

GOVERNING SUSTAINABLE WASTE MANAGEMENT

*Newcastle City Council
Recycling Centres*

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1 INTRODUCTION

Since *Waste Strategy 2000*, municipal waste policy (MWP) has undergone considerable upheaval. Local authorities which until recently had to concern themselves with little more than the collection, planning and disposal of waste, and a relatively narrow range of regulations, today have a radically broadened agenda with progressive statutory performance targets for recycling and composting, as well as responsibilities for diversion of waste from landfill, recovery from waste and waste minimisation. In the wake of these developments, the *Governing Sustainable Waste Management*¹ project seeks to examine what facilitates, and what prevents, the development and implementation of sustainable MWP in the North East of England, and the wider lessons which can be learned across the UK. The project involves an overview of MWP across the region, and the analysis of three case-studies: Durham County Council; Newcastle City Council; and Stockton Borough Council. In each case, semi-structured interviews have been conducted with local policy-makers and stakeholders, and a range of policy documents have been analysed. Six initiatives which aim to reduce, re-use or recycle waste have been selected for further research, involving semi-structured interviews with relevant actors, documentary analysis, and interviews and participant observation with those communities involved in the particular waste management initiative. These research 'snapshots' are intended to illustrate the range of good practice taking place across the region and the challenges facing the development of sustainable waste management policy and practice.

This report focuses on Newcastle City Council's (NCC) Recycling Centres (RCs). The research involved informal interviews with over 240 members of the public as they used the centres, on-going information gathering from site staff over the course of the fieldwork, and participant observation of people's waste habits at the facilities. The report details the development and day-to-day working of the RCs, and considers more broadly how policy agendas, together with the physical nature and cultural perceptions of such sites, influence the opportunities for managing waste sustainably. We hope that in highlighting the positive lessons and the challenges that our research has uncovered, the report will be of interest to local authorities and waste contractors, as well as to regional and national government.

The report is structured in the following way. Section 2 provides an overview of NCC's waste management strategy and the key drivers for increasing the proportion of waste diverted from landfill, while Section 3 examines the ways in which NCC has sought to improve the RC sites in order to contribute to these broader aims. Sections 4 and 5 identify examples of good practice and the key challenges facing RCs, respectively, in terms of increasing recycling/composting rates and in contributing to the wider agenda of promoting waste reduction. Section 6 then considers the implications for sustainable waste management that can be drawn from this case-study in order to promote sustainable waste management, and Section 7 places these implications within the wider findings of the research project.

2 BACKGROUND

2.1 NCC waste strategy

NCC is a Unitary Authority and has responsibility for the collection and disposal of municipal waste, as well as for planning for the facilities to provide these services. The responsibility for leading on waste management lies with the Street Services Division of the Council's Neighbourhood Services Directorate. NCC's *Waste Management Strategy and Action Plan (2005)* states its vision as seeking **"to achieve zero waste by treating waste as a resource and not a problem"**, aiming to achieve this through improving "how waste is collected and dealt with and ensure that this balances the environmental benefits, social gain and financial costs to the community". A range of actions are set out in the waste strategy, including:

- raising public awareness of waste minimisation and recycling/composting;
- working in partnerships with commercial, voluntary and community sectors;

¹ The project team acknowledges the support of H J Banks & Co. Ltd. funders of the project through the Landfill Tax Credits Scheme, facilitated by Entrust. We are also grateful for the support of the International Centre for Regional Regeneration and Development, University of Durham. Finally we wish to thank our many respondents for the time and support they have given to the project to date. For more details, visit the project web pages via: www.dur.ac.uk/geography/research/researchprojects/.

- reviewing bulky waste collection;
- piloting kerbside collection of green wastes/additional materials for recycling;
- improving RCs.

Currently, approximately 100,000 homes are served by kerbside collection services, leaving only medium and high rise properties, accounting for around 20,000 households, to be served by different means. Around half of the city's 48 high rise blocks are now served by communal facilities, and there are a further 21 communal recycling facilities and 4 larger RCs, while 10,000 compost bins have been distributed across the city by NCC in the past few years².

2.2 Drivers for recycling/composting

Under the Best Value Performance Indicators (BVPI) framework, specifically BVPI 82 a&b, NCC have been set the target of recycling or composting 18% of household waste in 2005/06. In 2003/04, 10.08% of household waste was recycled/composted against the BVPI target of 10% (see Table 1).

