Municipal Waste Management Strategy for the Borough of Southend on Sea

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Foreword

"The Council is presented with a significant challenge in order to comply with the European Union Environmental Legislation currently being transposed into UK law.

*The Challenge will require the community to '**reth!nk**'* the way it manages its waste, which is the first major change since the 1936 Public Health Act.*

The Council will need to reduce reliance on disposing of the communities waste at landfill. Householders are currently enthusiastically separating their bottles, cans, newspapers etc. for recycling but the quantity of waste we need to take away from landfill between 2010 and 2020 is likely to be much more than householders will be able to manage so the Council is looking at other ways to do the job.

I am actively working with members of other local authorities in Essex to develop a solution which will achieve the most recycling/composting of our waste but which can be afforded by residents of the Borough."

Ann Holland

…….

Councillor Mrs Ann Holland

Executive Councillor for Environment & Public Protection

* *reth!nk rubbish details can be found on page15*

Part I: Overview of the UK Waste Management System

Executive summary

With European Legislation driving how we treat our waste becoming more demanding to reduce volumes sent to landfill for disposal, tough new legislation is being put into place covering all aspects of waste being produced, handled and how eventually it is disposed of.

Government Targets

The Government has set the following targets:

- Recycle or compost at least 25% of household waste by 2005
- Recycle or compost at least 30% of household waste by 2010
- Recycle or compost at least 33% of household waste by 2015

Southend Borough Council has the responsibility to collect and dispose of all household waste, street litter and, if asked to do so, trade waste.

Currently the Government has set Southend Borough Council specific targets to recycle/compost household waste from Landfill.

18% by 2003/04
27% by 2005/06

Landfill Directive

The EU Landfill Directive [1999/31/EC] was adopted on 16 July 1999. The Directive aims to improve standards of land filling across Europe, through setting specific requirements for the design, operation and aftercare of landfills, and for the types of waste that can be accepted in landfills. The Directive is to be implemented over a period of years, impacting directly upon the industry.

The first requirement of the regulation was for all landfill operators to submit a conditioning plan by July 16, 2002 which reclassified the landfill site as suitable for disposing of inert, hazardous or non-hazardous. This is one of the key elements of the directive as previously UK landfills had been inert or practiced co-disposal of hazardous and non-hazardous material. Now, 'non-hazardous' sites can accept only non-hazardous waste, while 'hazardous' sites can continue co-disposal until 2004, when co-disposal is finally banned.

In future the Directive will also ban liquids and certain materials (such as vehicle tyres) from landfill and tighten site monitoring and engineering standards. It will be supplemented by the new European Waste Catalogue, which has extended the range of materials classified as 'hazardous', and the Waste Acceptance Criteria, which will introduce stringent pre-treatment requirements

Aims of the Landfill Directive

The Landfill Directive aims to reduce the amount of biodegradable municipal waste sent to landfill.

In simple terms, biodegradable waste is waste which breaks down and produces methane (a greenhouse gas causing global warming). The main requirements of the Landfill Directive are that:

- All landfill sites are to be classified as either hazardous, non hazardous or inert. This will mean the end of co-disposal
- Full costs to be met by the charge per tonne made to deposit the waste at the site
- Only treated waste may by land filled
- Once a landfill site is classified, the Directive dictates the types of wastes it can accept

Certain wastes will be banned from landfills over a number of years. Examples include - liquids, explosives, infectious clinical wastes and tyres

Targets for Reducing Biodegradable Waste

The Landfill Directive also sets out successive targets for reducing biodegradable municipal waste (BMW). BMW must be reduced to:

- 75% of the 1995 baseline by 2010,
- 50% by 2013
- And 35% by 2020.

The Landfill Directive also requires Member States to set up a national strategy for the implementation of these targets.

Government Waste Strategy 2000

The Government has introduced a Waste Strategy to set targets for reducing waste to landfill and to look at different options of disposal to include recycling, composting, recovery etc.

The Waste Strategy 2000 provides a clear lead from the Government to reduce waste, meet the requirements of the Landfill Directive and move towards a more sustainable waste management system.

Key Measures in the Strategy include:

- Statutory local authority recycling targets and action plans;
- New plans to require Government Departments to buy recycled products, starting with paper;
- More use of the landfill tax credit scheme to deliver an increase in recycling, particularly of household waste;
- A new Waste & Resources Action Programme (WRAP) dedicated to developing new markets for recycled waste;
- Tradable permits limiting the amount of waste local authorities can landfill;
- Extending producer responsibility for packaging to areas such as newspapers and junk mail, end of life vehicles, and waste electronic and electrical equipment;
- Continuing to raise public awareness, working with the National Waste Awareness Initiative.

