

Appendix 5B**APPENDIX 5B****DEVELOPMENT OF PUBLIC AWARENESS IN THE UK****1. History of SWM Public Awareness**Introduction

In the early 1970s, a series of incidents related primarily to children playing on and around indiscriminately dumped toxic and hazardous wastes was widely reported in the press, and resulted in the government recognising the need to control waste disposal sites and to control access of the public to such places. At about the same time, the death at a landfill site of a tanker driver from inhalation of toxic fumes liberated when he deposited chemical wastes on top of other non-compatible wastes, contributed to the national government's sense of urgency that controls were needed. This prompted the government to hastily implement legislation in 1972 requiring pre-disposal notification of all disposals of hazardous wastes. This was superseded in 1974 by legislation which introduced the concept of waste management licensing. The first landfill sites were licensed in 1976.

Concomitant with this legislation the government realised the need to educate its local government waste management officers on the subject, and to create a national standard for the management of all kinds of wastes. The Department of the Environment commenced publication of a series of Waste Management Papers for this purpose, the first of which was The Licensing of Landfill Sites, published in 1974. These papers were issued to the industry but the public was generally unaware of their existence.

Public awareness and recycling – the formative years

In the early 1970s, environmental campaigners recognised the need to conserve resources and to prevent further degradation of the planet. They began to run ad-hoc recycling initiatives setting up manned containers in public car parks and close to markets. They accepted paper, clothing and other recyclables on a small scale. They also published 'green consumer' guides aimed at educating the public on their purchasing power to influence manufacturers e.g. to eliminate phosphate from washing powder, to eliminate CFCs from aerosol cans for household use.

Also in the early 1970s, there was a considerable demand for paper to be recycled into newsprint. Campaigns were run and school children and the scouts' movement collected newspapers for recycling. The money gained from the sale to the recyclers of the collected paper was given to charities – providing a strong incentive for people to make the effort to collect their newspapers for a particular cause. The aluminium foil seals on the top of milk bottles were similarly collected for the charity Guide Dogs for the Blind.

The manual collection of paper for cash was replaced by the provision of paper banks in the early 1980s.

A voluntary/charity group called the Tidy Britain Group - now the Keep Britain Tidy group - has run an almost continuous campaign for the minimisation of waste and for its recycling and re-use from the early 1970s to the present day.

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Institutional developments to raise public awareness

In response to the incidents in the early 1970s of children playing on toxic wastes, and the acknowledged need to introduce legislation to manage a broad spectrum of wastes, the government formed a Technical Committee to gather information from the waste industry on waste management practices and to report to parliament. The Royal Commission on Environmental Pollution, established in 1970, issued a series of reports including one on 'Managing Waste'. The expert reports issued by the Commission have played a major role in informing parliament and the public on waste management issues.

In the late 1970s, the national government commenced a programme of research into wastes management. This programme included research into the feasibility of treating and recycling wastes with a view to reducing the total volume going to landfill. There was considerable interest at this time by the water and waste authorities, in the potential for recycling the organic fraction of sewage and waste. A number of composting plants were set up and attempts made to sell the resulting compost to the public. Considerable effort was put into local publicity campaigns in support of this objective. All the schemes at that time failed, however, because of the public's perception of the 'dirty' nature of the source material, and the fact that where municipal waste had been used as the source, the compost contained tiny pieces of broken glass and other 'fines'. At about the same time the government funded a full-scale research project in a comprehensive recycling plant, in the UK. The plant separated ferrous and non-ferrous metals, glass, ceramics and a number of other recyclables. It ran for only a few years because no market could be found for the recyclables once separated.

Analysis of waste composition in the UK, in the late 1970s, showed that glass constituted about 10% of the volume of waste, and was a considerable proportion of the weight. A reduction in this constituent alone would save both landfill space and the cost of transport. The local authorities formed an alliance with the British Glass Federation to encourage the public to recycle glass which would be used as cullet, consuming less energy than the manufacture of glass from raw materials. Bottle banks were placed in public car parks, in the mid 1980s, and poster campaigns run to encourage the public to use them. The public was slow to comply. Bottle banks were fairly limited in number, and the public had to be determined to contribute to the scheme in order to seek them out and use them.

In the early 1980s, some universities started to include solid waste management modules in undergraduate and post graduate courses, and at about the same time, the Institute of Wastes Management (the industry's professional body) authorised a diploma course for those who wanted to gain entry to the industry or who were involved in the industry and wanted to broaden their knowledge.