Table 1: 2003/04 recycling/composting tonnages by source³

Activity	Tonnage
Recycling Centres	4,543
Bring sites	2,626
Kerbside recycling	3,732
White goods/fridges	720
Other contracts	709
Charities	548
Total recycled/composted	12,878
Total household waste	127,719

In collecting the largest tonnages of material recycled/composted, the RCs played a central role in the achievement of the 2003/04 target. As pressures for the diversion of waste from landfill continue to mount, in order to meet the recycling and composting target of 18% in 2005/06 and through the recent implementation of the Landfill Allowance Trading Scheme (LATS) scheme, RCs are likely to become more important within NCC's municipal waste policy. However, while NCC is currently below national and regional averages for recycling/composting, it is anticipated that performance will improve once a Mechanical Biological Treatment (MBT) facility becomes operational in autumn 2005. MBT is designed to extract metals for recycling and to separate the organic section of the waste stream, which will then be taken for in-vessel composting at a site in Northumberland.

3 IMPLEMENTING IMPROVEMENTS TO RECYCLING CENTRES

3.1 Infrastructures and partnerships

NCC have four RCs, Benwell, Brunswick, Byker, and Walbottle. During the period of fieldwork, the Byker site was closed for refurbishment and as a result the case-study focuses on the other three sites. In each case, the management and running of the sites involves a partnership between the local authority and a waste management contractor. Table 2 shows the materials collected at the three RC sites included in this study.

² NCC (2005) Waste Management Strategy and Action Plan.

³ NCC (2005) Waste Management Strategy and Action Plan.

Table 2: Waste materials accepted at NCC Recycling Centres⁴

	Benwell	Brunswick	Walbottle
newspaper/magazines	Yes	Yes	Yes
glass bottles/jars	Yes	Yes	Yes
cans		Yes	Yes
plastic bottles		Yes	Yes
textiles		Yes	Yes
books		Yes	
telephone books		Yes	Yes
waste motor oil		Yes	Yes
cardboard		Yes	Yes
garden vegetation	Yes	Yes	Yes
timber	Yes	Yes	Yes
rubble and soil	Yes	Yes	Yes
vehicle batteries	Yes	Yes	Yes
fridges	Yes		
domestic batteries		Yes	Yes
white goods (other than fridges)	Yes	Yes	Yes

Benwell RC was first established as a ‘civic amenity’ site circa 1978, and is situated in Paradise Yard, off Scotswood Road. Benwell RC is managed under contract by Sheepfolds Scrap Metal Co. Ltd., and positioned behind one of two NCC transfer stations, operated under contract by SITA. In 2004/05, 4970 tonnes of municipal waste passed through the facility, of which (by weight) 18% was recycled/composted and 12% reclaimed rubble⁵. Benwell is the smallest of the RCs in Newcastle, and the last remaining facility at which a one-way circular system for vehicles has not been implemented.

Brunswick RC was originally opened in 1994 and refurbished in Aug. 2002. Situated off Sandy Lane in Brunswick industrial estate, it is the closest of all NCC RCs to a neighbouring local authority boundary – an increasingly challenging location (see 5.3). This facility is managed and run on behalf of NCC by a small independent waste contractor, G & B Waste Services. In 2004/05, 4669 tonnes of municipal waste was managed through the site, of which 43% (by weight) was recycled/composted and 25% reclaimed rubble.

Walbottle RC is the largest of the three RCs surveyed in the research, both in terms of size and tonnages of waste managed. Located on Walbottle Rd., Newburn, not far from the Parks and Countryside Training centre (PACT) - where the green material collected at all the RCs is composted. The site was opened in 1988, and re-opened after a period of refurbishment in 2003. Managed by SITA, 6328 tonnes of waste were handled through this facility in 2004/05: 36% was recycled/composted and 30% reclaimed.

⁴ Source: www.newcastle.gov.uk/cwenviro.nsf/a/recyclingcentres.

⁵ ‘Rubble’ materials are not officially considered household waste.

⁶ Byker is the main transfer station, handling 114,000 tonnes of the total 128,000 tonnes of municipal waste dealt with by SITA in 2003/4: NCC (2005) Waste Management Strategy and Action Plan.).

