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Working towards a Greener Borough:

Recycling in the London Borough of Merton

An Interactive Qualifying Project Report
submitted to the Faculty of
WORCESTER POLYTECHNIC INSTITUTE
in partial fulfilment of the requirements for the
Degree of Bachelor of Science

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Abstract

The London Borough of Merton's Waste Service division sought to improve the kerbside recycling scheme currently in place for its residents. Using field studies, focus groups, and comparisons to other boroughs, we revealed the underlying reasons for low participation levels which allowed us to propose improvements to the programme. Increased participation will enable the borough to meet the demanding recycling standards set by the United Kingdom and the European Union.

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Executive Summary

With landfill space decreasing rapidly in Europe, waste minimisation through recycling is essential. To ensure that European nations reduce the amount of waste being sent to landfill, the European Union presented a waste reduction Landfill Directive, effective 16 July 2001. The directive set mandatory targets for the UK and other European nations. As a result, the UK Government is enforcing recycling targets for London and its individual boroughs. The London Borough of Merton is required to increase its recycling rate by ten percent for the year 2005.

Merton introduced a kerbside recycling scheme, titled 'Recycle from Home', in 2003. At the start of the programme, a trial group of residents were given green boxes for paper recyclables. In 2004, with the addition of a purple box, the scheme made its most recent expansion to a borough-wide collection of paper, glass, plastic bottles, cans, and card. Though the programme has seen some success, participation from residents must be increased to achieve the goals set for the borough.

Some other areas have used incentive schemes to increase participation. For example, the city of Worcester, Massachusetts, employs a 'pay-as-you-throw' recycling scheme. This type of system charges residents by the bag for waste disposal, but allows recyclable materials to be collected free of charge. Programmes such as 'pay-as-you-throw' prove to effectively increase participation and recycling rates because of the clear incentive they offer. However, owing to taxation policies in London, Merton and other London boroughs are unable to implement such a scheme.

Although those types of schemes are not currently available to Merton and other London boroughs, they do have some powers that allow them to enforce a 'polluter pays' principle. The Environmental Protection act of 1990 gives boroughs the authority to require that certain types of waste be placed in receptacles specified by the council. For a recycling incentive, a borough can use this to charge residents for side waste that does not fit in the box specified, or to require that recyclable materials be kept separate from the ordinary garbage and impose fines on those who do not comply.

The Borough of Barnet used this legislation in initiating London's first compulsory recycling scheme. Beginning 1 April 2004, twenty-five thousand homes in Barnet were required to keep recyclable materials separate from household rubbish. This plan makes residents who continuously throw recyclable materials into their ordinary waste bins liable for fines of up to £1,000.

Some boroughs are hesitant to begin monetary incentive schemes, fearing an increase in 'fly tipping' or illegal dumping. For example, the boroughs of Sutton and Wandsworth rely heavily on innovative advertising programmes. Sutton, which retains high recycling participation levels, uses its advertising scheme titled 'Reuse, not refuse', as a way to educate residents on recyclable materials in an effort to reduce the amount of recyclables lost to landfills due to contamination. Wandsworth, part of the Western Riverside Partnership, benefits from 'Reth!nk Rubbish', one of the largest and most concentrated recycling advertising campaigns in the UK.

Having completed research on Merton's and other areas' programmes, we were able to determine our data collection methods. The methods chosen were archival research, field studies, and focus groups to examine the specific areas in the scheme that needed attention. By conducting field studies, we were able to backup claims made by the participants within the focus groups. These ideas were then compared to the programmes in greener boroughs. Recommendations for improvement were made based on comparisons found in the field studies and focus groups, with consideration given to what was feasible for the Borough of Merton.

The field studies were conducted in areas of the borough that had not been measured since May and September of 2003. Our field studies of two wards conducted in March and April of 2004 showed that the participation levels had remained relatively constant since the introduction of the purple box scheme.

Conducting the focus groups resulted in both expected and unexpected data. The result of these groups was information that showed the programme implemented by the council was more than complete and some residents felt it was even excessive. Several concerns arose surrounding the programme, while other concerns focused on the council itself. Residents felt that the scheme possessed policies that were usually simple in nature, but that had issues

that could not be solved easily. For example, the residents wished that the boxes had lids so that rain would not be able to penetrate the papers waiting to be recycled. This is a simple request but the cost of purchasing lids for the entire borough, which amounts to approximately 150,000 lids, is not a cost-effective option for the borough at this time. Another insight which came from the focus groups was the popular idea of having monetary incentives for those who recycle. We found that residents who were less well-off economically were more concerned about the financial aspects of the programme as compared to the effects of recycling on the environment. Although this was not unexpected, it further highlighted the lower levels of participation in those boroughs. The residents were more concerned about the expense and how much it may be costing the residents to recycle rather than reducing costs. This concern resulted in fewer residents who were likely to participate.

The concerns which centred on the council itself were not programmatic, but were issues which would need to be addressed to have residents comfortable with pursuing the programmes enacted by the council. This was an unexpected outcome of the discussions but it provided insights into how the residents perceived how their council was working for them. A major theme was distrust of the council. Most resident were very open about their lack of faith and minimal trust in the council. Focus group participants thought the new recycling scheme was created without any input from the residents themselves, which made higher levels of initial participation less likely.

Education, advertising, and offering a monetary incentive are the recommendations offered to the Borough of Merton. An education centre overlooking the reuse and recycling site for Merton, planned for 2005, will be effective in making students actively aware of the importance of recycling. Advertising will be a critical partner with education in spreading information to the general population. Providing details about the current recycling scheme and the costs and benefits of recycling are vital steps to increasing participation by Merton residents. A monetary incentive, in the form of a discount on the council tax, bottle returns, or fines for not recycling, could encourage residents to recycle and be motivated by physical results. Many residents in the focus groups complained about the lack of information sharing between the council and the community. Advertising in local papers with regular updates about how well the borough is recycling is another way to motivate residents to recycle.

Participants in the focus groups stated that having detailed updates about the status of the programme would motivate them with the knowledge of an attainable goal.

Our data and analysis provide a clear picture of what changes residents of Merton are looking for, and our recommendations offer potential ways to increase participation in recycling in Merton. This report will be used as a guideline for the London Borough of Merton to consider changes to their recycling programme.

Chapter 1: Introduction

With landfill space decreasing rapidly, the need for waste reduction by recycling is essential. Each year, Londoners produce 3.4 million tons of waste (Recycle for London, 2003). To prevent this figure from increasing any further, the UK Government set targets for all London boroughs. For this reason, the London Borough of Merton has been looking to improve its recycling programme to significantly reduce household waste and meet government standards. One larger issue was the public's lack of awareness for the need to recycle. In 2004, little more than half of Merton's residents were participating in the kerbside programme. A resident was considered to be a participant if a bin for recyclables was placed outside for pickup at least once every three weeks. This number was producing unacceptably low amounts of recycling in the Borough of Merton. The borough needed to find a way to promote recycling awareness and motivate its residents to participate in its kerbside recycling programme.

The majority of waste was not re-used in the Borough of Merton. This translated to only about 17% of total waste produced were being sent to recycling centres. Furthermore, because of the way taxes were collected in the borough, no additional taxation could have been placed on residents as they were already paying for waste disposal within their council tax. This means that there could not have been any incentive system charging residents for their waste and not their recyclables. However, the problem seemed to be multi-dimensional. While a flaw in the programme may have been a major cause, there was also a societal side to the issue. A lack of education or environmental concern, insufficient media coverage for the recycling scheme, or an overall apathetic attitude towards the programme could all have been possible factors.

The kerbside recycling programme was originally designed only for paper. That included



Figure 1 - Kerbside Recycling Boxes

newspapers, magazines, junk mail, stationery, and envelopes. Merton then decided to increase the usefulness of the kerbside system by widening the range of materials collected using the kerbside programme. Expansion and refinement of the programme was a necessity. A system like Worcester's 'pay as you throw' programme would be a good option, to have been introduced to Merton's kerbside

programme, though legislative changes would have been needed in order to implement it. Quite frequently recycling programmes meet with limited success because they require more time and effort than participants are willing to put forth. The reduction of waste relied solely on the people of the Borough of Merton, so it was necessary to determine why people from the area did not become more involved in the process.

The Borough of Merton's future recycling plans and policies were publicized online in detail in the borough's 'Recycle from Home' scheme and were also available by reviewing LBM Waste Services' Draft Recycling Plan. There were countless sources of information regarding the expansion of the programme as well as the government's policies aiding and, in some cases, preventing its progress. In 2002, the Borough of Merton released the Draft Recycling Plan, outlining essential legal, financial, environmental, and economical issues relating to recycling throughout the borough. While a variety of statistical information on Merton's recycling programme could be readily accessed online or through our sponsor, there was a gap in the research. Little was known about the residents and what may or may not motivate them to recycle. Finding out what makes a resident choose to participate in the programme was a vital aspect of our research. This was accomplished through various forms of surveying, which helped to gain information regarding similar projects. This aided our project in multiple ways.

Work on this project provided Merton with recommendations for increasing the effectiveness of their recycling programme. Through a series of participation level field studies and focus groups, we identified reasons why the current programme was not successful. Our participation level data was used to determine what areas of the borough were recycling more than others. The targeted areas were chosen because of the difference in recycling rates. They were used to determine what differences existed between the two areas to cause the difference in kerbside recycling participation. We determined some of the psychological causes for residents not recycling, and also highlighted any flaws in the programme that prevented residents from participating. This data was obtained through our focus groups. Specific characteristics were also chosen to be used for comparison. Collecting participants was accomplished using a database of available residents. A recycling officer questionnaire allowed us to gain insight into other borough's programmes. This information was used as a basis for the recommendations. Recycling occurred only if the residents felt it was necessary and worthy of their time and efforts. This project to included determining exactly what was

needed to increase recycling. By suggesting effective solutions to Merton, we looked to help the borough decrease the amount of waste disposed to better meet the standards set by the Central Government.

Chapter 2: Background

2.1 Legislation

Because of the rapidly decreasing landfill space throughout Europe, the European Union (EU), Europe's primary governing body, presented a Landfill Directive, which became effective 16 July 1999. This directive set mandatory waste minimisation targets for the UK and other European countries. By 2010, the UK must reduce municipal biodegradable waste to 75 percent of that produced in 1995 (Department of Environment, Transport and the Regions, 2001). For 2013, this target jumps to 50 percent and by 2020 the UK must reduce waste to 35 percent of that sent to landfill in 1995 (DETR, 2001).

The EU has established a waste hierarchy to present the best way to reduce waste. The four major areas of the hierarchy are reduction, reuse, recovery, and disposal. Reduction involves using less material overall. If the amount of material used is decreases, disposal is less of a concern. Reuse entails producing materials that can be returned or reused within a household and encouraging consumers to conserve more. Recovery combines recycling, remanufacturing, and energy recovery. Disposal is the last option, and should be resorted to only if nothing else is feasible. Britain's National Waste Strategy is based on the concept of this hierarchy and applied it when introducing statutory performance standards for each waste authority (LBM Waste Services, 2002).

To comply with the Landfill Directive, the UK Government came up with its own set of standards for recycling and recovery (DETR, 2001). By 2005, the UK expects 25 percent of

all of its household waste to be recycled or composted. This rate increases to 30 percent for 2010 and 33 percent in 2013 (DETR, 2001). Performance standards for each specific waste authority, including Merton, were published by the Department of Environment, Transport and Regions in a document titled 'Guidance on Municipal Waste Management Strategies' (2001). Merton was expected to achieve an 18 percent recycling rate for 2003-2004 and 25 percent for 2005-2006.

UK Government Waste			
Reduction Targe			
Recycling and Composting			
(%)			
2005	25		
2010	30		
2013	33		

Table 1 - Government Targets

Department of Environment, Transport and the Regions, 2001 The Mayor of London, in his London Plan of 2001, discussed working with all of the boroughs to safeguard existing waste management sites, identify new sites, require space for recycling facilities for all new developments, and support treatment facilities to recover value from residual waste (Mayor of London, 2001). These plans were designed to help boroughs focus on areas that they can improve or maintain to decrease waste sent to landfills, as well as to simultaneously increase recycling to comply with the European Union's policies and directives. The mayor also discussed working with the legislature to find ways to 'achieve rates of recycling and composting of municipal waste of 50 per cent in 2010 and 60 per cent by 2015' (Mayor of London, 2001).

The landfill tax has been increased by British legislation over time in an effort to encourage recycling and reduce waste sent to landfills. London boroughs have been continuously working at their recycling programmes to avoid these landfill taxes and meet the government standards. Unfortunately, for communities throughout Britain, waste removal is included in taxes paid by the residents; therefore it has been difficult for Merton and other boroughs to increase recycling participation by means of a monetary incentive. However, the Environmental Protection Act of 1990 does provide London boroughs with some options. The act states that a borough can require that certain types of waste be disposed of in receptacles specified by the authority (London Borough of Barnet, 2004). For a recycling incentive, a borough can use this to charge residents for side waste that does not fit in the rubbish bin specified, or to require that recyclable materials be kept separate from the ordinary garbage and impose fines to those who do not comply.

2.2 Merton and 'Recycle from Home'

For Merton, meeting the government standards and avoiding large costs for waste disposal would take a great deal of research and evaluation. The borough differs from most areas because of its drastic split in economic status. Residents of the north-western region of the borough, which includes the Wimbledon area, are some of the most successful and affluent people in all of England. Census data from 2001 shows a steep decrease in economic status towards the south-eastern part of Merton. Assessing whether this divide had an affect on participation proved to be large part of our investigation.

Pressured by the government standards, Merton launched its 'Recycle from Home' scheme in 2003. It was first piloted in two differing areas, but in 2004 the programme expanded to

supply all homes with both green and purple boxes. Residents received leaflets explaining what materials could be placed in the boxes. (See Appendix A: Kerbside Recycling Purple Box Leaflet) Paper and glass were to be separated and put into the green boxes. Purple boxes were for mixed items, including plastic bottles, metal cans, and cardboard.

Recycling collection currently takes place weekly on the same day general rubbish is picked up. The recycling collection vehicles are equipped with three compartments (LBM, 2003). Glass, paper, and mixed recyclables are kept separate and sent to Merton's Reuse and Recycling Centre at Garth Road in Morden. From here they are sent to different facilities for remanufacturing.

Material	Facility	Details
Paper	Ayleford Newsprint, Aylesford	Mixed into pulp, de-inked, dried, and pressed into large reels of new paper to be distributed to publishers
Glass	Midland Glass Processing Company, Kirkby-in- Ashfield	Crushed and used as material to build roads
	Grosvenor Waste	Cans: reprocessed into new cans, readymeal trays, dairy lids and chocolate wrappers
Management Mixed Materials Recovery Facility, Kent	Plastic bottles: made into new products such as drainage pipes, electrical fittings, clothing, compost bins and kerbside boxes.	
		Card: similar process as paper (see above)

Table 2 - Merton's Recyclables

London Borough of Merton, 2003

2.3 Supportive Organisations

To ensure that the UK and other European nations meet the standards set by the EU, several environmental and financial organisations have developed in support of reducing waste sent to landfill. The Waste & Resources Action Programme (WRAP), a not-for-profit organisation established in 2001 as a response to the UK Government's 'Waste Strategy 2000', aims to promote sustainable waste management through recycling by helping to create stable markets for recyclable materials (WRAP, 2004). In addition, WRAP has set up an advisory service to aid councils in achieving successful recycling strategies (WRAP, 2004).