The UK joined the European Union (EU) in the 1970s. At that time, the EU policy department were in the process of developing a series of Directives aimed at improving environmental standards across all member states, and one of the first of these to be implemented was the Waste Framework Directive in 1982. This required the licensing of all waste management activities, and was intended to form the basis for a further series of Directives setting standards and requirements for the various types of activities involved in and facilities used for the management of wastes. In the mid 1980s, a Landfill Directive was proposed which had severe implications for the way that wastes were disposed off to landfill in the UK, most notably the elimination of co-disposal and the provision of full containment for all landfills. This would have a significant effect on the cost of disposing of municipal and other wastes into landfill. In the event, this Directive was not adopted until more than a decade later.

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In the UK, there is a planning system which regulates the use of land for development purposes. The local authorities run the planning system and in most authorities there is a department dedicated to minerals and waste planning. The two were linked because minerals extraction resulted in voids which were restored to natural ground level using waste materials. The waste planners realised in the mid 1980s that the country was running out of minerals for construction, and hence, there would be less and less excavation and voids for the disposal of wastes. They also realised that landfill sites, once authorised, were nearly always extended and that over valuable mineral reserves sterilising them. They therefore exercised greater control over the granting of permission for such sites and warned that landfill would not be allowed in locations, where it would sterilise mineral reserves. There was thus a reduction of locations where the disposal of wastes would be acceptable, and a reduction in permission granted to the use of land for disposal purposes adjacent to existing landfill sites. The planners issued warnings in the press in the mid 1980s, that the UK was running out of landfill space – probably the first attempt by local authorities to raise public awareness that something needed to be done to reduce the amount of waste to be disposed of.

In the late 1980s, schemes were launched to recycle another significant and easily separated part of municipal waste: cans. Two schemes were launched nationally: Save-a-Can (for steel cans) and Cash-a-Can (for aluminium cans). The Save-a-Can scheme is still in operation today.

Most of the schemes described above have been supported primarily by national poster campaigns and by the distribution of leaflets to households and businesses on a local basis, supported by explanation in papers accompanying the demand for householder's tax. There were no television campaigns before the 1990s, but more recently there have been a number of documentary programmes made on the subject of waste and wastes management, for broadcast on the radio and television.

The land use planning regime in the UK requires those who plan a development, resulting in a change of use of the land or of a significant increase in an existing use, to advertise their intention on the entrance to that land, and in a public place (e.g. library, school or similar place to which the public has ready access). This allows the public to be aware of the proposals and to examine the detail in respect of the effect on them. They can then write to the planning authority to object to the proposal, if they wish. This applies to waste management facilities as it does to any other land use. If there are sufficient objections to a scheme the planning authority may either refuse planning permission or, if it supports the proposal, defer the decision to the Secretary of State for the Environment who will appoint an Inspector to hold a public inquiry, at which all parties are allowed to air their views. Following the public inquiry the Inspector will make his recommendations to the Secretary of State as to whether or not planning permission should be granted.

In 1987, the Environmental Assessment Regulations were brought into force under the planning regime and some waste management facilities were identified as requiring an Environmental Assessment prior to the granting of planning permission. The public was aware of landfill from the planners' warnings earlier in the decade and now took the opportunity afforded by the planning system to commence virulent opposition to all proposals for waste management facilities (most notably landfill but more latterly thermal treatment plants). Much public awareness of the issues, arising from the treatment and disposal of waste, has resulted from self-taught opposers to these schemes who have broadcast their knowledge to all who would listen. The strength of opposition aroused has meant that, in many cases, the planning authority has had no option but to refuse planning permission. This led to increased concern on the part of the government about the availability of landfill

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space. The public warnings continued but the volume of waste generated per capita increased annually.

In the late 1980s, surveys were conducted – as part of the emergence of an interest in environmental economics – to find out whether, and how much, the public would be prepared to pay for the protection or betterment of the environment.

The Institute of Wastes Management authorised the first undergraduate degree course solely on the topic of wastes management in the mid 1990s, and at about the same time waste management issues were included in the geography module for primary school children (aged 8). As a result of the latter, it is now often the children who explain to their parents the importance of recycling.