3.2 The improvement programme

The Council are committed to a program of improving their RCs, with Brunswick and Walbottle facilities recently undergoing refurbishment, the Byker facility⁶ being improved during the period of research, and plans to look at options for Benwell in the autumn. This improvement programme has been funded from within the Council, after an unsuccessful bid to the WRAP programme for assistance, and is two-fold. First, significant changes to the physical layout and appearance of the facilities has been undertaken. Secondly, three new members of staff had been employed as ‘meeters and greeters’ immediately prior to the research. These initiatives are having a significant impact on the practices of waste management among the general public using the sites, and on the amounts of waste which are recycled. Refurbishment of the sites at Brunswick and Walbottle Road have seen recovery rates rise from around 30% to in excess of 70%, and, in order to sustain progress, the recently awarded contracts for the management of these sites included requirements for minimum recovery tonnages⁷ (Newcastle City Council 2004).

In the rest of this report, we discuss the good practice which this improvement programme demonstrates, the challenges which have been encountered, and the wider implications of this case for managing waste sustainably.

4 GOOD PRACTICE IN NEWCASTLE

4.1 Public awareness

The provision of information about RCs is critical, given that users must know both where they are located and how they can be used in order for them to offer an effective service. In terms of finding sites, few people reported any problems, despite the fact that one site – Benwell - is situated behind a waste transfer station with only a sign at the entrance off the main road, giving incorrect opening times. There were no complaints regarding site information provision or access by users at Benwell, though many respondents using the other RCs mentioned having difficulties finding it in the past. This apparent discrepancy may be explained in part by the fact that two thirds of respondents at Benwell described themselves as regular users of the RC, visiting the site at least 6 times a year – their familiarity leading to satisfaction with Benwell’s limited site information and less obvious access.

In terms of information about how RCs should be used, NCC have a comprehensive website with information regarding which materials can be deposited at which sites (see Table 2), and the use of ‘meet and greet’ staff enables those at the sites to find out directly where different materials should be deposited. At the same time, the research found an increasing realisation on the part of residents that they are expected to separate waste on site, and in the main this responsibility is accepted. Many users described this awareness of the need to separate materials as stemming from the implementation of kerbside recycling schemes, and greater knowledge about waste issues through mainstream media – especially the problems surrounding traditional landfill disposal. While some individuals resented separating materials, the majority stated that their waste practices were shifting in response to changing facilities (kerbside schemes as well as the refurbishment of Brunswick and Walbottle RCs) and increasing social pressure to deal with their waste in more environmentally friendly ways. However, the provision of public information and levels of public involvement in sustainable waste practices are not without their challenges, to which we return below.

4.2 Design improvements

As stated above, a central feature of the improvement of the RCs have been changes to the physical layout and services provided. These measures have been directed to two key issues – access to the site, and access to the separate facilities on the site.

At Brunswick, a one-way drive through system has been implemented, although the site has to be temporarily shut for lorries to take/deliver skips. The public waiting in their cars outside the facility generally understood this to be a necessary part of RC procedure, and were on the whole frustrated but resigned. In contrast, the infrastructure at Walbottle encompasses

⁷ NCC 2004

a ramp that cars drive up and around to be level with the top of the skips, and is designed with a separate entrance and area for skip lorries, thereby enabling the public to continue using the site while skips are being removed/delivered. This layout was especially praised. At Brunswick, raised platforms have been provided around the green waste and timber skips to make disposal easier. These platforms were welcomed by users, though several respondents (particularly those that had also used Walbottle) said that the platforms were not high enough/more were needed around other skips. Nonetheless, at both Brunswick and Walbottle, the majority of users reported the facilities to be far better than before their refurbishment, in terms of organisation, facilities and service provision. This is in contrast to Benwell, where issues of access to the site and the facilities were regarded as problematic, in ways which we detail below, indicating the importance of the physical layout of RC sites in terms of public satisfaction and engagement.

4.3 Public satisfaction

NCC research into residents' satisfaction with waste management services reveals an improvement in satisfaction with the RCs between 2002 (49% approval) and 2003 (69% approval), specifically linked to the refurbishment of the Brunswick and Walbottle sites⁸. Our research similarly found that the majority of people surveyed reported being satisfied with all of the RCs. Comments ranged from 'really excellent' to 'it does what it needs to do'. Such levels of satisfaction are clearly encouraging, not least because they appear to be having a positive impact on recycling rates at the RC sites.

