driven by outcomes from global summits, European Union directives (e.g. on landfill and use of hazardous substances) and thematic strategies (integrated producer responsibility, recycling and prevention, and natural resources) and government policies. *How to Deliver a Resource Management Strategy* notes that change is evidenced by action in other countries, for example, Japan's material-cycle society, and the behaviour of large private sector companies, but concludes that much remains to be done if the UK is to join the material recovery economy. The report notes that substantial tonnages of material have to be recovered in the next 14 years just to meet regulatory targets. It goes on to state that recycling needs to increase by 150–200% overall and in specific material streams like organic material by up to 500%. In order for resources to be better used in every stage of their lives, from design and use to reprocessing and recovery, the UK needs a proper market for materials, and where appropriate, energy.

The important leadership role of a range of government departments in creating a material resource economy is a key theme in *How to Deliver a Resource Management Strategy*.

2.2. Delivery

How to Deliver a Resource Management Strategy set out six steps to achieve delivery.

2.2.1. Establish a leadership body and its agent. This aims to achieve a joined up approach and show how a resource management strategy can be delivered at a regional and local level. Leadership could best be provided by a cross-cutting government team involving the departments principally involved:

the Treasury, Department for Trade and Industry (now Department for Business, Enterprise and Regulatory Reform), Department for Transport, Department for Environment, Food and Rural Affairs (Defra), Department for Communities and Local Government, and other government bodies like the Cabinet Office and National Audit Office.

The delivery agent role is about leadership, communication, data management, strategic direction, planning and capacity building. The function could be undertaken by one of a number of existing organisations like the Waste and Resources Action Programme (Wrap), Environment Agency, Carbon Trust or Envirowise.

2.2.2. Collect the data. This is to develop the business cases for new systems and technologies, and the investment in new facilities and reverse logistics systems. Much better information is required on material flows to enable business cases to be developed for new infrastructure and the development of new systems and technologies.

2.2.3. Enable options for delivery. This is achieved by giving business the detail they need in order to invest and by getting the private sector to share non-confidential data with strategic planners. Industry needs confidence about security of supply and quality, together with reliability of demand before they will invest in new infrastructure and processes.

2.2.4. Use public sector leverage to create demand. This could be achieved by sending clear signals to industry with a commitment to use a percentage (at a reasonable and attainable level) of recovered construction material. For example, the total public sector spend on construction is £22·3 billion, this being split between national level decisions and local decisions taken by local authorities, police, health, and fire and rescue authorities, universities and other public bodies. The public sector could routinely specify the use of recycled materials where fit for purpose, as well as other sustainable options like renewable energy.

2.2.5. Develop action to overcome barriers to change. Links should be forged between leadership and the organisational capacity to make things happen. Barriers occur because there is no direct link between leadership and the organisational capacity to achieve delivery. For example, if stimulation of markets for recycled materials/products is not a direct responsibility, decisions default to convention, such as price.

2.2.6. Gain commitment from key people. This is necessary to deliver a strong signal to the market, to enable it to respond by delivering material to specification and price. People in the public and private sectors need to understand the vision and associated benefits. Flexible working between government and industry is needed to deliver resource management. This is a established via a range of organisational models: partnerships, joint ventures, agreements, coalitions, alliances and formal contractual arrangements. All of these approaches will be needed.

3. THE GOVERNMENT'S RESPONSE

3.1. A new strategy

The government published its new *Waste Strategy for England 2007*[3] in May 2007. The strategy starts from the viewpoint that we, as a nation, are living beyond our means in consuming natural resources, the document noting that it has been estimated that if everyone consumed the way we do, three planets would be needed to support the global population. The environmental rationale for action is that better management of waste can contribute to

(*a*) reducing greenhouse gasses, notably methane from landfill sites but also CO_2 through reuse and recycling
(*b*) improving resource efficiency—saving energy and material use through waste prevention, reuse, recycling and renewable energy recovery
(*c*) protecting public health through safe management of potentially hazardous substances
(*d*) safeguarding social amenity by reducing fly-tipping and limiting local nuisances from waste facilities.

3.2. Strategy elements

In summary, the main elements of the new strategy are as follows.

3.2.1. Incentivise efforts to reduce, reuse, and recycle waste and recover energy from waste. This is to be achieved by increasing the standard rate of landfill tax by £8/t/year from 2008 until at least 2011, removing (subject to consultation) the ban on local authorities introducing household financial incentives for waste reduction and recycling, and enhanced capital allowances for investment involving use of secondary recovered fuel for combined heat and power.

3.2.2. Reform regulation to drive the reduction of waste and diversion from landfill while reducing costs to compliant businesses and the regulator. This can be implemented by the use of waste protocols for when waste ceases to be waste, reform of permitting and exemption systems and the controls on handling, transport and transfer of waste and effective action on flytipping and illegal dumping abroad. Consideration is to be given to banning recyclable and biodegradable waste from landfill.

3.2.3. Target action on materials, products and sectors with the greatest scope for improving environmental and economic outcomes. Targeted materials sectors are paper, food, glass, aluminium, wood, plastic and textiles. Statutory and voluntary producer responsibility arrangements can be used, for example to minimise the environmental impacts of packaging and higher targets for recycling. (See below for actions in the construction sector.)