An essential financial support for London boroughs is the London Recycling Fund. Since its establishment in 2002, the fund has awarded over 70 grants—allocating over £24.9 million to various recycling and waste minimisation schemes throughout London (London Waste Action, 2003). Merton's 'Recycle from Home' scheme was not overlooked. In 2002, the Merton council was granted £640,000 to expand the green box paper scheme to include cans, plastics, cardboard, and glass across the entire borough (Capital Waste Facts, 2003).

There are also several advertising campaigns for recycling and waste management in London. For example, 'Recycle for London' is an advertising scheme with a website dedicated to educating London residents and making it easier to recycle more (RFL, 2003). Londoners can refer to this site for information on what can be recycled as well as facts and feedback about the city's progress. The site also offers an explanation of the importance of recycling in London and around the world. This campaign is aimed at providing residents of London with as much information as possible regarding their local recycling services in an effort to encourage participation and help reach government targets (RFL, 2003).

2.4 Other Recycling Programmes: Policies and Evaluations

For improving the effectiveness of any recycling programme, a combination of a programmatic review and a societal evaluation is necessary. It is important to remember that many factors may determine the success of a recycling scheme. The low levels of recycling participation in a community might be due to a programme flaw, residents' attitudes, or a combination of multiple weaknesses. Reviewing how other cities or boroughs in both the UK and the U.S. have improved their programmes as well as what measures they have taken to evaluate their performances provided a starting point for our methodology.

Because of the dual nature of possible factors, cities often evaluate their recycling programmes by using some method of surveying, making sure to obtain demographic information as well as residents' opinions on the policies of the service in question. For example, in a study done by the city of Winston-Salem, North Carolina, a phone survey was completed. The survey first gathered data on race, age, sex, specific location, and income. Further along, questions were asked about each subject's satisfaction or dissatisfaction with some of the city's various sanitation services. Survey conductors were asked to probe participants thoroughly for suggested improvements that could be made to the recycling

programme (Bryant, 1999). The city found that most of the citizens who were dissatisfied with the programme suggested some sort of programme expansion. The city was also able to compare participation with traits such as age to find out how demographics played a role in the success of the programme. Another important discovery was that almost twenty percent of the residents surveyed claimed to be unaware of the programme's existence (Bryant, 1999). Perhaps a good advertising campaign could significantly increase recycling participation.

While the phone survey was an effective method of data collection for the city of Winston-Salem, time and resources must be considered when choosing a data collection method. After obtaining a large grant from the Iowa Department of Natural Resources, the East Central Iowa Council of Governments (ECICOG) used a combination of multiple resources and methods in evaluating the residential recycling programmes of its communities. For each community case study, the ECICOG used five methods of data collection. Participation rates were gathered by counting boxes set out on each route. Capture rates, or percentages of recyclables collected, were determined by examining the amount of each type of recyclable sent to reprocessing centres. To determine some of the qualitative factors affecting participation, a drop off survey was delivered to residents and focus groups were conducted to gather public opinions and suggestions (Iowa Department of Natural Resources, 2003). Questions asked during the focus groups were intended to gather information about the group's knowledge of the programme, suggestions on improvement, opinions on the importance of recycling, and ideas about improving the programme and residents' awareness (IDNR, 2003). After this data was collected an analysed, a cost analysis was conducted comparing the cost of kerbside collection and processing with that of a drop-off recycling centre (IDNR, 2003).

The ECICOG's methods of evaluation are a good example of what can be done with ideal resources. While this evaluation worked well for communities in Iowa, it was important for us to remember that the Borough of Merton is a far more diverse community than those studied by the ECICOG. In assessing the Merton programme, coming up with a valid sampling strategy and working with the resources at our disposal were essential. Data collection techniques for the project in Merton are described in detail in our methodology section.

2.5 Policy Reform

In addition to researching examples of policy evaluation, it was important to have a good understanding of policy reforms that have resulted in success. For example, after years of poor recycling performance, the city of Worcester, Massachusetts, managed to attain the highest recycling rate of any major city in New England by employing a 'pay-as-you-throw' trash-recycling programme (Varney, 2003). This type of programme charges residents per bag for their waste but offers to pick up recyclable materials free of charge. The new policy allowed Worcester to save over 100,000 tons of recyclables from being wasted (Varney, 2003). While this type of scheme provides residents with a clear incentive to participate in a city's recycling programme, due to taxation policies it could not be replicated in the Borough of Merton.

Residents of Merton pay a council tax, a local tax enforced by each authority to cover the cost of local services including waste disposal (London Borough of Merton, 2003). While 'payas-you-throw' methods for recycling have proven to be effective, with the council tax in place, charging residents by the bag for waste disposal would have been unlawful. If the borough made a decision to implement such a system, some reform of local and national policies would have to take place. Changing the taxation policies of the borough would require a series of steps. If the Council of Merton's Environment and Regeneration branch decided to try a 'pay-as-you-throw' strategy, it would have to be presented to Ged Curran, LBM's Chief Executive (London Borough of Merton, 2003). From here, a proposal to the Greater London Authority or central government would have to be made.

2.6 Factors Affecting Participation

If a change in legislation becomes a possibility in the future, modelling Merton's programme after a 'pay-as-you-throw' community's could be a successful option. However, we were also asked to provide the borough with recommendations in the more likely event that the legislation would not be changed. With a 'pay-as-you-throw' system, or 'polluter pays principle', the incentive for a resident to recycle is clear. Recycling is an easy and obvious way for the individual to save money. To increase participation without the advantage of an incentive like this, it was important to gain an understanding of what factors might affect a resident's decision to participate. Factors causing Merton's insufficient participation might include a lack of education, improper media coverage, or an overall apathetic attitude towards recycling.

Reviewing the progress of the 70,000 homes already part of the expanded kerbside programme also provided us with some possible factors determining participation. For example, we speculated that the demographics of specific areas in the borough and their success or failure might be strongly correlated. Perhaps age, race, religion, or economic standing played a part in how much a person recycled. By studying and surveying in both the areas with high rates and those that are lacking, we predicted that we might find participation to be more of a societal issue than a structural one. Though studies have been conducted for both sides, many recent reports cite Shalom H. Schwartz's *Model of Altruistic Behavior* and norm-activation theories which provide evidence that recycling behaviour is linked to a set of values that extend beyond an immediate social circle (as cited by Stern, 2000). There may be psychological attributes that determine whether residents recycle.

While the lack of participation by residents might have been a societal issue, we also had to be sure to explore the possibility that a flaw in the programme could be the cause of the low numbers. For example, the collection methods could have been a factor. Perhaps residents were confused about the day of collection, unsure of what could be placed in the box, or simply did not want to have to separate recyclables into two individual boxes for paper, glass, and others. It was important that we reviewed the programme's policies as well. When non-recyclable materials are placed with the recyclables, some communities' policies are to discard the entire box. If wasteful practices were present in the Merton programme policies, additional education for both residents and employees would be needed.

2.7 Chapter Summary

In confronting a project of this type, it was important that our team formed a strong conceptual framework. This framework consisted of a system of concepts, assumptions, expectations, beliefs, and theories that would support our research and provide us with the information necessary in forming a solid background and clear objectives (Maxwell, 1996). In selecting the core concepts used in developing this frame, our team considered available existing theory and research, current conditions, various past successes and failures, societal issues, and variables we thought we may encounter.

We found it important to investigate what factors affect the Merton recycling programme, as well as to form comparisons with recycling programmes that have been successful.

Researching practices on a national, council, and local scale helped us to determine the best options. It was also important to assess Merton residents' attitudes on recycling. Talking with residents and determining the impact social habits were having on the programme helped us to anticipate its future progress. Suggested improvements to the programme were determined by identifying programme shortfalls as well as existing social influences. Our recommendations were based on these findings combined with knowledge of government policies and restrictions.

Chapter 3: Methodology

3.1 Policy Evaluation

To decrease the costs of waste management, in 2003 the Borough of Merton underwent the task of further reducing the amount of waste sent to landfills by introducing a kerbside recycling programme called 'Recycle from Home.' At the start of the project, 70,000 homes were part of the scheme. In March 2004, the programme expanded to provide every Merton resident with boxes in which paper, glass, plastic bottles, cans, and cardboard could be recycled from home (London Borough of Merton, 2003). The extended programme had not yet reached its desired targets, though it had seen some success. It was clear that the participation by residents was not sufficient. The 'Recycle from Home' scheme was in need of an in depth evaluation and some alternative or additional practices had to be implemented to make the programme successful by government standards.

To reform a programme's policies, a thorough evaluation must be conducted. A variety of specific evaluation tools and techniques can be used to assess a programme. These tools can be either qualitative or quantitative. An effective policy evaluation consists of four important phases. First, the evaluation must be structured. This involves defining clearly which parts of the policy need to be assessed. A list of questions that the evaluation must answer should be formed during this step (Williams, 1999). The second evaluation phase involves observation and data collection. Here, the field of observation must be defined. The population being studied must be large enough to produce useable information without being too broad (Williams, 1999). The field must also be representative of the population. During this phase, sampling strategies are chosen and various data collection procedures are implemented. Data collection often combines statistical information and previous research with qualitative data acquired from the field. The data is often obtained through a series of techniques usually including some form of surveying. This may consist of a combination of personal interviews, focus groups, questionnaire surveys, or ethnographic observation (Williams, 1999). The third phase, analyzing the data, consists of two major parts. First, the data must be represented. This is often done with graphs, comparative tables, or geographical information systems (GIS) layering (Williams, 1999). Next, effects must be estimated. This requires an investigation of causes and effects. To complete this step, quantitative analysis tools such as comparative analysis and regression analysis are favoured (Williams, 1999). Finally, the effects must be judged. The evaluation must be able to provide some insight into

whether the effects that the programme produces or will produce are satisfactory. During this final phase, conclusions can be drawn and recommendations can be made.

Knowledge of these various methods policy evaluations was helpful when deciding on the best approaches for data collection and analysis for evaluating the London Borough of Merton's 'Recycle from Home' scheme. Considering the amount of time and resources available for this project, we chose a series of comparative techniques. Reviewing U.K legislation as well as how other London boroughs were lobbying for regulation changes or, instead, finding ways around the current limitations provided us with an initial direction. We examined the state of the Merton programme and compared it to that of other boroughs through archival research and a questionnaire distributed to recycling officers for each of the London boroughs. Through field studies, we calculated participation and set-out rates in varied areas of the borough and compared them with previous studies done by Merton Waste Services. We also studied the societal aspects of recycling participation by using focus groups to identify the attitudes of the residents.

3.2 Legislation and Other London Boroughs

We reviewed the alternate recycling policies of other boroughs to see if there were any similarities that could be applied to the programme in Merton. Although Merton and other London boroughs are unable to charge residents directly or by the bag for their waste disposal, they do have some powers that allow them to, indirectly, enforce a 'polluter pays' principle. Part of our project included doing an analysis of specific legislation of the United Kingdom in the hope of finding ways in which a borough could lawfully charge residents proportionally to how much waste they produce. We specifically looked for anything that would give a borough the authority to alter its waste management system in a way that would promote kerbside recycling participation.

For example, the legislation gives boroughs the authority to limit the amount of waste a resident disposes of on the day of collection. This allows a borough to refuse to accept excess rubbish and impose fines on those who have remaining waste on their kerbs after collection. This type of policy, combined with a free kerbside recycling service, would provide residents with a clear incentive to recycle as much as possible. However, many boroughs are hesitant to implement such a system, fearing what might happen with the

rubbish not collected. Such measures may increase 'fly tipping' or illegal dumping. We contacted London borough councils to find out whether incentive schemes were being used, general collection policies, and the overall effectiveness of various kerbside collection methods in London.

3.3 Recycling Officer Questionnaire

We produced a questionnaire that was distributed to all the recycling officers in the London Boroughs. (See Appendix B: Recycling Officer Questionnaire) It consisted of questions regarding current recycling collection schemes, the containers provided for recycling, penalties for excessive waste, and policies regarding recycling containers contaminated with non-recyclable materials. This questionnaire gave us information in a standardised form to allow for easy comparison to Merton. It highlighted the details that were important in our project without obtaining unnecessary information.

3.4 Demographic Questionnaire

An important part of our project was determining why people were not recycling sufficiently. We wanted to identify what the most influential demographics were when considering the amount of recycling they do. An aspect that was critical in determining this was an individual's demographics. The best way to determine what was affecting a resident's participation was to present a questionnaire. It was distributed to the participants of the focus groups, directly preceding the discussion. This was so that any responses could be correlated to their demographics and trends could be found within the focus groups. The questionnaire included information on name, age, address, marital status, children, and occupation. (See Appendix C: Demographic Questionnaire)

3.5 Focus Groups

3.5.1 Focus Group Validity

A focus group is defined as 'a small group of people whose response to something is studied to determine the response that can be expected from a larger population' (Webster, 2004). Focus groups involve people discussing a specific issue with the aid of a moderator to guide the dialogue. These groups are run with the expectation of exploring the participants' opinions, as well as their self-reported actions in regard to a specific issue. Self-reported answers are not necessarily statistically accurate representations of the population from which the participants are drawn from. 'They can only assess what customers say they do and not

the way customers actually operate the product' (Nielsen, 1997). This is a reason why some researchers avoid focus groups.

The majority of researchers continue to use focus groups as an indicator and not a guarantee. Focus groups can guide a researcher to look in a more narrow area for answers, or when trying to solve a problem, for example, focus groups can provide potential answers or solutions from which to draw from.

The involvement of the participants amongst themselves during the discussion is another reason why researchers sometimes avoid using focus groups. Members are likely to be affected by the make up of the rest of the group. If there is one very outgoing participant, then a shy participant might be less likely to vocalise what he or she is thinking. This is why the moderator is so critical. The moderator has the power and requires the ability to steer the dialogue in the direction it needs to go in order to get the correct answers to a previously determined list of questions, while encouraging less vocal members of the group to speak up. Researchers find group interaction to be a critical element that goes into producing the best results possible.

'A key benefit of traditional focus groups is the group dynamics which occurs [sic] when the moderator stimulates discussion among the participants about a topic. This can often generate new thinking about a topic which will result in a much more in-depth discussion of the subject being covered. Importantly, it enables the people in the group to share their views whether agreeing or disagreeing, thus enabling all the key issues to surface' (Groups Plus, 2003).

Views on focus group validity vary depending on what the groups are used for. They may be used for product research, or for discovering problems that arise during product implementation and development. How the participants are chosen, and in what manner the groups are conducted affect how the results are perceived. If the guidelines provided by research experts are followed, then the end result of a focus group is usable data for solving a problem or answering a specific question with many potential solutions.