5 KEY CHALLENGES

5.1 The physical attributes of recycling centres

At Benwell, which has yet to be refurbished, two main issues concerned users with respect to the physical layout of the site. The first involves having only one entrance to the site through which vehicles must also exit, creating traffic problems and safety worries when the site is busy, and resulting in temporary closure of the facility while lorries deliver/remove skips. Most people, though, regarded this with resignation, something to 'put up with'. The second issue is the physical difficulty of depositing materials into the skips. The infrastructure at Benwell RC consists of skips standing on the same concrete surface as site users, who are required to get materials up and over the rim of the skip – approx. six feet high. People specifically mentioned this issue when talking about the expectation that they should empty bags/containers into skips. For those who did not have difficulty loading material into the skips, this problem was identified with reference to 'other people'. To address the problem, staff often directed people to leave bags/containers next to skips if someone was having difficulty, if staff thought that they may have difficulty, or when staff suspected that the material inside the container was not suitable for the skip into which it was about to be deposited. Staff then had to deal with this waste themselves, a task which is especially onerous at busy times. Importantly, people who had also used Brunswick and Walbottle RCs since their refurbishment held more negative perceptions of Benwell than those without experience of other sites. Furthermore, any dissatisfaction with provision was always blamed on NCC and RC staff, rather than the waste management contractors who also have a role in the management of the sites.



Critically, the waste behaviours observed among the public using all three of the RCs suggest that the physical design of the sites plays a crucial role in diverting waste from landfill. At Benwell, despite signs to the contrary and direction by staff, people often do not separate materials or empty bags: for example, black bin liners full of grass clippings are commonly

⁸ NCC (2005) *Waste Management Strategy and Action Plan*.

thrown into the 'green waste' skips for convenience. Such contamination of skips results in their rejection by the relevant recycling/composting facilities they are taken to, and the material is subsequently sent to landfill. Despite the best efforts of staff, who attempt to decontaminate skips, the RCs are often extremely busy and directing all site users is impossible. Similar waste behaviours (non-separation, placing bags in skips) is also evident at Brunswick and Walbottle, but to a lesser degree due to the better accessibility of the skips. One man at Walbottle described how he packs his trailer according to the site's layout, so that he can offload more quickly and walk a minimum distance between skips! This illustrates how changing physical facilities can have an impact on routines and what is considered 'normal' behaviour at the RC, and in turn the potential to capture more waste through recycling and composting channels.

5.2 Trade waste

There are longstanding problems around the disposal of trade waste at RCs (which are intended for household waste only), common throughout the UK. As part of the improvement of the sites, NCC imposed height barriers at Brunswick and Walbottle to prevent entry by larger vans claiming to be householders. This has had a variety of impacts upon waste disposal and recycling rates across the three RCs in the study. At Benwell staff reported a significant increase in vans at their site, suggesting that the problem has been shifted rather than resolved. Efforts are made to monitor larger vehicles via registration numbers, and suspected traders barred from the site and referred to the council. However, staff fear that this may result in fly tipping, and certainly bear the brunt of individual frustration if entry is refused.

At Brunswick, the combination of a height barrier directly above a speed ramp meant that householders with '4 by 4' type vehicles cannot gain access to the site. While the majority of the public recognised the need for such a measure, '4 by 4' drivers often approached staff to unlock the barrier – which was common practice until NCC management asked staff to halt this action. On one occasion, when an irate individual had been told that staff could not raise the barrier, he contacted Envirocall on his mobile phone while at the RC, and was instructed by Envirocall to ask the staff to unlock it as they often would! This lack of communication of management decisions across different sections of waste services does not bode well for getting the public on board with improving waste behaviours. In the meantime, staff offered shopping trolleys to bring materials from outside the barrier, or gave directions to Benwell: neither option is received well by '4 by 4' drivers. The use of the barrier at has, however, now been discontinued, so such problems will no longer arise.

There is also a height barrier at Walbottle, but without a speed bump beneath it '4 by 4s' can gain access. Van drivers, however, must carry material into the site, or go elsewhere. The local authority is perceived, by householders physically refused entrance, to be denying the public their rights: "we pay our council tax, they should be taking our waste" was a common refrain. The key issue here is that facility users denied access/directed elsewhere stated a strong disinclination to separate materials – the majority deposited everything in the 'general household' skips rather than attempting to use any of the recyclable skips. Among respondents who had contacted NCC via Envirocall or the internet, none reported being aware of the height barriers. Given the close connections between waste practices in relation to kerbside sorting and sorting for the RC documented by many respondents, the knock on implications of alienating some 'legitimate' users of RC sites may be far reaching and improved information about access would address this issue and public frustrations. To overcome these problems NCC now intend to introduce a permit system for household vans and trailers in the near future and to discontinue the use of barriers at all sites.

