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Review

Towards a Zero Waste Strategy for an English Local Authority

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ABSTRACT

Many developed countries are using a challenging Zero Waste concept to change current waste management practices to more sustainable methods of managing waste, including household waste. The concept includes waste prevention; high levels of recycling and recovery of all resources from waste; and behavioural change. This research provides a case study on the development of a Zero Waste Strategy (ZWS) for Charnwood Borough Council (CBC), an English Local Authority (LA), which has an established household waste management system.

This paper describes the steps taken by the authors, together with CBC to devise and implement a ZWS. A series of focus groups were held involving elected members of the LA and members of the community. The aim was to identify the core aspects of environmental, operational and social demands in order to prioritise actions to be included in a draft ZWS. The draft underwent wider public consultation, which highlighted areas for revision, and following revision has been adopted by the LA. The ZWS takes into account local issues, local policies, alongside national strategies and legislation.

Many of the options identified during this research complement each other and if used in combination may see large steps taken towards Zero Waste. This is difficult to achieve without a holistic approach to waste generation, collection, treatment and disposal. Key findings from this research are to switch the focus from recycling to reuse and waste prevention, alongside increasing education and behaviour change programmes for householders. Additionally, the potential value of separately collecting food waste, with a recognised high potential yield, must be explored to ensure meeting targets set in the ZWS and the requirements of the Landfill Directive.

Contents

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1. Introduction

The Brundtland Report "Our Common Future" (WCED, 1987) brought the concept of sustainable development into the mainstream of business and political thought. Since then, legislation has been introduced at European and National levels with the aim of improving environmental performance. This includes better waste management practices. On a local level, this has led to strategies and operational practices including the introduction of separate household collections for organic (compostable) waste and recyclable materials. Local Authorities (LAs) have a key role in supporting sustainable development through many of their activities, planning, education and waste management (Wilson and Williams, 2007).

Resource depletion, climate change and rising consumer awareness are providing challenges for more sustainable solutions to waste management and treatment. For many years, the focus in the UK has been on increasing the amount of household waste (HW) that is collected for recycling and reducing landfill disposal (Defra, 2007). Recycling targets, source separated kerbside collections have been implemented and education programmes for householders to encourage recycling have been undertaken (WRAP, 2009). As such, annual amounts of recycled HW increased from 3.2 to 10.7 million tonnes between 2001/2002 and 2011/2012 (Defra, 2012).

Zero Waste is one of the most visionary concepts for addressing waste problems and encompasses many different strategies developed for sustainable management of waste; these include waste reduction, repair, reuse and recycling (Welsh Assembly Govt., 2010).

The aim of this paper is to describe the process undertaken by the authors with CBC to develop a draft Zero Waste Strategy (ZWS) that will integrate alongside an established household waste management system.

2. Research context – household waste management in the UK

Household waste makes up approximately 9% of all waste collected and treated in the UK each year (Defra, 2007). Environmental, social, governmental and fiscal pressures have led to a range of measures being introduced that have impacted on the way HW is collected and treated. These include the introduction of separate kerbside collections for recyclable materials, and organic waste for composting alongside collections of residual waste for treatment or landfill disposal (LGA, 2013). A well operated HW collection system can have a considerable impact on increasing recycling levels (Barr and Gilg, 2005).

In the best performing areas, approximately 20% of households do not make use of their recycling collection service (Harder and Woodard, 2007). Changing behaviour to more sustainable patterns remains one of the biggest waste management challenges (Price, 2001). This requires raising awareness in waste prevention and reuse and providing information on a wider range of sustainable actions rather than concentrating on recycling. However, funding for such schemes is now under significant threat due to the continued reductions in Local Government spending and impact of these activities is very difficult to monitor (Read et al., 2009). Holistic approaches to material flow, resource use and long term sustainability are required for a truly sustainable Zero Waste City (Zaman and Lehmann, 2011).

3. Defining Zero Waste

A variety of definitions exist for Zero Waste depending on the primary focus. These include 'Zero Waste to Landfill 'and 'Zero Waste emissions to land, sea and air'. However, all focus on sustainable waste management and comprehensive use of resources. This, together with sustainable design and management of products and processes brings a move towards a Circular Economy (Ellen MacArthur Foundation, 2010) with a holistic approach to preventing and managing waste. Definitions of Zero Waste taken from a variety of sources, including strategy documents, are outlined in Table 1.

Recent research also recognises that Zero Waste utilises a range of measures aimed at eliminating waste and challenging conventional ways of thinking, to view waste as a resource with value rather than a problem to be dealt with (Curran and Williams, 2012). The concept of Zero Waste goes beyond maximising recycling and focusing on the Waste Hierarchy (Fig. 1) by targeting recovery of all resources, and aiming to reduce the amount of waste collected, whilst reusing and recycling progressively higher proportions and designing and managing production processes to eliminate waste and encourage recovery of all resources to mitigate the impact of waste (Scottish Government, 2010).

In this research ZW is defined as an aspirational end process where all waste that is produced is reused or recycled as a resource without the need for any landfill or energy recovery.