Statutory recycling targets can only be truly achieved if there is long term, sustainable markets for the materials recovered. A priority is the need to overcome market barriers to promoting re-use and recycling.

Whilst the Strategy has to be broadly welcomed, - now comes the challenge of meeting its objectives.

Policies and Proposals for the EU And The UK

There are a number of policies coming into affect to encourage a more sustainable approach in reducing materials currently disposed in landfill. These policies are aimed to provide 'stepping stones' for waste producers and collectors to encourage alternative means of disposal, with the infrastructure required to do so.

Directive	Meaning	Implementation Date
Waste Emission Trading Act 2003	The Secretary of State to specify maximum amount of biodegradable waste allowed each year to be taken by a Waste Disposal Authority to Landfill; to permit trading of allowances; a Waste Disposal Authority is under a duty not to exceed the amount of waste authorised by the Landfill Allowances to that Authority for that year. If a Waste Disposal Authority fails to comply with a duty imposed on it, the Authority is liable to financial penalties.	Expected 2005/06 onwards
Household Waste Recycling Act 2003	The Waste Collection Authority shall be under a duty to arrange for the collection of at least two types of recyclable waste together or individually separated from the rest of the household waste. A Waste Collection Authority need not comply if the cost of doing so would be unreasonably high or comparable alternative arrangements are available.	31st December 2010
EU Waste Electronic & Electrical Equipment (WEEE) Directive	UK government is completing the final consultation before drafting legislation. Producers of WEEE have a responsibility to arrange for the collection and processing of annually prescribed proportions of the WEEE a producer puts into the market. The EU Directive requires that householders shall be provided with a place to deposit their WEEE free of charge and it is suggested that Local Authorities could make Civic Amenity sites available for this purpose.	Coming into effect from 13th August 2005 and meeting targets from 31st December 2006
EU Landfill Directive	Consultation and Guidance has been issued by the Government. All waste must be pre-treated by a physical, thermal, chemical or biological process, including sorting, which changes the characteristics of the waste in order to reduce its volume or hazardous nature, facilitates its handling or enhances recovery. Landfills will be re-licensed and classified with some materials being banned from landfill (e.g. tyres, liquids etc)	Introduced in 1999. Targets to be met by- 2010 2013 2020
EU End of Life Vehicle Directive (ELV)	The Government is currently bringing this legislation into UK Law. The producers of vehicles will be required to 'take their vehicles back' free of charge when they come to the end of their life, and de-pollute them at a cost to the producer	1st January 2007
EU Bio-Waste Directive	Currently in draft form, if accepted, local authorities will be required to undertake separate collections for food waste	Draft
EU Household Hazardous Waste Directive	Domestic hazardous waste is currently exempt from the Hazardous Waste Directive but the European Commission is considering separate household collections for Household Hazardous Waste.	This legislation is in the early stages.
EU Batteries Directive	The Commission is considering establishing collection targets for spent batteries, automotive batteries and accumulators and introducing the Producer Responsibility Principle	This legislation is in the early stages.

Producer Responsibility for Packaging Waste

The Producer Responsibility Obligations (Packaging Waste) Regulations 1997

The Regulations give substance to 'Producer Responsibility' which is an extension of the polluter pays principle, and is aimed at ensuring that businesses take responsibility for the products they have placed on the market once those products have reached the end of their life. This, through the Regulations, aims to:-

- achieve a more **sustainable approach** to dealing with packaging and packaging waste as part of the Government's Waste Strategies;
- **reduce** the amount of packaging waste, and particularly the amount going to landfill;
- Increase **reuse** of packaging where possible, increase the **recovery and recycling** of packaging waste in the UK and implement the recovery and recycling targets in the EC Directive on Packaging and Packaging Waste 94/62/EC and any subsequent packaging Directives.

The UK's policies and approach to broader waste management issues are explained in greater detail in the Government's Waste Strategies.

These Regulations apply to businesses, **partnerships or sole traders, which in Great Britain carry out certain activities, or functions, in relation to packaging,** from the manufacture of packaging raw materials to the selling of packaging to the final user (see below). Such businesses, if obligated, will be "producers". To carry out their obligations they may either register individually with an Agency or take the necessary steps themselves; or they may join a registered compliance scheme which will carry out their obligations for them.

Any business with a turnover of more than £2,000,000 and handling more than 50 tonnes of packaging in a year is likely to be affected by the Regulations.

