

# **Managing Swindon's Waste for Future Generations**

**The Municipal Waste Management  
Strategy for Swindon  
2006 to 2020**

## Version Control

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## Contents

<b>1</b>	<b>Executive Summary</b>	
<b>2</b>	<b>Introduction</b>	<b>4</b>
<b>3</b>	<b>Glossary</b>	
<b>4</b>	<b>Waste – What’s the Issue</b>	<b>7</b>
<b>5</b>	<b>Waste – The Way Forward</b>	<b>15</b>
<b>6</b>	<b>Other Wastes</b>	<b>24</b>
<b>7</b>	<b>Waste Transport</b>	<b>27</b>
<b>8</b>	<b>Education</b>	<b>28</b>
<b>9</b>	<b>Waste – Working with business</b>	<b>29</b>
<b>10</b>	<b>Regional Working</b>	<b>31</b>
<b>11</b>	<b>Resources</b>	<b>32</b>
<b>12</b>	<b>Policy Summary and Action Plan</b>	<b>37</b>
<b>13</b>	<b>1) Appendices (Contained in separate document)</b>	
	<b>A. Legislation</b>	
	<b>B. Waste Predictions</b>	
	<b>C. Waste treatment methods</b>	
	<b>D. Zero Waste</b>	
	<b>E. Results of 2002 Consultation exercise.</b>	
	<b>F. Best performing waste collection Authorities</b>	
	<b>G. Map of Recycling ‘Bring’ Sites.</b>	

# 1. Executive Summary

Managing waste presents us with both challenges and opportunities over the next 14 years. We have to meet the challenge of dealing with an increasing waste stream produced by: Swindon's demographic growth, an increase in packaging materials and the use of convenience goods, which are often 'disposable'. At the same time we have to meet stretching targets to reduce the amount of waste going to landfill.

We also have the opportunity to become a Leading Edge Authority in minimising waste, through reducing the amount of waste produced, reusing goods, recycling and composting and, finally, waste treatment. In securing the waste treatment facilities we will need in the future, we should aim for advanced technology, which extracts the maximum resource from residual waste.

This strategy sets out how we will meet the challenges and benefit from the opportunities on offer. The policies that this strategy introduces can be split into two phases, Phase 1 – things which we need to do in the next 4 years and Phase 2 – things which we need to do after 2010, although we need to start planning for them now.

## **Phase 1 (2007 – 2010)**

To meet our Promise to our citizens of 'recycling or composting 50% of household refuse and to provide a recycling collection to all our homes where practicable by 2010' and meet our landfill targets, we will change radically our waste services, to emphasise the importance of waste reduction and recycling. In 2007 we will start to introduce a new waste management service which will:

- Provide a comprehensive kerbside recycling service to all our householders where practicable.
- Actively engage with residents to help them fully participate with the scheme.
- Introduce a fortnightly waste collection using wheelie bins or similar containers.

It is important to emphasise that the proposed service changes are about citizens taking responsibility for their own waste, although we will do everything to help and support them to manage their waste effectively. We need to put in place services and policies that are 'fair but firm', so that those who refuse to participate are not permitted to use up an unfair amount of resource in terms of waste disposal capacity.

Between 2007 and 2009 we will improve the standard of our recycling sites including our 'Household Recycling Centre'. We will promote waste minimisation, including financial incentives where these are cost effective and ensure that the needs of our waste infrastructure are considered when determining planning applications.

A wide consultation on waste was carried out in 2002 and our citizens were asked about these proposals at that time. Of the responses we received, we found that:

- 96% supported waste reduction.
- 88% supported a second household recycling centre.
- 95% supported comprehensive kerbside recycling
- 73% found a fortnightly collection of waste acceptable, if a kerbside recycling service was also provided.

A further consultation on these proposals in August and September 2006 demonstrated continuing support for kerbside recycling with a strong desire for dry batteries and plastics to be collected at the kerbside. We hope to be able to include these recyclables within our revised service.

## **Phase 2 (2010 –2020)**

Whilst we aim to achieve 'leading edge' levels of waste reduction, recycling and composting, this will not be sufficient to reduce the quantity of waste sent to landfill. Although we have at least ten years' capacity in our land fill sites, we need to plan now for the capacity to treat our residual waste to extract the resources contained in it, either as energy or compost. Swindon's treatment requirements are modest compared to many waste disposal authorities and this, along with the pressures for growth in Swindon does give us a number of options. These are :

- I. Many large waste disposal authorities are commissioning treatment plants which have significant surplus capacity and we could procure some capacity from another authority.
- II. We could enter into a partnership agreement with a neighbouring waste disposal authority to develop a joint facility.
- III. We could work with the waste industry to develop a cutting edge plant in Swindon as a large scale trial of emerging waste treatments.

The third option could generate heat and power for new industrial or residential development.

We consulted widely on these options in August and September 2006 and found that there was wide support for treating waste locally and energy recovery from waste.

## **Other Proposals**

As well as the work we need to do for Phase1 and 2, we are also proposing to:

- I. Work with business to help them minimise their own waste production. This will often lead to significant cost reductions for business.
- II. Work to reduce the waste produced by the Council's own activities.

- III. Review this strategy in 2010 and 2015 and in other years if there are major legislative or other change which could impact upon our waste activities.
- IV. Develop close links with other waste disposal authorities in our region, with the aim of achieving some alignment between each authorities strategy.

## Introduction

This chapter sets out the background to Swindon and the municipal waste strategy. In particular it covers:-

- **About this strategy** – What it aims to achieve
- **About Swindon** – A brief description
- **Aims and Objectives**

### About this strategy

This strategy sets out our proposals for the management of municipal waste in Swindon until 2020. 'Municipal Waste' includes waste from households, waste accepted at the Household Waste Recycling Centre, waste from Council parks and gardens and commercial waste collected by the Council in its role as a waste collection authority.

In order to minimise the amount of waste we produce we need to encourage citizens to take responsibility for their own waste, although we will do everything to help and support them to manage their waste effectively. We need to put in place services and policies which are 'fair but firm', so that those who refuse to participate are not permitted to use up an unfair amount of resource in terms of waste disposal capacity.

However, in our role as Community Leader we also need to address waste for which we are not directly responsible. The theme of Swindon's Local Area agreement, which was signed in March 2006 is the 'UK's best business location'. Whilst this strategy will inevitably focus on municipal waste, we must also look to assist business in managing its waste sustainably.

A key theme of this strategy will, therefore, be how we work with business to enable and encourage the minimisation, reuse and recycling of non-municipal waste. We recognise and applaud the efforts that many companies in Swindon have already made to reduce waste. We need to ensure that their expertise is shared across Swindon's business community.

The regulation and management of waste is the subject of legislation, much of which imposes challenging targets to reduce the amount of waste sent to Landfill. A summary of the relevant legislation affecting waste management, is included as Appendix A.

The strategy sets out:

- Aims and objectives for the way we manage waste
- Ways in which we will minimise the amount of municipal waste produced
- How we will improve our recycling services to encourage waste minimisation
- How will we change our refuse collection services

- How we will work with other Local authorities to provide waste treatment methods which provide 'value for money' and comply with industry best practice.
- How we will seek citizen and communities support and participation in minimising our waste.
- How we will work with business to encourage waste minimisation in the commercial sector.

The Strategy addresses in detail waste management over the next five years, (up to and including 2011) and looks in less detail at options to 2020. The strategy will be reviewed and refreshed every 5 years and in addition, as key legislation is introduced or before any major investment in waste collection or disposal.

We also look at how we will work with other Waste Disposal Authorities, notably, Wiltshire County Council, to achieve partnership arrangements to manage waste effectively and sustainably whilst achieving Value for Money.

### **About Swindon**

Swindon is one of the fastest growing towns in the country, with an estimated 2006 population of 185,000 which is predicted to rise to 250,000 by 2026. Last year, 1730 houses were completed and this level of build is set to continue, with land identified for 16,000 houses over the next 10 years and proposals for a further 16,000 between 2016 and 2026 in a new development area. This will bring the population to over 250,000, making Swindon a regional centre. We are working to ensure that new housing is sustainable, attractive and accompanied by community infrastructure.

Swindon is a wealth creator and strategic business location for major companies, including Honda, Nationwide, W H Smith, Zurich, Intel and Motorola. Inward investment is buoyant. Gross Value Added per head is one of the highest in the country, 47% higher than the national average. Gross weekly pay is above national and regional levels. Transport access is unrivalled. We are central on the M4 with excellent rail services: close enough to London and Heathrow to be commercially attractive, but far enough to keep costs down, and an hour or so from Birmingham, Cardiff, Bristol, Oxford, Reading, Southampton, Portsmouth and Bath.

As a unitary authority Swindon Borough Council has responsibility for both the collection and disposal of municipal waste.

Swindon has promised to recycle or compost 50% of household refuse and to provide a recycling collection to all our homes where by 2010 as part of it's 50 Promises to its citizens. We are also determined to meet the targets and timescales which have been set for us by Government for diverting waste from landfill. This strategy forms one of the tools by which we will meet that promise.

## Aims and Objectives

### Aim

To provide an effective and sustainable framework for managing waste which provides value for money and is environmentally responsible and socially acceptable.

### Strategy Objectives

- For Swindon to become a Leading Authority for Waste Management and recognised as such Nationally.
- To reduce the growth of municipal waste by encouraging waste minimisation and raising public awareness;
- To increase recycling and composting to at least 50% of municipal waste by 2009/10 in order to meet Promise 49 (to recycle or compost at least 50% of Swindon's refuse by 2010);
- To increase consistently overall recovery of waste in order to achieve the Landfill Directive targets in 2010 and beyond;
- To consider the options available to the Council for delivering these targets;
- To promote an integrated network of facilities to manage municipal waste within the Borough;
- To reduce the transport of waste by ensuring it is managed as close as practicable to the point where it is produced;
- To encourage local employment opportunities by ensuring that waste is treated locally wherever possible;
- To encourage future investigation and review of new and emerging technologies for materials and energy recovery;
- To encourage waste management practices that do not endanger human health or incur unacceptable adverse impacts on the environment
- To put in place an effective, practical and affordable waste management regime which has the support of the public and other stakeholders.
- To support and contribute to the Regional waste strategy and , where there is mutual benefit, plans of neighbouring Authorities.

## 2. Glossary

DEFRA	Department for Environment, Farming and Rural Affairs.
ELV	End of Live Vehicles, Vehicles which are no longer wanted because they are beyond economical repair.
HWRC	Household Waste recycling centre
Landfill	A site where residual waste is disposed of by burial.
LATS	Landfill Allowances Trading Scheme – A scheme where Local Authorities are ‘awarded’ an annual allowance for the tonnage of waste which can be landfilled. Surplus allowances can be sold to Authorities which will not meet their targets.
Leachate	Ground water which drains out of a landfill site, usually contaminated with metals and organic material from the waste.
MRF	Materials Recycling Facility. A site where recyclables are sorted from waste, can be either a ‘dirty’ MRF where household refuse is processed, or a ‘clean’ MRF where mixed recyclables are sorted.
PCB’s	Polychlorinated biphenyls- These were commonly used in electronic components until recent years and have been proven to be harmful to human health.
Residual waste	The waste remaining after recyclables have been extracted and after any treatment.
S106 Agreements	A planning agreement where a Developer is required to the cost of infra structure or other facilities needed as a direct result of the Development.
Sidewaste	Additional waste put out for collection which will not fit in the wheelie bin or other approved refuse container.
SME’s	Small and Medium Enterprises – Usually taken to be businesses with less than 50 employees (small) or less than 250 (medium).
WRAP	Waste & Resources Action Programme

### 3. Waste – What’s the Issue

This chapter sets out the challenges we face in waste and how we might address these as follows:-

- **Background to changes in waste.**
- **Landfill Targets** –Why we can’t carry on landfilling
- **The Landfill Allowances Scheme** – the implications for Swindon.
- **Waste Disposal** – What we at the moment.
- **Waste Collection** – What we do at the moment
- **Waste Treatment** – Summary of available technologies.
- **Policies**

#### **Policies – Waste Minimisation.**

WS1	To meet the 2009/10 Government target for landfill by achieving a combined composting and recycling rate of at least 50.2%
WS2	To meet the targets for landfill for 2012/13 and 2019/20 by maintaining a recycling rate of at least 50.2% and treating residual waste before disposal by landfill or waste for energy schemes
WS3	To develop a strategy for maximising the financial benefits from trading landfill credits.

#### **Policies – Waste Treatment.**

WS3	That the options for waste treatment be kept under consideration with treatment capacity being procured for 19,000 tonnes in 2013 and 40,000 tonnes in 2020. (See chart on page 12)
WS4	Waste disposal and treatment will be procured with Swindon or as close to it’s boundaries as possible whilst taking into account the needs of any partners.
WS5	That we constantly review opportunities to procure innovative waste treatment methods either through part funding by Section 106 contributions from developers as part of their contribution to the waste management infrastructure, or as a pilot plant for emerging technologies.

## **Background**

Until recently waste policy has focused on the efficient and effective disposal of waste with the majority of waste in the UK being either land filled or incinerated. It is recognised that such policies are no longer acceptable; landfill sites have the potential to cause serious and long lasting environmental damage, including climate change, and burning or land filling waste does not recover the valuable resources contained in the waste stream.

Modern packaging, which is used to protect, transport and market goods has resulted in an increase in waste, whilst the use of disposable products, which consumers often see as more convenient, has also led to an increase in waste production. Demographic changes also affect the production of waste, there are now more households and they contain fewer persons in the family unit.

Set against this, there is considerable enthusiasm for recycling and the amount of waste diverted for reuse or recycling has increased,. Nonetheless, total waste production continues to increase.