3.5.2 Conducting Focus Groups

The focus groups provided insight into the views of the residents toward the borough's recycling scheme. These groups aided us in determining the problems with the programme from a user's point of view. We also asked for input from residents on programmes other

boroughs were running and how they felt about recycling in general; as in whether they were aware of the critically small amount of land still available for the UK to use for landfills. As detailed below, the focus groups we settled upon were the result of research within the Borough of Merton in conjunction with members of its Council. Our group was able to discover the best methods which allowed us to acquire a volume of data large enough to be readily evaluated.

The format for conducting the focus groups resulted from a meeting with Ms. Tracy Bedford. Ms. Bedford works for the London Borough of Merton Council. Her education and Ph.D. has afforded her varied experiences organising and conducting focus groups of a similar nature to those outlined here. The organisation and methods by which we conducted the focus groups were heavily based on her recommendations.

Each of the four focus groups we conducted consisted of two to nine people chosen from a predetermined database supplied by Cormac Stokes, our liaison, and Ms. Bedford. This

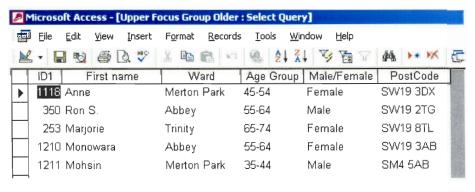


Figure 2 - Sample of Database of Residents

database had been compiled previously by the Merton Council for use with issues within the borough that required the attention and input

of the community on the operating policies of the borough. The database provided basic contact information in the event that residents would be requested to provide their viewpoints on any topic or issue relating to the borough. Every member on the list we compiled was from the council's database and as such was more inclined to participate in the focus groups.

To contact the individuals for the focus groups, we phoned residents on the database of contacts. From the database we generated four lists organized by ward and then by age. This allowed us to call residents systematically based on the focus group we wished them to participate in. We then briefly described ourselves and our goals for the project and requested their attendance at the group discussions, reminding them that any information provided would be held in confidence. (See Appendix D & E: Phone Script Versions 1 & 2)

To obtain the eight to ten participants desired, we attempted to receive twelve positive responses from each of the four lists. This was a recommendation of Ms. Bedford. Once the sufficient number of residents had agreed to participate in each of the focus groups, we were able to review the participants' backgrounds.

From the format of the focus groups we obtained participants from substantially different wards within the borough. The wards from which we drew our participant base had different economic backgrounds. Wards in the north-western area of Merton tended to have a higher economic income than those in the other area we polled, the south-east. At the recommendation of Ms. Bedford, we chose 35 years old to be the dividing line—those participants younger than 35 were placed in one focus group, and those who were older in the other focus group. In total we conducted four focus groups: two from each different economic area of the borough; and within those areas, one group of younger participants and one older group.

To maintain the number of residents who agreed to participate in the focus groups, we mailed a letter confirming their participation in the study after the initial phone call. We also phoned each participant the night before their predetermined focus group as a reminder that it would be taking place the next evening at 18:30 in the Merton Civic Centre. The four focus groups were conducted on 31 March 2004, and 2, 5, and 7 April 2004. For their participation, each member of the focus group was paid £15 in the form of cash for the March 31 group, and cheques for the other three groups. (See Appendix F &G: Cash Statement and Check Form) Ms. Bedford and our liaison informed us that this was a standard compensation for participation.

We required residents to sign a confidentiality statement, ensuring they understood that their identities would remain strictly private, as well as maintaining each others confidentiality. (See Appendix H: Confidentiality Statement) The discussions that occurred during the focus groups were formatted to begin with questions regarding a leaflet distributed to residents through the new scheme. Following these were general open-ended questions that pertained to the residents' views on recycling. These questions were not necessarily specific to the Merton recycling programme. They were designed to get the participants into a frame of mind to discuss recycling issues. (See Appendix I: Focus Group Questions) The answers were then used to tailor more specific, in-depth questions to each individual and to the group

as a whole. These follow-up questions addressed to the group focused upon the broader issues, either encouraging or discouraging individual levels of resident participation. The desired result was empirical data for analysis.

3.6 Field Studies

To understand how the expansion of the kerbside recycling program was affecting the

participation rate in the borough, we completed a series of field studies. The data collection involved visiting households in two different areas for three consecutive weeks. Members of the staff of Waste Services had previously monitored recycling participation in these areas. This data collection found the percent of households who placed their recycling boxes at the kerb, or set out rate, for



Figure 3 - Participation counting in Graveney

the area during each week. This procedure was repeated over three weeks to include the households that did not produce enough recyclables to place a box at the kerb every week. After the third week of data collection, the lists of households from all three weeks were compiled into one. Calculating the percent of households that put out boxes over these weeks produced the overall participation rate, and was viewed as representative of the area.

The two wards that we observed within the borough were Graveney and Merton Park. In Graveney, last monitored in September 2003, we selected Tynemouth and Edenvale Road, while in Merton Park, last monitored in May 2003, we selected Sandbourne, Charnwood, Charminster, and Windermere Avenues. Each week, we recorded the house number and what recyclable materials that house put out. We also made sure to choose the same times as used previously to provide consistency with the earlier data. We visited Graveney on Tuesdays and Merton Park on Thursdays, both at 8:00 am. We then transcribed our tallies into Microsoft Excel.

3.7 Chapter Summary

In evaluating the Borough of Merton's 'Recycle from Home' scheme, it was important to have an understanding of various techniques of policy evaluation. Considering available time and resources, we chose a series of data collection and analysis methods in assessing the conditions of the programme. Methods included archival research, field studies, questionnaires, and focus groups. It was essential to determine both programmatic and

societal factors in need of attention. Investigating other London boroughs' kerbside recycling schemes through archival research and a questionnaire presented to London recycling officers allowed us to define Merton's waste management system's progress with respect to that of other boroughs. Focus groups were effective in revealing residents' opinions of the programme as well as factors affecting participation. Combined with field studies, the focus groups allowed conclusions to be drawn regarding correlations between demographics and recycling participation.

Chapter 4: Data and Analysis

Our data collection consisted of a variety of approaches. Through archival research we learned how other London boroughs were improving recycling and waste management services. We conducted field studies and determined participation levels in sections of two wards for comparison use. Focus groups were effective in providing information regarding residents' viewpoints and suggestions for programme improvement. Questionnaires were distributed to recycling officers in all other boroughs to identify the range of kerbside collection policies in London. The following section explains the data that was collected as well as its subsequent evaluation.

4.1 Archival Research

4.1.1 Data

With the new recycling targets set by the Central Government, boroughs across London have come up with innovative schemes to acquire the same high recycling rates seen in other areas throughout Europe (Friends of the Earth). The Borough of Sutton, for example, has not only provided residents with a kerbside recycling service, but has set up an 'Adopt-a-Bank' scheme and an extensive advertising campaign.

Sutton, which has been regarded as a pioneer in environmental practices—specifically recycling, provides a kerbside programme that has attained some of the highest participation levels throughout London. The borough first provided household residents with a brown wheelie bin for non-recyclable waste and a green wheelie bin for recyclable materials such as cardboard, plastic bottles, and aluminium cans. After seeing an overwhelming success, the programme was expanded to include flats and also to provide a kerbside glass pickup.

Sutton's Adopt-a-Bank scheme has increased the number of public Neighbourhood Recycling Centres from 32, in 1989, to 177 with 89 community groups registered as of 2004 (London Borough of Sutton, 2004). The scheme encourages community involvement by getting community groups to agree to look after a recycling centre. The groups are given £6.50 per ton of recyclables collected from the sites in return (LBS, 2004). With this initiative, Sutton aimed to build a community that cared (LBS, 2004). Not only can residents in Sutton feel good about recycling for the environment, they also have the motivation of helping to fund a

community organisation. A report by the Aylesford Newsprint in Sutton maintained that 70 percent of the public would participate in recycling more if a charity organization was involved (LBS, 2004).

Even with the borough's high kerbside recycling participation rates, Sutton was still not fully on its way to reaching the recycling tonnage percent targets set by the government. Much of this was due to the fact that many residents were placing materials in the green wheelie bins that were not recyclable by the borough. This contaminated the bins and as a result, entire bins would have to be discarded and sent to landfill with non-recyclable waste. For this reason, in 2003, the borough hired Citigate Communication for a three-year ad campaign to promote recycling (Citigate Communications). The campaign was intended to target school children, 18-35 year old residents, and local businesses (Citigate Communications). This scheme, titled 'Reuse, not refuse,' also was aimed at those already participating in the kerbside recycling programme (LBS, 2004). The borough used the campaign to help educate residents about what items could be placed in the green recycling bins. This type of awareness is especially important in a borough like Sutton which maintains high resident participation, yet loses many recyclables to landfill as a result of the contamination of bins.

Because London boroughs cannot charge residents variably for waste disposal due to a confining legislation, one of the most potentially effective ways to increase recycling participation and decrease waste sent to landfill is not viable (Western Riverside Waste Authority, 2003). For this reason, in May, 2003 the Riverside Waste Partnership presented the 'Draft Waste Strategy: 2004-2011', which proposes multiple waste minimisation strategies, including a plan to lobby the government for a change in the legislation.

The Riverside Waste Partnership comprises four London boroughs employing the Western Riverside Waste Authority for removal of rubbish. The boroughs in the partnership include Lambeth, Wandsworth, Hammersmith and Fulham, and the Royal Borough of Kensington and Chelsea. As of 2003, this authority's 'Reth!nk Rubbish Western Riverside' campaign was the largest and most concentrated waste awareness scheme planned in the UK (WRWA, 2003).

Wandsworth, which in 2005 has recycling targets similar to those of Merton, is one of several boroughs with an 'orange sack' kerbside recycling scheme. This type of programme provides

residents with an orange sack for all glass, paper, plastic, and metal recyclables. Kensington and Chelsea have provided residents with a similar kerbside collection of co-mingled recyclables since 1993 (WRWA, 2003). The Western River Waste Authority has planned to expand this service by constructing a Materials Recovery Facility (MRF) at Smuggler's Way in Wandsworth to manage up to 84,000 tonnes of co-mingled recyclable materials each year. In May, 2003, at the time of the Draft Waste Strategy's release, the mixed recyclables from the Western Riverside Partnership were sent to a £5 million MRF operated by Grosvenor Waste Management (WRWA, 2003). A local MRF allows a borough to ensure that the materials recycled within a borough will be re-used in the borough. Kerbside collection of co-mingled recyclables is often favourable with residents because of the simplicity for the participants.

Before the implementation of 'Recycle from Home,' Merton had piloted a similar co-mingled kerbside recyclable scheme titled the 'pink bag' approach (LBM Waste Services, 2002). Though many residents were pleased with the simplicity of this type of system (Chapter 6.4), Merton was forced to stop the scheme due to resident disruption. Pink bags were given to residents free of charge for the purpose of placing all recyclable materials. A group of Merton residents who had feelings of mistrust toward the council began to purposefully place all of their rubbish in the bags, contaminating the recyclable material collected and forcing Merton to find an alternate approach.

Because of the government's increasing recycling targets, all London boroughs have been forced to produce a recycling scheme of their own. Co-mingled kerbside collection and charity involvement are just a few examples of successful approaches for increasing participation in a kerbside recycling scheme.

In April, 2004, the Borough of Barnet took a much bolder step by introducing London's first compulsory recycling scheme. Though a London borough cannot charge residents variably for waste disposal, the legislation does give them some power to limit the amount of waste collected per resident and impose additional fines for excess. The Environmental Protection Act of 1990 allows a Council to require that different types of waste be placed by residents in specific containers (London Borough of Barnet). The Borough of Barnet used this authority to make it mandatory that residents dispose of all glass, cans, and paper recyclables in the black recycling boxes provided for them by the borough. Beginning 1 April 2004 more than

25,000 homes in the borough of Barnet became part of the mandatory scheme. This plan makes residents who throw recyclable materials into their rubbish bins liable for fines of up to £1,000 (Webster, 2004). The scheme later expanded to cover the entire borough and it was predicted that, with Barnet taking such drastic measures, similar incentive schemes would spread throughout the UK (Webster, 2004).

4.1.2 Analysis

London boroughs have taken great strides to reduce waste and avoid government fines since the introduction of the E.U. Landfill Directive. Each borough came up with its own approach, but most started by launching or expanding a kerbside recycling scheme. Though some boroughs seemed to be more active leaders in kerbside recycling, there were not many major programmatic differences in Merton's scheme when compared to even the most progressive boroughs. Most areas that offered successful kerbside recycling managed an 'opt-out' system. This type of scheme includes every resident automatically and removes a resident from the programme only by request. Opt-out schemes prove to be a good way to get as many people involved as possible at the start of a kerbside programme such as Merton's 'Recycle from Home.'

To increase participation in a recycling scheme thereafter, further steps must be made. While Sutton and the Western Riverside group had extensive advertising and education programmes, Merton was weaker in encouraging participation through these media. In comparison with the advertising campaigns for recycling in other boroughs, Merton was clearly lacking. Though Merton offered a helpful website for its recycling programme and planned to improve environmental education in schools, there was no significant advertising scheme for the borough.

The simplicity of the Merton programme for residents was another area that needed improvement. Co-mingled collection saves residents from having to sort recyclables and makes participating easier. However, a co-mingled bag scheme, similar to the one employed in Wandsworth, was previously ineffective in Merton due to poor resident-council relations.

The following chart displays the rates and targets for Merton, Sutton, and Wandsworth.

Though Merton and Sutton are similar in size and population, Sutton's co-mingled scheme is expected to attain much higher levels than Merton's in future years. While Wandsworth's

ultimate target for 2005-2006 is slightly less than Merton's, the overall expected improvement of the co-mingled schemes increases more than Merton's 'Recycle from Home'.

Borough	Population	Recycling Rate	Recycling Target (2003/4)	Recycling Target (2005/6)	Description of Kerbside Scheme
Merton	188,348	15%	18%	27%	Two separate boxes; paper, glass, plastic, card, metal
Sutton	180,174	19.30%	33%	36%	Wheelie bins: one designated for all recyclables; comingled
Wandsworth	260,847	10.5%	16%	24%	Orange sack for recyclables; co-mingled

Table 3 - Recycling Facts for Merton and Surrounding Boroughs

All figures from Capital Waste Facts (December, 2003)

4.2 Field Studies

4.2.1 Data

Upon completion of our tallies, we calculated the set out rates and participation rate for each street. On Tuesdays, we studied two streets in Graveney, containing 175 households, and on Thursdays we observed four streets in Merton Park, containing 226 households. The charts below show the results and the average participation and set out rates.

Graveney

	Set Out Rate (%)			Avg. set out Rate (%)	Participation Rate (%)
Location/Date	23/3/04	30/3/04	6/4/04		
Tynemouth Road	25	23	28	25	41
Edenvale Road	31	51	49	44	60
				34	51

Table 4 - Participation levels measured in Graveney

Merton Park

	Set out rate (%)			Avg. set out Rate (%)	Participation Rate (%)
Location/Date	25/3/04	1/4/04	8/4/04		
Sandbourne Avenue	60	72	55	62	80
Windermere Avenue	46	49	38	44	64
Charnwood Avenue	64	79	70	71	85
Charminster Avenue	81	78	74	78	93
	•			64	80

Table 5 - Participation levels measured in Merton Park

Walking through these neighborhoods gave us a unique perspective of the way the kerbside programme was being used by the residents. We discovered that Tynemouth Road was comprised of many households with shared entranceways, and on one occasion we found that a box in front of one household was being shared with the household adjacent to it. There were also instances where households put out bundles of paper or plastic bags filled with paper at the kerb instead of in a green box. Cracked and broken boxes also appeared to be a visible problem. We saw the limitations of our tally method, where a household that puts very little in its bin is counted the same as a household that puts out a full box of recyclable items.