The EU packaging waste targets are revised every five years under the 1994 European Directive on Packaging and Packaging Waste.

While the final details are still being negotiated by the European Commission and Council of Ministers, the next set of European packaging waste recovery/recycling targets are likely to be:

- **Overall recovery:** 60% as a minimum by weight.

- **Overall recycling:** 55% (maximum 80%).

- **Material-specific recycling**:
  Glass – 60%;
  Paper and board – 60%;
  Metals – 50%;
  Plastics – 22.5%;
  Wood – 15%.

EU Member States are to achieve these targets by 31st December, 2008.

An Overview of Waste Management

The Waste Hierarchy

The recycling of waste is something that we do with an item when it has reached its end of life. However, before we consider recycling, we should look at two more sustainable options: reduction and reuse. In light of this, a rough guideline as to the order in which waste should be treated has been produced and adopted by the government. Known as the Waste Hierarchy, this is a stepped order of preference for the management of waste

- Reduce
- Reuse
- Recovery (recycling, composting and energy recovery)
- Disposal
- Disposal without energy recovery

By following this favoured hierarchy, we are making a commitment to reduce waste and maximise the use of resources available.

Reduce

The best and most efficient way to overcome the growing waste problem that we are facing is to reduce the amount of waste created in the first place. At home small changes can be very significant: Examples include:

- Use reusable bags for shopping etc
- Not purchasing over packaged items
- Not purchasing disposable items

It can often appear to be a huge task to try and cut down on waste, but reducing waste at the source will mean not having to consider how to dispose of a product when finished with.

Reuse

If a product is reused without changing its form, then there is no requirement for additional manufacturing. This means that reusing products and materials is more energy efficient than recycling, as no additional energy or raw materials are required to get a second use from them.

Why is there a need for reuse?

During 2001, households in the UK produced 25.1 million tonnes of household waste. It has been estimated that for every tonne of household waste, another 5 tonnes is created at the manufacturing stage and 20 tonnes at the site of initial extraction. This ever-increasing demand for raw materials is depleting the world's natural resources and supplies of non-renewable energy.

Many of us reuse household items already, without being aware of it - Reuse includes repairing, refilling and refurbishing items.

Buying a second-hand car, or getting a pair of shoes re-heeled is a common practice, but many of the things we use could also be repaired, and have their life extended instead of being thrown away.

Milk bottles are a familiar form of reuse. On average, a milk bottle is re-used 20 times.

Many supermarkets and shops now sell products in refillable pouches. This reduces the amount of packaging waste created and enables many containers to be reused again and again, examples include; refillable soap dispensers, detergent bottles, etc.

Charity shops are a good example of reuse

The Reduce, Reuse principle is aimed at preventing waste being produced in the first place. The less waste we create reduces the volumes of waste which need to be disposed of.

The next steps in the Waste Hierarchy (recovery and disposal) is how to deal with waste produced and what Waste Management Methods need to be in place to accept this material, ideally changing the nature of the 'waste' into a new product.

Waste Management Methods

There is a range of waste management methods that can be used to reduce the amount of rubbish dumped in landfill sites. These include recycling, composting, mechanical biological treatment and thermal treatment.

Recycling

Recycling is a process whereby a product can be reprocessed back into another product

The processing of waste products (recycling) can provide the raw material to make new products. When you take materials to a bring bank or put them out for kerbside collection, they have not at that point been recycled – they have been *collected* for recycling.

The recycling process as a whole is completed when we buy the products that have been made from the recycled materials.

Costs of Recycling

In the UK there are fewer recycling and reprocessing plants, higher storage and transportation costs, and smaller markets for recycled products than in other EU countries.

To make it cheaper and easier for households to recycle, there needs to be an increase in the availability and consumption of recycled products to stimulate a demand for recycled material.

This process of supply and demand is called "closing the loop". Increases in environmental legislation will lead to an increase in reprocessing and recycling plants in the UK, making it easier and cheaper for local authorities, and consequently individuals, to recycle.

How to Start Recycling

The Council provides facilities for the recycling of household waste.

Southend Borough Council provides an edge of property collection service to provide householders with the means to set out materials for collection with clean, sorted materials for recycling.

The mini recycling centres and Civic Amenity sites can also be used for a wider range of waste to be taken for recycling.

The Council also subsidises the costs of home composting bins for householders with gardens to compost their organic waste.

Composting

Composting is Mother Nature's way of recycling.