5.3 Boundary issues

During the course of the research, NCC were keen to plot whether RC users were Newcastle residents or from other authorities – in particular, they were concerned that recently North Tyneside RCs had been refusing entry to NCC residents. While no figures were available at time of writing, the point here is that local authorities perceive non-resident use to be an issue. Indeed, staff said that they were certain many people from outside Newcastle use their RCs, but that it would be impossible to monitor all users – the facilities were either too busy or people simply gave false postcodes when asked. Site users were often aware of this issue,

and felt that it was “ridiculous” to have to drive elsewhere: many people use the RC most local to their house, or trips to RCs were commonly made en route to other destinations. This border issue was especially problematic at Brunswick, which is situated close to the North Tyneside boundary.

The issue of geographical proximity was also evident *within* NCC’s area. Benwell staff reported that they had seen a significant increase in use due to the temporary closure of Byker, in addition to receiving those people turned away by height restrictions at Brunswick and Walbottle. As the smallest and least developed site, Benwell RC is under increasing pressure, with the result that at times it has to shut because it is full. Until the skip lorries can arrive to restore capacity – sometimes the next day – the public are redirected to one of the other RCs. Again, this increases frustration with service provision and people identified a corresponding disincentive to separate their waste once they reach another RC.

5.4 Conflicting practices

The research found that there was misunderstanding surrounding several issues:

- what constitutes ‘green waste’ – some people thought that green bags are acceptable, others believed any garden materials could be included (fences, soil, etc);
- only solid wood doors can be recycled via the timber skip, but the public commonly place any door in this skip;
- not all the RCs offer identical service, ie. provision for all types of materials.

On site signage addresses the first point, and NCC have a comprehensive website with information regarding the latter (see Table 2). However, many users appear not to notice signs, and only two respondents stated that they had gone to the website for information. Although NCC provide significant information through different channels, including the newly introduced ‘meet and greet’ staff, it is evident from this research that many site users are confused/lack knowledge regarding what they should be doing, and that this has a material impact on their recycling and composting practices. The lack of awareness about where materials should be deposited was described by people as a disincentive to improve their recycling behaviours – most agreed that they could/should bring a wider variety of materials to the RC, but they “didn’t have the time to sort everything out and put it in the right place”. The ‘meet and greet’ staff appear to be addressing this issue – although they are currently not based at Benwell where the problem is most acute.

This confusion and lack of knowledge is exacerbated by the different practices which take place across the sites. What staff were and were not willing to do also varied from site to site: most staff attempted to separate materials for recycling when left at the side of skips, but one believed that waste separation was not his role, and threw everything into the household waste skip (destined for landfill). Equally, while some believed it their job to pull out contaminating materials, others stated that once dropped in a skip, material was beyond their responsibility. Staff are given clear guidance that they should only retrieve contaminants if it is safe to do so (i.e. by not climbing into or on to a skip, or by over-stretching), but how these guidelines are interpreted in practice does vary from individual to individual. Members of the public picked up on these conflicting practices, and several stated that “if they’re not bothered, why should we be?”, going on to deposit their ‘waste’ unseparated – exacerbating the problems caused by side waste and contamination. Nonetheless, most users described RC staff as friendly and helpful. On the other hand, the failure of the public to read signs, and their disposal of the wrong material in the wrong skips led staff to hold the view that site users are concerned only to “dump their waste and get out as quick as they can”, and voicing their concerns that site users are “lazy and ignorant” publicly. This sometimes antagonistic atmosphere between users and staff appears to have created a difficult environment for the ‘meet and greet’ staff, whose role is to proactively engage with the public.

The practices of waste management at the RCs also appear to be shaped in terms of gender, which further exacerbate the tensions described above. The RCs were predominantly used by men, with many respondents describing gendered roles within their household: males

visit 'the tip', while their wives/female partners/daughters undertake separation of materials for kerbside collection. Indeed, all three RCs come across as particularly masculine environments - in the physical predominance of male staff/users, site offices with topless model calendars, limited toilet facilities (except Walbottle, which also has a shower, though never used!), and in the 'blokey' chat that takes place between site staff, some users and skip lorry drivers. The female 'meet and greet' member of staff was treated differently than her male counterparts by 'traditional' staff (all male), and she was described as "doing too much", "holding people's hands" and spending too much time talking to people – criticisms not levelled at her male counterpart 'meet and greeters' during the research. However, her presence was widely welcomed by site users, especially women, with many positive comments about it being "refreshing" to see a woman on site. Although the specific interactions between individual members of staff are also related to issues of work ethics and personality, the experience of the female meet and greet member of staff reflects broader findings of the study concerning how appropriate gender roles around waste are conceived.