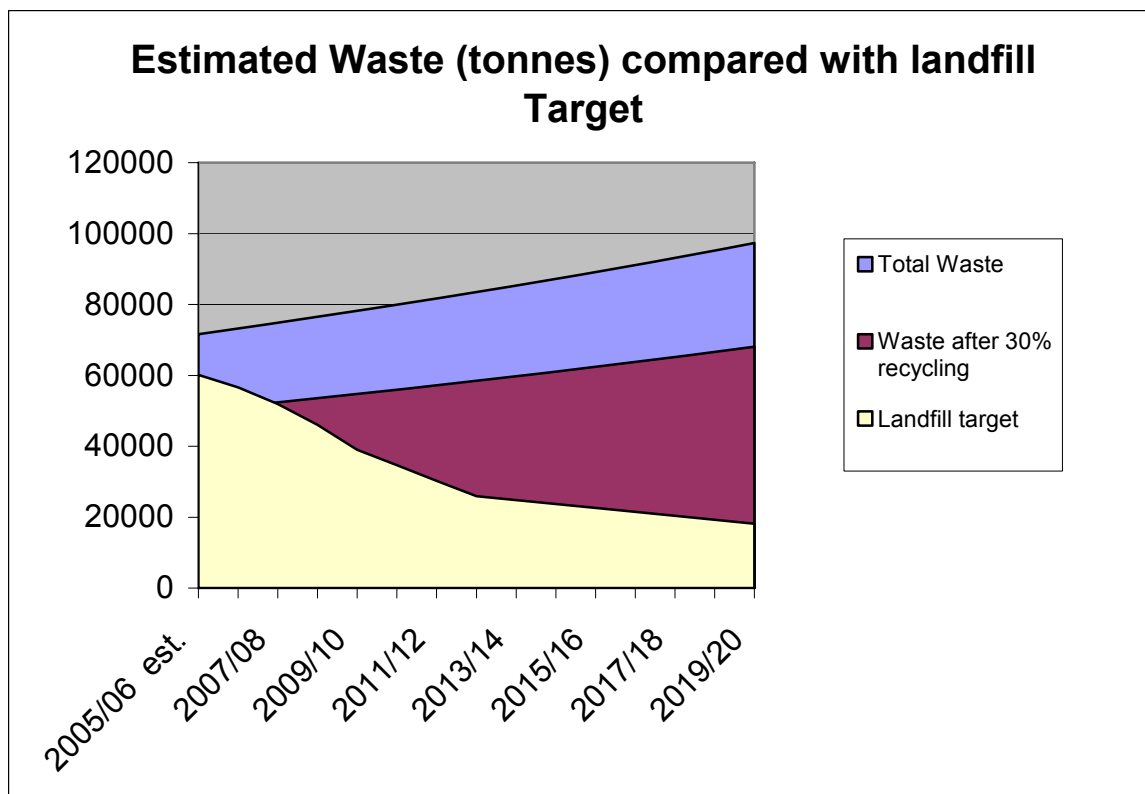
European and National Policy recognises that there must now be a fundamental change in the way that we manage waste and, in particular, that there is a need to move towards more sustainable methods of waste management.

## **Landfill Targets**

### **Why can't we continue Landfilling?**

Targets have been set for all Waste Disposal Authorities which limit the amount of biodegradable municipal waste which can be sent to landfill. In the target years of 2010, 2013 and 2020, the penalties for failing to meet these targets, which are currently set at £150 per tonne are severe. These may be supplemented by a further penalty, as the Government has stated that if England misses its overall target, then they may pass on a proportion of the European Union fine, imposed on England, to Local authorities that breach their targets.

Appendix B examines the likely growth of municipal waste in Swindon in detail. Best estimates suggest that waste will grow at 2.21%. This chart demonstrates the gap between that waste growth and the landfill targets set for Swindon. The yellow area shows our landfill allowances, the blue area shows the impact of a recycling and composting rate of 30% and the purple area is the gap which we have to close.



This estimate of growth could change depending on the future growth rate of Swindon. The Government has indicated that it may be willing to revise the landfill targets for Local Authorities within growth areas. This means that the issue of waste does need to be considered as part of the debate on Swindon's future. We are closely monitoring waste volumes to ensure that the predicted rise in waste volumes remains valid and are discussing the impact of Swindon's expanding population on waste with Government.

Swindon achieved a recycling and composting rate of 27.5% in 2005/06 , a considerable improvement over previous years. As the chart shows, however, this will not be nearly enough to meet the targets. The area on the chart in red illustrates the gap we have to close.

Unless we significantly improve our recycling and composting performance, Swindon could face penalties of many million pounds. Even if we only miss the targets by 10% the penalties would still be significant. If we are doing no better than a recycling rate of 30% by 2010 the penalty is estimated to be in excess of £3.2M.

### Landfill Allowances Scheme

Waste Disposal Authorities can trade landfill allowances using the LATS (Landfill Allowances Trading Scheme) selling surplus allowances or purchasing additional ones to meet their needs. This scheme is little used at the moment and like most other Authorities, Swindon has not carried out any trades. There is also limited scope to borrow or bank allowances from one year to another. This process can, however, only ever be used as a balancing

tool rather than a solution to the problem and we need to plan to meet the targets. Traded or banked landfill allowances **cannot** be used to meet the targets in the 3 target years of **2010, 2013 and 2020**. Landfill allowances which have been 'banked' before any of the penalty years cannot be used after that penalty year.

Even without the penalties, the annual increase in Landfill Tax and the potential need to be a net purchaser of Landfill credits, should we fail to meet the targets, makes landfill an increasingly expensive option. Landfill capacity nationally is becoming more scarce and landfill should be seen as an expensive and wasteful form of disposal for all but residual waste from which all resource has been removed.

Current and forthcoming legislation aims to ensure that landfilling has minimal negative effects on the environment. Inert landfill sites only accept waste that will not decay, such as rubble from building and demolition sites. Mixed waste sites accept all types of household waste and give off methane gas and a liquid known as leachate as the waste decomposes. Methane may be simply burnt or vented off or collected and used to generate electricity. The leachate from landfill sites has to be controlled and treated, at Chapel Farm this is the responsibility of our Waste Disposal Contractor, and at the two closed landfill sites which we have this work is our responsibility.

### **Waste Disposal**

Swindon Borough Council currently has a contract with Hills Waste to dispose of Swindon's residual waste at the Chapel Farm landfill site or in another licensed site in close proximity to the Borough for a further 10 years.

Swindon Borough Council as a unitary authority to not only manage household waste but also municipal waste. 'Household waste' comprises of:

- all wastes collected from households;
- all materials brought to local bring sites or collected at the kerbside for recycling;
- all waste (apart from rubble) brought to the Household Waste Recycling Centre (HWRC), both for recycling and disposal; and
- litter and street sweepings.

'Municipal waste' includes all the above, plus:

- waste collected from trade premises by the Council where requested;
- waste from the Council's own parks and gardens;
- rubble from the HWRC; and
- clearance of fly-tipped waste.

Household waste typically makes up at least 90% of all municipal waste in the UK. In addition, large quantities of industrial and commercial waste are produced in Swindon, which are collected by private waste management companies. Although municipal waste only accounts for about a third of waste, local authorities have more control over what happens to this waste. and are only required to produce a strategy relating to municipal waste.

Table 1 shows the household and municipal waste generated in 2005/06 from different sources, together with the disposal routes for this waste

<b>Table 1. Waste generation in Swindon</b>				
	<b>Household waste</b>		<b>Other municipal waste</b>	
	<b>Tonnes (2005/2006)</b>		<b>Tonnes (2005/2006)</b>	
Recycled (bring sites)	2,733		0	
Recycled (collection)	7323		0	
Recycled (House Waste Recycling Centre)	6348		4080	
Composted (House, collection, Waste Recycling Centre & parks waste)	6083		0	
Incinerated (Clinical)	36		0	
Landfilled (House Waste Recycling Centre)	9139		0	
Landfilled (household collection & bulky waste)	50867			
Landfilled (Trade & Internal waste)	0		5273	
<b>Totals:</b>	<b>Household waste</b>		<b>Municipal waste:</b>	
	Tonnes	%	Tonnes	%
Recycled	16,404	20%	20,483	22%
Composted		7%	6,083	7%
Landfilled	60,005	73%	65,279	71%
Incinerated	36	0%	36	0%
<i>Total waste arising</i>	<i>85,528</i>	<i>100%</i>	<i>91,881</i>	<i>100%</i>
<i>Overall recycling rate (%)</i>		<i>27%</i>		<i>29%</i>

### **Waste Collection.**

Until April 2005 all households in the Borough of Swindon were serviced by a weekly collection of rubbish in black sacks and over 4 million such collections are made each year. Each household could use as many sacks as necessary as there was no limit placed on the number of sacks that would be collected from each property.

In April 2005 a trial scheme was implemented in West Swindon involving 10,000 homes. Each household was provided with a 240 litre wheelie bin which is emptied fortnightly. Additional waste is discouraged and will not be collected, although large families will be issued with an additional wheelie bin if requested. The remainder of Swindon continues with a weekly black sack collection.

The black sacks of waste are transported to the landfill site at Chapel Farm near Blunsdon for disposal. Each load is weighed before being landfilled. A

free green waste collection is provided to all households. Green waste is collected fortnightly and taken to a specialist facility for composting

Members of the public who, because of disability, infirmity or ill health, are unable to carry their black sacks, or move their wheelie bin and recycling boxes, to the edge of their property, receive an assisted collection, whereby the waste is collected from the back door or other agreed location.

Bulky waste such as furniture, white goods, large packaging and mattresses is collected by Swindon Commercial Services. A charge is made for this service. Refrigerators and freezers are also currently collected and are stored at Waterside Park, until they are degassed by a specialist contractor, along with those brought by members of the public to the HWRC. All ozone depleting substances are removed for safe disposal.

Clinical waste collections are made free of charge from residential properties and the waste is taken by a private contractor for incineration. Bonded asbestos cement sheeting or guttering arising from DIY activities is also collected from households if double-wrapped in plastic. This is then disposed of at an appropriate, licensed site. There is a charge for this service.

The waste collection services are provided by Swindon Commercial Services. The landfill site at Chapel Farm, Blunsdon for the disposal of household waste is operated by a Contractor. The contractor has expressed an interest in working with the Council to increase recycling rates and waste treatment rates and has limited sorting facilities for commercial and industrial waste on site at present. Methane extraction is carried out at the site and the energy provided is used to generate power for the National grid. The site is close to the centre of Swindon which reduces the financial and environmental cost of transporting residual waste.

The best performing Local Authority in the UK are currently achieving a recycling rate of about 50%. Details of these Authorities and the collection methods they use are contained in Appendix F. If we can achieve a recycling and composting rate of at least 50.2% (the 2010 promise is to achieve 50%) by 2009/10 we would meet our targets and avoid any penalty. Successfully reducing waste will greatly help Swindon in meeting its targets.

To meet our targets in subsequent years will require some form of waste treatments. We also need to develop a strategy for maximising the financial benefits from trading landfill credits

## **Waste Treatment**

There are alternatives methods of waste disposal to landfill. Some of the treatments rely on 'tried and tested' technologies and have a long established track record of being used to treat residual waste in the UK. Other technologies have been used extensively in Europe, but only recently introduced in the UK or have been used to treat different types of waste. There are also new and emerging technologies, which are currently unproven in the UK or Europe.

The following is a brief summary of the main alternatives to landfill, a more detailed summary is included at Appendix C.

***Anaerobic Digestion***

Biodegradable material is processed in an enclosed vessel under controlled conditions, producing a compost like material and gas. The gas produced can be used to generate electricity. Rejects from the process will still need to be landfilled.

***In-vessel Composting***

Biodegradable material is processed in an enclosed vessel under controlled conditions. The material breaks down in the presence of air and produces compost.

***Energy from Waste (EfW)***

Mixed, non-source separated waste is combusted under strictly controlled conditions producing energy in the form of heat and electricity.

***Gasification and pyrolysis***

Gasification and pyrolysis are separate processes but are often combined to improve combustion efficiency. Waste which has been sorted and shredded is burnt either with a limited supply of air (gasification) or in the absence of air (pyrolysis) to produce a variety of products including a gas, which can be used to generate electricity, a carbon-rich material, char and oil (from pyrolysis).

***Mechanical Biological Treatment (MBT)***

MBT processes use a series of screens and conveyors to separate different fractions of waste (the same as a materials recycling facility MRF). The biodegradable fraction is then processed using anaerobic digestion or in-vessel composting technologies.

***Materials Recovery/Reclamation Facility (MRF)***

Source separated or mixed waste (dirty MRF) is separated mechanically and in some instances by hand into different recyclable fractions e.g. glass, paper, plastic, and metals. Depending on the quality of the separated materials it is likely that a viable market would be found for the products.

The following table provides a summary of the processing capability of the waste technologies considered.

Technology	Process mixed household waste	Process separated household waste	Waste requires pre-treating before processing	* Product still classified as biodegradable	Process proven in UK
Anaerobic Digestion	<b>X</b>	√	√	√	√
In-vessel composting	<b>X</b>	√	√	√	√
Energy from waste	√	√	<b>X</b>	<b>X</b>	√
Gasification & Pyrolysis	<b>X</b>	√	√	<b>X</b>	<b>X</b>
Mechanical Biological Treatment	√	√	<b>X</b>	√	<b>X</b>

\*

Any treatment plant has a minimum throughput to make it economically viable. Swindon's residual waste tonnages are low, compared to many waste disposal Authorities. Procuring joint facilities with one or more other Authorities or purchasing surplus capacity from another Authority or contractor may offer both the best environmental option and best value for money for Swindon.

On the other hand our relatively low waste tonnages may provide an opportunity for piloting new technologies in waste treatment and we should be aware of such opportunities.

Swindon's future development may also provide opportunities to part fund treatment facilities through Section 106 contributions from developers as part of their contribution to the waste management infrastructure. For example, a major new housing or commercial development could include an energy from waste facility which provided the development with heat or power.

## Conclusions

- We need to significantly reduce the amount of waste we send to landfill.
- We need to develop a strategy to ensure we fully exploit the Landfill Allowances Trading Scheme (LATS)
- We need to re-engineer our waste collection services to place the emphasis on recycling and composting and reduce the amount of residual waste.
- We need to plan now for waste treatment capacity.

## Waste – The Way Forward

### i.

This chapter sets out our proposals for waste minimisation based on the National Waste Strategy and Hierarchy as follows

- **The National Waste Strategy – How we can use this.**
- **Waste Reduction**
  - i. **Policies**
- **Reuse**
- **Recycling & Composting**
  - i. **Kerbside Collection**
  - ii. **Bring Sites**
  - iii. **Household waste recycling centres.**
  - iv. **Policies**
- **Residual Waste and Waste Treatment**
  - i. **Policies**

### **Policies – Waste Reduction.**

- |      |  |
|------|--|
| WS6  | Promote the environmental and financial benefits of waste reduction to Swindon's residents taking part in, and using National Campaigns, as appropriate. |
| WS7  | Engage in education campaigns and initiative to assist residents in waste reduction measures.  |
| WS8  | Provide financial incentives for waste minimisation measures where these are likely to prove cost effective  |
| WS9  | Wherever possible require, encourage and promote the use of sink macerators to reduce the amount of kitchen waste collected and sent to landfill.        |
| WS10 | Encourage and promote alternatives to disposable nappies   |

### **Policies – Recycling**

- |      |  |
|------|--|
| WS11 | A comprehensive uniform kerbside recycling service, providing at least fortnightly collections, is provided to all households.   |
| WS12 | Provide kerbside recycling solutions to residents of flats and other multi – occupied buildings where storage and manual handling of recycling boxes can be difficult                        |
| WS13 | The Council's network of bring sites should be maintained to high standards and kept under review to ensure the number, location, and recyclables accepted continue to meet the needs of our |

population, and complement the service provided by the kerbside collection rounds.