By composting organic materials i.e. green garden waste and vegetable peelings etc, we are reducing the impact on landfill by reducing volumes of waste disposed, and also minimising harmful effects of leachate and greenhouse gases which are emitted from landfill with the decomposition of organics.

Composting green waste produces a product of rich dark soil which is beneficial to gardens and general land uses as a soil improver.

Composting can be done in two ways, at home or collected and taken to a centralised composting facility.

At home, there are a number of 'composters' that are suitable for home composting. Garden waste and vegetable peelings can easily be composted with the end result, a rich soil enhancer which can be spread on lawns and dug into flower/vegetable beds.

A centralised composting facility accepts a larger volume of material and again has varying methods of process to create a usable product.

The composting process can be broken down into three sections as follows:

Sanitisation

This is the intensive phase over the first three weeks that ensures that if any weed seeds or pathogens are present in the feedstock they are eliminated to make the product safe. This is done by maintaining temperatures around 65 degrees, checking moisture levels and going through a systematic process of turning.

Stabilisation

During this period, the compost windrows are monitored carefully to maintain optimal composting conditions to ensure a good quality product.

Maturation

This is the period where the compost is allowed to develop into a better product, optimal conditions are still maintained but less vigorously than previous stages. The length of this period varies depending on the end product required.

Disposal and Recovery

The term 'recovery' means to obtain value from waste through either:

- Reuse
- Recycling
- Composting
- Other means of material recovery (such as anaerobic digestion)
- Energy recovery.

Waste Treatments

The following Recovery Methods have been taken from the December 2002 Consultation Draft for Essex Authorities – 'War on Waste' produced by the consultant Environmental Resources Management (ERM).

Biological Treatment

About half of municipal waste is organic in nature: paper; vegetable matter and food scraps; and garden waste. There are several constraints that require this waste stream to be managed effectively. Many European countries have already banned the land filling of organic wastes as a result of the Landfill Directive. This is likely to stimulate the development of biological processes aimed at the biodegradable portion of household waste.

There are two main forms of biological treatment for organic waste, Aerobic and Anaerobic Digestion. The issues associated with each of these are discussed in the following table.

Composting Method	Advantage	Disadvantage	Indicative Gate Fee
Windrow – the most common type of system used in the UK. The waste is pre-processed by shredding and sorting.	• Can be conducted in the open • Simple process • Particularly suited to green (garden) wastes • End product (compost) can be marketed resulting in additional revenue	• May be influenced by adverse weather conditions • Odour problems with 'open' windrows composting food wastes • The potential for transfer of, inter alia, BSE and foot & mouth hazards from kitchen wastes will mean only green waste can be composted in open windrows • Can often attract vermin	Open Windrow –£20/tonne Enclosed Windrow - £25/tonne
In-vessel – typically shredded garden waste is mixed with the kitchen waste necessary for aerobic composting	• Provides control of temperature, moisture and airflow and hence a more rapid and efficient process • Odour production is minimised	• Requires organic (green and food waste) in correct amounts. • Require pre-processing area to prepare waste • More expensive than windrow composting	Gate fees are around £30 - £40/tonne
Anaerobic Digestion – is when organic waste streams are ground and mixed with water to produce a pumpable pulp. This pulp is then biologically 'digested' and a methane-rich biogas is generated.	• Can process a variety of organic materials • Requires less floor area when compared to a windrow of the same capacity • Biogas is a Renewable Energy • The production of biogas produces an additional revenue stream that offsets higher capital and operating costs • Residues can be used as a soil fertiliser and conditioner	• Capital and operating costs are relatively high • Product may still require further composting to produce a more stable product • If product is of poor quality and/or market does not exist, then further disposal will incur costs • Odour problems may arise if poorly maintained • No plant operating for MSW (Municipal Solid Waste) in the UK	Gate fees vary from: £75/tonne (<20 ktpa) to £50/tonne (<60 ktpa)

kt = thousand tonnes

Mechanical Biological Treatment

Mechanical Biological Treatment (MBT) systems involve a combination of the mechanical sorting of materials for recycling and the biological treatment of organics/residuals.

Generally, MBT systems are designed to receive the residual waste remaining after source separation has been completed, either by separation at source, or by an intensive pre-sort.

Currently, the technology is at the planning stage in the UK, with major proposals in Milton Keynes/Buckinghamshire and for the East London Waste Authority. These employ the Italian *"Sistema Ecodeco"* design.