In 1998, the County Surveyors Society (an informal association of the local authority minerals and waste planners), together with a number of other organisations, recognised the need for a national waste awareness campaign. At that time, most local authorities were attempting to reduce waste volumes, encourage recycling and engaging the public in debates about managing waste long term, but there was no co-coordinated national campaign to provide coherence to their efforts, and the local authority resources were limited. The National Waste Awareness Initiative (NWA) was initiated to fulfil the need for a national campaign to which all parties could contribute, with efficiency gained from the pooling of resources.

The NWA was launched in 2000, managed by a steering group representing local authorities, waste producers, NGOs and other stakeholders in the waste industry. The NWA aims to achieve a measurable change in awareness, attitudes and behaviour towards waste management throughout the UK. The broad objectives of the NWA are:

- To move waste up the environmental agenda,
- To increase the level of awareness as to why people should think and act differently in respect of waste production and management,
- To increase the level of individual ownership and responsibility for waste, and
- To overcome current inertia and make action to reduce, re-use and recycle imperative

Raising awareness – the government's role

In the UK, each householder pays a tax to the local authority for the provision of local services, including the collection and disposal of waste. In the late 1980s/early 1990s, the government commissioned research into the environmental cost of landfill and the preparedness of the public to live near to a landfill site (i.e. the nuisance and blight factors). It was recognized that the environmental cost was significantly greater than had hitherto been recognised. The local government authorities recognised the need to increase the amount of householders' tax collected to cover the increased costs of disposing of waste to landfill; they also recognised the potential unwillingness of the public to pay more for something they knew little about. Many commenced a campaign to increase public awareness. The campaigns were run by the local authorities and comprised descriptive literature, sent with the demand for the householder's tax, explaining what proportion of the tax was spent on dealing with wastes.

The national government decided that it was necessary to raise public awareness of the issues related to waste management, to set a target for recycling and recovery of waste and to galvanise action to achieve the goal. It therefore published in 1990 a White Paper on the Environment - This Common Inheritance - containing a target to recycle or compost 25% of

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all household waste by the year 2000. This document was widely broadcast in the press and constituted part of the public awareness campaign. The recycling target was set at about half of all the household waste that can be recycled or composted in order to be perceptually achievable and yet leave room for improvement in later years.

In response to the recycling target contained in the White Paper, many local authorities created a new post: Waste Recycling Officer. The responsibilities of the Waste Recycling Officer were to determine the strategy and actions needed to achieve the government's target and to mastermind the publicity campaign needed to ensure co-operation from the public. This resulted in some innovative and imaginative campaigns involving schools, shops and local communities. Poster and leaflet campaigns have been run, the local press has been involved in publicising successful schemes, and local dignitaries have hosted events and awarded prizes.

The government – in its strategy for sustainable waste management in England and Wales 1995: Making Waste Work – reiterated the target of 25% recycling and recovery, within the same timeframe of 2000. This document again constituted part of a public awareness campaign and was used by local authorities in their efforts.

In 1996, the government imposed a tax on all wastes sent to landfill for disposal in order to encourage recycling and recovery of energy from waste. This further increased the cost of disposal to landfill and made it imperative to continue education of the public on the true costs of landfill disposal, and the environmental disbenefits compared to recycling and recovery. The landfill tax scheme made provision for some of the tax to be invested in Environmental Bodies, set up for the purposes of environmental improvement, research and education, in relation to waste management.

In 1999, the government launched the Best Value initiative requiring local authorities to commit themselves to continuous improvement for all their services, including wastes management, and to develop indicators by which this can be assessed in an annual assessment. Most authorities have developed indicators for waste reduction and recycling and carry out annual surveys through questioning householders face to face.

Today, the government's target for recycling and recovery remains at 25% but within an extended period: by 2005/6. The current government Waste Strategy 2000 document – A Way With Waste – sets recovery and recycling targets for local authorities in bands, dependent on the authority's success in previous years, the purpose being to achieve continuous improvement. This document is produced in two parts, the first of which is aimed at the general public and raising awareness of the issues associated with solid wastes management, and the second contains the technical basis. The document is described further in the next section.

The Department of Environment, Food and Rural Affairs (DEFRA) has a web site for the dissemination of information about wastes and the recycling/recovery effort. The web site was set up following the publication of the Waste Strategy 2000 document and comprises a series of newsletters and an interactive page, with games which may be used by adults and children alike, to learn what part they can play in the responsible management of wastes. The interactive site has received some 28,000 visits to date (i.e. in the space of about a year).