WS14 Provide sufficient household recycling centres so that they are convenient for citizens, minimise queuing and provide appropriate facilities to maximise reuse and recycling of unwanted goods and materials delivered to them.

**Policies – Residual waste**

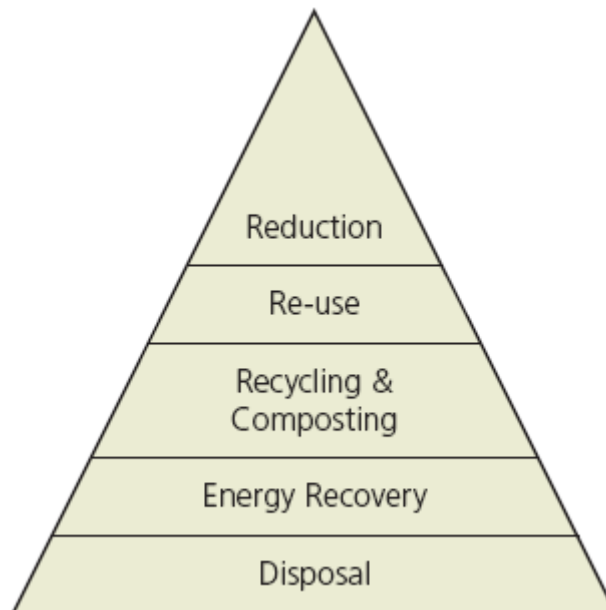
WS15 Residual waste will be based on fortnightly collections which are limited in volume by the use of wheelie bin or similar containers and by No collection of sidwaste.

WS16 Collection methods will be designed to limit the risk to operatives through manual handling or exposure to sharp materials.

WS17 Residual waste will be minimised by active engagement with residents including personal visits to residents not participating in the recycling and composting schemes.

**Waste Hierarchy**

The National Waste Hierarchy sets out the five steps of sustainable waste management which are illustrated in the following diagram.



By following these five steps we can minimise the amount of waste which Swindon has to treat or dispose of whilst recovering the resource contained within that waste.

**Swindon’s Intentions**

We will adopt and implement a series of policies, based on the National Waste Hierarchy, which encourage and support:

- **Waste Reduction** - we must make every attempt to reduce the amount of waste that has to be dealt with by not producing it in the first place.
- **Reuse** - we have to increase the amount of waste that we re use.
- **Recycling and Composting** - we should manage more waste at home by composting which saves on collection, processing and disposal costs. Increased recycling, reduces the amount of waste going to landfill while reducing the demand for valuable raw materials and energy. Recycling can also create local employment.
- **Recovery.** The waste which is left, following reduction, reuse, recycling and composting will still contain value which we will seek to extract whenever possible.
- **Disposal.** After all the above options have been exhausted, we will ensure the safe disposal of what remains to suitable landfill sites.

**Waste Reduction.** Waste reduction should be the priority for Swindon wherever possible. Reducing the amount of waste produced, not only saves on the environmental and financial costs of disposal, but also reduces the costs associated with collecting and processing the waste. It can also lead to reduction in the demand for products through not buying what we don't need such as oversized products and surplus foods, and reducing what we throw away by buying things that can be repaired, used more than once or by someone else. Waste reduction makes achieving our targets easier.

Actively promoting waste reduction is essential. A successful waste reduction campaign needs to persuade people to change the way they think about waste and the way they dispose of it. Messages are sent out in national campaigns to encourage people to change their shopping habits or compost waste at home. We should vigorously promote our own waste reduction campaigns including the use of doorstep campaigns to encourage participation. It is difficult to estimate the effect of a waste reduction campaign on the total amount of waste generated. However, if 25% of Swindon's 77,300 households composted around 80% of all their compostable waste (approximately 30% is thought to be compostable), this would lead to an 8.5% reduction in the amount of waste collected on the household collection rounds and a 1% increase in the recycling rate.

Swindon has the power to carry out initiatives aimed at reducing municipal waste under the Waste Minimisation Act 1998. Proposed initiatives are as set out below.

### Schools

Working with schools is an important aspect as pupils represent the recyclers of tomorrow, as well as using 'pester power' to encourage recycling at home. In addition, the schools themselves are producers of a significant tonnage of waste, of a diverse nature. Efforts to reduce the school's own waste can reinforce the message being delivered in the classrooms. The 'Eco Schools'

programme and other initiatives already promote awareness of waste issues to our young people.

### Kitchen waste

Kitchen waste is a significant component of the biodegradable waste in household waste. If it were to be collected separately, it would increase collection costs and require specialist and expensive treatment as a result of legislation designed to eliminate the risk of the spread of animal disease.

Kitchen waste is best treated by home composting, wherever possible, as this eliminates both the financial cost of collection, transport and treatment and the environmental cost associated with the transport. Kitchen waste can be composted in traditional composters or using specialised devices, which aim to dispose of the waste without producing significant amounts of compost.

Home composting is also the best environmental option for green waste as it avoids the transport costs and emissions through collection and delivery to the composting site and return of the composted material for reuse.

Kitchen waste can also be dealt with by maceration and disposal through the sewage system. A grinder is fitted to the waste outlet of the sink which grinds waste which is then washed away with waste water. This technology is well developed and in some parts of the United States and Scandinavia legislation is in place requiring all domestic housing to be equipped with a sink waste macerator.

### Disposable nappies

Disposable nappies make up a significant part of household waste which is notoriously difficult to deal with. Disposable nappies take 500 years to breakdown in landfill and contribute to both methane production and toxic leachates during that time. A baby using disposable nappies will contribute approximately 0.65 tonne to the waste production of that household whilst in nappies.

Consumers believe that disposable nappies are more convenient and their use saves the initial investment in washable nappies. Washable nappies are, however, now far more convenient to use than they used to be and nappy laundering services are available. Actively promoting the use of real nappies including the use of financial incentives to new mothers could lead to a modest reduction in household waste.

### Other issues

Other examples of waste reduction initiatives that Swindon could engage in include:

- Informing householders about the Mailing Preference Service to reduce junk mail;
- 
- Encouraging careful and appropriate shopping such as buying products in less or reusable packaging, reusing carrier bags and buying products made from recycled materials;
- Promoting refurbishment and reuse of furniture and household electrical goods, for example in conjunction with the Top Drawer Furniture Project and other not for profit groups;

- Developing rewards for good citizenship in respect of waste;
- Adoption of a waste reduction policy by Swindon Borough Council for its own waste.

## Reuse

Many things which are thrown away can be reused, either locally, nationally or in the third world. Giving unwanted books, clothing and gifts to charity shops is an example of this. Reusing goods in this way not only reduces the amount of waste produced, but can also have considerable social benefits.

Schemes which reuse computers and other electronic equipment in developing nations are particularly valuable because of the presence of toxic materials in the equipment which makes them difficult to dispose of safely.

We should also encourage reuse of goods and materials within our business community, this will be developed later in this strategy.

## Recycling

Recycling is effective in reducing the amount of waste sent to landfill. Most of Swindon's households benefit from a limited kerbside recycling service, although the service provided varies across the Borough. This makes any effective the promotion of the service difficult.

In addition the Council has a well developed network of recycling sites which the public 'bring' recyclables to. (Normally called 'bring sites'). However these have now been in place for many years and need upgrading to remain attractive to users.

### Kerbside recycling Collection

We provide a range of different kerbside recycling schemes to our residents. Table 2 summarises the services provided.

<b>Table 2 – Recycling services provided in Swindon</b>			
<b>Service</b>	<b>Method of Provision</b>	<b>Household numbers</b>	<b>Collection Method</b>
<b>Kerbside Dry Recycling Collection</b>	Fortnightly mixed paper and card collection	40,000 households	Kerbside Box

	Weekly multi-material collection (mixed paper and card, cans, glass containers, textiles, foil)	27,000 households	Kerbside Box
	No service	13,000 households	
<b>Kerbside Garden Waste Collection</b>	Free service – collected fortnightly	All Households	

Many of our residents are enthusiastic about recycling and there is strong demand for full kerbside recycling to be rolled out across the Borough. The lack of a kerbside collection for plastic bottles is also frequently raised by the public.

Plastic bottles are a very light but bulky material, and so providing a collection service has very little effect on the overall recycling rate. However there is a public demand for this service and it is believed that meeting this demand improves residents' satisfaction and participation in the scheme.

We need to find innovative solutions to provide kerbside recycling facilities for flats and other multi – occupied buildings where storage and manual handling of recycling boxes can be difficult. Provision of a consistent service to all of Swindon's residents will make promoting and encouraging participation in the scheme easier and more effective. As far as possible we should aim to collect residue waste and recyclables on the same day of the week.

We consider that providing a comprehensive kerbside recycling service is essential to improving the performance of our recycling services and achieving policy WS1- To meet the 2009/10 target for landfill by achieving a recycling rate of at least 50.2%

### Bring sites

Bring sites comprise of a groups of banks, skips or other containers where the public can bring glass bottles and jars, cans, textiles (clothes, shoes and bedding), plastic bottles and paper for recycling although not all sites offer facilities for all these materials. Bring sites are usually located in the car park of local supermarkets and community centres and there are currently 42 bring sites in Swindon in addition to the Household Waste Recycling Centre at Waterside Park, Cheney Manor. A map showing the location of recycling services is provided at Appendix G.

Even with a universal and comprehensive kerbside collection available to all Swindon's residents , there will be a need for bring sites as some householders prefer to recycle at their own convenience. As kerbside recycling is improved, the location of bring sites will need reviewing.

In addition, the bring sites can receive materials not collected by a kerbside recycling scheme. These may include plastic bottles, which are not included in any of the kerbside collections, because of their bulk and materials that occur in smaller quantities such as foil and books.

To improve the use of bring sites, we need to maintain them in good order, with containers replaced as required. Containers should be clean and safe to use and signage needs improving. Excess waste should be removed promptly. The locations of any new sites should be balanced against concerns of nearby residents about noise or disturbance and noise-reducing mechanisms should be fitted where possible.

### Household waste recycling centres

Swindon currently has one household recycling centre at Waterside Park, Cheney Manor. In 2005/ 6 this accepted 21,570 tonnes of waste of which 58% was recycled. We recognise that household recycling centres have a significant contribution to make to both waste minimisation and recycling rates.

Demand at Waterside Park is high, which leads to queuing and unacceptably long waiting times at peak periods. The desire of customers to move quickly through the site at these times limits the opportunities to assist them in sorting waste and so achieve the best reuse and recycling rates.

We now need to consider the improvement of services at Waterside Park to provide a more convenient service.

As Swindon continues to grow we will need to consider the provision of at least one additional site. This could be part or fully funded by Section 106 contributions from housing developers as part of their contribution to the waste management infrastructure.

Swindon's recycling performance was the subject of a report by WRAP (The Waste & Resources Action Programme), funded by DEFRA. WRAP review of our recycling services in March 2006 found that 'Swindon has made significant progress towards achieving a recycling rate of 30%...'

### **Residual Waste and Waste Treatment**

However successful we are in introducing waste minimisation, re use, recycling and composting initiatives there will always be some household refuse that requires collection (Known as residual waste). The refuse collection service needs to be designed to minimise the amount of residual waste collected.

Since April 2005 Swindon has operated a pilot fortnightly refuse collection service for 10,000 homes in West Swindon. Those houses taking part were provided with a 240 litre 'wheelie' bin which was collected fortnightly, combined with a weekly multi item recycling service. Households with more than 4 members were provided with an additional wheelie bin. Side waste (additional waste which would not fit in the wheelie bin) was discouraged and generally not collected. Whilst the revised service generated many complaints

in the early days, residents have generally accepted and learned to manage their waste within the constraints of the service. In the first year the amount of waste collected is estimated to have declined by about 30%.

The results of the trial reflect the experience of other Local Authorities who have found that limiting the volume of waste that would be collected, reducing the frequency of collection, whilst enhancing kerbside recycling services is the most effective way of limiting residual waste whilst increasing participation in recycling.

Whilst the scheme has proved successful, many lessons have been learnt. We also recognise that wheelie bins can cause difficulties in terraced housing and could be detrimental to the street scene in conservation areas. We will investigate if other refuse containers are available which can deliver the same benefits less obtrusively and if we can learn from the experience of other Authorities.

The Health & Safety Executive have endorsed wheelie bins as the preferred method of refuse collection, as it reduces manual handling and minimises the risk of injury from broken glass and other sharp material included with waste material for residents and collection operatives. Advice from the HSE is that side waste (additional waste put by the side of a wheelie bin, usually in a refuse sack) should not be collected as part of a wheelie bin collection as refuse freighters designed to handle wheelie bins are not suited to the manual loading of waste.

Learning from the experience of both the West Swindon trial and of other Local Authorities, we propose that fortnightly collections of household waste, using wheelie bins or similar containers to limit the volume of waste collected should be introduced for household waste collection for all of Swindon. This should be combined with comprehensive kerbside recycling and a proactive promotional and education exercise to engage householders in managing their waste effectively.

Any additional waste, which is not contained in a fully closed wheelie bin, should not be collected (this is normally described as 'sidewaste'). Collecting 'sidewaste' would defeat this strategy and experience shows that were residents actively participate managing their waste there should be no need to put out 'sidewaste' for collection.

In planning the roll out of this service account would be taken of the lessons from West Swindon. Households with only 2 persons would be offered a half size (120 litre) wheelie bin which would be easier to store. Significant resources also need to be invested in promoting the scheme and encouraging participation in it. Experience elsewhere demonstrates that we can only achieve the recycling and waste minimisation rates we need by constant reinforcement of the need to recycle including personal visits to those households not participating.

## **Conclusions**

- Waste minimisation, by reducing the total amount of waste collected is

the most effective way of increasing recycling and reducing the amount of waste sent to landfill or requiring treatment.

- Sink macerators can significantly reduce the amount of organic waste present in household, and the Council should promote their use.
- Engaging with our residents, and promoting waste minimisation is key to successfully reducing waste.
- Home composting should be promoted
- We should encourage the use of real nappies.
- We must provide a comprehensive kerbside recycling service.
- We should plan for additional household recycling centres as part as part of Swindon's growth, procuring them through agreements with developers wherever possible.
- We should ensure that Developers contribute to the additional waste infra structure that will be required as a result of Swindon's growth through S106 agreements.

## 4. Other Wastes

This chapter sets out a brief description of the other municipal wastes that the Council is responsible for disposing of and our policies for dealing with them.

- **Non household Municipal Waste**
  - i. **Abandoned vehicles**
  - ii. **Flytipping**
  - iii. **Clinical waste**
  - iv. **Animal waste**
  - v. **Hazardous waste**
  - vi. **Other Municipal waste**

### Policies – Other waste

WS18 Flytipping and other waste related crime will be tackled by a range of initiatives including robust Enforcement action and a continuing programme of 'Safe & Clean' days.