Typically, residual waste is fed into a highly-mechanised front-end sort, designed to remove metals, plastics and other materials. This maximises the diversion of recyclable materials and separates a compostable element. Clearly, if a mixed waste stream is accepted by the plant, the recovered

materials will be subject to a higher level of contamination than if they were to be separated at source.

The second stage is the biological process, which is usually an enclosed, in-vessel composting system. This is intended to 'stabilise' the residue by rendering inert readily degradable materials, reducing the weight of the residue through water and carbon loss, rather than to produce a saleable compost product.

The materials broken down and composted at this stage include paper & board, green/kitchen organics, and the organic content contained within nappies, packaging, textiles etc.

The residue still has to be managed. If contamination levels are sufficiently low, it may be used as a low-grade compost or reclamation material, or, if sufficiently stable, as landfill cover. Alternatively, the residue of the process can be used as feedstock for a combustion process, similar to a Refuse Derived Fuel (RDF). If these routes are not available, the residue will need to be land filled. Because it has been biologically treated, it will have a reduced biodegradable content over normal waste, reducing methane production, leachate difficulties and landfill fires. Nevertheless, if the residue is land filled, it is likely that the dry biodegradable materials will absorb water within the site, and continue to decompose anaerobically, although the initiation of decay may be delayed significantly.

Thermal Treatment

There are a number of thermal treatment technologies available, some of which are more advanced in their development and implementation than others. These methods include mass burn incineration, incineration of Refuse Derived Fuel (RDF), gasification and pyrolysis. The last two of these are emerging technologies in which a number of authorities are expressing considerable interest. Nevertheless, they have not yet been demonstrated beyond the pilot scale in the UK.

Incineration

Conventional mass burn incineration is proven and deliverable in the UK, with 13 facilities currently operating, and many more proposed and in planning. The mass-burn, moving grate, technology is the most common, and has the advantage of being robust and relatively inexpensive. The scale of mass-burn energy from waste plant in the UK varies between c.80, 000 tonnes per year and c.500, 000 tonnes per year (there are smaller specialist incinerators). It is unlikely that smaller plants would be commercially viable, and there are reasonably significant economies of scale through to a capacity of 250,000-300,000 tonnes per year.

Planning applications for incinerators are typically very poorly received by the public, and attract large numbers of letters of objection. The perceived health impacts associated with the emissions from such plants are generally a common concern, although the scale of facilities in relation to recycling and composting schemes, and the NIMBY (Not In My Back Yard) concern related to facility buildings are also frequent reasons for objection. Nevertheless, incineration plants must meet the emissions limits set in the EU Waste.

An Incineration Directive is in place in order to obtain an Environment Agency Pollution Prevention Control Permit, and the Government has stated that it is *"confident these controls protect human health"* [source: A Way with Waste: A Draft Waste Strategy for England and Wales Part 1 Paragraph 3.20 page 25 DETR June 1999]

Advantages and Disadvantages of Thermal Treatment Methods

Technology	Advantage	Disadvantage
Mass burn incineration – material is fed onto a grate that then moves waste through the combustion chamber. The material dries and then the volatiles are combusted.	• A proven technique, which can accept bulky materials • Material does not require pre-treatment • Can process large throughputs of material	• Public concern over health impacts of emissions • Maintenance costs incurred by the many moving parts • The wide variation in the waste inhibits optimum combustion conditions (wet waste – organics)
Fluidised bed incineration – material is injected into a 'fluidised bed' of hot granular material (usually sand). Refuse Derived Fuel (RDF), liquid or gaseous materials can be introduced to the bed and so combusted. The types of plant available are: bubbling, revolving and circulating.	• Versatility to accept solid, liquid and gaseous materials (including sewage sludge) • Bed has large quantity of stored heat (thermal inertia) to cope with variations in feed rate or composition • Lower temperature may reduce the formation of nitrogen oxides.	• Absence of long term plant operation experience • Requires care with the feed composition. For example excessive tar, glass or aluminium can melt and form agglomerates within the bed • Requires fluid bed preparation (2-day start up time) and maintenance • High internal power costs
Gasification/pyrolysis – involves 'thermal treatment' but not the direct combustion of waste. Both are considered to be 'Advanced Thermal Treatment Technologies'.	• Potential for low emissions • Potential for conversion of the products to higher value materials • Qualifies under the Renewables Obligation	• A gas clean-up system comparable to that of an incinerator may still be required • Relatively new technologies

Energy Recovery

Modern thermal treatment plants are designed to generate power (usually in the form of electricity) and often heat (in the form of steam) from the combustion process. The efficiency of the operation in capturing energy varies between different types of facility, and is also dependent on the nature of the waste entering the plant although different types/levels of recycling do not affect their viability. The efficiency of energy production can be greatly increased if, in addition to power generation, heat is captured through what is known as Combined Heat and Power (CHP). This can provide direct benefits to the community in the form of local heating if housing or businesses are close to the location of the combustion facility.