4.2.2 Analysis

When compared to the data collected from the same areas previously, the average set out rates and participation rates did not vary much. For Graveney, the average set out rate dropped by 4%, meaning that over the course of our data collection, 4% fewer households put out boxes each week. More importantly, the participation rate dropped 2%, showing that over the course of our three weeks of monitoring, 2% fewer households participated compared to data collected by the council in 2003.

Graveney – 2003				
Avg. set out Participation				
Rate (%)	Rate (%)			
38	53			

Graveney – 2004			
Avg. set out Participation			
Rate (%)	Rate (%)		
34	51		

Table 6 - Participation level comparison for Graveney

The theme was the same in Merton Park. The average set out rate across all four streets was 2% lower than the data collected in 2003, and the average participation rate had dropped by 5% along the streets we monitored.

Merton Park – 2003			
Avg. set out Participation			
Rate (%)	Rate (%)		
66	85		

Merton Park – 2004	
Avg. set out	Participation
Rate (%)	Rate (%)
64	80

Table 7 - Participation level comparison for Merton Park

In an effort to better understand the implications of the participation levels, we looked at statistical census data from the two locations where we counted boxes. The best indicator of economic status was found to be education level, stated as 'qualified to degree level or higher' in the census report.

Location	Percent Qualified to Degree Level or Higher
Graveney Ward	29.6%
Merton Park Ward	43.7%
Merton Borough	35.7%
England and Wales	19.8%

Table 8 - Census Data for Education Level Comparison

All figures from National Statistics Online, 2001

According to this information, it is clear that Merton Park is a more educated area than Graveney. The levels of participation that we found showed that the Merton Park area also had a higher level of participation in the kerbside recycling scheme. There is a correlation between education level and economic status. Previously, Waste Services for the Borough of Merton had a notion that those of a higher economic status were participating more in the recycling programme. The data collected from the participation levels, combined with the census data confirms their suspicion that education has a positive relationship to amount of recycling participation completed by residents.

4.3 Recycling Officer Questionnaire

4.3.1 Data

We sent a questionnaire out to the recycling officers in each London Borough and received 13 replies. The boroughs that supplied answers all reported some form of a kerbside recycling programme. The materials collected by each borough are as follows:

Borough	Material Collected				
	Plastics	Papers	Card	Glass	Cans
Brent		X		X	X
Barnet		X		X	X
Bromley	X	X	X	X	X
Camden		X		X	X
Corporation of London	X	X	X	X	X
Hammersmith & Fulham	X	X	X	X	X
Greenwich	X	X	X		X
Hounslow		X	X	X	X
Islington		X		X	X
Kingston	X	X			X
Newham	X	X	X	X	X
Kensington & Chelsea	X	X	X	X	X
Wandsworth	X	X	X	X	X

Table 9 - Recycling Officer Questionnaire Results

Brent, Barnet, and Hounslow also claimed to collect textiles, batteries, and engine oil from the kerbside boxes.

When asked about their borough's policy on contaminated boxes, Wandsworth, Bromley, Kingston, and Islington responded that they leave the boxes at the kerb. In the boroughs of Kensington & Chelsea as well as Hammersmith & Fulham, the materials in a contaminated container are simply thrown away with the rest of the refuse. The remaining respondents say they sort through the containers, remove the contaminants, and recycle the remainder. Bromley, Camden, Barnet, Brent, Hounslow, and Islington leave a note to advise the resident of the contamination.

Containers for recycling are not provided by Camden and Hounslow, though Brent and Greenwich both provide wheelie bins for their residents. Islington and Kensington & Chelsea both provide their residents with green boxes in which to place their recyclable items. In the borough of Bromley, households are provided with two 54 litre boxes for recyclables. The residents of Barnet are provided with as many black boxes as they feel are necessary to dispose of their recyclables. Wandsworth, Hammersmith & Fulham, and Newham differ, having a co-mingled collection where the residents are provided with orange sacks in which they place all of their recyclable materials. The Corporation of London has a similar scheme, whereby residents are given sacks to put their recyclables. The only borough that stated that they offered an incentive program was Bromley, which has a monthly drawing of four £25 prizes.

Most officers felt that their borough's recycling scheme was good and that when compared to the schemes found in other boroughs, their programmes were above average. The recycling officers from both Greenwich and Kensington & Chelsea felt that their recycling programmes were excellent and well above average respectively. The officer from Wandsworth felt that the borough's program was good, but only average as compared to other programmes within London. The officer from Kingston felt that the scheme was below average.

4.3.2 Analysis

A majority of the respondents stated that they provided their residents with containers to place their recyclable materials in. Merton is no different in this aspect, as they provided all residents with a purple and green recycling box. Unlike other boroughs, Merton residents must separate their recyclable material between two boxes rather than co-mingled into one box or sack.

Nearly half of the respondents stated that when contaminated bins were encountered, a card or note was placed either in the bin or at the door of the residence. Although there are plans in Merton for a program such as this, contaminated boxes are currently left at the kerb unemptied, with no explanation. Boxes left at the kerb lead to complaints from people claiming that the collection crew missed their boxes.

4.4 Focus Groups

4.4.1 Data

4.4.1.1 Focus Group 1

(See Appendix J: Focus Group 1 Discussion Summary)

Understanding the opinions and wishes of the residents of the London Borough of Merton was important. This meant that the focus groups which had been conducted needed to produce data which could be used to show trends within the residents' thoughts about the current recycling scheme. These thoughts and concerns were taken into account when the final recommendations were made to the council. The data collected from each of the four focus groups gave an impression of residents' reactions to the expanded scheme. This data was compiled by each focus group as they had previously been organized by socio-economic class to enable trends to be more prominent, as discussed in the methodology.

The first focus group, conducted on 31 March 2004 in a conference room in the Merton Civic Centre, produced data on several predetermined topics. These topics included but were not limited to, participation, future development, quality of service, and comparisons with other borough's programmes. Also covered in the discussion were topics which were not expected. The participants were confused about what could be put into each box and what could not. We assumed that any concerns with what could be recycled had been addressed previously. A concern we had with respect to validity, before the start of the focus groups, was the willingness of the residents to participate in the discussions freely. This concern was quickly removed as the residents openly discussed all the topics we wanted to cover. They held no reservations about voicing their personal opinions and actions.

Nine of the original twelve who had originally agreed to participate attended the discussion. The participants themselves represented a wide variety of backgrounds within the necessary constraints. Of the nine in attendance, four were male and five were females. The ages ranged from 45 to 75 years old. Several boroughs were represented and occupations varied from housewife to professionals and those who are retired.

Number	Gender	Age	Ward	Occupation	Marital Status
3	Male	55	Merton Park	Journalist	Married
6	Female	51	Dundonald	Housewife	Married
2	Female	50	Merton Park	Teacher/Housewife	Married
4	Male	69	Merton Park	Engineer Retired	Married
10	Female	75	Abbey	Retired	Widowed
5	Female	49	Hillside	Commercial Mg	Divorced
7	Male	45	Merton Park	Engineer	Married
9	Male	75	Hillside	Architect Retired	Married
8	Female	57	Raynes Park	Community Organizer	Married

Table 10 - Focus Group 1 Participant Demographics

The majority of the participants within the first focus group made known that they had been recycling for a substantial length of time, even before the new scheme went into effect.

Largely, the residents were well settled within the borough and felt that they were well-versed in the policies and procedures of the borough. Many of the participants stated that

they had lived in the borough for over twenty years, while others stated that they had always lived in Merton.

Participation within the recycling programme by the focus group participants was shown to be high. All but one participant had received the purple box and of those who had, thought it was a good idea. The green leaflet, which was distributed with the purple boxes by the Office of Waste Regeneration, was familiar to the group. Most felt that the complexity of the programme required a document explaining to the residents what materials went into each box. For example, a few participants voiced concerns that they still did not know what types of paper and card went into each box, as certain papers with plastic films must be put in one box while newsprint goes into the other. In general, most felt the programme was good but was overly complex, resulting in lower participation than would probably be recorded if a simpler system were put into place. By contrast, one woman felt that the programme was comprehensive and that it could not get any easier. She especially felt that the kerbside collection was a welcome change, requiring little effort on her part to find collection containers or transporting the recyclables to a location where they would be collected.

The future development of the programme is dependent upon the willingness of the residents of the borough to comply and participate in the programme. A programme will not meet success if it does not have the support of the residents. We asked the participants of the discussion to comment on how they would feel about a variety of possible changes and what they thought would be positive changes for the programme in order for it to succeed. All of the participants verbally agreed that the boxes needed to have some sort of a closure to prevent papers from blowing away. A woman, aged 49, stated that 'paper ends up all over the garden or pavement'. Many residents stored their boxes outside, so a lid would have been useful for protecting the recyclables from the elements as well as animals such as foxes, as there is a problem with the animals scattering the contents of the boxes about the pavement. Another major point that appeared in the discussion concerning future development of the programme was the overwhelming consensus that, for a new scheme to be effective it cannot cost the residents more than it does now. The participants felt that the programme could be more cost efficient and should be. The group also agreed that a monetary incentive or a clear display that the cost to residents will not increase with an improved scheme would gain more support for recycling.

The quality of service that residents perceived was also addressed during the discussion. The participants stated that the service performed by the collectors resulted in poor feelings toward the scheme. The reason for this was that several participants said they witnessed the collectors (dust men) handling the boxes very roughly, often damaging the boxes when they were thrown back onto the pavement or front garden. A few participants felt that the job was done quite well, though they were confused when a box would be skipped, not realising that it might be because the box was contaminated with non-recyclable materials.

Other boroughs' programmes were a topic discussed. This provided insight into how the residents felt Merton's scheme was doing when compared to other boroughs. Most of the participants felt that Merton's scheme was very good comparatively. Only Sutton was mentioned as a borough that Merton may want to look at to improve their scheme. The Borough of Sutton has a wheelie bin scheme that some participants liked. The overwhelming majority felt that Merton's scheme was comprehensive, but a woman, aged 51, felt 'Merton doesn't have it right'. The participants felt that the scheme in Merton was too complex to suit everyone's needs. Their conclusion was that the diversity of the borough's demographics made it complicated to please all and that some more adjusting was necessary.

4.4.1.2 Focus Group 2

(See Appendix K: Focus Group 2 Discussion Summary)

The second focus group, conducted on 2 April 2004 was composed of the older residents of the lower east side of the borough. Of the original 12 who accepted, nine attended. Of those participating, six were male and three were female. The ages ranged from 44 to 78 years old. Those participating represented a wide variety of boroughs and occupations.

Number	Gender	Age	Ward	Occupation	Marital Status
1	Female	69	Colliers Wood	Retired	Married
5	Male	54	Longthorton	Minister of Religion	Married
6	Female	71	Ravensbury	Retired Nurse	Married
10	Male	75	Lower Morden	Retired	Widowed
3	Male	60	Figges Marsh	Retired	Single
11	Male	71	Longthorton	Property Developer	Married
4	Female	44	Ravensbury	Housewife	Married
7	Male	56	Longthorton	Logistics Consultant	Married
2	Male	78	Lower Morden	Retired	Married

Table 11 - Focus Group 2 Participant Demographics

The recycling levels of this group's participants were not as high as those of the first focus group. One man in particular said he would never recycle because it was too complicated and cost the individual and the borough too much money. Many of the participants felt it was a chore to recycle. They did not see it as part of their daily routine, but rather as a hindrance to time that could be spent performing other tasks.

Future development of the scheme was a topic discussed by the group. It was initially apparent that the participants were less willing to participate in the scheme if it did not benefit them in some perceivable way. Because of this, we decided to ask the participants what could be changed to the programme to motivate them to recycle. Many participants said that they would benefit most from a monetary incentive. They were very interested in learning the facts and figures behind the programme from the council but also said that they do not generally read publications put out by the borough. Some participants also felt that the scheme required too much effort from the resident. They felt residents would benefit from a simpler scheme. One, for example, that is a co-mingled scheme and has the collectors sort it at vehicles equipped with dividers, or at the recycling station. The participants also felt that the boxes would have benefited from lids or another form of cover. Many residents also expressed interest in the wheelie bins used by other boroughs but acknowledged that they had little area to store them in.

The quality of service received by the residents was perceived to be lower than desired. The participants noted that boxes were often broken when they were thrown back to the pavement by collectors. A few participants noted that the collectors received special jumpsuits to collect the recyclables. The residents did not feel this was appropriate as one man, aged 75, sarcastically stated that collection could be done '...in their best suits'. The participants felt the larger issue was that the council seemed to be wasting more money than necessary on the scheme. They also felt that the scheme had been started without their input and a scheme would be more successful if the residents were left to supervise themselves.

When asked to compare the programme in Merton to other boroughs, the residents suggested that Merton should look to Sutton and Lambeth, which is included in the Western Riverside Partnership. Largely, the group felt that the new scheme in Barnet would not be a great success. They had concern over who would oversee the participation, how the fines would be distributed, and how much money it would cost to enforce the scheme in the entire borough.

Largely, the participants knew that recycling was a benefit to the environment, but they were more concerned with the cost of the programme which they felt was not living up to its expectations.

4.4.1.3 Focus Group 3

(See Appendix L: Focus Group 3 Discussion Summary)

Our third focus group, held on 5 April 2004, was made up of residents under the age of 40 and living in the south-east portion of the borough. Of the six who had originally agreed to be present, only three attended.

Number	Gender	Age	Ward	Occupation	Marital Status
1	Male	36	Longthornton	Graphic Designer	Single
5	Female	20	Colliers Wood	Customer Service Supervisor	Single
6	Female	23	Colliers Wood	Stock Administration	Single

Table 12 - Focus Group 3 Participant Demographics

Discussion included the importance of recycling as an environmental issue, potential ways for council publicity to educate the borough, and programmatic issues. Two of the residents, both female, had only recently moved into Merton and had not yet received any information about the kerbside recycling scheme. The third resident, a male age 36, was a self-proclaimed recycler who was more focused on recycling as an environmental issue than as an attempt to save money by the council. He was aware of the government targets set for the borough and felt that without such targets Merton would never have done anything on the level of this programme. He also discussed the apathy shown by many of his neighbours with regards to the programme and the future of the planet. He talked about the importance of showing residents the concrete evidence of the difference recycling makes and not just discussing the theoretical trees destroyed in a foreign country.

The participants discussed how to reach their fellow residents. Responses included using the free magazine delivered to residents by Merton, advertisements and/or articles in local newspapers, or educating organizations such as churches or volunteer groups. One female, age 20, was very interested in the kerbside programme and made a note of the phone number to call to receive her boxes. The other female, age 23, seemed uninterested in Merton's recycling programme and unaware of any recycling programme that existed in her previous residence. All participants discussed an avid interest in seeing a form of positive

reinforcement to encourage recycling, specifically a monetary incentive such as a discount on their council tax. The male participant also discussed the distrust toward the council that was expressed by many residents within the borough.