The Council has policies on non-household municipal waste as well as other types of waste that the Council may deal with.

#### **Abandoned vehicles.**

Many cars are abandoned when the owner no longer wants them because falling scrap metal prices and tighter waste disposal legislation means that the owner may otherwise have to pay to get rid of their vehicle. This is different from the situation of several years ago when an 'end of life vehicle' could be exchanged for cash when scrapped.

Abandoned vehicles are a growing problem and the Council currently deals with around 1800 vehicles in a year. In the medium to long term, the EC Directive on End of Life Vehicles (ELVs) should encourage the take back by final owners to authorised dismantlers, followed by recovery and recycling of parts. This should reduce the number of abandoned vehicles the Council has to deal with.

We aim to visit all reports of abandoned vehicles within one working day and to remove the vehicle in one working day from the point that we are legally entitled to.

## **Flytipping**

In 2005/06 there were more than 1,500 instances of fly tipping in Swindon and large volumes of fly-tipped waste are removed each year. More than a third of these were investigated.

This waste is classified as municipal and the Council regularly removes this waste from public land. Some measures that might be designed to control waste, such as charging for certain waste types to be deposited at the Householder Waste Recycling Centre, may lead to an increase in fly-tipping. Several initiatives to combat fly-tipping have already been carried out in Swindon, for example working with the Environment Agency to set up observation cameras to catch fly-tippers, and we have embarked on a programme of multi agency 'Safe and Clean' days' which aim to combat environmental crime including flytipping.

Swindon is determined to deal effectively with flytipping and will look at new ways of using existing and new enforcement powers to deal with those people who don't dispose of waste materials responsibly. Waste disposed of correctly can be processed to ensure that it is treated in the most appropriate way and so minimise the quantity sent for landfill. We have recently signed a protocol with the Environment Agency on how we work together on enforcing flytipping

## **Clinical waste**

Swindon Borough Council has a duty to collect clinical waste where requested and where confirmed by the local health authority. There are potential hazards and costs associated with this practice. At present, no charge is made to the householder for collecting clinical waste, which amounts to around 12 to 15 tonnes per year. Whilst the Council is at liberty to introduce a nominal charge to reflect some of the difficulties associated with disposing of this waste, we do not intend to do so as such a charge would penalise people with a long-term illness.

Clinical waste is disposed of by a specialist contractor by incineration

## **Animal Waste**

Swindon maintains a network of about 200 dog waste bins and services another 100 bins on behalf of Parish Councils. More than 75 tonnes of dog faeces are collected annually. The bins are serviced by a specialist contractor and the waste is disposed of at a suitably licensed facility,

## **Hazardous waste**

A number of types of hazardous waste are produced by householders, for example engine oil, refrigerators, fluorescent tubes, PC Monitors and TV's

,car and dry cell batteries and asbestos. Some items such as old washing machines may contain low volumes of PCBs. All of these are currently accepted at the HWRC, or can be collected from the householder for a fee with discounts available for disadvantaged groups. All such waste are currently recycled or disposed of to appropriate licensed sites.

However, as more restrictions are placed on the disposal routes for these materials, for example, the Landfill Directive's ban on landfilling of tyres, Swindon Borough Council may need to restrict the wastes that can be accepted from the public, or a charge may need to be made to help meet the additional costs of handling the materials. Charges are now made for the disposal of tyres and a charges may be imposed in the future for other hazardous materials.

### **Other Municipal waste**

The UK Packaging Regulations oblige businesses to recover and recycle certain tonnages of packaging waste, although this can be done through membership of a packaging compliance scheme. Packaging discarded by householders remains a very visible and bulky part of the waste stream, although its weight can be considerably less than other waste.

## 5. Waste Transport

- **Waste Transport.**

This chapter describes why waste is best treated locally

Waste is a hazardous material to transport and contractors need to be licensed. If waste cannot be disposed of or treated locally additional facilities need to be developed where collected waste can be stored and bulked before transport. Such facilities need specialist safeguards to protect the local environment and are expensive to operate. The unnecessary transport of waste is also environmentally unsustainable. Developing waste disposal and treatment facilities close to the source of the waste offers the best value for money and is also the best environmental option. This needs to be balanced against the need to develop facilities jointly with other waste disposal authorities and commercial undertakers.

This is already addressed in policy WS4 which is repeated here for clarity:

WS4	Waste disposal and treatment will be procured with Swindon or as close to its boundaries as possible whilst taking into account the needs of any partners..
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## 6. Education

- **The importance of engaging with our communities**

### **Policies – Education**

WS19      We will work to engage with communities and citizens to encourage active participation in waste minimisation schemes.

Swindon Borough Council cannot deliver the Aims or Outcomes of this strategy on our own. We need the enthusiastic participation of all our residents to succeed. To achieve this we need to engage with and educate people to win their support for our proposals.

An important part of the changes to recycling and waste collection services described in policies WS1 and WS2 will be active engagement with communities as the new services are introduced. We will not only arrange public meetings to explain the service changes but aim to call on residents in their home to ensure that they understand and are making best use of the new service. This activity will continue so that newcomers to the area are contacted as are those who are not participating.

Education activities will also include schools, to ensure that young people are engaged and parenting classes so that new parents understand the choices between reusable and disposable nappies.

Education activities with business are discussed in the next section.

## 7. Working with business

- **Waste produced by Business**
- **Working with and Supporting Business**

This chapter sets out who will work with and support business.

### Policies – Other waste

WS20 We will work with Swindon's business community to minimise waste production and maximise the resource recovered from waste materials.

Whilst Swindon has a legal obligation to minimise municipal waste i.e. waste produced by its own activities and those of its residents, this waste accounts for less than half of the total waste produced in Swindon. Swindon's buoyant and growing economy inevitably result in business producing a significant amount of waste.

Many businesses in Swindon have recognised that managing waste effectively can reduce costs, and improve efficiency. There are many examples of good practice including:

- the use of returnable packaging for components.
- recycling of disposable items such as drink cups.
- Recycling or reuse of surplus materials.

The Council sponsors annual 'Quality of Life' awards, which include a Business Category. Past award winners have included companies chosen for demonstrating good practice in waste management.

However we need to help business to improve its performance, particularly small and medium enterprises (SME's) who may not have the expertise or capacity without assistance.

We are already working with our Waste Disposal Contractor to set up joint facilities to sort and recycle commercial waste at Waterside Park and we need to expand our activities in this area, where commercially viable. We also need to work with Swindon Chamber of Commerce to promote waste minimisation to business particularly SME's. We are also working on proposals for a recycling centre for construction waste as part of the Wichelstow development. This would ensure that developers were able to manage their construction waste sustainably.

Promoting of 'waste clubs' for occupiers of industrial estates is another activity that could produce considerable gains. Pooling recyclable materials such as cardboard or timber packaging can produce quantities that are viable for a contractor to collect. Joint contracts for waste collection and disposal may

produce savings, and one companies unwanted goods may be of use to another. Such clubs could also be used to share good practice from other parts of the Swindon business community.

We will also continue to provide advice to local business to help them comply with the packaging regulation.

## 8. Regional Working

- Working with other Authorities
- Working with waste contractors

### Policies – Regional Working

WS21 We will engage with neighbouring waste disposal Authorities and local waste contractors so that work and projects where joint working would be of mutual benefit are identified and exploited.

We have already recognised that compared to many Waste disposal Authorities Swindon produces a modest amount of waste. We believe that there are many advantages for us in working with other authorities.

Swindon already produces a joint Local Waste Plan with Wiltshire County Council and we have started to meet with Wiltshire County Council and other waste disposal Authorities to discuss the opportunities for better joint working.

Wiltshire already has a group, the Wiltshire Waste Partnership, made up of Wiltshire County Council and the four District authorities and discussions are ongoing about Swindon joining this group.

Wiltshire C.C adopted their Waste Management Strategy in 2005 and intend to review it in 5 years time. Swindon intend to review it's strategy regularly and we will consider whether there are advantages in a joint review at that time.

Both Wiltshire C.C. and Swindon have waste disposal contracts with Hills and we are also discussing holding joint meetings with them on a regular basis.

We believe that we need to improve our dialogue with our neighbouring waste disposal authorities and businesses so that we can collaborate where ever there are advantages in so doing.

## 9. Resources

- Resource requirements to deliver this strategy up to 2010.
- Likely requirements beyond 2010

To achieve the aims and objectives set out in this strategy will require significant resources. The costs of implementing phase 1 of the strategy, up to 2009/10 are included within the Council's Medium term resourcing plan.

However the cost of not delivering those aim and objectives are greater both financially and in the damage to the Council's reputation and the local environment. We have calculated that "doing nothing" (recycling about 33%) will cost the Council £2.9m.

We anticipate that the policies outlined in this strategy will have the following resourcing needs up to 2010:

	2007/08 £'000	2008/09 £'000	2009/10 £'000
Revenue costs of funding the borrowing required to fund construction costs of second CA site and wheelie bins/boxes	280		
Additional operating costs of additional Household recycling centre(s)		570	
Introduction of consistent and comprehensive recycling weekly recycling service.	1,077		
Recycling at flats/HMSO's	109		
Savings from fortnightly collection of residual waste	(409)		
Education, promotion and engagement campaign	262	(-30)	
<b>Totals</b>	<b>1,319</b>	<b>540</b>	

These figures do not take into account inflation or increases in contract prices and landfill tax. Costs in 2007/8 will be lower due to part year implementation.

Other initiatives in this report will be subject to individual business cases, including the identification of costs and funding options before inclusion in the Council Medium Term resources plan.

## Policy Summary and Action Plan

<b>Policy No</b>	<b>Policy</b>	<b>Actions</b>	<b>Who by?</b>	<b>Target Date</b>
WS1	To meet the 2009/10 target for landfill by achieving a combined composting and recycling rate of at least 50.2%	Implementation of Policies WS6, WS7, WS8, WS9, WS10, which by reducing the amount of waste collected will have a positive impact on recycling volumes	Waste Management Team	Targets set for individual policies
		Implement Policies WS11, WS12, WS13 and WS14	Waste Management Team, working with partners including Swindon Commercial Services	Targets set for individual policies
WS2	To meet the targets for landfill for 2012/13 and 2019/20 by maintaining a recycling rate of at least 50.2% and treating residual waste before disposal by landfill or waste for energy schemes	Implementing Policies WS3, WS4, WS5 and WS21.	Waste Management Team, working with partners and other Local Authorities.	Targets set for individual policies
WS3	To develop a strategy for maximising the financial benefits from trading landfill credits.	Model likely waste volumes to determine likely requirements for landfill credits	Waste Management Team	Sept. 06
		Develop risk assessment to determine risks of trading	Waste Management Team	Sept. 06

		Prepare strategy for trading which is agreed with Cabinet Member for Local Environment and Cabinet member for Resources.	Waste Management Team	Nov. 06
WS3	That the options for waste treatment be kept under consideration with treatment capacity being procured for 19,000 tonnes in 2013 and 40,000 tonnes in 2020.	Engage in negotiations with other Local authorities on the options for joint procurement of treatment capacity	Director, Environment & Health and Waste Manager	Sept 2007
		Continue to discuss proposals with providers and developers of waste treatment plant so that any opportunities to develop leading edge technologies can be properly evaluated.	Director, Environment & Health and Waste Manager	Sept 2007
		Continue negotiations with the existing waste disposal contractor about amending the existing disposal contractor to meet the changing needs of waste legislation.	Director, Environment & Health and Waste Manager	Sept 2007
		Have in place firm proposals for procuring waste treatment capacity by the end of 2009		Dec. 2009
WS4	Waste disposal and treatment will be procured within Swindon or as close to it's boundaries as possible whilst taking into account the needs of any partners.	This policy will be taken into account in implementing WS3	Director, Environment & Health and Waste Manager	Ongoing

WS5	That we constantly review opportunities to procure innovative waste treatment methods either through part funding by Section 106 contributions from developers as part of their contribution to the waste management infrastructure, or as a pilot plant for emerging technologies.	Produce 'Specific Planning Documents' as part of the Local Development Plan to enable the Council to secure contributions to waste facilities from developers	Waste Manager and Forward Planning Service Manager	Dec 2006
		Negotiate contribution , as appropriate, from Developers towards waste management infra structure	Development Manager and Development Control Teams	From Jan 07
WS6	Promote the environmental and financial benefits of waste reduction to Swindon's residents taking part in, and using National Campaigns, as appropriate.	Develop a communications and Promotion plan for waste minimisation	Waste Manager and Communications Manager	Dec. 06
		Implement communications and promotion plan.	Waste Manager and Communications Manager	From Jan 07
WS7	Engage in education campaigns and initiatives to assist residents in waste reduction measures.	Develop an Education programme to assist Residents in taking part in Waste minimisation initiatives	Waste Manager	Jan 07
		Set up a small team of waste minimisation officers to engage with individual residents and communities and assist them to make the best use of Swindon's waste minimisation facilities	Waste Manager	April 07

WS8	Provide financial incentives for waste minimisation measures where these are likely to prove cost effective. These could include: <ul style="list-style-type: none"> <li>• Real nappies</li> <li>• Grants for Sink macerators</li> </ul>	Develop a scheme of waste minimisation measure which is regularly reviewed where financial assistance is likely to provide an incentive for residents and the pay back , in terms of waste reduction, will be beneficial to the Council.	Waste Management Team	Dec 06
		Secure funds for such schemes, possibly through 'Invest to Save' Funding	Waste Management Team	April 07
		Regularly review the effectiveness of schemes and modify or withdraw them as appropriate, introducing new schemes as opportunities develop.	Waste Management Team	Annually
WS9	Wherever possible require, encourage and promote the use of sink macerators to reduce the amount of kitchen waste collected and sent to landfill.	Produce 'Specific Planning Documents' as part of the Local Development Plan to enable the Council to require all new properties to be fitted with sink macerators.	Waste Manager and Forward Planning Service Manage	Dec 06
		Implement planning policy to ensure macerators fitted as part of new development	Development Manager and Development Control Teams	From Jan 07
		Develop incentive schemes as part of action on policy WS8	Waste Management Team	Dec 06

WS10	Encourage and promote alternatives to disposable nappies	Promote the use of reusable nappies as part of actions to deliver WS6 and WS7	Waste Management Team	Dec. 06
		Develop incentive schemes as part of action on policy WS8	Waste Management Team	Dec 06
WS11	A comprehensive uniform kerbside recycling service, providing at least fortnightly collections, is provided to all households.	Secure funding for introducing such a scheme through the Council's Medium Term Resourcing Plan and Budget process	Director, Environment & Health and Director, Finance	Dec 06
		Develop implementation plan with Contractor to deliver service	Director, Environment & Health & Director, Swindon Commercial Services	Aug 2006
		Develop plan to promote the service as part of Policies WS6 and WS7	Waste Manager and Communications Manager	Dec. 06
		Waste minimisation officers to engage with individual residents and communities and assist them to participate in Swindon's recycling scheme.	Waste Manager	April 07
		Introduce Service	Swindon Commercial Services	Phased start from April 07, fully implemented by 1 <sup>st</sup> October 2007.