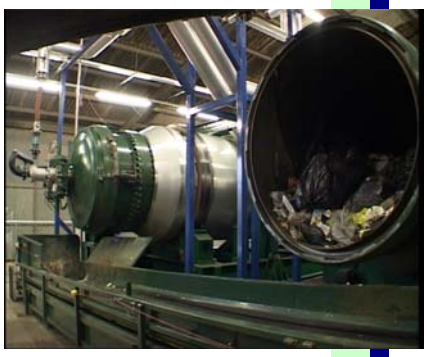
Emissions

The control of emissions is a key issue for all thermal treatment processes. All technologies emit pollutants that are associated with the combustion of waste to some degree. The emissions from thermal treatment are strictly regulated by European Directives and have been greatly reduced since 1996.

Residues

The nature of residues will depend upon the type of recovery process. The processes produce some inert material that cannot be burnt, whilst the chemical treatment of emissions from the burning of the waste produces smaller amounts of 'fly ash'. Some of the inert material may be capable of further use, for example through use as a substitute primary aggregate in road building or construction block production, or in landscaping. Recovery of these residues will further increase the diversion rates from landfill. Other residues may be classed as special waste and will only be suitable for landfill, e.g. fly ash from incineration.

Advanced Thermal Treatment



There are many variants on the two principal advanced thermal treatment processes, pyrolysis and gasification, and, indeed the two may be found combined. Although there has been interest in applying the techniques to MSW for over a decade, there are no demonstrated facilities in the UK of other than pilot scale. Experience with the technologies in other countries has been mixed, with problems somewhat similar to fluidised-bed combustion, and they are generally regarded as not yet mature. The risk/cost ratio is likely to stabilise as plants are commissioned and operating experience is gained.

Brightstar Environmental has a contract with Derby City Council to provide a SWERF (Solid Waste Energy and Recycling Facility) plant to serve the city. Initially, the plant will have a capacity of 40,000 tonnes per year; although the long-term plans are to expand this to 225,000 tonnes per year should it prove successful. Brightstar are also partnering Bretts in a disposal contract for Dover and Shepway Districts in Kent.

Compact power has a small demonstration combined pyrolysis and gasification plant at Avonmouth. Their technology is being employed to serve Dumfries and Galloway, with a 64,000 tonnes per year plant that is due to be operational. Compact Power maintain that their thermal treatment process is cleaner than conventional incineration, and, as a result of lower demands for flue gas cleaning, the costs of small scale facilities can be kept to a competitive level.

Other thermal technologies are likely to emerge in the future, one of which is the Autoclave process, now at the pilot plant stage. With this approach, waste is cooked with steam to produce a sterile output. The resultant treated waste is separated using proven material sorting technology. One of the resultant fractions can provide a homogeneous feedstock for composting, etc.
There will always be wastes that cannot go through a reuse, recycling or composting process as waste may be contaminated or composed of mixed materials making separation difficult, also through an incineration process, the ash is an end product which will still need to be disposed of, therefore there will need to be a process to take this residual waste

Landfill Sites

Landfill sites can be unattractive, resulting in noise, smells, vermin and wind-blown litter. As waste breaks down in a landfill site it produces a polluting liquid (leachate) and landfill gas. Methane and carbon dioxide are the main gases produced at landfill sites as the waste decays. Methane is a greenhouse gas linked to global warming, it has, volume for volume, a 21 times greater effect than carbon dioxide. Methane can be burnt (flared) on site and the energy produced used to generate power. This landfill gas is beneficial in two ways,

- reduces the methane emission into the atmosphere as it is broken down to carbon dioxide (a less potent greenhouse gas) through flaring; and
- Is used to fuel engines to produce electricity which reduces the amount of fossil fuel that would be consumed to produce the energy another way.

Disposal to landfill also involves high transportation costs as landfill sites are an increasingly long way away from large urban areas where most of the waste is produced. Modern landfill sites are constructed to high standards but remaining environmental concerns. Additionally, we are running out of landfill space unless quantities of waste are dramatically reduced.

Part II: Overview of SBC Waste Management Systems

Introduction

Waste can be detrimental to the environment and human health if it is not managed properly, or recovered and disposed of safely. It is essential, therefore, that everyone in the waste disposal chain from production and transport, through to final disposal or recovery, manages waste in a safe and proper manner.

