

Design of the times for waste

Councils and builders need tighter guidance to stop recycling in new developments from flatlining. **Andrea Hughes** describes how the development of such guidance became a turning point in the drive for a circular economy in one region

The Resource Event 2014 was billed as the first major affair for the circular economy in a resource-constrained world that demands new thinking and new business models.

Representatives from sustainability and resource management, extraction, design, recycling, manufacturing, retail and resource recovery across Europe came together at London's Excel centre to learn how they could capitalise on the commercial opportunities of a circular economy.

A recurring theme was that the need to see waste as a resource must be central to the drive for a circular economy. Over the past decade, the population's appetite for recycling has increased. Data from the European Environment Agency illustrates that the UK's recycling rates increased from 12% in 2001 to 39% in 2010.

At the time, this represented the fastest growth in Europe and coincided with the increasing provision of easy-access recycling facilities across the country. These included neighbourhood recycling sites in car parks and recreation grounds and an increase in kerbside collections. But DEFRA statistics are now showing that recycling rates are slowing down.

A survey by Greenredeem, the recycling awards company, has highlighted a growing complacency towards recycling among the British public. More than a third of those surveyed claimed they did not recycle due to a lack of convenient facilities. This is evidenced by reports from *Letsrecycle.com* that councils in England achieved a combined recycling and composting rate of 43.6% over the 2012 calendar year, up just 0.6% from the previous 12 months.

This is all bad news for our European commitments. The Landfill Directive (1999/31/EC) requires a diversion of municipal waste from landfill to 35% of 1995 levels by 2020 and the Revised EU Waste Framework Directive 2009/98/EC requires the recycling or preparation for reuse of 50% of household waste by 2020. Currently, the UK ranks eighth in Europe.

In a league table drawn up by the European Commission, the UK comes below Austria, the Netherlands, Denmark, Germany, Sweden, Belgium, and Luxembourg. The commission recognises the danger of this plateau effect, along with the need for recycling to maintain a high public profile.

One environmental initiative, Generation Awake, involves a European Commission public information film, which appears as a trailer for a fictional movie *The Awakeners*. In it, various waste characters urge the public to turn waste into a resource through tips on how to reduce waste. The campaign urges young urban adults to use social media such as Facebook to improve sustainable behaviour.

But in his book *Promoting Sustainable Behaviour*, Adam Corner states that "public information campaigns need more than just a clever slogan and the right information to succeed". He says that if a strategy for promoting sustainable behaviour engages with people at a deeper level than "single behaviours" and gives thought to how people's personal values shape behaviour, then there are essential gains to be made in terms of building a sustainable society.

Collaborative working is seen as key to the success of this. Professor Chris Huxham who is known internationally for her work on collaboration, said: "In some cases, it should be possible to achieve some higher-level... objectives for society as a whole rather than just for participating organisations."

Collaborative approach

In the past few months, a collaboration between a council, a community and a major house builder has shown exactly how much more can be achieved when there is a will to promote sustainable behaviour and a commitment to a collaborative approach.

Erskine barracks in Wilton, Salisbury was the headquarters of the UK Land Forces for many years. In 2010, the headquarters moved to Andover and for the past four years the 13.5-hectare site has laid derelict. When the site closed, local residents formed a group that began to develop ideas for an eco park.

This group became the Wilton Community Land Trust and gave itself the remit to 'empower our local community to create long-lasting social, economic and environmental improvements'. The trust was introduced to the business development group Our Enterprise, which in turn introduced housebuilder Redrow Homes.

Redrow bought the land and existing permissions in April 2013 and a consortium was created, the Wilton Hill Partnership. From

the outset, the twin themes of sustainability and a legacy for the veterans of the armed forces were the focus of the group. Monthly technical meetings were held to develop the proposals with these themes at the heart.

Alan Caldwell, head of planning and regeneration consultant Alan Caldwell Associates, notes: "The partnership between the three organisations has been the key to communication and community input on all aspects of this project. At a strategic level I don't think a community could have such a constructive input through the normal process."

In an assessment team led by planners Terence O'Rourke, consultant Mayer Brown was commissioned to provide the input on waste management along with transport, infrastructure, drainage, air and noise.