Conflicting waste practices, then, are socially shaped as well as influenced by RC infrastructures, and addressing social and cultural issues will be critical in realising their potential for improving rates of recycling and composting. In particular, while the 'meet and greet' initiative was at an early stage during research, the *conflict* between 'traditional' and 'meet and greet' *activity* appears to have a significant detrimental effect on the public's willingness to be involved with any activity that goes beyond simply 'dumping' 'waste' at 'the tip' – indeed, the socialised *understandings* of waste and recycling centres also need to be addressed.

5.5 Public perceptions and apathy

The fact that RCs were usually described as 'the tip' or 'the dump' by respondents reflects an overwhelming perception of waste as waste – useless material to "get rid of". While this perception remains dominant, it will be difficult for NCC to pursue a 'zero waste' strategy that focuses on waste as resource. The public hold also specific conceptions of RCs. Waste is predominantly perceived as dirty and smelly, and there was a good deal of surprise among respondents regarding the cleanliness and tidiness of all three RCs. As stated above, the public were overwhelmingly positive about the new service enabled by RC refurbishment and 'meet and greet' staff: "a very good idea" and "they should have done this ages ago" were common statements.

Despite welcoming the new service provision, and acknowledging the increased **actual** involvement of residents in recycling and composting, RC users continue to place waste management responsibility squarely on the local authority: NCC are expected to provide facilities to deposit waste. However, there is increasing realisation of the **responsibilities** of residents to take part in managing waste sustainably. Nonetheless, when asked how environmentally concerned people described themselves as, by far the most common responses were: "about average", "same as most people" or "middling". When questioned more closely, it emerges that the majority of individuals use the RCs for reasons of convenience rather than because of environmental concerns, for example:

- bulky waste collection "takes too long" and people do not want waste hanging around the house;
- most people had not recycled paper/cans/glass before kerbside recycling schemes were introduced, despite bringing other materials to the RCs;
- if separation/access to the correct skip was perceived to be onerous, materials were deposited in the 'general household waste' skip;
- those approached by staff emptying materials into incorrect skips on the whole were unconcerned about their error;

Almost half of respondents described themselves as regular users of the RCs – with six or more visits per year. As this research is not longitudinal, it is not possible to test the accuracy of these statements, but the *perception among users that they require the sites regularly is important*, because it provides an arena within which longer term education concerning sustainable waste practices could take place.

5.6 Markets for re-use/recycled products

Informal practices of 'moving on' materials have a long history at RCs – stemming from their prior incarnation as 'tips'. Traditionally, such sites have had loose collectives of 'volunteers', who spend time at the sites working alongside members of staff and who have taken items in good condition to sell on via various means, or for their own/family's personal use. It is impossible to say how much material still gets reused in this manner, though in terms of waste reduction the answer is probably not enough. The contractors at each site have ownership of all the materials not required by NCC for recycling. Some staff are therefore able to sort material to move on and members of the public who spot an item that they would like approach staff to buy it, and informal price negotiation occurs. Such 'moving on' of materials, whether strictly legal or not, is accepted as "common practice in this line of work".

Despite the presence of these 'informal' markets, there is no formal marketing of recycled products, in particular composted green waste. Most members of staff stated that they would be keen to sell bags of soil conditioner produced at the Parks and Countryside Training (PACT) site from the green waste collected at RCs. 'Closing the loop' between recycling and use of recycled products is well accepted as an important part of sustainable waste management. However, there was some concern about the logistics of this, in particular issues around staff being responsible for cash, and its presence on site. This reaction may appear over-cautious. However, the point is that once direct selling becomes official, ultimately those higher up the authority, but with no direct control over practices on the ground, become responsible, and issues concerning VAT and the transit of money from sites to other places, intervene to complicate matters. Such a situation is very unfortunate, as many respondents – in particular those depositing green waste - indicated that they would be keen to buy (back) composted material for their gardens.

In the meantime, staff rarely inform facility users that they may purchase bags of composted material at PACT (which is located very close to Walbottle RC), or promote other recycled products in any way, although a display and sign advertising the PACT service at Walbottle got very little response. Equally, the RCs appear to play no role in the waste minimisation message. There are lost opportunities, especially among 'meet and greet' staff to refer users to, for example, a furniture re-use project in Newcastle, charities or other recycling/re-use organisations. Often staff deplore the general public's waste habits, but do not offer an alternative.