Legislation places a 'duty of care' on everyone, who must, by law, take all reasonable steps to look after any waste they have and also prevent its illegal disposal by others.

This duty includes the requirement to store waste in a safe and secure manner. A control system of licensing and inspections for waste sites is implemented and enforced by the Environment Agency.

For more information on the Role of the Environment Agency please go to their web page at www.environment-agency.gov.uk

The Waste Problem

Southend Borough Council (SBC) being a Unitary Authority has responsibility for the collection and disposal of all Municipal Solid Waste (MSW).

SBC is expected to reach the 2003/2004 Best Value target of diverting 18% of the household waste element from landfill by recycling/composting.

For the target of 2005/2006 to be met, SBC must divert 27% of all household waste from landfill. In order to do this SBC must look at putting into place more infrastructures to collect a more diverse stream of materials particularly those which are biodegradable, or increase participation in the services currently provided.

Overview of Waste Management in the Borough

The Borough is an urban area comprising of 4,163 hectares of land with a population of approximately 160,400 with 75,750 domestic premises.

In the year 2002-2003 the Council handled over **96,000** tonnes of waste of which approximately **19,000** tonnes was composted or recycled (this includes rubble, soil and green waste).

Southend on Sea Borough Council is part of the Thames Gateway South Essex Partnership. The Regeneration of Thames Gateway South Essex is of regional and national importance. The government has recently given future impetus to the growth of the area through the national action plan Sustainable Communities: Building for the future.

A sustainable waste management strategy for dealing with the waste generated by the partnership authorities is being developed

The Government's Statutory Best Value Performance Indicators (BVPI) Recycling Targets* for the Council's householders are as follows:

2003/2004 – 18%
2005/2006 – 27%

*The targets are monitored by the Council when regular reviews are undertaken of its delivery plan for 2003-2006.

Current Municipal Waste Infrastructure

The Council's Municipal Solid Waste and Cleansing Services are undertaken by an integrated 10 year contract which has been awarded to Cory Environmental Municipal Services Limited [Contract ends 31.03.08].

The Council recycled approximately 20% of its total waste handled (household, commercial and industrial) in 2002/03.

Current Recycling Infrastructure

Southend has three methods of collecting materials which householders separate from their waste at home for recovery.

1. Household Edge of Premises Collection,

Contained within pink tinted sacks for collection of recyclables;

- Newspapers
- Magazines
- Food and Drink Cans
- Plastic Bottles
- Cardboard Packaging
- Textiles
- Yellow Pages

Household Doorstep Green Garden Waste Collection for Composting

Two methods available for the collection of garden waste are available by;

- Prepaid Collection of corn coloured biodegradable sacks
- Wheeled Bins

2. Civic Amenity Sites

At present there are 2 Civic Amenity Sites in Southend on Sea, both of which offer a diverse set of recycling facilities.

The Civic Amenity sites are located at Stock Road, Southend and Leigh Marsh, Leigh on Sea for the use of Southend residents.

- Green Waste
- Glass (bottles/jars)
- Paper
- Batteries
- Mobile Phones
- Bicycles
- Fridges/Freezers
- Soil
- Hardcore
- Engine Oil
- Metal
- Textiles

3. Mini-Recycling Centres (Bring Sites)

20 Borough Wide Recycling Centres which include collection of:

- glass,
- textiles
- newspapers, magazines, and junk mail
- plastic bottles
- food and drink cans

In total 2,000 tonnes of recyclables were collected through 'bring 'sites in 2002/2003. The average number of households per 'bring' site is 3,775 although this can vary in different areas.

Other Municipal Waste

Street Cleansing, Litter and Abandoned Vehicles

Littering - it is an offence to drop litter, yet so many people seem to feel that someone else should pick up their rubbish!

Littering, the dumping of old furniture, electrical appliances, abandoned vehicles etc, are a problem which local authorities have to try and combine into the street cleansing services.

Not only does these dumped wastes provide a potential hazard to residents, but is unsightly and requires extra vehicles and staff to cope with this increasing problem.

The Council has formed a partnership with Essex Police (Southend Division) to deal with abandoned vehicles promptly (those vehicles which do not have a current keeper or owner). From November 2002 the Council, the Police and Driver Vehicle Licensing Authority (DVLA) established a process to deal with untaxed vehicles.

Clinical Waste

There are a number of households which need to discard clinical waste, which is generally produced as a result of patients being treated at home under the care of a medical practitioner. This clinical waste is collected and disposed of by the health care trusts.