WS12	Provide kerbside recycling solutions to residents of flats and other multi – occupied buildings where storage and manual handling of recycling boxes can be difficult	Secure funding for introducing such a scheme through the Council’s Medium Term Resourcing Plan and Budget process	Director, Environment & Health and Director, Finance	Dec 07
		Develop a range of recycling schemes to meet the needs of flats and other multi – occupied buildings where storage and manual handling of recycling boxes can be difficult	Waste Manager and Swindon Commercial Services	July 07
		Develop implementation plan with Contractor to deliver service	Director, Environment & Health & Director, Swindon Commercial Services	Dec 07
		Develop plan to promote the service as part of Policies WS6 and WS7	Waste Manager and Communications Manager	Dec 07
		Waste minimisation officers to engage with individual residents and communities and assist them to participate in Swindon’s recycling scheme.	Waste Manager	April 08
		Introduce Service	Swindon Commercial Services	April 08

WS13	The Council's network of bring sites should be maintained to high standards and kept under review to ensure the number, location, and recyclables accepted continue to meet the needs of our population, and complement the service provided by the kerbside collection rounds.	Review current site provision to ensure that it continues to meet communities needs as kerbside recycling services are expanded	Waste Manager	Mar 07
		Develop arrangement to ensure signing and maintenance of sites reach high standards	Waste Manager	Mar 07
		Develop plan to promote the use of bring sites as part of Policies WS6 and WS7	Waste Manager and Communications Manager	Dec 06
		Annually review bring site provision	Waste Manager	Annually
WS14	Provide sufficient household recycling centres so that they are convenient for citizens, minimise queuing and provide appropriate facilities to maximise reuse and recycling of unwanted goods and materials delivered to them.	Secure funding for increasing the opening hours and improving service at the council's Household Recycling Centre through the Council's Medium Term Resourcing Plan, Capital Plan and Budget process	Director, Environment & Health and Director, Finance	Feb 07
		Produce 'Specific Planning Documents' as part of the Local Development Plan to enable the Council to procure additional Household Recycling Centres through the planning process.	Waste Manager and Forward Planning Service Manage	Dec 06
WS15	Residual waste will be based on fortnightly collections which are limited in volume by the use of wheelie bin or similar containers,	Secure funding for introducing such a scheme through the Council's Medium Term Resourcing Plan and Budget process	Director, Environment & Health and Director, Finance	Dec 06

		Develop implementation plan with Contractor to deliver service	Director, Environment & Health & Director, Swindon Commercial Services	Aug 06
		Develop plan to promote the service as part of Policies WS6 and WS7	Waste Manager and Communications Manager	Dec. 06
		Waste minimisation officers to engage with individual residents and communities and assist them to participate in Swindon's recycling scheme and so manage their waste within the restrictions of the scheme	Waste Manager	April 07
		Introduce Service	Swindon Commercial Services	Phased start from April 07, fully implemented by 1 <sup>st</sup> October 2007.
WS16	Collection methods will be designed to limit the risk to operatives through manual handling or exposure to sharp materials.	Ensure that refuse and recycling schemes reflect best practice published by the Health & Safety Executive.	Swindon Commercial Services	Ongoing
WS17	Residual waste will be minimised by active engagement with residents including personal visits to residents not participating in recycling and composting schemes.	Waste minimisation officers to engage with individual residents and communities and assist them to participate in Swindon's recycling scheme and so manage their waste	Waste Manager	April 07

		within the restrictions of the scheme		
WS18	Flytipping and other waste related crime will be tackled by a range of initiatives including robust Enforcement action and a continuing programme of 'Safe & Clean' days.	Develop an effective Streetscene enforcement strategy	Director, Environment & Health	Oct 06
		Develop generic enforcement capacity within the Council to effectively use the powers contained within the Clean Neighbourhoods and environment Act 2005.	Director, Environment & Health	Oct 06
		Develop plan to promote Cleaner Neighbourhoods as part of Policies WS6 and WS7	Lead officer with responsibility for streetscene and Manager and Communications Manager	Dec. 06
WS19	We will work engage with communities and citizens to encourage active participation in waste minimisation schemes.	Develop plan to promote waste minimisation as part of Policies WS6 and WS7	Waste Manager and Communications Manager	Dec. 06
		Waste minimisation officers to engage with individual residents and communities and assist them to participate in Swindon's in waste minimisation schemes	Waste Manager	April 07
WS20	We will work with Swindon's business community to minimise waste production and maximise the resource recovered from waste	Working with our business community we will develop a plan for engaging with local business on waste minimisation measures	Director, Economic Development, Waste manager and Local Agenda 21 coordinator.	April 07

	resource recovered from waste materials.	Implement plan	Director, Economic Development, Waste manager and Local Agenda 21 coordinator	From April 07
WS21	We will engage with neighbouring waste disposal Authorities and local waste contractors so that work and projects where joint working would be of mutual benefit are identified and exploited.	Develop links and attend appropriate forums to ensure that Swindon is an active player in regional waste matters and Swindon's needs are properly taken into account.	Director, Environment & Health	Immediate

## APPENDIX A LEGISLATION

### Legislation affecting waste management in Swindon.

#### European Dimension:

##### Batteries and Accumulators and spent Batteries and Accumulators Directive (Proposed)

#### Legislative Overview:

This Directive was proposed in 2004 and is still in draft format to this day. It proposes restrictions on the placing of batteries and accumulators on the market in the EU and specific rules for the recovery, treatment and disposal of waste batteries and accumulators. It applies to all batteries and accumulators irrespective of their type, weight, size or any other factor other than where exempt (e.g. military).

Selling batteries be restricted to ensure that they do not include excessive heavy metals (i.e. Mercury and Cadmium).

The Directive will require member states to have collection schemes in place for waste batteries and accumulators. These schemes shall be free-of-charge to the end-user. Bring-back schemes shall be in place for industrial end-users and automotive batteries. For non-commercial vehicles, there will be no charge to this scheme.

Collection targets will be set and member states (e.g. UK) will be required to recover 25% of batteries and accumulators sold. The limit for this is four years after the ratification of the Directive, and 45% after 8 years.

The Directive will also lay down minimum standards for recovery, treatment and disposal methods and will require best available techniques.

#### Swindon Impact:

The impact upon Swindon may vary from the Directive as additional regulations could be made by UK Government. This may include localised collection targets.

It is entirely likely that there will be a requirement for localised bring banks for the collection of batteries and accumulators and some of this task is already being undertaken at the Household Waste Recycling Centre with the collection of non-commercial automotive batteries and a household dry-cell batteries, all of which is for recovery purposes.

##### Biowaste Directive (Proposed)

#### Legislative Overview

The Biowaste Directive seeks to deal with the composting of Biodegradable Municipal Waste to help with the targets of the Landfill Directive. It seeks to do this by creating minimum standards and controls on the recovery, treatment and re-use applications of Biowaste. The Directive also seek to promote its reuse in the overall theme of Sustainable Development. This includes quality standards for the consideration of material as 'compost'.

## APPENDIX A LEGISLATION

The Directive will also address the issue of composting animal by-products and related catering wastes. These controls will supersede those of the current Animal By-Products Regulations.

Another of the aims of the Directive is to ensure soil protection in accordance with the thematic strategy on that subject. It will do this using the controls and quality standards and ensuring that issues arising with contaminated land and other pollution are dealt with.

### Swindon Impact:

Swindon already deals with its compostable organic waste from gardens through licensed sites which are part of the Waste and Resources Action Programme (WRAP) and Compost Association accreditation. It is thought that this Directive will not impact upon Swindon in that sense, however, possible consequences of increased regulation in this area may increase the cost.

### End-of-Life Vehicles Directive

#### Legislative Overview:

The End-of-Life Vehicle (ELV) Directive (2000/53/EC) covers the:

- Restriction of the use of heavy metals in new vehicles
- “certificate of destruction” for scrapped vehicles
- markings on recyclable components
- provision of dismantling information by producers
- free take back for vehicles marketed after 1 July 2002; and
- the requirement for ‘authorised treatment facilities’ (ATFs) to dismantle vehicles and the standards to which they must work.

This Directive has been implemented into UK Law through Regulations and these clarify ‘local’ measures and requirements, particularly in the case of licensing and producer responsibility.

#### Swindon Impact:

Within Swindon, our existing ELV and Abandoned Vehicle collection and disposal arrangements concur with those of the Directive and therefore this has had an insignificant impact. However, the fluctuating costs of the disposal of vehicles, particularly those marketed prior to July 2002, have given rise to large variations in the quantity of abandoned vehicles and the knock-on costs, up or down, incurred in the contract.

### Waste Framework Directive

#### Legislative Overview:

The European Directive on Waste (75/442/EEC) is the ‘umbrella’ Directive through which the majority of waste legislation has been implemented. It defines the meaning of waste and establishes the waste hierarchy (reduce,

## APPENDIX A LEGISLATION

reuse, recycle, recover, dispose). It requires that wastes be managed without harm to health or the environment. Also covered are the establishment of competent authorities for the regulation of waste activities, for Member States to establish a self-sufficient waste disposal network and the requirement for an integrated network of facilities using the Best Available Techniques.

### Swindon Impact:

The Directive has been in place for some years and no further aspects require implementation. The impact on Swindon has been an indirect one but one of the key points is the waste hierarchy and how the Borough must strive to meet that in its activities. The principles of self-sufficiency can also be interpreted as being on a Borough basis and well as a national one.

### Hazardous Waste Directive

#### Legislative Overview:

The Hazardous Waste Directive (1991/689/EC) brought in specific controls and measures for the management of Hazardous Wastes. This is currently implemented by the Hazardous Waste Regulations 2005.

The Directive introduces the definition of Hazardous Waste and a 'cradle-to-grave' approach for the management of hazardous wastes includes accurate record keeping. A further requirement was introduced to ensure that hazardous wastes were not mixed. It also laid down the criteria which made a waste hazardous and various identification methods and codes.

### Swindon Impact:

The additional burden of managing Hazardous Wastes in accordance with the Directive has not been significant for a Local Authority due to the exemption for domestic wastes, which is the largest portion of the Municipal waste stream. The segregation of items at the Household Waste Recycling Centre was previously taking place and no additional burden was imposed. Although there has been some additional costs as a knock-on cost from treatment facilities.

### Landfill Directive

#### Legislative Overview:

The Landfill Directive (1999/31/EC) was introduced to strengthen the controls on landfill sites and minimise the amount of waste that was landfilled – in line with the waste hierarchy introduced through the Waste Framework Directive (75/442/EEC). It lays down requirements for member states to restrict the amount of waste they send to landfill to certain percentages by certain years. Failure to do so results in strong penalties.

In addition to this, certain wastes were banned from landfill altogether, including liquid, explosive, corrosive and flammable materials. The landfill of whole tyres was also banned and shredded tyres after a longer period.

## APPENDIX A LEGISLATION

The controls for the management of sites were made more prescriptive and this covered from site design through to aftercare of the site. Waste Acceptance Criteria was also established which identifies what must happen to what wastes prior to disposal at a landfill site and which sites can, or cannot, take those wastes.

The Landfill Directive was implemented into UK Law via the Landfill (England and Wales) Regulations 2002 (SI 2002: 1559) and the Wastes and Emissions Trading Act 2003.

### Swindon Impact:

While not directly affecting Swindon, as with all European legislation, the implementation into UK Law through the Regulations and Act outlined above has been significant. The Landfill Directive is a key driver in this strategy and a full appreciation of its impact can be found within the main document.

### Ozone Depleting Substances Regulations

#### Legislative Overview:

The Ozone Depleting Substances Regulation (2037/2000) prohibited the use of chemicals, such as chlorofluorocarbons (CFCs), in cooling units due to their damaging effect on the atmosphere and the ozone layer. It also required that the disposal of older items containing CFCs be controlled in such a way that the atmosphere would not be damaged.

#### Swindon Impact:

It had direct impact on the UK as Regulations do not need National interpretation to implement them. The 'manufacturing' elements of the legislation had no impact on a Local Authority but the 'disposal' elements of the Regulation made it no longer possible to dispose of the refrigeration equipment as normal scrap metal or to landfill. This incurred additional costs in disposal and storage prior to disposal.

Within the first year, Swindon collected 11000 units for segregated disposal through its Household Waste Recycling Centre and dedicated collections. This has since dropped to approximately 4000 a year.

### Waste Incineration Directive

#### Legislative Overview:

The Waste Incineration Directive (2000/76/EC) merged the Hazardous Waste Incineration Directive (94/67/EC) and the various non-hazardous Waste Incineration Directives (89/369/EC and 89/429/EC).

The aims of the Directive are: to prevent, or reduce as far as possible, the environmental impact of waste incineration; and to reduce the risks to health and the environment by reducing pollution from emissions from incineration.

## APPENDIX A LEGISLATION

The Directive sets out: strong operational conditions and technical requirements; and emissions limits.

### Swindon Impact:

Swindon does not have any existing infrastructure affected by this Directive and therefore no impact was felt.

### Waste Electrical and Electronic Equipment (WEEE) Directive

#### Legislative Overview:

The WEEE Directive (2002/96), and that of the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) Directive (2002/95), are in place to control the process from 'cradle-to-grave' of all electronic and electrical equipment.

The Directive looks to be implemented into UK by having: a national clearing house for WEEE producers to arrange take-back schemes and recovery programmes; domestic collection from Household Waste Recycling Centres and delivery to these clearing houses; and authorised treatment facilities run through compliance schemes.

The costs of compliance and recovery will be borne by the WEEE producers and no costs will be directly charged to householders or other customers.

### Swindon Impact:

It may be necessary for Swindon to segregate electrical and electronic wastes into further categories and possibly add a collection option. This will ensure that the greatest possible diversion from disposal is accomplished.

### National Dimension:

#### Animal By-Products Regulations 2003

#### Legislative Overview:

These Regulations introduced controls on composting catering wastes containing animal by-products. This ensured that polluting or potentially infectious material would not be released. The rest of the Regulations covered the reuse and disposal of animal by-products

The controls generally require composting in a sealed system with no release to environment of any emissions other than steam, 'dirty' and 'clean' areas on composting sites to prevent contamination of 'clean' material, and it laid down the required temperatures and time periods that material must be treated for – in order for it to be classified as 'clean'.

