



Resource Guide in:

Sustainable Waste Management

Introduction

Waste is an issue of increasing importance in industry as environmental issues, government directives and increasing landfill taxes are influencing us towards more sustainable management of solid waste streams. Heightened environmental awareness amongst consumers and increasing media coverage are factors in persuading firms to embrace environmental issues and institute sustainable practices as part of their operations. This package looks at waste management in the hospitality industry, but can be applied across many different industries. There are many areas in which the hospitality industry can improve compliance with the waste management hierarchy of reducing, reusing and recycling in order to reduce the waste stream before arriving at the disposal stage. Some of the central sustainability issues surrounding waste management include:

- Inefficient resource use – the land filling of materials that still have value, perhaps in a different form
- the increasing shortage of land where waste can be buried
- the large distances over which waste is transported
- health implications of hazardous waste and recent implications about landfill sites
- polluting effects of landfill sites – gas (including methane) emissions and liquid runoff
- the economic folly of unnecessary and excess packaging
- excess consumption driven by the forces of lifestyle marketing and designed obsolescence

Annotated Bibliography

Kirk, D (1996) Environmental Management for Hotels, Oxford, Butterworth-Heinemann

This work is an uncomplicated introduction to environmental issues and their relevance to hotels, and contains a chapter entitled 'Materials and Waste Management'. It commences by using a practical model to assess the level of waste in a hotel, and considers assessing purchasing policy as a means of reducing the amount of waste brought into a hotel. It digresses slightly to discuss pollution, before covering some of the more commonly recycled materials, although it questions the economics of recycling in some cases, which somewhat challenges the message being put across. The chapter ends with some brief case studies where hotels have implemented waste reduction techniques and improved purchasing practices.

Webster, K (2000) Environmental Management in the Hospitality Industry, London, Cassell

This book is a good starting point for those with a limited understanding of environmental issues. The first section provides a broad history to the vast array of global problems that are currently prevalent and topical in the world today. It then addresses how these are being dealt with at global, national and regional levels. With this background set, it then concentrates on the hospitality industry with chapters on waste management and packaging and disposable products. It could perhaps place a little less influence on the economics of management decisions about purchasing decisions and waste collection and disposal, but covers a good range of options. A clear and compact piece, relevant to all those who work in the hospitality industry.

Gray, R & Bebbington, J (2001) Accounting for the Environment, London, Paul Chapman Publishing

This book, published in association with a professional accounting body, has a comprehensive chapter on the rising importance and necessity of a formal waste management strategy within the management structure of a business. It highlights, in a number of summary boxes, the reasons for minimising waste and the obligations to do so, along with changing practices in the world of business that encourages firms to take into account the effects that their waste has on the wider world (i.e. internalising the externality costs of waste, for example, pollution). Pollution legislation and health and safety regulations are stressed as driving factors for better waste management, and that managing waste in a more sustainable way will achieve these ends. This is where financial accounting can make a contribution to sustainability. The economics of packaging are also addressed.

Green Globe (1994) Waste Minimisation for Restaurants and Catering Facilities, Oxford, WTTERC

This is one of a series of booklets in a pack produced by Green Globe, a worldwide environmental management and awareness programme for the tourism and travel industry. Other booklets on waste in the pack, which also covers water, energy and environmental policy, include Waste Minimisation for:

- the Transport Sector
- Tour Operators and Travel Agents
- Visitor Attractions
- Office Facilities

The basic text is the same throughout this series of short booklets, which are useful to those with only a beginner's knowledge of the environmental implications of waste management. They offer practical advice on how to go about minimising and reducing waste, and include examples relevant to the sector where efforts to both reduce waste and make cost savings have been successful.

Biffa (2002), Future Perfect

A report on the future of the waste industry in the UK. This publication examines:

- Data collection issues and economics
- Policy development and instruments of change from European and UK Government
- Technology capability in transport and end processes
- Knowledge sharing, public education and dissemination

Hawkins , R & Todd M (2002), *Waste Counts – A Handbook for Accommodation Operators*

A practical guide to assist accommodation establishments minimise their waste. Contains a tool in the form of tables to calculate the amount of waste produced and then identify ways of reducing this. It also contains a directory of recycling agents, aimed at the Oxfordshire region but with national UK relevance as well.

Annotated Guide to Journals and Periodicals

WARMER Bulletin (<http://www.residua.com/wb/description/>)

This is the journal of the Resource Recovery Forum which is published bi-monthly. The Resource Recovery Forum is a network of more than 60 organisations with a shared interest in seeing society achieve more sustainable waste management - making better use of waste that is produced. The Forum works towards this end by promoting the best practicable environmental option for waste and providing links between waste producers, handlers and processors. It covers all aspects of waste management, but the bias is towards sustainability. Each issue contains a four-page information sheet dedicated to a specific material. It is very topical, keeping abreast of all current issues and legislation, which even though not specific to hospitality, invariably affect all industries. Subscription is by membership of the Forum, and includes regular e-mail updates (virtually daily) of breaking news on waste topics.