6 IMPLICATIONS FOR SUSTAINABLE WASTE MANAGEMENT

6.1 Partnership working across local authority boundaries

Understandably in a context where the cost implications of increasing waste arisings are critical to local authorities, there is concern about the cross-boundary traffic in waste between RCs. However, from the perspective of the public, such boundary disputes can seem petty and frustrating. The goodwill lost in trying to police the border, on the part of the public and those staff whose role it is to enforce, would seem counter-productive to the overall aim of increasing the proportion of waste recycled and composted.

An alternative mechanism might be to agree with neighbouring authorities a proportion of waste (based on a survey) for which their residents are responsible, and to charge a cost accordingly. This could, perhaps, be related to the sorts of facilities available in neighbouring authorities – those with similar facilities could be charged less than those with lower provision, as an incentive for neighbouring authorities to 'level the playing field'. Otherwise, it might be necessary to adopt a 'live and let live' approach, if the proportion of cross-border traffic is relatively minimal in relation to waste arisings as a whole, and where the good practice at some RC sites could be used as a model in neighbouring authorities.

6.2 Improving physical access

It is clear from the research findings that the refurbished sites not only offer a better service in terms of the satisfaction of those using the sites, but have also made a material difference to the ways in which people sort and separate their waste, and the amount which is recycled

and composted. This has been achieved both by making it physically easier for people to use the site and by changing the 'cues' which direct behaviour at site – through meet and greet staff and through the layout of the facilities.

There is, however, scope for further improvement. First, there is a need to rethink the placement of receptacles for batteries/clothes/fluorescent tubes, which are often out of sight and hence out of mind – not one respondent knew about the battery recycling facility, and with a cost of £100 a unit there is a need to engage users with this facility. Second, involving and consulting users in the design of such sites as they evolve could provide a means through which to find out how the sites are used in relation to, for example, which things need to be 'dropped off' first, and in turn build relations of trust and inclusion with the communities using such sites. Despite needing to work within the physical limits of the sites, the involvement of the community in the design of such sites may become all the more important as the implications of the WEEE Directive, and the need to separate different materials, come into effect at existing sites and there remains continued difficulty in gaining planning permission for additional sites.

6.3 Waste education and changing cultures of 'waste'

While significant resources at a national and local level are increasingly directed to educating the public about how to manage waste sustainably at a personal, household and even global level, less attention has been directed to the arenas within which this can successfully take place. Across the research project, we have found an emphasis on national campaigns and on targeting particularly 'easy to reach' groups, such as primary school aged children (for household kerbside collection schemes) and committed gardeners (for composting). Our findings concerning the RCs in Newcastle suggest that they are a potentially fruitful site for public education initiatives for three reasons. First, they attract a broad cross-section of 'the public', many of whom think about waste disposal in traditional terms – the tip, the dump, and so on – and who are not reached through other initiatives. Second, respondents have long running and regular associations with a particular site, and hence there is an opportunity to engage with the same people over a period of time. Third, staff are already actively engaging with public education practices on site, and this applies both to the 'traditional' and to the new 'meet and greet' staff. The findings also demonstrate that such education, in *practical terms* – how to use the site, what sorts of materials go where and so on – is critical in changing behaviour, as witnessed by the increased rates of recycling which have so far been achieved.

In order to build on this potential, the role of 'meet and greet' staff could be extended, supported by relevant publicity material, from showing people how to use the site to include, for example: encouraging people to sort waste at home (with the model of the kerbside box as one to follow) in preparing for their trip to the RC; having information available about



the potential for sending unwanted items to 're-use schemes (see below); and offering information about waste minimisation, including specific schemes being undertaken by NCC, such as home composting. In addition, linking other education schemes – including those which go on in schools – to the RCs, though site visits, for example, may also improve their effectiveness as a place where people not only take waste, but learn about it. Through broadening the waste education role of the RCs, potential opportunities for engaging with re-use, and with the wider resource cycle, are opened up.

6.4 Enabling re-use networks

One potential benefit of widening the education role of RC staff would be the possibility for enabling the development of re-use networks. As shown above, RCs have long been sites at which informal practices of re-use take place, and it is important that as practices of managing waste become more formalised, such networks do not disintegrate and as a result increase the proportion of waste going to landfill. Equally, there is scope to formalise re-use practices for some specific materials – e.g. furniture, white goods, paint. This could be done in collaboration with relevant community sector organisations and groups by: increasing the liaison between RC staff and relevant organisations, through training or workplace visits; putting potential 'donators' and 'users' in touch with relevant services; having facilities for the collection, storage (and, possibly, passing on) of such goods on site; or establishing new initiatives, such as 're-paint' schemes.