From the outset it was apparent all parties were committed to waste management, both in the initial demolition phase and in the operation of the future scheme. Redrow brought a strong dedication to waste management, having worked closely with the Waste & Resources Action Programme (WRAP) to develop supplier procurement questionnaires.

Since 2004 they have also been developing and using a detailed and prescriptive waste management policy, which involves the segregation of waste during demolition and construction. This has resulted in them boasting that 93% of their site waste is diverted from landfill.

However, for the complete waste management of the proposals, the other side of the equation was the management of operational waste from the development itself. This is where ongoing and successful waste management requires both practical guidance from the council as well as commitment from the developer.

Wilton Hill, as the development has been named, is in the administrative boundary of Wiltshire Council. For its part, Wiltshire Council has demonstrated a strong commitment to waste management in the region. Between 2001 and 2006, Wiltshire made rapid progress on providing new recycling and composting services for municipal waste.

This resulted in a doubling of recycling rates with the work of the Wiltshire Waste



A recurring theme at the Resource Event was the need to see waste as a resource

Partnership, which was made up of the former district councils and Wiltshire County Council. In 2012 the waste collection service was harmonised by Wiltshire Council, which increased the recycling opportunities for many residents.

In 2012 its waste strategy was updated, setting new targets and providing guidelines for the commissioning of waste services as existing ones come to an end. Crucially for developers, in 2011 Wiltshire Council's waste collection team, in consultation with the planning department, developed the Wiltshire Council Waste Collection Guidance for New Developments to ensure that "new buildings are designed to enable waste to be segregated for recycling and composting and to be stored and collected in such a way that is mutually beneficial to all parties involved".

Linking guidance

The development of a document such as this is a turning point in the drive for a circular economy. Without this type of linking guidance between council and developer, recycling rates will inevitably plateau as efficient waste collection cannot occur.

During the development of the waste management plan for the site, Gareth Jones, a senior waste technical officer for Wiltshire

Council advised the team that: "Proactive consideration of how the waste collection service will be delivered in a new development is important in ensuring that nuisance to residents is avoided.

"If the requirements of the waste collection service are not taken into account in the design process, it can have a negative impact on the attractiveness of the living space.

"For example, where there is no consideration of the distance between container storage and collection points, there is an impact on how residents access services and how the council collects.

"This can lead to bins being grouped on street corners, which can be unpleasant for nearby households, and can discourage residents from putting out recycling containers where these distances are excessive. Poorly located bin stores can also lead to an increase in excess waste and fly-tipping.

"These examples have an adverse effect on recycling performance and on the quality of life for residents living in the new development, all of which can be avoided with early consideration in the design process."

The document also provides guidance on the recycling requirements within buildings, requesting that provision is made in kitchens for facilities such as pull-out cupboards, with

two containers attached, for waste and dry recyclables, under sink storage solutions or areas of storage available in kitchen and utility rooms to enable the separation of waste within the home.

The work of the waste service is also supported by specific policies within the waste core strategy which calls for 100% of approved new developments to carry out waste audits and for 100% of major developments to make provision for waste segregation and recycling.

All of these requirements were readily accommodated within the evolution of the Wilton Hill masterplan. Tim Peach, master planner for Redrow, says: "While the requirements of the guidance were over and above that required in typical housing developments, we were happy to accommodate them as they dovetailed with the type of scheme that the community wanted and with our own movements towards more sustainable development."

Research and sustainability director at Redrow, Nigel Smith, added: "We have listened to suggestions made by the community to complement our design work. As a result we have identified a potential partnership opportunity with the nearby Malaby Biogas anaerobic digestion plant at Warminster, which would see food waste from Wilton Hill used to generate electricity and heat."

Business in the limelight

In May last year, senior DEFRA official Dr Colin Church told a panel debate on resources that the government was not in a position to provide financial stimulus to help the UK move towards a circular economy. "This is a time for business-led solutions", he said, pointing out the government was looking for "the people on the ground" to drive the revolution.

The application for the Wilton Hill proposals was registered on 16 October 2013 with the full approval of The Wilton Partnership. It is hoped this flagship project, provided by the 'people on the ground', will set the template for what can be achieved in waste management when the community, council and developer work together to promote sustainable behaviour and move towards a true circular economy. ■

Andrea Hughes is an associate environmental consultant at Mayer Brown