Green Hotelier Journal (<http://www.ihei.org/csr/csrwebassist.nsf/content/f1c2a3b4.html#5>)

This is the journal of the International Hotels Environment Initiative (IHEI), published four times a year. Each issue covers two or three environmental issues facing the hotel industry, as well as news of environmental schemes and initiatives, including examples from hotel chains and specific hotels and resorts. Most issues contain a news item featuring waste management. Issue 9 (January 1998) has a case study of kitchen waste management at the Maurya Sheraton, New Delhi, India, which illustrates how some products perceived as waste can be re-used in the kitchen and the hotel. Issue 20 (October 2000) has a more in-depth feature on 'Managing and Reducing Waste', which contains several short case studies, and step-by-step practical advice on how to go about decreasing the solid waste stream in hotels.

Green Futures Periodical (<http://www.greenfutures.org.uk/>)

Published bi-monthly by Forum for the Future, which seeks to 'accelerate the building of a sustainable way of life, taking a positive solutions-oriented approach'. Each issue contains a section devoted to 'materials and recycling', usually a page or two, which features new organisations, schemes and technologies which are making a contribution to more sustainable waste management. Each feature is brief, but provides contact details for further information. Although not aimed specifically at the hospitality industry, there are many ways in which the items featured could be relevant. Some examples include floor tiles from TV and PC screens, recycling of mobile phones, composting with vermiculture (worms) and an internet site for the exchanging of unwanted materials.

Ethical Consumer Periodical (<http://www.ethicalconsumer.org/online.htm>)

This publication looks at the broader ethical issues of purchasing, covering the environment, animal rights, and people (social responsibility). It is a bi-monthly magazine, and each one contains four in-depth features in which different brands of a product are judged and graded as to their ethical suitability according to criteria under these headings. Under the environmental banner, companies' products are investigated for, amongst other things, polluting effects in the manufacturing process and unnecessary packaging.

Materials Recycling Week (<http://www.environmental-center.com/magazine/emap/>)

Weekly journal for the waste industry, containing latest industry news and reports on materials.

Annotated Guide to Internet Resources

There are many internet sites dedicated to waste and recycling, and even more which cover waste under the wider umbrella of sustainability. There are sites such as greenhotels.com, greenglobe.org and ihei.org, which are organisations committed to sustainability in the hospitality industry, but the sites cater mainly for members and there is limited information available to the casual browser.

Tips for Searching the World Wide Web

Sites:

- www.alupro.org.uk - aluminium can recycling
- www.ciwim.org.uk - Chartered Institute of Wastes Management – professional body for waste management in the UK
- www.compost.org.uk - The Composting Association
- www.defra.gov.uk - website of the Department for Environment, Food and Rural Affairs of the UK Government – contains consultation papers on waste
- www.letsrecycle.com - Recycling and waste management news, including market prices for recycled materials
- www.resourcesnotwaste.org - Resource Recovery Forum – links to subject areas
- www.wastewatch.co.uk - a charity promoting action on waste reduction, re-use and recycling
- www.wrap.org - Waste and Resources Action Programme – a government funded programme aimed at stabilising the markets for recycled goods and materials
- www.zerowaste.co.nz - a comprehensive site looking at a wide variety of waste issues, also containing links to resources

Key words:

- aerobic
- compost
- disposal
- incineration
- landfill
- leachate
- organic
- putrescible

- recycling
- sustainable, sustainability
- waste

Related Topics:

Emissions

Global warming

Pollution

Resource management

Sustainable Development

Water management

Suggested Delivery Examples

Teaching Sessions

To give context to the understanding of the implications of waste management, various activities are possible, many perhaps more suitable to practical workshop/seminar sessions. For example:

- Considering waste as a resource (eg. Recycling, re-use, innovations)
- Conducting audits of packaging (eg. Packaging from a shopping trip, home/self waste over one day)
- Considering the benefits to a business of waste reduction
- Investigating simple low cost technologies which reduce landfill waste
- Using case studies for exercises (or assessment)
- Conducting lab based experiments (eg. Putrescent waste experiments such as organic waste in a fermenting jar with a balloon over the top).

Assessment

A variety of assignments could include students in either specific individual tasks or compilation of tasks into a whole module/unit of study:

Practically undertaking an audit of a waste stream (examples of waste audit sheets can be found in the Green Globe Guides).

Completing a management report on a firm's waste management based on a case study audit. This could assess current performance, areas for improvement, recommendations for changes and the financial benefits aligned to this.

Conducting general research in the area of sustainability and waste management, with the aim of understanding the environmental and financial issues involved. Essays or annotated bibliographies could be used to illustrate the breadth and depth of reading.