### Swindon Impact:

## APPENDIX A LEGISLATION

Swindon does not have a site suitable for treated the catering / kitchen fraction of its waste, however, this fraction of the waste is significant if it can be diverted and such a scheme would require a developed treatment facility.

### Environmental Protection Act 1990

#### Legislative Overview:

The Environmental Protection Act (EPA) is the framework that is in place for waste legislation in the United Kingdom. It covers the duties of the waste authorities, the provisions for enforcement activities and many other miscellaneous items, including waste licensing.

Section 52 of the EPA allows for the provision of Recycling Credits to be paid to authority's and organisations that recycle waste which otherwise would have been disposed of by the authority making the payments. This payment is generally on a rate per tonne equal to the disposal costs – including landfill tax.

#### Swindon Impact:

The EPA, obviously, has an impact on everything that Swindon undertakes regarding waste activities, including enforcement and regulation. However, the Act is long-established and much of its contents are now accepted without need for review.

Recycling Credits are used in Swindon where the waste has been diverted in arrangement or agreement with the Authority.

### Environment Act 1995

#### Legislative Overview:

The Environment Act (EA) introduced the Environment Agency as the principal regulator in the waste industry. It also introduced new regulatory regimes for contaminated land, air quality and other areas of the environment as a whole.

The waste part of the EA, as an amendment to the EPA, included the requirement for the Government to produce a National Waste Strategy and detailed how it would be constructed and what consultation was necessary. Various sections of this part also introduced the Producer Responsibility regime and many enforcement powers that would be used in the Environment Agency's role as regulator (many of these have now been delegated to Local Authorities as well).

#### Swindon Impact:

The EA did not initially have direct impact on a Local Authority in the waste area, as many of the duties were at a national level – with the Environment Agency. However, this has now changed and many of the powers previously only available to the national enforcement bodies are now available to Local Authorities in the investigation and regulation of waste activities.

## APPENDIX A LEGISLATION

### Household Waste Recycling Act 2003

#### Legislative Overview:

The Household Waste Recycling Act (HWRA) introduced a requirement for a Local Authority to provide a collection of at least two recyclables to each household in their area, other than where an exemption is made. This may include a collection of compostable waste. This collection is required to take place from the 31<sup>st</sup> December 2010.

Further provisions in the Act make it a requirement for the Secretary of State to report to Parliament on the status of the recycling and composting rates of all Local Authorities in the country.

#### Swindon Impact:

Swindon is undertaking large-scale kerbside collection at present with intentions for expansion to all households well within the timescale permitted by the Act.

### Local Government Act 1999

#### Legislative Overview:

The Local Government Act (LGA) introduced, among many other things, the Best Value regime including Performance Indicators and Best Value reviews. Over time this has developed and there are now a number of indicators and targets to which the authority must report and aspire.

These indicators currently include: recycling, composting, recovery and disposal rates; amounts of waste collected per head of population; percentage change of amounts of waste collected per head of population on previous year; cost of waste collection per household; cost of waste disposal per tonne; and percentage of population served by kerbside collection rounds.

#### Swindon Impact:

The Best Value regime uses a significant amount of resource when reporting the indicators and preparing targets and performance plans. They produce a tangible result that can be reported and used a benchmark for future years and other authorities.

### Finance Act 1996 Landfill Tax Regulations 1996

#### Legislative Overview:

The Finance Act (FA) and the Landfill Tax Regulations (LTR) introduced the system of taxing the disposal of waste by landfill.

Landfill Tax (LFT) is paid in two classes – active and inactive – when waste is disposed of by landfill. The rate of the active disposal is significantly

## APPENDIX A LEGISLATION

higher, and increasing, than the inactive rate. There is also an 'exempt' classification which allows for material delivered to a landfill site to be used in engineering and other re-use applications and no tax is made upon this material. All rates are paid per tonne.

Further provisions are made within the Regulations for credits under the LFT scheme where monies received through LFT can be paid to environmental bodies for improvements in the area local to the landfill site.

The overall aims of the LTR are to incentivise the diversion of waste from landfill and to ensure that the targets for diversion from landfill are achieved.

The current rate (2006/07) for LFT is £21 per tonne with annual increments of £3 per year per tonne until a ceiling of £35 per tonne is reached in 2011.

### Swindon Impact:

Swindon pays significant amounts of its disposal budgets in landfill tax. It is one of the key drivers in landfill diversion and one of the readily identifiable savings when calculating diversion costs.

### Waste and Emissions Trading Act 2003 Landfill Allowances and Trading Scheme Regulations 2004

### Legislative Overview:

The Waste and Emissions Trading Act (WETA) and the Landfill Allowances and Trading Scheme Regulations (LATS) are the method of the UK implementation of the diversion targets of the Landfill Directive (1999/31/EC).

### Swindon Impact:

As a key driver for the production of the Strategy, a full explanation is given within the main body of the document.

### Waste Minimisation Act 1998

### Legislative Overview:

This Act gave the Council the power to take steps to minimise waste and allocate resources to those activities. It also enabled central government to create funds for related activities.

### Swindon Impact:

Within the Borough, several types of waste minimisation activities have been carried out. These include distribution of compost bins and education schemes.

APPENDIX B  
WASTE PREDICTIONS

**Waste predictions from 2006 – 2020.**

These calculations are based upon the most recent municipal waste arisings (2005/06) and the changes in waste arisings of household waste since 1997.

It is not possible to use municipal waste arising changes due to changes in reporting over the relevant period.

Previous arisings

Household Waste Arisings		
<u>Year</u>	<u>Tonnes</u>	<u>Percentage change</u>
1997/98	71740	
1998/99	72563	1.1%
1999/00	77392	6.7%
2000/01	77870	0.6%
2001/02	79713	2.4%
2002/03	80960	1.6%
2003/04	79895	-1.3%
2004/05	83588	4.6%
2005/06	83450	-0.2%
8 year Average		<b>3.10%</b>

Future arisings

<u>Year</u>	<u>Tonnes</u>
2006/07	92991
2007/08	95872
2008/09	98843
2009/10	101906
2010/11	105063
2011/12	108319
2012/13	111675
2013/14	115135
2014/15	118703
2015/16	122381
2016/17	126173
2017/18	130082
2018/19	134113
2019/20	138268

APPENDIX C  
WASTE TECHNOLOGIES

**Technical notes on Waste Management Technologies.**

**Biological.**

**Aerobic.**

Windrow / other composting.

The traditional method of composting organic material to produce a material which can be used as a soil improver / fertiliser. It uses 'windrows' which are formed mounds of the composting material that are turned regularly to aerate and therefore increase the aerobic (with oxygen) activity.

Windrow composting is limited in its application, as it requires a clean feedstock of organic material, which does not contain any foodstuffs that can be attractive to animals and pests – due to its uncontained nature.

The potential odour and litter caused by open windrows can restrict the locations for which it is a suitable treatment.

The benefits of windrow composting are a low cost and easy expansion with only an impermeable surface required.

Organics in-vessel.

In-vessel aerobic composting uses similar principles to that of windrow composting but it is contained within a vessel rather than open to the elements. The impacts and emissions of the process are more controllable but the infrastructure is limited in its expansion capability as it is often of a modular construction.

The feedstock for an in-vessel system can include foodstuffs – including meat where the facility is licensed for such.

Biodrying

Biodrying is an in-vessel system that uses forced air and the heat that aerobic activity generates to remove the water content from waste thus reducing its biodegradability and its weight.

Biodrying is often followed by a mechanical sorting to remove recyclables and the residual waste is stable in nature so it can be used as a refuse-derived-fuel.

**Anaerobic.**

Municipal Solid Waste to Anaerobic Digestion.

Taking 'whole' waste from a refuse collection round and reducing its biodegradability through anaerobic (no oxygen) digestion.

As a highly controlled process, it can produce a biogas that is suitable for use as a fuel in local combined heat and power processes or for export.

The output of the system will be of a lower biodegradability than that of whole refuse having been 'dried out' by the process can be exported as a refuse-derived-fuel. It may be possible to sort the fines from this material and export them separately as a soil conditioner or replacement material.

Organics to Anaerobic Digestions.

The same principle as for whole MSW but with a feedstock restricted to organic material only, which, as it is a controlled process, could include foodstuffs and animal by-products.

## APPENDIX C WASTE TECHNOLOGIES

Producing an output material suitable for use as a compost and also a by-product of biogas – suitable for export as a fuel.

### **Chemical.** **Gasification.**

MSW to gasification.

Gasification is a process which follows Pyrolysis (*see below*) and is the reaction of the carbon-rich char with added carbon dioxide and steam. It was originally designed and used for the production of town gas from coal.

The resulting gas is a synthetic gas containing Hydrogen, Carbon Monoxide, Carbon Dioxide. This may be more efficiently converted to energy than the direct combustion of the fuel. The gasification process also refines out corrosive elements of the ash.

The input of whole MSW can provide up to 80% diversion from landfill when combined with a sorting system at the front-end.

Refuse Derived Fuel (RDF) to gasification.

An RDF feedstock removes the need for any pre-treatment of the material within the gasification process and depending on the composition of the RDF, it may not be classed as a waste treatment plant.

The outputs of the process are an efficient syngas, that can be used for the production of heat and power, and some (approx 20% of input by weight) non-hazardous waste.

### **Incineration.**

Incineration with energy.

The traditional combustion process of providing a disposal route for waste while recovery energy from it and providing heat and power.

The resulting ash from the combustion process is inert and therefore 0% biodegradable for the purposes of the Landfill Allowances Trading Scheme (LATS). Also output is a small amount of hazardous fly-ash. Metals can be recovered from the outputted ash and exported for scrap metal.

Incineration without energy.

No longer available as a new facility, some existing facilities do not recover energy from the disposal process although the process is otherwise the same as that for Incineration with energy.

### **Pyrolysis.**

Waste within the Pyrolysis process is indirectly heated in an oxygen-free environment. This process produces a combustible vapour, including condensable liquids, which can be used as a fuel for energy production. The remaining solids can have the ferrous and non-ferrous metals extracted and recycled and the residual char is disposed of or used as a fuel in a waste-to-energy process.

### **Physical.** **Autoclave.**

The autoclaving process is the sterilisation of the waste using steam. This sanitises the material and aids sorting and separation of recyclables. It can also reduce the risks presented by the waste by lowering its hazardous nature.

## APPENDIX C WASTE TECHNOLOGIES

After removing any recyclables, the remaining organic fibrous material can be used as a refuse-derived-fuel. Depending on the systems employed, the biodegradability of the waste will be lowered.

### **Thermal treatment.**

**Mechanical Heat Treatment.**

After homogenising the feedstock to ensure consistency, the material is fed into a hot air stream at around 200°C. This dries, sanitises and disrupts the materials in order to make any separation of recyclables and organic material easier. It also lowers the hazardous nature of the organic components of the waste.

The output from the heat treatment can be put through separation techniques and achieve high diversion from landfill, including the production of a biomass product from the organic material.

### **Landfill.**

The traditional method of waste disposal in the United Kingdom. Using engineered containment, material is deposited within land and subsequently sealed and capped to prevent uncontrolled emissions from being released.

### **Materials Recycling Facility (MRF).**

**Recyclables to MRF.**

An MRF utilises manual and automated sorting facilities to classify different recyclable materials, usually as a result of a mixed recyclable collection from the kerbside of households or commercial premises.

**Residual waste MRF.**

This is the sorting of mixed wastes not restricted to recyclables. Commonly seen at the front end of other treatment technologies in order to recover material before the treatment takes place or to remove any materials that could adversely affect the treatment process.

## APPENDIX D ZERO WASTE – THE CHALLENGE FOR SWINDON

We need to prepare for even greater challenges as this Waste Strategy is reviewed in the future. We need to think the unthinkable and seek out fresh challenges. and address them with innovative actions. We must be prepared to lead the rest of the UK to achieve and exceed our targets. We want to be the No.1 sustainable town or city.

Zero waste is a concept that is spreading throughout the globe. Our vision is to reduce consumption of goods by ensuring that products are made to be reused, repaired or recycled. What we now call waste should instead be regarded as a mixture of resources to be used again to their full potential, not as something to be thrown away.

We have the option to develop a long term vision of zero waste in our waste strategy. This concept is challenging and needs us to be innovative. It will require measures from many others – government, business and communities, and may take a long time to achieve. It will involve adjusting our lifestyles and doing without certain luxuries. We recognise that there will need to be incentives to succeed, these could include charging for waste collection if it has not been separated for recycling for example

We want to take the lead by raising awareness in the local community, developing new re-use, refurbishment and recycling schemes, and encouraging community, business and householder participation.

The concept of zero waste transforms waste management away from 'managing' to 'minimising' waste, as waste becomes fundamentally unacceptable. Being a relatively new concept, the breadth and depth of thinking and practice is undergoing significant development.

'Zero waste' is a similar concept to 'zero accidents' or 'zero defects' in manufacturing. An extreme target encourages new levels of innovation and efficiency. The term 'zero' should not be viewed as an absolute figure, but is seen as a target to strive for.

Zero waste is an approach which not only encourages waste diversion through recycling and resource recovery, but provides a guiding design philosophy for eliminating waste at source and at buying your goods with zero waste in mind This concept does

APPENDIX D  
ZERO WASTE – THE CHALLENGE FOR SWINDON

beyond recycling in that it reclassifies waste as a mixture of resources to be used to their full potential. The concept aims to reduce consumption at the outset and ensure that products are made to be reused, repaired or recycled, discarding the idea of "waste".

Changing the way resources flow through society in order to eliminate waste will lead to substantial environmental, economic, and social benefits, and will be sustainable.

### **Challenges to Establishing a Zero Waste Strategy**

- 'Zero' is a target to encourage innovation - not an 'absolute'.
- Currently there is no legislative requirement to reduce waste
- Waste generation processes involve all sectors of society and are not easily addressed at a local level
- Unknown future - future waste minimisation processes and technology will change.
- Reaching beyond - it is relatively easy to plan to achieve 50% recycling & recovery. Innovation is needed to get beyond these levels.
- Sustaining and building momentum. We need to continue moving beyond our initial enthusiasm and success.
- Sustainable solutions - we will need a new way of thinking at a national level to achieve reduced consumerism and increased environmental stewardship at a local level.
- Resources – investment in new technology and process will be required to achieve progress.

Achieving zero waste (or even getting close to it!) is not going to be easy. The concept is exciting and challenging, and will require action from government, business and communities.

Zero waste cannot be achieved by local government alone as it involves all sectors of the supply chain from design, production, manufacturing, packaging etc. through to retail and final consumption. However Swindon Borough council can take the lead with a zero waste vision, by raising awareness in the local community, and encouraging community, business and householder participation.