Overall, these residents were less talkative about recycling. They were willing to answer questions but unlike other focus group participants, were not overwhelming us with complaints about the programme and about the cost to the borough.

4.4.1.4 Focus Group 4

(See Appendix M: Focus Group 4 Discussion Summary)

Our fourth and final focus group was conducted the night of 7 April 2004, in the Merton Civic Centre. It was composed of two residents, both with at least one small child which made them very aware of the environmental impact of recycling.

Number	Gender	Age	Ward	Occupation	Marital Status
2	Female	36	Raynes Park	Administrator	Married
4	Male	37	Merton Park	Transport Planner	Married

Table 13 - Focus Group 4 Participant Demographics

The female resident articulated that her family did not use the kerbside recycling programme prior to receiving the purple bin. Her household would take everything to the main centre at Garth Road every few weeks. The male resident stated that his boxes were put out about once every three weeks, unless a special occasion occurred, such as Christmas or his daughter's birthday. They both stated that sometimes their boxes just did not get collected; they did not really know why.

The male resident discussed the fact that his boxes seemed to be pretty indestructible and that they were in good condition. The female, age 36 noted that it is not difficult to sort out the different materials and that laziness is the reason many residents do not recycle. 'Personally', she said, 'I think it's a good thing. I am very committed to recycling'. Both residents were in favour of a monetary incentive. They proposed a five percent discount on the council tax for regular recyclers. They also discussed the feasibility of implementing such an idea. They brought up the idea of small incentives, such as discounts at grocery stores when you bring in and reuse your plastic bags, rather than a large system to determine which residents are recycling sufficiently enough to receive a council tax discount.

When wheelie bins were discussed, the female was initially in favour of them, but once the male resident brought up the idea of where to put them, she changed her mind. Discussion moved to how to reach those residents who were not participating. Responses included, 'I guess you've got to use options available, local groups, publicise to local residents, magazine that comes around', and 'hard to reach because they [non-recyclers] do not want to be'. They also stated that they did not read the informational mailings sent out by the council.

When asked if they thought the recycling programme costs the borough a great deal of money, both participants said that they felt it did not, and if it did it was worth it. The female resident stated, 'We can't continue to just fill landfill sites. It's [recycling] going to cost money but it's better to recycle than not'. The male resident stated that with two small children, he was definitely thinking of future generations.

Overall, both residents felt Merton was working to save the environment, and that some kind of monetary incentive would definitely increase awareness and participation. They were very helpful, polite, and shared more personal thoughts than the other younger group.

4.4.2 Analysis

4.4.2.1 Focus Groups 1 and 2

The older residents, living in the north-west, were very talkative, opinionated, and polite. Although they had many things to say, participants rarely interrupted each other. They had differing viewpoints that were able to survive without any criticism. Some residents felt recycling was easy, while others felt that separating was too complicated. Overall, the discussion was mature and generally stayed on topic with limited ranting or unhelpful, repeated complaints.

The focus group for the older residents, living in the south-east, was equally talkative and opinionated but hardly polite. The participants consistently repeated each other and themselves, were rude to the more soft spoken participants, and were very bitter towards the council. This group was less aware of the full picture in relation to recycling and saving the environment. The majority were concerned only with the council tax. There were a select few that seemed to be more educated and aware of the impact of the limited landfill space.

Comparatively, the north-west residents were more educated about the background surrounding the need for a recycling programme and were also more involved with recycling than the southeast residents. The southeast residents were generally of a lower income level, which showed with their worries about the council tax. The younger residents were less wary of the council, but also were not interested in reading what the council sent via mail. The younger residents were shorter on time, generally, due to families and careers while many of the older residents in both groups were retired. A few of the northwest residents had taken time to research the programme before attending the focus groups. The southeast residents had made no such visible effort.

The first focus group included engineers, a teacher, and a journalist. These are professions requiring higher educations. The second group included a minister, a property developer, and many retired individuals. Even the housewives, who would typically be very involved with waste disposal, seemed more aware of the societal issues, when comparing the first group to the second group. In Chapter 4.2.2, it was shown that there is a higher percent of educated people in the northwest than the southeast.

4.4.2.2 Focus Groups 3 and 4

The focus groups held on 5 April and 7 April consisted of younger residents, under the age of forty. It was much more difficult to find participants for these two groups. The resident panel database we had used to gain participants held significantly fewer residents to contact for participation in our younger focus groups. As a result we were forced to recruit participants from community. We visited grocery stores and shopping malls in particular areas that matched our criteria for sorting of the focus groups. We had short questionnaires for residents to fill out. (See Appendix N: Solicitation Questionnaire) We also had prepared letters to give to those persons who agreed to attend. (See Appendix O: Solicitation Letter) The shopping malls proved less than successful once Security identified us as non-shoppers. We were asked to get written approval from the management of the mall or to vacate the premises. We only had a few days before the focus groups were scheduled to be conducted so we were unable to ask for permission and were forced to leave. We only obtained one person willing to attend before we had to depart. The grocery stores were only slightly more helpful and resulted in two women who did appear and participate in a discussion. Unfortunately, they were roommates who had only moved into the Borough of Merton the

previous week. During the focus group their insights were severely limited because they were not participants in the kerbside recycling programme yet.

The information collected from the 5 April focus group was drawn from one person, and as such we felt he could not represent his entire demographic. The 7 April focus group data was drawn from only two people. They both fit within our stated demographics and appeared to be in consensus for the majority of the discussion. These residents more accurately reflected their demographic population, but we could not guarantee that they would, given the very small sample size. As such, it was not possible to evaluate the demographic of economic status within the younger focus groups because any assumptions made would be based on insufficient information. Because of the limited time, it was impossible to try and repeat these focus groups, so much of our analysis relied on the older groups' discussion, with serious consideration to the comments and suggestions made by the younger residents. We discovered some consistent themes throughout all of the groups, such as an interest in a monetary incentive to encourage residents to recycle. As a result, the younger focus groups were not a waste, despite the limited participation.

The age of the participants within each focus group had been previously determined as a way to facilitate better analysis of the data that was obtained from the focus groups. Originally we had chosen thirty-five years of age as the break point for distributing the residents into the different groups. Unfortunately, we found that three of the residents chosen for the younger age groups were actually thirty-six or thirty-seven, a result of an aged database. As a result, the age cut off was changed to forty years of age. None of the residents from the older groups fell between thirty-five and forty so changing the age cut-off to forty did not cause an issue.

4.5 Chapter Summary

Collecting data was critical to our project and provided us with updated information and first-hand experience with the programme. Walking the streets counting boxes was the best way to fully appreciate and comprehend the focus group participant's complaints about the condition of resident's boxes and the limited storage space. The analysis of the data we collected involved determining trends from the focus groups, uncovering correlations for specific demographics, and exploring the best features of other recycling programmes while considering the feasibility for Merton. Our data and analysis provided us with clear and concise information to make appropriate conclusions and recommendations.

Chapter 5: Conclusions and Recommendations

The review of the current recycling scheme in Merton provides the office of Environment and Regeneration with a comprehensive list of recommendations to improve their scheme. We found there were several areas in which the borough already excels, such as their public school education programme. There are also areas that could be improved, such as finding ways to increase recycling by residents and improve council relations.

5.1 Monetary Incentives

A common theme brought out by focus group participants was an interest in a monetary incentive to increase participation in the kerbside recycling scheme. Many different types of incentives were discussed, including a discount on the council tax, a refund for returned bottles at a grocery store, or even a small discount on groceries when customers bring their own bags. As described in Chapter 4.1.1, The Borough of Barnet has imposed a programme that involves residents paying a fine if they do not recycle. A 'pay-as-you-throw' programme is not a legal option right now, but could prove effective if allowed by the central government.

The idea of a discount on their council tax strongly appealed to focus group residents. They were more than willing to discuss different ways this could be enacted. Unfortunately each idea required a great deal of man hours and an elaborate system to maintain information on all residents in Merton. Determining the specific level at which a resident is participating and exactly how much of a discount would be given would be difficult. No matter what, there will be perturbed Merton residents who do not feel the discount system is correct or fair. Also, the feasibility in relation to Merton's budget has to be considered. Recycling will save the council money, but would it be sufficient to provide such a discount? What if an overwhelming number of residents participate when the discount programme first starts and the council cannot afford to continue it? Last time the borough implemented a programme, the free garden waste bags and collection, residents were very angry and upset when it was changed a few months later. A monetary incentive may be better created with simpler programmes.

Having a refund for returned bottles and cans, at grocery stores, would be a less dangerous plan for the borough. If Merton could set up a partnership with bottle and can manufacturers to give a small compensation for each bottle or can returned, as occurs in the United States, the number of thrown-out beer cans and bottles tossed in the trash would be reduced. Also, fly tipping would be decreased. Walking around the area by the Merton Civic Centre, one finds many places where bottles and cans have just been tossed over a fence instead of in the waste bins provided. Providing a 'reward' would alleviate the continuation of this practice.

The idea of having grocery stores give a reduction on grocery bills for any customers who bring in their own plastic bags would also be a form of recycling. The reduction provided would be a small compensation, as in one to three pence per bag, and would be an incentive to encourage Merton residents to recycle. It would require a partnership between the council and local grocery stores in regards to publicising the store policy. Sainsbury currently offers a one penny per bag discount (Shropshire, 2003). Also, some of the larger grocers currently offer a programme called a 'bag for life' scheme. Customers can purchase a large, reusable shopping bag from them and as long as you continue to use it at their stores; they will replace it free of charge. This is another form of recycling. These bags are visible throughout London being used for everything from groceries to carrying a change of clothes. If these stores combined this programme with a discount every time their bags were re-used, it would likely serve as an effective monetary incentive without a massive amount of work required by the council. It would be important not only to provide the programmes, but to also make customers aware of them. Educating the customers about the recycling programmes and discounts offered is critical. Something that customers would see and read as they wait in line would be excellent form of education.

In March 2002, Ireland put into place a tax on plastic bags of fifteen euro cents. Over 13 million euros were raised, as of 28 July 2002, and the money was used for recycling facilities. Ireland was previously using 1.2 billion bags per year. They had seen a 95% decrease by August of 2003 (MSNBC, 2003). This programme is effective by charging customers. This would require a change in legislation for the UK to create a similar programme.

The Borough of Barnet, discussed in Chapter 4, charges any resident who is found to have recyclable materials in their rubbish. This is a form of a monetary incentive, with a negative connotation. Instead of rewarding residents for recycling, Barnet fines residents who are not

contributing. Focus group participants were unenthusiastic about this idea. They felt that a positive influence would be more effective within the Borough of Merton.

'Pay-as-you-throw' programmes are currently not allowed by legislation in the UK. If legislation were altered, or if Merton were given permission to run a pilot programme, the most critical part of making it successful would be the education of Merton residents about how the programme works. Merton residents would have to be made aware of where to get bags and how much they cost. They would also need details about a discount on their council tax so that they are aware they are not being charged twice. It would be imperative for the residents to understand that when they pay for the bags, they are replacing part of their council tax.

5.2 Collection Policies

Collecting all recyclable materials at once as part of a co-mingled kerbside recycling scheme is one way to increase the convenience of the programme for Merton residents. However, combining glass and paper with the already co-mingled pick-up for cans, plastics, and card would not be feasible for the borough. Though focus group participants voiced a request for a simplified scheme, due to contracts with Aylesford Newsprint and other financial concerns, it is our conclusion that this current 'Recycle from Home' policy is sufficient does not need alteration.

Before the launch of 'Recycle from Home', Merton recyclers were forced to cart recyclables to a collection site where they would have to sort materials before leaving. With the 'opt-out' nature of the kerbside scheme, already dedicated participants can recycle much more easily and residents that have never made a trip to the nearest recycling site are given the opportunity to start recycling from home. It is clear that Merton has made an effort toward providing its residents with a comprehensive and convenient programme. However, our field studies show that, in some areas, participation has not increased since the scheme's implementation. To ensure that recycling rates increase, the borough will have to explore new measures in reaching its residents.

5.3 Advertising

During the focus groups, participants made it clear that there was a general lack of understanding of where the money each resident pays into the programme via their council tax goes. The participants voiced concerns that they felt uneasy about supporting the programme as they did not know what processes are entailed in the recycling scheme in Merton. One recommendation for improving this problem would be to have greater community wide access to the financial breakdown of the scheme in order to further educate the residents about their recycling from home scheme. This can be performed in several ways which will be outlined below. In addition to this, educating residents about how recycling can help them on a more personal level would aid in persuading them to recycle more.

There are several ways to educate the public to increase kerbside recycling participation. It emerged in the discussions with residents that some felt that if the scheme was more clearly presented and explained, they would be more inclined to participate. If the borough were to take steps to educate their residents, it is likely that the participation within the programme would increase. Some recommendations, as shown by the data, that would help persuade more residents to recycle are as follows: providing an instructional video or short television commercial about participating, making citizens more aware of the borough's website, and advertising the benefits and facts and figures of recycling in Merton in public areas.

Providing an instructional video either on request or with each new purple box handed out would be a relatively simple way of further explaining the process of preparing the recyclables for collection and of the importance and need to recycle in the borough. Some focus group participants voiced their concern over the seemingly complicated leaflet they received with their purple box. An instructional video with step by step instructions on sorting, washing, and placing the box out for collection would likely help these individuals. For those residents who do not understand why they are participating, the same video could contain information on how recycling aids the environment, reduces landfill waste, and lessens costs to the consumer. This would show them that their efforts involved in recycling are making a difference. A short television commercial would provide the same effect as the video, reaching large numbers of residents and providing information why recycling is helping the borough.

The Environment and Regeneration section of the Merton website includes information to answer most questions one could have about the recycling programme. It has statistical data about financing the programme, some quick facts about where recycled products go, and information regarding the 'Recycle from Home' scheme. Many questions that residents had could be answered if they were to navigate to the website and spend a short period of time sifting through the quantity of data. For the residents who have access to a computer in their home, this task would be very easy. For those who do not, the public libraries in Merton have free access to computers with internet access that would allow residents to navigate the website. To do this, the residents need to be made aware that the website is there to aid them and contains such information, a point that seemed to be lost on most of the participants of the focus groups. This would likely be through an advertising campaign.

A good advertising campaign would be tailored to making the resident aware of the recycling programme and its importance without any extra effort required on the part of the resident. Participants in the focus groups felt that they were already doing a lot of work for the programme and that they should not be required to exert any extra effort to ensure the success of the scheme. Thus, advertising would need to be prominently displayed in locations that are often and easily seen by the residents, including the signboards on the sides of public transport buses, inside the buses on smaller flyers and on the sides of waste containers on the street. Other boroughs that have proved to be good examples of green boroughs already have such advertisements in place. The outer signs could have Merton's 'Moving Ahead' slogan for example and the inside flyers could have several variations on the importance of recycling and what goods are commonly made from recycled materials. One example of this is the Western Riverside Partnership advertising campaign. It has flyers which illustrate that plastic bottles are recycled to produce fleece apparel. Another possibility would be to list simple but important general facts about recycling. Such a flyer might say how much money recycling will save the borough in waste removal over a year's time. These possibilities would make the public more aware of the borough's desire to increase recycling without the residents feeling that they are being forced to—a point often mentioned during the focus groups.