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2. Present issues addressed in SWM Public Awareness

The UK government waste strategy

The basis of all current campaigns on SWM is the government's Waste Strategy 2000: A Way With Waste. The first part of this document explains the issues of solid waste generation and management in the context of sustainable development. It seeks to use the common language of the public (but see Section 5 for effectiveness), to deliver its message and calls for the public to work in partnership with businesses, local authorities and community groups, to achieve a step change in everyone's attitude to waste. The step change calls for the use of fewer raw materials in the manufacturing processes, using processes that produce less waste, putting waste to good use - through re-using items, recycling, composting and using waste as a fuel - and choosing products made from recycled materials.

A Way With Waste explains the quantities of waste produced annually and the projected rate of increase in waste generation. It shows how the management of wastes is split between recovery, recycling and landfill. It describes the government's obligation to meet the requirements of the EU Landfill Directive by reducing the quantity of biodegradable municipal waste going to landfill to 75%, 50% and 35% of that in 1995, progressively up to 2020.

The document explains what the government means by waste reduction, re-use and recycling and how it hopes, by forming a partnership between the public, communities, local authorities and businesses, to turn the linear process of production – consumption - disposal into a cyclical process, through recycling, to production – consumption – reprocessing – production etc., to reduce the use of raw materials and reduce the quantities of waste requiring disposal. For organic wastes the government proposes a closed loop of production – consumption – composting – production etc. It points out that some wastes can be used as a fuel and thus will have a beneficial effect on the environment, because it displaces virgin fuels, producing less carbon dioxide (a greenhouse gas) than they do.

The government describes the role of the local authorities and the obligations upon them to set themselves a series of targets for performance on waste management, and to prepare an action plan for their delivery. It states furthermore that the government will introduce statutory performance standards for recycling by the local authorities. The government explains that it has set indicators of sustainable development which include waste production (by sector), production and recycling of household waste, recycling rates (by material), and the quantity of hazardous wastes produced.

The concept of recovery of municipal waste is explained as obtaining value from wastes through recycling, composting, material recovery and energy recovery.

The paper contains a proposal by the government to set up a partnership with the private sector, the Environment Agency (EA) and the local authorities to establish a Waste and Resources Action Programme to facilitate markets for recyclates, promote investment in reprocessing, carry out research to identify opportunities for re-use and recycling, co-ordinate and disseminate information and to provide advice, guidance and technical support.

The government explains in this document that it is already able to address environmental issues in procurement, through a framework specification which explains how its Departments can specify requirements in green terms, and that they should award contracts on the basis of value for money, namely whole life costs and quality, not simply the lowest

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price. It proposes to require its Departments to procure certain recycled products – leading the way for others to do the same and generate a market for recyclates.

The paper contains targets for the recovery and recycling of packaging wastes, newspapers and producer responsibility for 'junk mail'. It explains the European initiatives already in place for end-of-life vehicles, batteries and waste electrical and electronic goods. It explains proposals for tradable permits to restrict the amount of biodegradable municipal waste to be landfilled and the use and purpose of the landfill tax.

The waste strategy and public awareness

In relation to public awareness, the government refers to the 'are you doing your bit?' campaign and states that it has been successful in raising public awareness of environmental issues, including waste a recycling, and that it will also continue to support the NWA, which is being developed in partnership by local authorities, industry, community groups and others.

The document reinforces throughout that all parties must work together to achieve the desired change and sets out a framework of how this may be done, with the government's support. The document sets out the responsibilities of the national government, businesses, the waste management industry, waste planning authorities, waste collection and disposal authorities, regional development agencies, the EA, the community sector and consumers. It particularly places a responsibility on waste collection and disposal authorities to raise awareness locally, of the costs of dealing with waste, and the part which individuals can play in reducing the amount of waste.

As described in Section 1 above, the planning regime allows the public to be aware of the proposed development of waste management facilities in their vicinity and to take part in the decision making process.

Waste collection and disposal authorities use the householders' tax demand to explain the cost of providing waste management facilities.