Developing a clear vision such as zero waste will create a

APPENDIX D  
ZERO WASTE – THE CHALLENGE FOR SWINDON

climate for continual improvement within Swindon. We can take a lead in facilitating the zero waste concept by developing further contracts and measures which prioritise material and resource recovery over disposal, for instance we could create a key driver by commissioning new local resource recovery facilities. By adopting a vision of zero waste within our waste strategy, our future policies and services will be shaped towards achieving this vision. New initiatives and developments will need to be innovative in order to achieve change.

APPENDIX E  
RESULTS OF 2002 CONSULTATION

**Swindon's Local Municipal Waste Strategy**

**Response report**

Contents:

.Introduction.

*Questions:*

1. .Do you think we should aim to reach the targets?.
2. .Should a waste reduction campaign be implemented in Swindon?.
3. .What materials would you like to see recycled through the 'bring sites'?.
4. .Where are additional recycling sites needed?.
5. .Should non-Swindon Borough Council residents be charged to deposit waste at the HRWC?.
6. .Should all HWRC users be charged to deposit difficult or non-recyclable wastes?.
7. .Would a new HWRC significantly relieve pressure on the existing site?.
8. .Would you use a kerbside collection scheme if one were provided?.
9. .Would you consider having recyclables and non-recyclable waste collected on alternate weeks?.
10. .Should kerbside collection of green waste be carried out in preference to other recyclables?.
11. .Would you purchase good quality soil improver made from Swindon's composted waste?.
12. .Are you prepared to 'do your bit' to help us meet our recycling targets?.

.Do you have any other comments or suggestions?.

.Comments about the strategy document and consultation process.

Appendix 1. Copy of response card

APPENDIX E  
RESULTS OF 2002 CONSULTATION

**Introduction**

Earlier this summer, Swindon Borough Council launched the consultation process of its Local Municipal Waste Strategy. Included within the consultation document was a response card (see Appendix 1). This report outlines the responses received from these cards.

The distribution of the consultation documents took place in mid July and responses were to be received before 31 August. There were, however, many people who responded after this date and these have been included as well.

10000 documents were printed and the distribution was as follows:

Libraries	5000
Council offices	3500
Leisure Centres	1000
Sent to individuals	200
Kept as stock	300

While the public consultation process has ended, the strategy document provides good background reading for anybody wishing to know how Swindon deals with its waste and as a result, they can be left at these locations for reference purposes.

An electronic version of the document has also been uploaded to the Swindon Borough Council website in the "Portable Document Format" which can be read using freely distributed software. The consultation card is also available to look at online and an email address is also available for responses to be sent to. Any representations made through this media have also been recorded in this report.

Another point of note is that several people have taken the opportunity of the waste strategy to let us know their views to a greater extent than the strategy allows. These individuals have written outlining their responses in greater detail than the card would allow. In the interest of brevity, this compilation report does not have the capability to include these responses but copies of the original letters are attached for your records.

In conclusion, the number of responses has not been as numerous as this Council would wish but those we have received cover a wide spectrum of opinions and views. This should enable us to gauge what the public expects us to do next!

Richard Fisher  
Waste Technician  
Swindon Services

APPENDIX E  
RESULTS OF 2002 CONSULTATION

**Question 1:**  
**Do you think we should aim to reach the targets?**

**YES**  
118 (96.72%)

**NO**  
3 (2.46%)

**DON'T KNOW**  
1 (0.82%)

**Responses in respect of Question 1:**

- *Of course – we have no choice!! This is a pointless question. The essence of a target is you aim to meet it!!*
- *What targets?*
- *Only meet them if no extra costs.*
- *If you mean the Govt. targets then YES.*
- *We should far exceed them with modest effort. Japan recycles greater than 50% I believe.*

**Commentary:**

From Appendix 1, it can be seen that there was not an area for comments in the case of Question 1 but several people felt a comment was needed. The question was intended to be a rhetorical one but some interesting points have been made. The National Waste Strategy seeks this answer.

- Obviously some people were unclear from the document what targets we meant but it was the Government target of 30% for 2003/2004 and 36% for 2005/2006.
- The public concern regarding costs is a small concern but a noticeable one as can be seen from following questions. The general public believe that the targets should be met as long as it doesn't increase the taxes of the Borough and it doesn't deprive other areas of the Council from funding.
- The perception that the United Kingdom should already be recycling as much as other countries, i.e. Japan, Switzerland, is mainly due to television coverage and news items. This shows that people are aware of what other countries are capable of and what we are, eventually, capable of as well.

APPENDIX E  
RESULTS OF 2002 CONSULTATION

**Question 2:**  
**Should a waste reduction campaign be implemented in Swindon?**

YES  
117 (95.90%)

NO  
4 (3.28%)

DON'T KNOW  
1 (0.82%)

**Responses in respect of Question 2:**

- *More facilities, less PR.*
- *Would need to be focussed on what is achievable. Should it not be primarily targets at producers rather than consumers?*
- *We all need to do more. Keep educating us to the need.*

In the case of question 2, there was also no area to write a comment or response but those that did write notes are reproduced above.

In the section for any Comments or Suggestions at the end of the document, there were also some comments that are relevant to this question.

- *Encourage schools to collect recyclables by rewarding them for their efforts. Make it easier for school waste to be collected (free). By influencing today's school children today, they are the waste producers of tomorrow.*
- *More open meetings to inform ratepayers of what they can / must do and fully explain to them what the consequences would be.*
- *Would it be possible to launch a more pro-active communications campaign? The info in the consultation brochure was excellent. Improved communication might lead to greater awareness and ACTION.*
- *Better publicity for Real Nappies and sale of soil improver. Work needed nationally, with supermarkets, to reduce packaging waste.*
- *There needs to be a major awareness campaign. There are people who have total disregard for waste reduction / recycling as can be seen by the huge number of black sacks and other items put out for collection each week.*
- *Perhaps target big companies for sponsoring recycling schemes, giving their business a good image as environmentally friendly. Encourage recycling schemes in schools. Provide incentives to recycle, perhaps charge those who have more than one wheelie bin of rubbish a week.*

**Commentary:**

The second response above indicates that the general public is not aware of legislative items such as Producer Responsibility that affect businesses and commercial organisations. Any education or waste reduction campaign should also brief the public on what commercial areas of the community should be doing as well. Many people do not see this aspect of recycling, as it does not contribute towards any local or national targets administered by the Council.

APPENDIX E  
RESULTS OF 2002 CONSULTATION

**Question 3:**

**What materials would you like to see recycled through the 'bring sites'?**

This question was written response only and 96 (78.69%) of the cards returned had a comment in this area.

Of these 95 responses, 53 (56%) had specifically mentioned plastic as an additional material they wished to see introduced. The types of plastic mentioned are mainly plastic milk bottles (HDPE-type plastic). Plastic shopping / carrier bags are also a concern. These plastics require separate collection or sorting at a transfer station before being taken to a mill as they vary in qualities and cannot be mixed.

Cardboard and card was a material requested by 19 (20%) of the respondents who entered a selection in this box. This included card used for food packing, i.e. cereal boxes, cardboard trays and packaging.

The above two items were those 'expected' in this response area. Many reiterated the list of items that are currently collected through these sites (paper, mixed cans, textiles, books, foil & glass) however, there are some that were not expected and these are listed below along with the number of mentions they received:

- Batteries (5)
- Metals (8)
- Bricks / Rubble (1)
- Timber / Wood (4)
- Garden waste (4)
- Oil (1)
- Nappies (1)
- Electrical equipment (3)

There were also some representations made in the comments and suggestions area that would be applicable to this question.

- *Local waste automatic shredder sites!! For public.*
- *Plastic bags and bottles may be light and therefore proportionately less of your targets but as a material that takes hundreds of years to decompose and is made from non-renewable source material, it should be given more importance by this council.*
- *Newspapers better recycled through kerbside collection than at bring sites.*
- *I already recycle everything and hate putting cardboard packing in the bin.*
- *Yes, a site please where we can recycle ALL plastics of every description.*

Many responses were just as "All possible" or "Everything burnable". While vague they do show that people want to recycle as much as possible.

APPENDIX E  
RESULTS OF 2002 CONSULTATION

**Question 4:  
Where are additional recycling sites needed?**

As with question 3, this question had an area for a written response only. Of the 122 cards returned, 65 (53.28%) had an entry in this area.

Of these 65 entries, 3 identified specific locations. These are likely to be where the person lives. Two of the comments stated that while the current distribution of the sites was adequate, they just needed to be emptied more often. Seven comments were that they did not know where to add a site or the existing sites were adequate. Three suggestions were that they were located well but all the sites needed to recycle all the possible items.

Many refer to general areas of the Borough with the following results:

	NORTH (9)	
WEST (2)	CENTRE (2)	EAST (7)
	SOUTH (3)	

Most of the suggestions refer to types of places

- Supermarkets / Shopping areas (6)
- Schools (2)
- Leisure Centres (1)
- Pubs / Restaurants / Fast food outlets (2)
- Car Parks (2)

A common region for increased recycling was Abbey Meads with 3 specific requests for additional services in this location with, as can be seen above, many generic requests for the Northern new developments to be serviced.

Some areas that were mentioned would be seen to be well serviced already but there is obviously public demand for more in these areas. For example, Highworth has two existing recycling sites (with capabilities at one for Glass and Textiles only while the other will take Glass, Cans and Paper). In this instance, two responses were returned with request for additional sites in Highworth.

Five responses requested sites to be added in the outlying villages and towns of the Borough with specifics being named as Liddington, Badbury and Wroughton.

Interesting comments in the suggestions area were:

- *Any waste ground sites where nothing else would be done with the site.*
- *'Out of Town' supermarkets should have collecting areas for ALL types of recycling – especially as most of the materials are purchased from them.*
- *Bring sites should be landscaped and contained. At present many in car parks are an eyesore and risks from broken glass to car tyres.*

APPENDIX E  
RESULTS OF 2002 CONSULTATION

**Question 5:**  
**Should non-Swindon Borough Council residents be charged to deposit waste at the HRWC?**

**YES**  
59 (48.36%)

**NO**  
59 (48.36%)

**DON'T KNOW**  
4 (3.28%)

**Responses in respect of Question 5:**

- *If they are charged, fly tipping will increase*
- *If kerbside available*
- *Fly tipping!*
- *Not practical*
- *Don't encourage fly tipping*
- *Introducing charging will result in more illegal dumping.*
- *Charges lead to fly tipping – not everyone has transport to bring waste to the HWRC.*
- *Recycling in all forms should be encouraged.*
- *If there are charges, then likelihood of fly tipping increases.*
- *See letter.*

**Commentary:**

Most of the comments made in this area are negative while people who agree to the idea did not comment at all. A split of 59 (48.76%) both ways with 3 (2.48%) people not sure does produce an interesting argument.

Most of the comments are people who think it is a good idea but for the sake of the countryside would not like to see it introduced. The theory that charges make people fly-tip is one that is not backed up largely by evidence from previous charges introductions. The introduction of the £5.00 charge to take away bulky waste items has not noticeably increased the number of fly tipping incidents involving bulky waste items. The introduction of the £20.00 disposal fee of a Refrigerator has also not seen an increase in the illegal dumping of these items either. There are these items being dumped but not at an increased rate, people were dumping them even when they could get rid of them for free.

APPENDIX E  
RESULTS OF 2002 CONSULTATION

**Question 6:**  
**Should all HWRC users be charged to deposit difficult or non-recyclable wastes?**

**YES**  
27 (22.13%)

**NO**  
92 (75.41%)

**DON'T KNOW**  
3 (2.46%)

**Responses in respect of Question 6:**

- *If they are charged, fly tipping will increase.*
- *Will increase fly tipping of hazardous waste.*
- *Fly tipping!*
- *I would be prepared to pay for all waste collected by weight if council tax is adjusted – this is one way to get residents to think & act*
- *No – more fly tipping.*
- *Could be counter-productive*
- *It would encourage fly tipping*
- *Any charges levied for whatever reason are likely to increase illegal fly tipping. Better to add a general levy in council tax, be open about it and encourage people to use facilities that they have paid for already.*
- *Charging for disposal encourages fly tipping*
- *We already pay high rates – no more surcharges!*
- *Any form of charging will increase fly tipping.*
- *Items might otherwise be dumped – fly tipping.*
- *If any charges the likelihood of fly tipping increases.*
- *Why are we paying rates so high and still considering charging for HWRC this is crazy. Council is wasting our money.*

**Commentary:**

The problems raised in this question are similar to those in question 5, however, the responses seem to be more aimed at people not willing to pay in this case rather than being concerned about fly tipping, although this is still a major concern. Swindon residents do not wish to pay in order to dispose of their waste without a review of the council tax system.

APPENDIX E  
RESULTS OF 2002 CONSULTATION

**Question 7:**

**Would a new HWRC significantly relieve pressure on the existing site?**

**YES**  
107 (87.70%)

**NO**  
6 (4.92%)

**DON'T KNOW**  
9 (7.38%)

**Responses in respect of Question 7:**

- *Swindon does need another HWRC on the east side of town.*
- *Possibly*
- *Depends on site but yes.*
- *Longer opening hours for HWRC. Make sure the waste carts are open at weekend. Twice recently all waste went to landfill in a dustcart. Provide extra staff at weekends to help public unload. Generally staff helpful. Lady particularly a great 'motivator'!*
- *The Hills Waste Recycling Centre at Purton is very well run (far better than Barnfield Road) and should be the model for the 3-4 new sites required in the Swindon area.*
- *Can't the Barnfield site be better managed or increased in size to increase flow through of cars (e.g. more space for manoeuvring).*
- *Initially, a new HWRC may inspire people to clear the loft.*
- *The queues for the HWRC are ridiculous, I've just moved here and in West Wilts there is no queuing. I was amazed at ½ hour wait. You need extra sites urgently.*
- *Too long a wait as Barnfield road need second site.*
- *Urgent need for additional HWRC such as Barnfield.*
- *And reduce energy costs of travelling there.*
- *On recent (rare) trip to the tip, I noticed wood etc. going into wrong container. Better supervision would be possible if less pressure of numbers.*
- *How can you be taken seriously when you get the opening hours and restricted access at Barnfield Road.*

**Commentary:**

This question has produced an excellent positive response. Queuing at the Barnfield Road site is a problem and any increase in the queuing area just seems to bring more people to the site so the increase is not noticed. There is the opportunity for nearly 90000 households to use this site and the queuing shows that many of these do. The other sites mentioned in these responses do not have the throughput of the Barnfield Road site and therefore seem more organised.

It is interesting to note that while people do want to see another site, the possibility of reorganisation and amending the way the site is currently run is also at the forefront of peoples minds.