5.4 Education

Developing an environmentally conscious community is not an easy task. Encouraging residents to live sustainable lifestyles can prove to be difficult if an apathetic attitude towards environmental issues already exists. It is important to advocate the importance of recycling

and other conservational practices before wasteful habits are formed. Making recycling part of elementary school curriculum is an effective way to increase awareness and environmental practices at an early age.

Merton is aware of the importance of environmental education. As of 2003, 43 mini recycling sites were located at schools throughout the borough (CWF, 2003). These sites were used not only for collecting recyclables, but also as an educational tool (CWF, 2003). Section 3.2 of Merton's most updated Draft Recycling Plan (2002) outlines a list of short-term goals. Target A.7 and A.8 outline plans to promote 'waste reduction, re-use and recycling within schools', and to 'ensure that every school within the borough has a waste paper recycling bank' (LBM Waste Services, 2002).

Merton is taking its elementary education plans one step further with plans to introduce an Education Centre at its Reuse and Recycling site at Garth Road in Morden. The centre is expected to be established in 2005 (CWF, 2003). Merton plans to equip the centre with interactive computer tools and a viewing station of the recycling facilities at Garth Road. The new centre will be used as a resource for elementary school teachers incorporating environmental awareness into their curriculum.

Merton is clearly already taking action in educating its youth on the importance of recycling. Following through with its plans for the Recycling Education Centre and maintaining and increasing the school recycling sites will be valuable next steps for the borough. To improve early environmental education further, the Merton's Recycling and Regeneration Department could try to work in coordination with the Education, Leisure and Libraries Department to form a standard environmental curriculum.

5.5 Council Relations

The focus groups revealed that many of the residents distrust and dislike the Merton Council. The participants in the focus groups stated that they wanted to know how much the recycling scheme itself was costing the residents because they felt that the borough was wasting too much money on it. Even if the borough were to publish facts and figures regarding the costs of the programme, it is unlikely that the people who do not trust the council will believe or even read the material. One resident stated that he simply throws out any mail that comes from the council. That the council must aim to improve its image in the eyes of the residents.

It would be possible to better council relations with a number of solutions, from all areas of council activity. In regards to recycling, a man age 54 from our second focus group stated that he felt strongly that the council should 'lead by example'. The borough should consider recycling on a larger scale within its public buildings and publish the information on how much material is collected.

An overall improvement in the way the council represents itself would encourage the residents who currently demonstrate antipathy towards the council to be more receptive to advertisements or publications regarding council programmes. The result would be an increase in participation in all programmes offered by the borough, including the recycling programme.

5.6 Chapter Summary

Overall, the London Borough of Merton's kerbside recycling scheme is effective in making recycling easier for those who want to participate. The next step for the borough is finding ways to reach out and include those residents who are not currently involved. A monetary incentive is one way this might be accomplished. Educating residents is another critical part of the process of increasing participation throughout the borough. Merton needs to be aggressive in informing residents about the resources available to them for recycling. These recommendations will provide Merton with the tools to increase recycling and grow to become a greener borough.

References

- Barnet Council. 2004. 'Wake up to Waste Barnet'. Retrieved from the World Wide Web March 27, 2004:

 http://www.barnet.gov.uk/environment_transport/waste_wise_web/recycling/comp_recycling.php3
- Bryant, Cathy. <u>City of Winston-Salem Citizen Satisfaction Survey 1999</u>. Retrieved from the World Wide Web February 17, 2004: http://www.cityofws.org/ooe/final/
- Capital Waste Facts. (2003). Retrieved from the World Wide Web February 17, 2004: http://www.capitalwastefacts.com
- Citigate Communications. (2003). 'London Borough of Sutton'. Retrieved from the World Wide Web March 27, 2004:

 http://www.citigatecommunications.co.uk/user_site/user_pageflash.cfm?lang=1&item id=125
- 'Cost effective plant for garden waste', UK Newsquest Regional Press, This is Local London, October 31, 2003.
- Diaz, L., George, S., Clarence, G., (1982). Resource Recovery from Municipal Solid Wastes Volume II, Boca Raton: Florida
- Duston, T. (1993). Recycling Solid Waste. Westport, CT: Quorum Books.
- 'Environment: £90,000 for city green schemes', Peterborough Evening Telegraph, January 16, 2004.
- Friends of the Earth. (2002). Good Practice Recycling. Retrieved from the World Wide Web March 27, 2004: http://www.foe.co.uk/resource/briefings/good_practice_recycling.pdf
- Group Plus, Inc. (2003). Retrieved from the World Wide Web March 22, 2004: http://www.groupsplus.com/pages/Respect3.htm
- Iowa Department of Natural Resources. (2003). <u>Evaluation of Recycling Programs The East Iowa Council of Governments</u>. Retrieved from the World Wide Web February 22, 2004:

 http://www.state.ia.us/dnr/organiza/wmad/wmabureau/recycling/evaluationOfRecyclingPrograms.html
- London Borough of Merton. (2003). <u>Introduction to Council Tax</u>. Retrieved from the World Wide Web February 14, 2004: http://www.merton.gov.uk/counciltax/intro.asp
- London Borough of Merton. (2003). <u>Chief Executive</u>. Retrieved from the World Wide Web February 17, 2004: http://www.merton.gov.uk/council/chiefexec.asp

- London Borough of Merton. (2003). <u>Recycling</u>. Retrieved from the World Wide Web February 22, 2004: http://www.merton.gov.uk/recycling/
- London Borough of Merton Waste Services. (2002). <u>Draft Recycling Plan</u>. Retrieved from the World Wide Web January 17, 2004: http://www.merton.gov.uk/environment/acrobat/recyclingplan.pdf
- London Borough of Sutton. (2003). <u>Adopt-a-Bank</u>. Retrieved from the World Wide Web March 27, 2004: http://www.sutton.gov.uk/Sutton/Our+Environment/Recycling/Adopt-a-Bank.htm
- London Waste Action. (2003). 'London Recycling Fund'. Retrieved from the World Wide Web April 17, 2004: http://www.londonwasteaction.org/lrf.html
- Lund, H. F. (Ed.) (1993). The McGraw-Hill Recycling Handbook. New York: McGraw-Hill Inc.
- Maxwell, Joseph A. (1996). Applied Social Research Series (Vol. 41). Thousand Oaks, CA: Sage Publications, Inc.
- Mayor of London. (2001). The Draft London Plan. London: England.
- Merriam Webster Online. Retrieved from the World Wide Web March 29, 2004: http://www.merriam-webster.com/cgibin/dictionary?book=Dictionary&va=Focus+Group
- National Statistics Online. Retrieved from the World Wide Web March 12, 2004: http://neighbourhood.statistics.gov.uk/Default.asp?nsid=false&CE=True&SE=True
- Nielsen, Jacob, <u>The Use and Misuse of Focus Groups</u> (1997). Retrieved from the World Wide Web March 29, 2004: http://www.useit.com/papers/focusgroups.html
- O'Murchu, Sean Federico, <u>Irish take lead with plastic bag levy</u> (2003). Retrieved from the World Wide Web April 19, 2004: http://msnbc.com/id/3070942/
- Recycle for London. (2003) Why Recycle More? Retrieved from the World Wide Web February 22, 2004: http://www.recycleforlondon.com/recycle_more/why_recycle/index.cfm
- Singleton, R., & Straits, B. (1999). <u>Approaches to Social Research.</u> New York: Oxford University Press.
- Stern, Paul C. (2000). <u>Toward a Coherent Theory of Environmentally Significant Behavior.</u>
 Journal of Social Issues. Retrieved from the World Wide Web

- February 14, 2004: http://www.findarticles.com/cf_dls/m0341/3_56/69391495/p12/article.jhtml?term
- Varney, Robert W. (2003). Massachusetts Communities Providing Leadership on Energy Efficiency and Clean Energy. Retrieved January 23, 2004 from the World Wide Web: http://www.epa.gov/region1/ra/column/archive/energy_20031106.html
- Webster, Ben. (2004, March 26) 'Don't just bin it, or it'll cost you £1,000', The Times, London. News: p.5
- Waste & Resources Action Programme. (2004). 'About WRAP'. Retrieved from the World Wide Web April 17, 2004: http://www.wrap.org.uk/wrap.asp

Appendices

Appendix A: Kerbside Recycling Purple Box Leaflet

Appendix B: Recycling Officer Questionnaire

Please answer the following questions to the best of your ability. Information gained from this brief questionnaire will be used for academic purposes, and also to aid the Borough of Merton.

We would greatly appreciate if you could provide answers to the below questions within three (3) days of receiving this.

Recycling Questionnaire Name **Borough of Employment** Kerbside Programme: Yes Do you have a kerbside recycling programme? No 1) Plastics If yes, what materials are collected? 2) Papers 3) Cardboard 4) Glass 5) Cans 6) Other 7) Combination (use corresponding #'s if easier) What is your policy on Returned to curb not emptied recycling boxes Taken and sorted at a later date containing nonrecyclables and Taken and all thrown out recyclable materials (contaminated)? Other **Incentive Programme:** Do you offer monetary Yes or equivalent incentives No to residents to recycle? If yes, what are the incentives? Yes Are residents provided with wheelie bins?

No

If no, do you provide any other form of a	Yes	Details:	
container	No		
Do you have a policy on side waste?	Yes	Details:	
	No		_
		7	
How good do you feel	Excellent		
your recycling	Good		
programme is overall?	Average		
	Below Average		
	Poor		
How does your complete recycling	Well Above Average		
programme compare to	Above Average		
your impressions of recycling programmes	Average		
of other London boroughs?	Below Average		
	Well Below Average		

Thank you for taking the time to answer these questions. This file can be returned via email to recylelondon@wpi.edu. If you have any questions, feel free to email recyclelondon@wpi.edu.

Appendix C: Demographic Questionnaire

Questionnaire

First Name	
Surname	
Age	
Address	
Postal Code	
Ward	
Occupation	
Marital Status	Single Married Divorced Separated Widowed
Children, if any	#

Appendix D: Phone Script Version 1

Phone	Calls					
>	Hello, I am calling for Ms/Mr					
>	Good afternoon. I am calling as a member of a student based academic research					
	project looking to evaluate the recycling programme here in Merton. We were					
	wondering if you would consider being involved by participating in a focus group on					
	, March at 6pm at the Council Civic Centre in Morden.					
>	Oh, he/she isn't there? Okay, is there a better time at which I could call back?					
	Thank you.					
>	A focus group consists of 8-10 people who get together to discuss a particular topic					
	with the aid of a moderator to guide the discussion.					
>	We are university students from the Worcester Polytechnic Institute, in the US,					
	working in coordination with the Merton Council to complete an academic project in					
	London to fulfil our graduation requirements.					
>	All personal information as in name, address, age, occupation and any other					
	demographics will be kept strictly confidential, and separate from any statements you					
	make.					
>	There will be a small compensation of 15 pounds offered to those Merton residents					
	who show up and participate in the discussions.					
>	If you choose to participate, you will be receiving a confirmation letter in the mail					
	with all the details about date, time, place etc. May I just confirm your address to					
	ensure that it arrives at the right location?					
	Thank you.					
>	Thank you for your time and we appreciate your help in this academic endeavour.					
	Have a great day.					
>	Notes:					

Appendix E: Phone Script Version 2

Phone	Calls	
>	Phone	Number: 9
>	Hello,	I am calling for Ms/Mr
	0	No Answer
	0	Beeping
	0	Answering Machine
	0	Oh, he/she isn't there? Okay, is there a better time at which I could call back? Thank you.
	0	Good evening. I am calling because you had previously agreed to be
		contacted in connection with the residents' panel. I am a student working with
		the Borough of Merton and I was wondering if you would consider
		participating in a discussion about recycling on Monday, April 5 th at 6:30pm
		at the Merton Civic Centre. (Morden tube station)
>	We ar	e university students from the Worcester Polytechnic Institute, in the US,
	worki	ng in coordination with the Merton Council to complete an academic project in
	Londo	on to fulfil our graduation requirements.
>	There	will be a compensation of 15 pounds offered to those Merton residents who
		up and participate in the discussions.
>	If you	choose to participate, you will receive a confirmation letter in the mail with all
	the de	tails about date, time, place etc. May I just confirm your address to ensure that
	it arriv	ves at the right location?
		Thank you.
>	Thank	you for your time and we appreciate your help in this academic endeavour.
	Have	a great day.
>	Notes	:
Yes:		

Appendix F: Cash Statement

Signing below acknowledges that you	u have received your £15 compensat	ion from the
London Borough of Merton for partic	cipation in a focus group which discu	ussed recycling and
related areas.		
Print Name	Signature	Date

Appendix G: Cheque Form

ENVIRONMENT AND REGENERATION

Director - Richard Rawes



Signing below acknowledges that you have participated in a discussion regarding the							
recycling programme in Merton. You also acknowledge that you will receive your							
compensatory cheque of £15 from the London Borough of Merton within ten (10) days							
via mail.							
Print Name	Signature	Date					
Cheque Information (Please P	rint Clearly):						
Cheque shall be made payable	e to:						
Mailing Address:							

Appendix H: Confidentiality Statement

Confidentiality Statement and Recording Notification

\sim	n			
Dear	\mathbf{P}_{2}	rt i	cin	ant
Doar	1 0		-	uni.

This discussion is being conducted for academic purposes by students from the Worcester Polytechnic Institute of Worcester, Massachusetts, USA, with cooperation from Merton's Environmental Regeneration Office.

Insights gained from this focus group will not be published in connection with your personal information, such as name, phone number, or address. All information and insights provided by any participants must be kept strictly confidential by all other participants.

This discussion will be recorded with audio equipment to allow transcription for research purposes.

Signing below hereby signifies that you have comprehensively read and understand the above information.						
Name		Signature	Date			
Thank you for you one of us.	r time and cooperation.	If at any time you have	questions, feel free to ask			
Sincerely,						
Jeremy Betsold	Jaclyn Blaisdell	Matthew Cholerton	Mary Schubert			

Appendix I: Focus Group Questions

Focus Group Targets (Questions we want answered):

- Pamphlets
 - Have you seen/received these green leaflets before?
 - o If so, do you think they were informative?
 - O What changes would you make to them?
- Recycling Habits
 - O Do you recycle? How often and where?
 - o Does your neighbour recycle?
 - O Do you think you recycle everything that you can recycle?
 - What are reasons that you think people do not recycle?
- Attitudes
 - o Do you think recycling is important? Why?
 - o Do you think it is beneficial to Merton to recycle? Why?
 - What types of people do you think recycle the most? (younger/older/with families/etc.)
 - Why do you think more people don't recycle household waste? (probe)
- Programme
 - What is your favourite thing about the programme?
 - O What improvement do you think is most critical?
 - What do you like about the programme?
 - O Do you like the kerbside programme?
 - O Does the programme fit into your lifestyle?
 - Have you received a purple bin and do you have a green bin?
 - O Do you know what goes in the purple bin/green bin?
 - o Do you know how the recycling programme works?
 - o Do you feel comfortable using this programme?
 - o Do you know what you can recycle?
- Other Programmes
 - O What have you heard about other boroughs' programmes?
- Changes
 - Are you aware that the Central government has recycling targets?
 - O Do you think its fair for people who produce more waste to pay more money for disposal?