In undertaking any such initiatives, it has to be recognised that they contribute to an overall process of changing waste cultures and practices which take time and for which there are not necessarily immediate rewards. The ODPM has dropped plans for local authorities to report re-use tonnages under BVPIs, recognising that "the complexities of reporting against the indicator would outweigh the benefits of urging better performance" given that much re-use is dealt with by the voluntary sector (ENDS, 2005), with their own challenges of capacity and resource to meet the growing demand from local authorities to become involved in waste management initiatives.

6.5 Developing markets for recycled/composted materials

In addition to facilitating the development of more formal exchanges of goods for re-use, the RCs have the potential to engage with the 'waste-resource' cycle by developing local markets for recycled and composted materials. One means through which this could be done is through the direct sale of compost at RCs, via a 'voucher' system made available through the existing Envirocall service in advance, to avoid the problem of cash on site. This could also work in such a way that residents who deposited green waste could gain 'bonus' vouchers for compost.

At the same time, the RCs could provide information about the availability of recycled products. This could be done through: display boards (perhaps along the lines of the current national advertising campaign where recycled items 'turn into' something else) with information about local sources of recycled products; through information on websites and publicity material for the RC; and through the sorts of informal discussions which take place between RC staff and the public on site.

7 CONCLUSIONS

As stated in the introduction to this report, the use of RCs in Newcastle was one of six initiatives researched for the project *Governing Sustainable Waste Management*. In conclusion, we list here the broader recommendations for managing waste sustainably that have emerged through the study in order to place this case-study within its wider context. While our comments are directed primarily to the local authority level, due to their central role in municipal waste management, we believe that they will also make relevant reading for central government, and the business and community sectors.

7.1 Enhancing the policy framework

- *Critical mass* – the effective delivery of MWP across any one local authority demands a certain number of people and level of resources – a ‘critical mass’ – to work effectively and proactively across the increasing range of responsibilities that MWP entails.
- *Institutional integration* – progress with the new waste agenda is easiest where waste management is integrated into the local authority; for example, links with active LA21 sections can integrate waste concerns into a broader environmental remit and enrol competencies, such as engagement with the public and voluntary sector, traditionally absent in many waste management sections.
- *Strategic priority* - specifically, a division of responsibilities needs to be established to free up dedicated staff time for strategic issues: identifying and pursuing funding stream; and establishing and maintaining contacts and networks across and beyond the authority. Clearly, any such ‘division’ needs to be done carefully to maintain suitable integration between strategy and operations.
- *Political support* - committed officers can do much in an ambivalent political environment, but with effective political support, progress can be faster and more far reaching.
- *Active networking* – locally engaging relevant partners, nationally providing links to key gatekeepers, and internationally learning from other local authorities helps to provide critical resources.
- *Embracing change* – a readiness to take on new challenges and to ‘think outside the box’ can yield dividends; this demands the creation of a culture in which there is a willingness to experiment and to take appropriate risks in response to a dynamic policy environment.

7.2 Moving up the waste hierarchy

- *Process alongside progress* – activities such as partnership building, engaging with the public, and developing new channels of communication should be valued by local authorities as much as monitored outcomes, with the recognition that these processes lead to longer term sustainable waste management. It is also important that central government actively support authorities endeavouring to put such mechanisms in place.
- *Rethinking monitoring* – the relevance of re-use and reduction need to be recognised within monitoring regimes, and the ways in which waste is ‘measured’ creatively re-imagined in order to make these behaviours ‘count’. Unless re-use and reduction are brought within the ‘target’ sphere, there remains little incentive for North East authorities to seriously engage with or commit funding to them.
- *The importance of the intangible* – re-considering the social and economic benefits of re-use and reduction will enable authorities and other bodies to bring waste issues into other areas of policy and practice, and address waste more coherently and effectively.
- *Moving beyond formal mechanisms* – recognising the informal networks and deliberative processes through which waste reduction and re-use occur at a day-to-day level, there is a need to enable the social space/climate for them to develop, and encompass informality and discursive engagement within waste management.
- *Challenging waste ‘norms’* – the image of waste as dirty, and secondhand as inferior, must be changed, if as a society we are to really engage with the waste debate, adopt sustainable attitudes towards waste management and alter waste habits. Such a paradigm shift in how waste is imagined may be aided by a move to considering ‘materials’ rather than ‘waste’ as the basis for policy interventions.

For further information about the research project and its findings, please follow the links from: <http://www.dur.ac.uk/geography/research/researchprojects/>