APPENDIX E  
RESULTS OF 2002 CONSULTATION

**Question 8:**

**Would you use a kerbside collection scheme if one were provided?**

**YES**  
116 (95.08%)

**NO**  
6 (4.92%)

**DON'T KNOW**  
0 (0.00%)

**Responses in respect of Question 8:**

- *I suggest bags in preference to boxes (they tend to get stolen!) for collecting recyclables & I would like to see a greater range collected (if it is not possible to have collection points on each street.*
- *Collecting recyclables saves wasting fuel of everyone driving to HWRC.*
- *Sort it properly, not send it to landfill site.*
- *Don't bury it up the tip.*
- *Use of multipurpose collection vehicles for kerbside / doorstep collection.*
- *Surely it is better to separate waste types at source rather than sort after collection.*
- *Separate containers could be used for paper, which could be collected weekly or fortnightly. Old people have difficulty in going heavy-laden to "bring sites".*
- *Talking to family / friends in other regions of the country, I get an impression that Swindon is far behind other areas especially on kerbside collections. All recyclables should be collected.*
- *I think all recyclable waste is important, as the next people I think would recycle more if the kerbside collection were part of the weekly collection.*
- *Swindon's record on recycling is pretty poor – the Council really needs to get its act together and start kerbside recycling. We need to be recycling 50%!!*
- *Kerbside collection in other areas I know works very well and would leave a bin collection every other week a reality.*
- *Alternative weekly collections of all household recyclables for every house in Swindon.*
- *Kerbside collections would be abused by outsiders and the roads would look a tip.*
- *I would prefer a "multi-bin" where items are categorised by household and collected ready sorted for recycling.*
- *Statically sited recycling bins distributed prior to refuse collection would enable householders to assemble items for mass collection.*
- *20 years ago the paper trolley was behind the dustcart and people still bundle newspapers separately for rubbish thinking they go separate. Also green sacks for garden rubbish BUT it is ALL put in the dustcart and churned up with the rest of the rubbish. So it seems ALL ELECTRIC goods should be recycled.*
- *VERY GOOD IDEA. Especially for the elderly and immobile.*

The written responses to this question are self evident and it is very clear that people want a kerbside collection.

APPENDIX E  
RESULTS OF 2002 CONSULTATION

**Question 9:**  
**Would you consider having recyclables and non-recyclable waste  
collected on alternate weeks?**

**YES**  
90 (73.77%)

**NO**  
28 (22.95%)

**DON'T KNOW**  
4 (3.28%)

**Responses in respect of Question 9:**

- *Limit the number of bags / bins collected each week per household.*
- *No – health reasons, especially in hot weather.*
- *Check on the life cycle of the housefly, weekly collections are essential.*
- *Stop collections from households putting of 7 or 9 bags of so-called household waste.*
- *Alternative weekly collections of all household recyclables for every house in Swindon.*

**Commentary:**

This was a question that we did not know what sort of results to expect. As can be seen, there is a majority of people willing to have this fortnightly collection of rubbish. However, we must consider that these people have an interest in waste and recycling as they picked up this document to start with and took the time to return the card. Some intriguing points have been raised though. It seems that people are interested in following up this idea but they would have to be reassured of the implications regarding storage of waste.

APPENDIX E  
RESULTS OF 2002 CONSULTATION

**Question 10:**  
**Should kerbside collection of green waste be carried out in preference to other recyclables?**

**YES**  
28 (22.95%)

**NO**  
83 (68.03%)

**DON'T KNOW**  
11 (9.02%)

**Responses in respect of Question 10:**

- *All garden waste to be composted at source.*
- *This would deter people from putting out other recyclables.*
- *Green waste should be collected as well as other items.*
- *Most people could compost at home.*
- *Green waste should be charge for as with green bag scheme and encouraged to be composted.*
- *We have 3 compost bins and recycle all our appropriate waste. We use council HWRC for all other bulky waste.*
- *Encourage composting instead.*
- *Stop the sale of Cypress Cyparis trees, as these are a major source of green waste & aggravation to neighbours.*

**Commentary:**

The responses received in this case indicate strong support for home composting schemes rather than municipal composting. This is tending towards people seeing garden 'waste' not as 'waste' at all but as a commodity they can re-use on their garden.

It can also be determined that people without gardens of a size to allow a compost bin would accept a green waste kerbside collection but they would want it as an additional collection and not a replacement one.

APPENDIX E  
RESULTS OF 2002 CONSULTATION

**Question 11:**  
**Would you purchase good quality soil improver made from Swindon's  
composted waste?**

**YES**  
83 (68.03%)

**NO**  
31 (25.41%)

**DON'T KNOW**  
8 (6.56%)

**Responses in respect of Question 11:**

- *Yes! Yes!*
- *Home composting vs. no gardens.*
- *I make my own.*
- *On could once buy wood chips from Moredon for mulch. I don't know if this scheme still exists.*
- *But I would if I had a garden.*
- *YES – although I probably won't need to as I compost.*
- *Have own compost.*
- *I make my own.*

**Commentary:**

This is another positive answer, it shows that many people would purchase it if they needed to but as many compost already, they have no need. The comments above, give good support for home composting.

APPENDIX E  
RESULTS OF 2002 CONSULTATION

**Question 12:**

**Are you prepared to 'do your bit' to help us meet our recycling targets?**

**YES**  
120 (98.36%)

**NO**  
1 (0.82%)

**DON'T KNOW**  
1 (0.82%)

**Responses in respect of Question 12:**

- *What targets?*
- *Swindon is an ever-growing town, which should do more to encourage recycling amongst the younger generation. We need to get our town looking clean and free of litter.*
- *The improvements I reuse / recycling / reduction need to be implemented now. For too long, too little has been done.*
- *As much as possible should be done to encourage recycling & reduction in waste for landfill.*
- *Try development relationships. I'd shop more at one with a commitment to reducing packaging.*
- *Get on with it!*

**Commentary:**

This question was intended to be clearly yes / no only but as with the previous questions, people have felt that in some cases an additional note was necessary. Also included above is any items from the comments & suggestions area which would seem relevant to the question.

The community are willing to help this Council in its task of recycling 30% of our waste by 2003/2004 but many are looking for educational programmes and much more publicity about the recycling. In the case of this consultation, many of the people who have picked up the document and returned the card, have an interest in waste management matters and recycling already as otherwise they would have not perhaps picked up the document.

APPENDIX E  
RESULTS OF 2002 CONSULTATION

**Do you have any other comments or suggestions?**

The comments shown below are those, which are not directly relevant to any of the above questions but are of people's general ideas and thoughts on the waste policies mentioned in the document.

- *The issue seems to start with the manufacturers and food processors. Added value products seem to have the most packaging.*
- *Swindon has one of the most backward recycling policies. This needs to be greatly improved.*
- *Borough waste management could identify and publish proposals for changes in the laws, which would accelerate and financially drive greater recycling. The public would then support these proposals via their MPs.*
- *From all residential areas, make it illegal for ignorant / selfish minority from having bonfires to get rid of waste. Others manage to do it in a responsible manner, especially during spring / summer when people wish to enjoy their gardens etc. Also windows open, clothes washing, hay fever, asthma sufferers.*
- *Manufacturers such as fridges, freezers to take back old ones on delivery of new or pay council for collection. Why use black bags rather than bins? Sacks get torn by foxes, cats and crows, making a mess of the paths and plastic does not decompose for years.*
- *Provide a free tip for builder's rubble at a crushing site where it can be crushed and screened for hardcore. Publish list of charities / organisations who are interested in receiving certain categories of useful items e.g. clothes, furniture, crockery, beds, bed linen, electrical goods, toys and so on. Address should be given and instructions whether they will collect larger items. Leaflets should be available at libraries. Provide a tip for soil, which can be sold on for landscaping (mixed with soil improver?)*
- *I believe SBC does a lot to encourage people to recycle. Need to educate young people to think recycling.*
- *Well done.*
- *To save black bag destruction by foxes, dogs, cats etc. It would be helpful to have wheelie bins.*
- *More junk swap days – better advertising for these. Look in to Pyrolysis for electricity. Refuse collection at night to ease traffic congestion.*
- *Keep up the good work! Encourage shoppers to choose goods with less packaging.*
- *Supermarket and retail industry also need to play a part in reducing packaging and reducing plastic carrier bags by charging for them.*
- *Reduction of excessive packaging. Litter bins emptied more frequently in town centre, twice a day.*
- *Discourage the opening of fast food outlets. Work with supermarkets etc., implement reduction of excessive packaging, where possible to use only materials that can be recycled.*
- *Provision of a shredder to householders for a small charge or shredding facilities at the HWRC site.*

APPENDIX E  
RESULTS OF 2002 CONSULTATION

- *Less “choice”, more enforcement.*
- *Work on local stores to reduce packaging, i.e. Tesco, Sainsburys etc. EEC packaging directive should have made them start by now.*
- *This kind of strategy should’ve been implemented years ago. I have never known such a slow moving & retrogressive council as Swindon.*
- *Bring pressure into supermarkets & shops to reduce packaging on goods.*
- *We think you’ve been too nice. There’ll need to be some compulsion.*
- *Apply pressure to supermarkets etc. to reduce packaging.*
- *Need incentives or disincentives for those no recycling.*
- *Issue a detailed and definitive guide to exactly what items can (& cannot) be placed in recycling facilities, from a householder prospective, to maximise usage. Display at all sites e.g. does textiles include totally worn out clothing, rags, worn out shoes? What “soiled” means by type or degree?*
- *Make household “can crushers” available for purchase.*
- *Perhaps we need a tax on ‘disposable’ items at source. Ireland has introduced tax on plastic carrier bags with surprising success. Revenue could go directly from central government to local, for schemes like these. Disappointed Gorse Hill’s lost its can bank. How’s about selling cloth shopping bags with slogans as an alternative to plastic carriers? Maybe competition for best designs perhaps open to adults, not just kids. We should be able to fuel larger incinerator, running independent of all, promising if most of borough’s scrap wood, non-foam carpet etc. were collected, generating electricity and/or heat from it. A change of culture is needed so that excess consumption or failing to recycle becomes as unacceptable as drink driving or smoking over the baby.*
- *Perhaps target big companies for sponsoring recycling schemes, giving their business a good image as environmentally friendly. Encourage recycling schemes in schools. Provide incentives to recycle, perhaps charge those who have more than one wheelie bin of rubbish a week.*
- *Energy recovery – Swindon is 50 years behind other areas of Britain.*
- *Please see my letter.*

**Commentary:**

What is interesting about the above comments is the number of times that Supermarkets and shops are mentioned. A large proportion of the population buy all their goods from supermarkets and as a result would visit them on a minimum basis of once per fortnight. These are ideal centres for any recycling efforts. Bring sites are in place at the majority of supermarkets that have car park areas attached to them. Many have their own environmentally friendly schemes running nationwide and separate from councils. Any publicity or educational efforts this council made regarding recycling could be done in these places.

APPENDIX E  
RESULTS OF 2002 CONSULTATION

**Comments about the strategy document and consultation process:**

The strategy was intended to get the peoples views on waste in Swindon, however several people felt it necessary to comment on how the strategy had been put out and the information contained in it presented. It was not envisaged that this would happen but some of the comments have been very useful and helpful for any future consultation that could take place.

- *Why if the consultation period was 1 April – 31 August has this not come out till now? Has it been presented at Area Panel South? It appears we need to double our % of recycling / composting within 2 years, so I think we need action rather than consultation. It's a pity this document contains such obvious errors on p4, 2<sup>nd</sup> column L1-3 & P4 2<sup>nd</sup> column L20-21. If we're trying to save money wouldn't 2<sup>nd</sup> class post have been adequate.*
- *The campaign should be more published. I only knew of this through my library.*
- *You should explain what HWRC stands for. Not everyone knows.*
- *Contained in a good document but circulation of that document was deplorable. It should have been issued to every household. I found it at the end of August!*
- *This and the document were delivered in Highworth PM Monday 2<sup>nd</sup> September therefore Swindon's Waste starts here!*
- *Your rhetoric is good but your actions are pathetic! New management is required! Workforce is OK!*

APPENDIX E  
RESULTS OF 2002 CONSULTATION

**Response Matrix**

Swindon's Waste Strategy Consultation					
	Yes	No	DK	Totals	
1	117	3	1		121
2	116	4	1		121
3	<a href="#">Comments File</a>				
4	<a href="#">Comments File</a>				
5	59	59	3		121
6	27	91	3		121
7	106	6	9		121
8	115	6			121
9	90	28	3		121
10	28	82	11		121
11	83	31	7		121
12	119	1	1		121
<a href="#">Comments &amp; Suggestions</a>					
Any other?					
	<b><u>Number of cards returned:</u></b>				121

APPENDIX F  
 EXAMPLES OF LOCAL AUTHORITIES WITH  
 BEST WASTE PERFORMANCE

DISTRICT AUTHORITIES

LOCAL AUTHORITY	OVERALL RECYCLING RATE 2004/5	COLLECTION METHOD; WASTE TO LANDFILL	RECYCLING COLLECTIONS	ORGANIC WASTE COLLECTION
St Edmundsbury	50.6	Fortnightly wheelie bin 240L	Fortnightly, mixed recyclables	Wheelie Bin Fortnightly Inc kitchen waste
Forest Heath	48.5	Fortnightly wheelie bin 240L	Weekly mixed recyclables	Wheelie Bin Fortnightly Inc. kitchen waste
South Cambridgeshire	46.8	Fortnightly wheeled bin 240	Fortnightly box collection Kerbside sort	Wheelie Bin Fortnightly Inc. kitchen waste
Lichfield	46.3	Fortnightly wheeled bin 240L	weekly box collection kerbside sort	Wheelie Bin fortnightly garden waste only
Harborough	46	Fortnightly wheeled bin 240L	weekly box collection	Wheelie Bin fortnightly garden waste including cardboard
Rushcliffe	46	Fortnightly wheeled bin 240L	Fortnightly wheeled bin collection	Garden waste only

APPENDIX F  
 EXAMPLES OF LOCAL AUTHORITIES WITH  
 BEST WASTE PERFORMANCE

UNITARY AUTHORITIES

LOCAL AUTHORITY	OVERALL RECYCLING RATE 2004/5	COLLECTION METHOD; WASTE TO LANDFILL	RECYCLING COLLECTIONS	ORGANIC WASTE COLLECTION
Isle of Wight	35.5	No sack issued weekly	Fortnightly box collection	Weekly chargeable in sacks. Free kitchen waste collection
South Gloucestershire	32.49	Fortnightly wheeled bin	Sack or box collection fortnightly	240l wheelie bin Free of charge, garden waste and cardboard
Bath & NE	31.6	Weekly sack collection	Box collection weekly	Green waste and cardboard 240 l wheelie Bin, chargeable
Medway	27.2	Sacks weekly	Fortnightly box collection	Green waste only 240l wheeled bin fortnightly Free service