

THE WASTE HIERARCHY



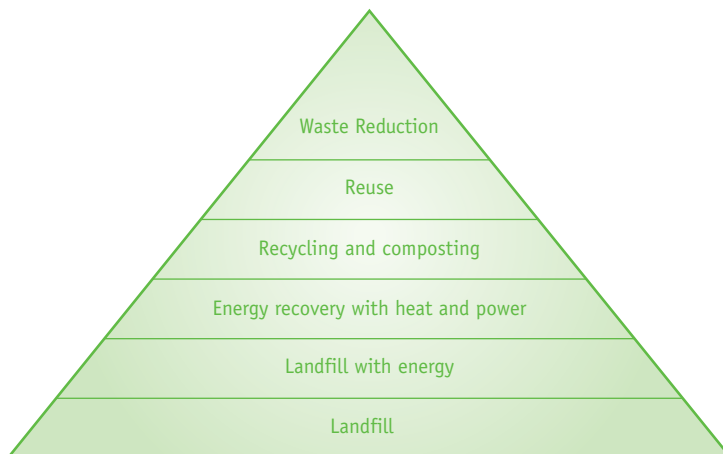
POSITION PAPER

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WHAT IS THE WASTE HIERARCHY ?

The waste hierarchy was first introduced into European waste policy in the European Union's Waste Framework Directive of 1975. In 1989 it was formalised into a hierarchy of management options in the European Commission's Community Strategy for Waste Management, and further endorsed in the Commission's review of this strategy in 1996. Drawing on the precautionary principle, the waste hierarchy prioritised the prevention and reduction of waste, then its reuse and recycling and lastly the optimisation of its final disposal. The concept is described by the "3Rs" – Reduce, Reuse, Recover – followed by unavoidable disposal.

The UK has incorporated the concept into UK waste management policy since the early 1990s. In its report Waste Not Want Not (2000) the government's Strategy Unit produced a more detailed version of the waste hierarchy, as shown here. Waste reduction is the most preferred option, while landfill without energy recovery is the least preferred option.



The waste hierarchy has been fundamental in designing national policies and plans that move the UK away from its dependence on landfill. Central Government initiatives prompted by the waste hierarchy include:

- the introduction of a landfill tax and a landfill diversion trading scheme
- setting national recycling and recovery targets
- encouraging energy recovery through market-based trading schemes

Strategic planning for waste has been profoundly influenced by the waste hierarchy. Local Authority strategic and spatial waste management plans have evolved during the 1990s from collect-and-dispose models to a more systems-based approach explicitly incorporating recycling and recovery options. Government support to Local Authorities in the form of Private Finance Initiative (PFI) funding goes hand in hand with a requirement for service providers to meet and indeed exceed Best Value recycling targets imposed by Government.

WHAT ARE THE ISSUES ?

The waste hierarchy has been applied almost exclusively to the field of post-consumer waste management. In reality, the waste hierarchy is an expression of the broader concept of the sustainable use of resources, exemplified by the 3Rs at the apex of the pyramid. End-of-pipe management strategies must be linked with strategies focused at the start of the value chain, where changes in product design and consumption patterns can prevent or reduce waste production. Waste managers typically have little or no control over this aspect of resource management.

These linkages are gradually entering policy development, for example through the forthcoming thematic strategy on waste prevention and recycling and Integrated Product Policy (IPP) initiatives at European Union level. Policy instruments shaped by the primacy of prevention and reduction in the waste hierarchy include raw material taxes, the "Factor 4" principle of product design, and the Waste Electrical and Electronic Equipment (WEEE) and End of Life Vehicle (ELV) Directives.

There have been widely differing interpretations of the waste hierarchy. Some planners and commentators regard the pyramid as representing a strict order of preference in which recycling is always preferable to incineration,

while incineration is always preferable to landfilling, regardless of factors such as cost, environmental outcomes or deliverability. Emphasis in waste policies and plans is placed on materials recycling and recovery at the expense of energy recovery and landfill. An extreme view considers that the waste hierarchy legitimises curtailment or outright bans on landfilling and incineration.

Others have regarded the waste hierarchy as a general guiding principle, for a more flexible approach to strategy development. While recycling and recovery options are favoured over those that do not recover value in some form, options at the bottom of the hierarchy are viewed as essential ingredients for a balanced strategy. The term integrated waste management applies to this interpretation.

Using life cycle thinking and cost-benefit analysis, studies have been performed to assess how the waste hierarchy should best be interpreted. The conclusions reached by these studies are fairly consistent:

- **Recycling is generally the most desirable option for materials such as aluminium, ferrous metals and glass.** Recycling these materials results in conservation of natural resources and expenditure of less energy in primary production processes.
- **Recycling of paper, cardboard and plastics is less supportable** relative to energy recovery or even landfilling.
- **Composting of biodegradable waste** can offer net environmental and social benefits, provided the compost is of a quality that allows for the displacement of peat.
- **The type of collection system and transportation distance** can influence the optimum mix of management options. Local circumstances will determine whether the optimum solution for plastics is recycling or energy recovery, or whether glass should be recycled or landfilled.

A number of material types (eg. textiles) are not readily recovered from the mixed waste stream, even if recycling represented a net social benefit.



WHAT IS SITA UK'S POSITION ?

1 The waste hierarchy must be applied in the wider context of resource management and sustainable consumption. Too little attention has been paid to the preventative aspects in policy development.

2 The waste hierarchy is a key principle guiding SITA UK's vision and strategy for business development. We interpret the waste hierarchy not as a rigid set of preferences, but as a framework for building affordable, environmentally friendly and integrated waste management solutions in partnership with our customers, tailored to suit local circumstances.

3 SITA UK will develop integrated waste management solutions and service offers designed to meet Government recycling and energy recovery targets. SITA UK will keep product quality as the foremost consideration when designing logistical and treatment solutions.

4 SITA UK regards thermal treatment and landfilling as essential components of a balanced waste management system able to deliver our contractual obligations and guarantee security of service. Wherever possible we aim to restrict ultimate disposal to residual wastes, after value has been extracted.

5 SITA UK will engage with Government, our customers, and with the wider community to promote the principles of sustainable development, raise environmental awareness, encourage recycling, and stimulate markets for recycled products.

SITA UK is the leading provider of resource and waste management services in the UK today. A division of the multi-services group, SUEZ, SITA offers a wide range of solutions to the public and private sector through consultancy services, waste and recyclable collections and treatment facilities.

For more information on the Waste Hierarchy please contact our in-house expert – Dr Gev Eduljee on 01628 513195 or email him at gev.eduljee@sita.co.uk