Starters

- o Give me a [picture, description] of...
- o I'd like you all to [discuss, decide]...
- o Tell me what goes on when you...
- o Describe what it's like to...
- o Somebody sum this all up...
- o Let's see [pause] I'm having trouble figuring out how I should word this...
- o Give me an example.
- o Explain to me...
- O Let me pose a problem...
- o I'm wondering what you would do if...
- What I'd like to hear about is how you are dealing with...
- o I don't think I'm getting it all. Here's what I've got so far, tell me what I am missing or not getting correctly...
- o So it sounds like you're saying...
- o That's helpful. Now let's hear some different thoughts...
- O How might someone do that?
- o How important is that concern?
- O So, the message you want me to get from that story is...
- o I can't seem to read the groups reaction to that. Help me out.
- Let's hear a different perspective on this.
- o Say more.
- Just say anything that comes to mind.
- o Boy, that got quite a rise out of everyone. What is everyone reacting to?
- O Can someone turn that [wish, dream, request] into a reality? Does anyone know how to do it?
- o Let's see, I haven't heard from ...
- o Before we move on, let's hear any burning thoughts that you have to get out.
- o Let's turn this complaint into a problem ... How can we solve it?
- You seem to have a lot of excitement and energy around that. Talk to me from the excitement.
- O Who can build on this last idea?
- o If I were to say....

Appendix J: Focus Group 1 Discussion Summary

Focus Group #1 Upper Older Committee Room F 31 March 2004

Prior to discussion:

- > 8 Complained about the council paying for this out of their money. She said she would email "Andrew" to complain.
- > 4 Was very nice, required a hearing aid but the induction loop aided him in hearing.
- ➤ 6 Fell on bus earlier this evening and might have to go to hospital afterwards.
- > 7 Was very quiet and reserved.
- > 8 Very vocal and social with 9.
- ➤ 2 Sitting and not talking to anyone, although she came in with 3.
- > 5 and 6 chatting

The discussion started at 6:52pm in an effort to allow all participants the chance to review the pamphlet and become familiar with each other.

- > Introduction to us... names, WPI, Project, recycling programme recommendations
- ➤ Intro each of themselves
 - o 10 where she lives
 - o 9 where he lived, president of Wimbledon society
 - o 8 lived, former chair of Merton recycling group
 - ~ 7 -
 - o 6 lived entire life in borough
 - o 5 lived here 20 years
 - 0 4-
 - 0 3-
 - o 2 lived here for 28 years

> Pamphlets

- o 4 -Was the only that did not receive a green pamphlet.
- o 2 Has no purple boxes, 2 green, pamphlet is very useful, keeps looking back at it.
- o 10 Took time getting used to it, is good to read, folded to have as resource.
- o 3 Received pamphlet, had green box for 6 months, "quite good", got thrown around street, sometime got collected. Got one of these. Stickers very good to put on side of boxes, doesn't know why one papers goes in one and one goes in other.
- o 4 Has green boxes only, for several years, helps sort out things. Not sure what is allowed in each box and what is not. Cake boxes and things are like plastic but are not bottles or containers, sometimes needs more explaining.
 - Went to Germany, have a similar idea there, much more strict in what goes in boxes, in quality, quantity, and size... cardboard to large has to be cut. Fined if wrong thing in wrong box.
- o 5 Has both boxes. Difficult to know if you should or shouldn't be in boxes. What about cardboard that comes around food? It would have been more beneficial to have a more encompassing list with examples, this is great with

stickers but a list would be a bit more helpful. Walk around a super market and list what is cardboard and what isn't. Barnet has lids on boxes because if there is a wind, paper ends up all over the garden or pavement. Has an issue with putting boxes out on pavement because they are returned to pavement. There's an accident standpoint. If someone falls over it because they haven't seen it, where is the liability? They throw it back onto the pavement. They throw it back on the pavement. Where does that leave you, if you put it right on the edge? Lots of people/school children walking backwards and forwards.

- o 6 Green box is cracked all the way. Collectors were very reluctant to empty, took three weeks. They were left in the road. Older residents say it is too complicated. It is a waste of time to separate on either side. The chaps sort through it anyway. Annoying that there are no lids because most people leave these boxes outside. Camden has lids. No one puts them inside, messy. Many people don't put glass in boxes because of the danger. Many people still take glass to bottle bins because it's too dangerous. No one likes crushing things. Issues with dustmen and their handling.
- 7 Has had green boxes for several years. Purple recently. Some green boxes have disappeared. It is difficult for people to have 2 boxes. No incentive to sort out, it is a burden. If they sort it they should have one box. They should make it easier to recycle. Boxes are often blown into street. When green boxes started, boxes lined up for weeks and not collected. Scheme should be easier, and there should be incentives. Barnet will start fining. Some incentive. A record kept by council, people given monetary incentive to participate. For people to participate there should be a scheme. The pamphlet is hard. For the ailing people, the disabled. The system should be simpler. The wrong thing in the box, it isn't emptied. Boxes should be sturdier and heavier. Lids are a good idea.
- O 8 Pink bags, everything in it, used to separate in garage and take it to the tip. Didn't have to go to the tip each week. Very good idea for kerbside programme. Storage space is limited, for only people who have space. It won't happen except for people who have space. Wind blowing, green box broken. Pamphlet lasted two weeks and then peeled off. Very good idea to have two. Pink bags were easier. Yes, there is a problem with papers and junk mail via colours. Appreciates the reason, but another obligation and stress in life. Want the least amount of stress. Bundle into one bag. Monday is collection today. Wasn't picked up. Tuesday wasn't picked up. Wednesday wasn't picked up.
- o 10 Boxes out and weren't collected. No space for it, sitting out for a week.
- o 6 Left hers outside.
- o 10 Leaves boxes upside down and leaves them outside.
- 9 Storing is difficult. Boxes getting damaged. Box thrown down steps when stored at his house. Detail about cleaning cans is difficult. The amount of energy to clean is more than the savings of recycling.
- o 5 Use washing out water. Wash them up after all other dishes. Very sharp to wash cans by hand is a safety issue.
- o 4 Squash cans by standing on it.
- o 6 Mess of squashing cans.
- 4 Domestic waste is a problem with lots of foxes in area, smell of food brings foxes.

- o 9 Puts food separate from to prevent them from going after anything else like black plastic bag.
- o 5 Just one bag in Waterloo, it is much easier.
- > Jeremy Is the programme too complicated?
 - o 4 Recycle with one bag and everything goes into it
- > Jeremy tries again Does anyone here get fed up with the programme and throw it all away?
 - o 3 Doesn't recycle tins because of all pre-said reasons.
 - o 5 Smell will get worse as it gets warmer, will not do tins need cover
 - o 4 Bin needs a cover, papers go everywhere. Lids would only get lost, thrown into someone else's garden.
 - o 6 Other borough has built in lids
 - 5 Putting out the box is difficult for elderly because of weight of box to get to edge of property.
 - o 2 'once you get into the habit it's not a problem'
 - o 10 Recycle anything possible, would rather fill boxes than sorting everything and go to the till[p]. Doesn't have a car so that would be very difficult.
 - o 6 People who are committed will do it. People have the option and now they don't bother, talked to neighbours and they won't have their own boxes.
 - o 10 not hard
 - o 6 confusing
 - o 5 not allowed certain kinds
 - o 10 Confused about what is allowed in purple bins.
 - o 5 Bringing in people that aren't on board, time is a premium for them, they won't bother.
 - o 6 People put out 5 sacks for 4 people still do that.
- > Jeremy concerns from neighbours
 - 8 Neighbour never received from, got one for the neighbour and he did it, he didn't have the time to get it. Put a number on that box. Don't get mixed up with others. Put number of house or flat on the box. See which box numbers are put out, home visit to those that aren't recycling.
 - o Jeremy like the Barnet programme
 - 5 Discount on council tax for those that recycle, there is a benefit to the council if the borough increases recycling.
 - o 6 Save money on landfill taxes.
 - o 7 Where did this scheme come from?
 - o Jeremy from council
- Jeremy Affect on council tax?
 - o 2 would hope not
 - o 10 Council: get rid of waste by going to tip. Get more recyclers to do bins along the road. Still involved a certain amount of effort. Give boxes and just put rubbish in them. They have gone a long way to make it dead easy for us.
 - o 5 They have to make it easy.
 - o 8 Council will loose money because of the government.
 - o 10 Council is entitled to a response. We are being muddy-coddled into recycling.
 - o 6 Spent a lot of our money. The super markets should be involved. Take things back to the super market. Take all your glass back.
 - o 10 When we were children we would take bottles back to the shop.

- o 9 Landfill major reason. Would like to know what happens to the material. Germany so efficient that they couldn't get rid of the materials. Look through a stationary catalogue, recycled paper is more expensive.
- > Jeremy Would you like to see where the materials go?
 - o 9 Green glass is not used in this country. Where does it go?
 - 8 Would like publications about recycled materials. Outside furniture from recycled materials. It would be good for the public to see where the materials are going. From here to the end result. That would be good to save those trees and save this and save that. Need more visual to our bins.
 - o 4 Stress cars are strictly recyclable. Very expensive to sort this.
 - o 9 Charge to have car recycled but then fly tipping of the cars.
 - o 4 Illegal trafficking neighbour dumps his green into the neighbours yard.
 - 5 We have gone backwards with regard to garden waste. Up until July we were able to recycle 5 bags or so free. The bags are 50 pence a bag, and buy ten. Pay for privileged to have the green waste removed. Find out from Alison Blume how many used it then and how many used it now.
 - o 10 People were putting their garbage rub age into the waste and dust men and put. People have abused the free system. Could see that the dustmen would open the top and leave them.
 - o 9 Green plastic bags are now taken away instead of left. Very sturdy. Buy new ones. Where do they go, what do they do with them? Why aren't the garden bags recycled?
- > Jeremy How is Merton compared to other boroughs?
 - o 2 Better than up north, has to carry to a certain waste site. It is simpler here.
 - O 3 Lots of variety. We love differences and our variety. When you move to a difference place we want the same system. We don't have a way to link that yet. We have the same problem across the country and tons of different programmes. There has to be a way to do this.
 - o 4 Lived in this borough far to long. (Didn't get question). Much more convenient to put outside the gate.
 - 5 Not as good as Sutton with the one wheelie bin each for recycling bin and waste.
 - 4 We had a scheme to get rid of heavier stuff and could be dumped into our container. And so many people took advantage of that because they don't have cars.
 - o 10 Can't please all the people all the time.
 - o 5 Put everything in one place. Doesn't mean that I want a wheelie bin. It would be better to put it in one bin. It is much better that it is being collected from the house.
 - o 6 Think recycling is a very good idea. Merton doesn't have it right. Inefficient and we are paying far too much for it. I don't want wheelie bins; they don't fit Merton
 - o 7 Certain schemes are simpler. Less complicated.
 - o 4 Wheelie bins are a bad idea, smells
 - o 7 Machines which recycle and sort are good. Install new equipment.
 - o 8 Sutton is a green borough:
 - Up and running for a long time one of the top boroughs
 - Christmas old trees are mulched and sold back to residents for a small fee
 - Trees picked up right now

- Public involved, sees what is happening
- Merton Social economic areas very different, quite a discrepancy, Mitcham area quite low compared to Wimbledon and Merton Park. We are willing to take the time. activists versus those who didn't care. Mitcham would love to get the money from bottles buy their drugs. Need different schemes for different areas. There is a dividing line.
- 9 Works quite well. Collectors need to take more care. Suspicious of government actions, especially this one. Would like to see the figures. I bet its costing us a fortune to run this scheme. If you take recycled paper, you can do it, but it costs. How many of the boxes are produced? They are scared to tell us. And even if it is high, the government is requiring this. You are saving on the landfill tax and not incinerating. I am very very doubtful of that. I think its costing us a fortune to do this.
- o 10 Nothing
- ➤ Jeremy Is there a way to charge residents differently?
 - o 5 People take to other people's garbage
 - o 10 Does use the bags, calls the council when enough.
 - o 9 Lives in a cul-de-sac sweep the road ourselves and put it into plastic bags and now pay for it.
 - o 5 Pay for the tree outside her house.
 - 6 We don't expect any household to produce more than a bin of rubbish.
 Education programme for people.
- > Jeremy starts wrapping up Paying for your own waste?
 - o 9 Others putting it on your lawn for what you pay for.
 - o 6 Reduction in council tax has more of a chance of working rather than charging for waste.
 - o 3 Completely against it.
 - o 10 From January 1st, it becomes illegal to have these in your possession.

Appendix K: Focus Group 2 Discussion Summary

Focus Group #2 Lower Older Committee Room B 2 April 2004

Jaclyn discussed what we do and who we are, including our programme and the recycling programme in Worcester.

Discussion officially started at 6:41pm. Empty seats include 9 and 7

- ➤ Jaclyn Official Intro
- > Pamphlet
 - 5 Doesn't have a purple box or pamphlet.
 - 6 Received the pamphlet first then the purple box.
 - \circ 1 Box is very convenient so much easier
 - 2 We never went unless we had to; it went into the black bag. This is much easier.
 - O 3 Never went to the recycling centre because they did not own a car.