3. Entities responsible for public awareness

The following parties are tasked with raising public awareness in the area of their responsibility:

- The national government,
- Business,
- Waste management industry,
- Waste planning authorities,
- Waste collection and disposal authorities,
- Regional development agencies,
- Environment Agency, and
- Community sector

At national government level, DEFRA is responsible for setting the policy to encourage recycling and the methods to be used i.e. whether regulation is required with supporting penalties and rewards, or, if the government will be able to rely on the public's willingness to co-operate if appropriately educated. DEFRA commission research from experts in the field into the best ways to encourage the public to reduce and recycle their wastes. The government will raise awareness through:

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- The 'are you doing your bit?' campaign aimed at achieving sustainability,
- Continued support for the NWA,
- Its interactive website, and
- Working with authorities to pilot schemes for encouraging consumers to reduce waste and recycle more

Businesses are required to devise schemes to inform consumers about the recycled content of their products.

The waste management industry is required to provide advice on waste reduction and better waste management so that customers and the environment can benefit from a real choice, also to make efforts to improve the industry's public image and to provide a high standard of training to employees.

Waste planning authorities are required to promote informed debate with the public and businesses in their area about the need for waste management facilities and the options available to produce the Best Practical Environmental Option.

Waste collection and disposal authorities are required to put in place effective local arrangements to reduce waste and maximise recycling and recovery, to raise awareness locally of the costs of dealing with waste and the part which individuals can play in reducing the amount of waste, involve local people in decisions on waste and work with community based schemes to promote re-use and recycling, form consortia where these would be able to obtain better arrangements with reprocessors and other outlets for recycle than would the authority or businesses acting alone. The local authorities take the prime role in determining the need for raising public awareness and for instituting the necessary publicity campaign. As described in Section 1 above, the majority of Waste Disposal Departments within the Local Authorities have appointed Waste Recycling Officers whose role is to determine the strategy for achieving the waste recycling and recovery target set by the government.

Regional development agencies are required to seek to attract private sector investment into the recycling sector, encourage companies to consider the impact of waste on economic performance, promote waste reduction, and make the links between suppliers of secondary materials and reprocessors.

The EA is required to disseminate the results of the waste production survey widely, through publications and on its web site.

The community sector is required to be fully involved in local authority efforts to build partnerships for more sustainable waste management, continue its work in motivating public involvement and increasing participation in recycling and composting schemes.

The cost of the individual parties named above, in contributing to the raising of public awareness, is borne by themselves. In the case of all government agencies and authorities, this comes out of the budget made possible through national and local taxation. In the case of the community sector, the efforts are voluntary and, hence, unpaid. The government has recently announced a new fund (the National Waste Minimisation and Recycling fund) of GBP140m to help local authorities deliver their legal obligation to meet the target of 25% recycling and recovery by 2005/6. The fund provides for GBP 50m for 2002/3 and GBP 90m for 2003/4. Local authorities are invited to put forward applications for grants under this fund.

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4. Methods used in public awareness

Until the recent survey commissioned by the NWA, there has been little or no research into the best way to approach the public, in order to achieve the desired end result. Most of the publicity campaigns run by the government have highlighted the issue – often in technical language – and hectored the public to play its part in reducing the huge mountain of waste. Unsurprisingly, this has not achieved the desired result and the public is not encouraged to take action because it sees the same problem being identified, and the same warnings given year after year, without change. An example is the warnings by the planners in the 1980s that the UK would run out of landfill space. The public – if they take in any information about wastes management - will know that the majority of waste still goes to landfill for disposal and will continue to do so for the foreseeable future.

To a large extent, most of the publicity in relation to waste issues has come from the environmental lobbyists, and their approach is to campaign locally with leaflets and personal presence, with support through publications (e.g. Green Consumer Guide) at national level.

There have been occasional surveys – run mainly in the 1980s – to determine how much the public would be prepared to pay for environmental improvement. But although these included questions on waste management issues, they were not aimed at increasing public awareness.

Methods used to raise public awareness include:

- Loose leaflets distributed to households and businesses,
- Explanatory pamphlets distributed to householders accompanying the demand for householders tax,
- Publication of the government's strategy on a regular basis,
- Publication of the Royal Commission reports,
- Publication of the government sponsored research,
- Publication of government technical papers/reports,
- Billboard advertising,
- News items/releases on radio and television,
- Documentaries on radio and television,
- Websites,
- Education through the school curriculum,
- Local competitions for innovative methods of recycling,
- Local competitions for volume of recyclates,
- School competitions for promotional material design,
- Waste management diploma,
- Waste modules in engineering, public health and environmental degrees,
- Waste management degree, and
- Training videos produced by the professional institutions

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5. Effectiveness of public awareness activities

Since the first public awareness campaigns were started in the early 1970s, there has been a gradual but growing public awareness of the issues and of what the public can do to assist in the reduction of waste, and recovery and recycling. There is still a perception, however, that 'greens' recycle their waste and the vast majority of the population does not actively do this, nor do they exercise their purchasing power to effect change. In many cases, the action to assist is forced upon the public through their participation in a local government kerbside recycling collection scheme. They may not, however, be aware of the ramifications of the scheme in which they are taking part, nor may they contribute to any scheme which requires their voluntary action.