3.2.4. Stimulate investment in collection, recycling and recovery infrastructure, and markets for recovered materials that will maximise the value of materials and energy. This would require a strengthened collection and recycling advice service for local authorities, improving investment and procurement by local authorities, using the private finance initiative, improved capital allowances and/or renewable obligation certificates (ROCs) to encourage a variety of energy recovery technologies that contribute to a well balanced energy policy, and developing markets to exploit the energy recovery potential of waste wood. The government acknowledges that the key to more efficient recovery of materials and energy is greater segregation and sorting at

source and the efficient operation of high quality markets for materials and resources.

3.2.5. Improve national, regional and local governance, with a clearer performance and institutional framework. This will deliver better coordinated action and services on the ground by helping local authorities work together, establishing a new performance package for them and encouraging regional development agencies to coordinate business waste and resource management in partnership with other public and third sector organisations.

3.3. Specific proposals for the construction sector

Waste Strategy for England 2007 states that the construction sector is the largest single source of waste arisings in England with 90 million t of inert wastes suitable for reprocessing into aggregates. The strategy also notes that construction is the largest contributor to hazardous waste (32% of the total), amounting to 1·7 million t per annum. Although performance in reusing and recycling inert wastes has increased, the government considers there is scope for improved performance and is proposing consulting on a possible new target of halving the amount of construction, demolition and excavation waste going to landfill by 2012. Any construction waste targets will be presented in the government's sustainable construction strategy to be published later in 2007.

Wrap and the Building Research Establishment (BRE) are working to achieve a voluntary sector-level supply chain commitment to increase the recycling of plasterboard, and the government is developing similar approaches for other priority construction products such as window systems.

The government plans a mandatory requirement for site waste management plans for construction projects over a certain value (subject to consultation).

3.4. Culture change

The strategy recognises that the whole community, as designers, producers, retailers, purchasers and consumers, has a role to play. Campaigns to change behaviour for recycling will be extended to awareness and action on reducing waste.

3.5. Delivery

To drive the strategy, the government is establishing a Defra-led waste strategy board to provide leadership within and across government. The board will be responsible for taking forward the delivery of the strategy and developing new policy actions as necessary to deliver the required outcomes. The waste strategy board will be supported by a waste stakeholder group to provide external advice, challenge and assistance with delivery.

4. DISCUSSION

Waste Strategy for England 2007 represents a marked departure from previous strategies in that it takes a more holistic view of waste materials in the context of resource management. It takes on board many ICE/IMechE recommendations, including the need to maximise the environmental and economic outcomes from recycling and recovery, rather than simply seeing the latter as a means of achieving targets. It is an important step forward in moving toward the concept of a secondary resource economy, though it can be argued that it does not go far enough in some key areas.

The naming of *Waste Strategy for England 2007* as a 'waste' strategy is no doubt related to the legal status of waste in the context of European legislation and the need to be consistent with the requirements of the EC waste framework directive.[4] This however misses an important opportunity, not least in public perception terms, to send a clear message to all sectors that the agenda is changing to material resource management.

An important consequence of the traditional 'waste'-focused approach is that it does not fully recognise that waste management is increasingly not an end in itself but a key element of sustainable consumption and production in the wider economy. Thus in order to maximise the potential benefits of the secondary resource economy, resource management needs to operate under the same principles as apply to the rest of the economy so that recovered materials and products are better able to compete in the market place with new ones. This means waste and resource management needs to be organised efficiently, for example by providing a strategic infrastructure network as advocated in *The Case for a Resource Management Strategy*. This issue is not grasped in *Waste Strategy for England 2007*.

Linked to the above, while *Waste Strategy for England 2007* appears less focused on municipal waste than previous national waste strategies, it fails to set out effective proposals for integrating household, commercial and industrial wastes processing. This is, perhaps, understandable in the context of achieving landfill directive targets, a holistic resource management approach should address material streams regardless of whether the material comes from households, shops, offices or factories. Rather than merely encouraging local authorities and third sector organisations to achieve a more integrated approach, more radical action to create the climate where industry has greater confidence to invest in 'merchant' facilities to service all sectors would potentially lead to a more effective and cost-effective solution for all.

Although *Waste Strategy for England 2007* is clear in setting out broad strategy objectives, it is lacking detail in many areas on how they will be achieved. The government would probably answer this by pointing to the proposed inter-departmental waste strategy board and its role in developing new policy actions. It is vital, as advocated in the ICE/IMechE report *How to Deliver a Resource Management Strategy,* that the waste strategy board is effective in achieving a joined-up approach and clear leadership from a range of government departments in mapping the way forward.

A key issue that should be addressed by the waste strategy board is the need for better strategic planning on a material stream basis. This is needed to give industry (not just the waste industry) greater confidence to invest in new strategic infrastructure, including new technologies to utilise recovered materials and products. There are currently 'gaps' in the evidence base which need to be filled and, importantly, there is no framework or methodology for designing an overall integrated system—from collection through to reprocessing—based on the best available evidence about effectiveness and efficiency. Until this problem is resolved, England is unlikely to achieve delivery routinely on the ground of the most efficient and effective resource management solutions.

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