 Haven't recycled before the boxes. Space in cottage is at a premium because they have a purple box, green box, and ordinary waste. Different colour reusable plastic bags would be good. Worries a little about squashing tins. I do it with hands in the kitchen.
 - 4 Squashes cans outside under shoe.
 - 1 It very easy with shoe.
 - o 8 Professional in Argentina in flat.
 - 1 Daughter wasn't given one, brings recyclables to their flat.
 - o 8 Put on porch, uncovered, Croyden has lids can be put outside.
 - \circ 5 Puts box in front garden, gets soaked, no fault of his own.
 - o 2 Wheelie bins would be good.
 - 5 Pamphlet highlights anomaly look after glass material and tins, spoil natural resource by washing them out.
 - o 6 Metered water, save the water, wasting water to wash out junk that is being disposed of.
 - 4 Would rather have a bath or drink then wash out cans.
 - o 6 Germany is already into recycling a lot. They don't wash the cans, just put in appropriate container.
 - 8 France has a number of large wheelie bins.
 - \circ 3 is driving to recycling centre
 - 5 There is never in a million years I could park my car, know where to put my car, so why is it there?
 - 4 moved regularly, tough to understand
 - 5 Takes trash to other boroughs. Has been to Garth Road once, very appalling.
 - o 2 Thought Garth Road was a good site, well laid out, everything is clearly labelled there

- O 3 Foxes get at the loose rubbish. Summer, if the box is indoors or outdoors, there will be flies seal or plastic bag I think that would be a lot more effective. Tried to keep newspapers in green box, doesn't use anymore because space is at a premium. Keeps boxes in back yard out of the way because they live in a small house. Two large boxes from ordinary rubbish is a lot of space.
- \circ 6 Boxes are heavy to lift empty, unwieldy when full.
- o 3 What if the box is full? If full, what do you do? With plastic bags you just open another one and put waste in it. Large families are a concern.
- o 2 wheelie bins or plastic bags, fox concern
- o 8 Should no go back to plastic bags, only the thin ones are bio-degradable.
- \circ 5 Foxes are all over the place, get into the trash.
- o 6 does not leave box out overnight
- o 3 heavy duty plastic bags for garbage (doesn't recycle)
- o 6- Studied dust collectors. Thinks there are too many collectors per route. (how many people to change a light bulb analogy)
- 2 Should only be two people for each, plus dustmen, plus lorry.
- 3 Is it cost effective? What is this going to cost us? Is it saving us money or costing us more?
- 5 Doesn't think that it is saving us a cent of money.
- \circ 8 There is employment, there are people.
- o 3 Paying council tax for something that is not working already, we will pay anyway. Regardless of targets, we have to pay.
- 8 Has the amount of rubbish gone down?
- 3 Should only buy things that aren't packaged excessively.
- ➤ Jaclyn For anyone that has started, are you putting less plastic sacks out?
 - 2 Only puts out one bag of waste a week, plus the green and the purple boxes.
 - 8 Scheme is costing me less.
 - 3 Savings on plastic bags goes to scheme.
- > Jaclyn Why is it important to recycle and why is it important to Merton?
 - o 10 Doesn't recycle anything. The cost of recycling is much more costly than getting rid of rubbish in landfill sites. Those boxes cost much more than the cost of black sacks. Uses boxes for when they are doing gardening. The ordinary housewives are doing everything. [The Council] want us to recycle, wash out cans, take the cardboard out, the paper gets all wet, soaking wet paper, all these things are costly. [I] monitored in the morning, six people with a lorry, that's to do with the recycling. Economically it's a crazy system, and it's all down to the EU directives. If recycling costs more then the government should pay for it. Everything [should go] into the rubbish lorry, and sort out later. Men standing around there. To me its rubbish, to them it's recycling. It costing us a fortune, this recycling. I don't have any qualms or worries about it.
 - 8 Lorry came in with different compartments.
 - o 5 − haven't seen that, feels very strongly, council should be leading by example, doesn't use recycled envelopes
 - 10 Has miles of space, the point is not about space, the point is about cost. Why employ people to spend money?
 - 8 Running out of space in landfills.
- ➤ Jaclyn What changes can be made?

- 2 wheelie bins
- 11 Space is a problem, environment people. After a certain time, there will be no space. Recycling saves space.
- o 3 Different colour plastic bags. Put the stuff into the plastic bags, dirty, uncut-up. Council collects in one vehicle and takes it away and sorts it themselves. Council or I pay for the same cost. Much more likely to work, people are lazy.
- 10 Getting back to the source of the rubbish. Producing too many newspapers. The whole system should start on the bases, over producing, over wrapping. Shouldn't be on it at the first place.
- o 5 About large items from the households...compare to Lambeth. There is no furniture lying around in Lambeth. Contrasts Lambeth doesn't charge residents for removal of large pieces lying about the streets. Merton has a fee of 25 pounds. Feels Merton residents are paying twice over.
- 11 Groyden council collects free of charge.
- o 3 very irritated, Merton should have polled the residents before the new scheme went into effect, not in the middle.
- 10 Merton is worst council for rubbish.
- \circ 3 Does not like the appalling way this council seems to run its taxes.
- > Jaclyn- What do you think of Barnet's new scheme?
 - \circ 10 Does not know who will pay for it. Thinks there is no way to enforce it.
 - 5 Make an example of one person. They're not going to be chasing after people all the time.
 - 10 They can't implement it.
 - O 1 Even before this scheme started, we were recycling. It was no extra hardship. We do pay that little bit extra. I do believe in recycling. When you think of the environment, it is being damaged because we do not reuse our resources. When paper is recycled, it is used to make other things. Understands there is some cost but is more caring of the damage to the environment.
 - 3 Would like to know costs of the recycling scheme, pollution and energy needed to recycle.
 - 1 We put our paper out early morning. Ivy protects it.
 - 4 agrees with 3 Doesn't have room for boxes. Doesn't want to keep tripping over boxes. There is no room out front to put them because they just keep throwing them on the pavement.
 - o 10 They started this scheme out without any input from us. Middle management is non-existent. Let people supervise themselves.
 - o 3 Thinks any recycling scheme needs to be based on what is reasonable for the resident to do.
 - o 8 agrees with recycling, helping to keep down the amount of rubbish that is going into the landfill. The amount of stuff that is being put into landfills will cause us a problem in the future. Incineration does create energy.
 - 10 Incinerator at Garth road?
 - 2 Hospitals used to have their own incinerators.
 - 5 How much saving do they do? Recycle the glass? Recycle paper? All the bits and pieces. How much are you saving?
 - o 8 Non-renewable resources.
 - 3 We aren't given this information. We are just told we need to recycle. Let's have the financial information, cost to us, the council, the environment.

- \circ 11 The glass is made from the sand.
- o 5 The recycling scheme here is much less efficient than Scotland. The quality of information. Involvement of charity groups.
- 6 The different charities have collection points.
- \circ 5 Tin cans for charity
- 6 Supermarkets take soda cans and bottles.
- 10 Cost on your car, glass is far too expensive to reuse.
- 10 Beverly It's a dump all the time.
- o 3 Merton is doing it half cocked, poisoned recycling in people's minds. It's PC. We aren't told why. I want to see the economics. There is an attitude.
- 4 Would like more information.
- \circ 10 As soon as you saw the cost, you would turn it down.
- ➤ Jaclyn What about incentives, people who threw away more cost more, people who use less would have a reduction?
 - o 5- Lowering the council tax would be a good incentive. A simple breakdown of what they would save each year by participating would be helpful.
- ➤ Jaclyn How would you get people to recycle more?
 - \circ 7 If people aren't committed, they won't do it.
 - o 8 We do need more information. It shouldn't be limited to what it costs to pick it up. We already talked about having too much junk mail. What the fines are liable to be. Age profile, liable to be more committed
 - \circ 2 What is the point of recycling
 - 10 To save landfill room.
 - 5 Incentive with lower council tax, total saving for entire
 - 2 Doesn't trust Borough to do that.
 - o 6 The whole concept of recycling is a good idea (all agreed) It's the way of going about it. We are paying for our services anyway. We know what we are working for.
 - 3 What are the extra costs in carry it out, in doing it, what is reasonable to expect people to do?
 - \circ 3 Its very easy to do that.
 - \circ 5 Saw six boxes thrown, the dustmen just threw them back.

> Final Comment

- 1 It's a good idea, the scheme, look at the cost, anyways they can minimize costs and the way it is done, like they have so many people coming 'round.
 On the whole I think it is a good idea to have these boxes.
- 2 They can't just lump everything to one person. Basically the cost of the personal, just 6 men for recycling.
- o 3 Wants to know: costs monitoring, costs implementation, costs to the council tax, and savings as well.
- 0 4 I think it's a good idea, give it a go, see what happens. We do need more information; it doesn't give you enough information aboutwhere the money's going to come from.
- o 5 − I do think the council should lead by example. Thinks the economics of it are completely out the window. I do use my green box. I will use my purple box to some extent, to the convenience factor. Crashing plastic bottles won't be an easy thing for me.
- o 6 In agreement with recycling. Needs to know the cost effectiveness of one system vs. the other.

- o 8 I am very committed to it. It is a convenience and whether people will actually do it. There is still a lot of education to be done. Even if they present the figures, who many people would read them?
- 5 Thought there was a mistake in pamphlet for reason why there is the sticker on it.
- O 10 Amount of cost would turn people away. Thinks the wrong half of the problem is being attacked. Thinks they should go to the people who are producing the waste. The producers are putting all back onto the consumer. They should be more liable. There are too many people per truck. Even multiple-coloured bags would be better. Asked for a bottle bank to have in car park, would have been charged 17 pounds a week, cheaper to have no returnable bottles that returnable ones. Are only saving on landfill problems by recycling. Should make companies use products that are more suitable for recycling.
- o 11 − I think recycling is good. If you don't recycle the paper, you are cutting down more trees. There is an exchange there. We must think of the next generation or so. We should be optimistic.
- 10 They are cutting more trees by not recycling paper. We should be more optimistic about it.

Appendix L: Focus Group 3 Discussion Summary

Focus group #3 Lower Younger Committee Room C 5 April 2003

- Mary Is 'pay as you throw' an option?
 - o 1 family household would cost a lot, would have to educate before the programme was implemented
- Mary what would be the best way to educate?
 - o 1 not the council, too much distrust
 - o 1 junk mail
 - o 5,6 receive too much junk mail too much, wouldn't work
- Mary- What about a community meeting?
 - o 1 time to precious for everyone
- ➤ Mary Is the programmes sorting process too complicated?
 - o 1 cant remember every thing, sticks to plastics and bottles and paper
- ➤ Mary Concerns with boxes or dustmen?
 - o 1 both boxes are broken
- ➤ Mary Have you heard about any other borough's programmes?
 - 5, 6 Wandsworth, orange bag programme
- ➤ Mary Would mailings or anything else someone new to the area would appreciate?
 - o 6 hasn't received anything from the programme
 - o 6 weekly local articles maybe to educate
- ➤ Mary Is anyone aware of government minimums for recycling?
 - o 1 yes, Merton wouldn't do anything otherwise
- Mary Anything else you would like to say?
 - o 1 boxes on lids would be helpful(attached), no good place for them though, so left outside as a result
- Mary bags to boxes?
 - o 6 bags
 - o 1 prefers boxes, Sutton has wheelie bins
- > Mary wheelie bin for waste?
 - o 1 would be another thing to have, ie: would get in the way
- Mary Barnet programme
 - o 1 negative way to go about it
- > Mary incentive?
 - 1 positive way to approach incentive would be a monetary incentive, seems positive
 - o 6 yes, money is good
- ➤ Mary Would telling other residents about the costs sway their opinion?
 - o 1 tell them its free, have to see some sort of benefit in order to feel they need to do it
- Mary If it could be proven the scheme reduced a person's costs?
 - o 6 agrees about lower cost if proven
- Mary Poll taxes, to stay same if not can go down? Work?
 - o 1 yes, would be a remarkable thing

- Make an industry of it to keep start-up costs down, get together with other boroughs
- o 6 seeing their money work would be a benefit, possibly shown in newspapers
- o 6 Sutton and Hereford are leading boroughs, residents are far more educated, compulsory programme not a good thing to start with, maybe later on in the future once it has been in place and going for awhile

Appendix M: Focus Group 4 Discussion Summary

Focus Group #4 Upper Younger Committee Room C 7 April 2004

- ➤ Mary Do you have the new purple boxes?
 - 4 has two green boxes in Merton Park, boxes have been thrown about lot by the collectors
 - o 2 has boxes in good shapes, just got them
 - o 4 yes, get thrown around a lot over hedges and such
- ➤ Mary What programme improvements would you suggest?
 - o 2 from the tip (Garth Road) only do plastic bottles, but a lot of things come in plastic now, why not taking other types?
 - o 4 expand scheme
- ➤ Mary Has anyone heard about the programme in Barnet?
 - 2 will no be harsh if only a little bit, is committed to recycling, probably laziness keeps people from recycling more or at all, not sure about plastic shampoo bottles, but knows now
 - o 4 not a big deal to wash out stuff
 - o 2 can be tough to squash down plastic bottles
- ➤ Mary What kind of programme should Merton have?
 - o 2,4 user friendly programme
- ➤ Mary How can the borough encourage others to recycle?
 - o 2 incentives would be good, especially for the people who make the effort to recycle, give something to those who regularly recycle
 - o 4 5% discount on council tax would be good, since its about to go up anyway
- ➤ Mary A 'pay as you throw' programme, would it work here?
 - o 4 would be reduction in council tax but have to pay for bags, would have to give incentive, programme is difficult with children, is one more thing to think about having to buy bags when lifestyle is busy with children
 - o 2 1-2 bags per week, a lot of it is nappies though but still are using bags each week
 - o 4 took price off council tax equivalently
- Mary What about wheelie bins?
 - 2 bags need to be put somewhere because scavengers get into them if they are outside ahead of time, surprised to not see them in Merton when moved here
 - o 4 increase in waste production when you see a larger box to put things in, street cleaner after pick-up would be good as scattered trash is often seen as a result of the foxes getting into waste, wheelie bins are good but not necessarily the best alternative
- Mary Other focus groups have complained about the cost of programme, what are your views?
 - 4 not aware it costs a lot of money
 - o 2 never really looked at itemization of council tax, cannot continue to fill landfills

- o 4 future generations need to be thought about
- Mary, if council educated about good points of recycling, what would be the best way?
 - 2 Use all available options, local groups etc., council stopped advertising in local paper, now put out a magazine, though cannot find it in many locations
 - o 2 those who do not are not likely to look at it
 - o 4 have seen it on council website
 - o 2 uninterested people are hardest to reach because they almost do not want to be reached
 - o 4 incentives, would encourage, fast food places/other public gathering areas
- ➤ Mary What do you think are the main reasons why others do not recycle?
 - o 2 bottom line of other was because you have to sort it out
 - 4 has heard older people say they can't be bothered to wash out all their cans etc., advertise in larger stores, grocery stores would be good, Tesco, Waitrose, Marks & Spencer, Safeway, Sainsbury
 - o 2 Ireland.co.uk made others charge for their bags they used...encouraged other to bring their bags back and reuse them
 - o 2 is an incentive without the hassle, promotions in the stores would be good
 - 4 signs in aisles about the recycling
- ➤ Mary Any other comments/questions?
 - 2 Merton is generally at least doing something to try and help the situation, purple boxes are a good ides
 - 4 council should publicize how well they are doing with their targets towards recycling
- Mary, govt has set up targets to meet for each borough
 - o 2 are in top ten, good to know

Appendix N: Solicitation Questionnaire

Initial Questionnaire

First Name	
Surname	
Age	
Address	
Postal Code	
Ward	
hone Number	



Appendix O: Solicitation Letter

Waste Services Section C/O WPI Group 63-69 Amenity Way Off Garth Road SM4 4NJ

Dear Participant,

Thank you for agreeing to take the time to participate in a discussion regarding the topic of recycling in the Borough of Merton.

The details of the discussion are as follows:

Date: Monday, April 5th, 2004

Time: 6:30pm

Location: Merton Civic Centre, Committee Room C

Tube: Morden Station

A student representative will be in the front lobby to aid you in finding the correct room.

Students from the Worcester Polytechnic Institute of Worcester, Massachusetts, USA, in coordination with the Merton Environmental Regeneration Office, are conducting this discussion for academic purposes.

Thank you for your time and cooperation. If at any time you have questions or concerns feel free to contact us:

Email: <u>recyclelondon@wpi.edu</u>

Phone: 020.7808.9225 (ask to speak with Mary)

Sincerely,

Jeremy Betsold Jaclyn Blaisdell Matthew Cholerton Mary Schubert