Much of the public's knowledge of the issues related to waste generation, reduction, recovery and recycling has been gained from the ongoing campaigns of the environmental lobbyists, such as the Tidy Britain Group. But it depends on people being interested in the topic and prepared to take an active part in effecting change through recycling, and through exercising their purchasing power.

Campaigns run by the local authorities have had some local success and this is demonstrated by the wide variation in recycling achievements across the UK. This has been largely due, however, to the drive and enthusiasm of the local waste recycling officer to achieve, despite budgetary constraints and lack of national support. This should change as a result of the NWA, with the provision of a national vision and support to achieve it.

There has been little research to test the effectiveness of the various campaigns on waste reduction, re-use and recycling. One of the first actions of the NWA, however, was to commission research into the most effective and appropriate way of communicating national messages to encourage attitude change and actions on waste. The research was carried out in 2001 and examined the effectiveness of the message delivery of historical campaigns. The research comprised a survey of both adults and children and a mix of those concerned, and those who care little about environmental issues. A spread of age and sex was ensured throughout the country and the locations for the research were selected, to reflect as widely as possible, the variety of local waste concerns (such as rapidly diminishing landfill space) and schemes (kerbside collection schemes where the local authorities will collect recyclable material from individual's houses weekly or bi-weekly), and a mix of rural and urban environments.

One crucial finding of the research was that the message should be addressed in the contemporary discourse of the public and not in technical language. For instance, all campaigns refer to 'waste'. To the public 'waste' is an intangible issue and not of immediate relevance to them – it is a concept attached to the output of industry with disposal in huge barrels dropped to the bottom of the ocean. It conjures up notions of toxicity, smelly fluids that need to be disposed of by major manufacturers, power companies and even sewage works. Colloquial development of the language also leads to connotations such as 'wasted' meaning either 'killed' or 'drunk'. It was found that the term 'rubbish' was the best recognised and understood by the public. It is a household word, which individuals can immediately recognise as something they produce, and which goes into their kitchen bin. Similarly, with the terminology for disposal: 'landfill' and 'incineration' should be replaced with the words 'burying' and 'burning', but it was found that neither had any immediacy or relevance to the surveyed group unless they directly impinged on the individual's lifestyle i.e. existed or were proposed in close proximity to an individual. In this case, it was found that there is no such thing as 'better' – either was unacceptable.

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The research examined the cultural factors which would govern whether or not people would act to reduce, re-use or recycle waste. It was found that there is a culture of convenience i.e. a desire to make life as easy and hassle-free as possible with instantaneous, simple solutions. Coupled with this is an expectation of single use and disposability, rather than time consuming maintenance and aftercare. The rapid developmental advances in electronic technology have contributed to this, as electronic goods are rapidly outdated by new more powerful models. This pursuit of instant gratification and convenience results in an attitude which is, perhaps, the greatest barrier to change. The actions to reduce, re-use and recycle waste must above all, therefore, be convenient. Examples of providing such convenience include workplace paper recycling bins, and kerbside collection of recyclables. The key elements for success are that methods should be:

- Quick: it has to be an action that can be carried out as fast as possible, thus freeing up time for other, more interesting activities
- Easy: it needs to be achievable with the minimum of effort, requiring very little in the way of thought and concentration
- Available: it has to be performed when it is convenient for the individual – their time cannot be dictated by this action in any way. Thus it must be possible to achieve 24 hours a day, 7 days a week
- Personally beneficial: The more it is understood why this is being done and how an individual will reap the rewards of carrying out the action, the more popular it will be

It was found that all parties (i.e. council, consumer/individual, retailers and manufacturers) feel powerless to effect change on their own. It is not their fault that things are as they are. The solution is to work together in a partnership to achieve the common goal of waste reduction, re-use and recycling.

The research concluded that positive action by the consumer to recycle, re-use, shop responsibly and compost is currently the exception, and not the norm.