Education and Promotion

More and more people are aware of recycling initiatives; whether they believe or participate in the schemes provided are another issue.

Each one of us is responsible for the waste we produce, it is our decision whether we buy over packaged products, conform to the ever-changing fashion trends and contribute to the disposable one use item which has a short life cycle.

Huge efforts are being undertaken to provide as many recycling/recovery schemes as possible for the use of householders to minimise the amount of rubbish being sent to landfill.
The Council offers recycling services for a variety of materials, this includes:

- edge of premises recycling collection
- mini recycling centres
- Civic Amenity sites

Developing Markets

There will be no demand for waste materials for recycling unless there is a demand for them to be turned into another product, **and** there are consumers willing to purchase that product.

Recycled products today can be made to the same standards as products made from raw materials. Many products do not even state their recycled content as this might be considered a sign of inferiority. For instance, recycled paper is now available at similar standards to high quality virgin paper and will function perfectly in printers and photocopiers.

With the drive to increase recycling, the markets will develop to incorporate quality recyclable materials within new product manufacturing processes etc. This expanding market will promote business expansion and opportunity, creating employment and economic opportunities.

Programmes

Reth!nk Rubbish

Southend Borough Council is promoting the 'reth!nk rubbish' campaign to educate and promote reduction and recycling initiatives.

This nationwide scheme is supported by many organisations and businesses to improve the way we dispose of our waste.

Initiatives have included sending a team to door knock and discuss various activities in regards to recycling and monitoring residents responses, 'slim your bin' and running an Essex wide campaign 'Don't Rubbish Essex' using familiar landmarks to encourage Essex residents to recycle more.

Schools Waste Action Club

The Schools Waste Action Club (SWAC) is an environmental education programme run by the national environmental charity Waste Watch in partnership with Essex County Council, Southend-on-Sea Borough Council and Thurrock Council.

This exciting free package helps Essex schools tackle the 3Rs and helps children take practical action on waste. SWAC has developed a variety of fun, curriculum based activities focused on the 3Rs for use in primary and secondary schools.

SWAC can offer schools;

- Planning advice
- Flexible National Curriculum based education programmes
- Delivery of lessons and access to a variety of good quality educational resources
- Visits to local waste management facilities to enhance the education programme
- Provision of recycling and composting facilities
- Teacher training
- Termly newsletter
- Certificates and prizes for successful waste reduction

By running a successful SWAC project, a school can expect to:

- Improve social responsibility, 'citizenship' and environmental awareness in the school and wider community

- Improve the environmental management of the school
- Develop cross curricular links through the delivery of an environmental education programme
- Save costs on materials and waste disposal (particularly if your school is responsible for its own waste disposal costs)
- Raise the profile of the school within the local community.

SCOUTS Waste Awareness Programmes

Cub Scouts from Southend-on-Sea Borough are taking part in a Waste Awareness Project in a bid to learn about the 'War on Waste'. This partnership program funded through Southend-on-Sea Borough Council and the HSBC Bank gives children the opportunity to learn about the environmental issues surrounding the environmental impact of Waste.

As part of the project the Cub Scouts keep dustbin diaries consisting of quizzes and information on waste as well as monitoring how much waste they throw out and if they are making the right decision for a better environment.

Real Nappies

Disposable nappies are responsible for 4% of household waste in the UK, where around 8 million disposable nappies are thrown away every year. In households with one baby, disposable nappies often make up 50% of the waste. The vast majority of waste in this country is land filled

Studies have shown that nappy laundry services use 32% less energy than home washing and 41% less water. Lisa's Nappy Laundry (the only one currently located within the Borough) provides new parents with a supply of natural cotton nappies, a collection bin, deodorising discs and biodegradable liner. Once used, the biodegradable liner and its contents are flushed down the toilet and the nappy placed in the bin which is emptied every week and replaced with a fresh batch. Nappies are then taken away and laundered.

The Southend on Sea Real Nappy project has been launched In recognition of the great potential to reduce waste in Southend on Sea through raising awareness of real nappies. The project is a partnership between Southend on Sea Borough Council, The Cory Environmental Trust in Southend on Sea and Southend based Lisa's Nappy Laundry.

It is estimated that Southend produces 2,000 tonnes of disposal nappies per year

Commercial Recycling

The Southend business community is responsible for contracting licensed Waste Collection and Disposal Contractors to deal with their waste in accordance to the law.

Businesses can produce a large amount of waste, with a high percentage of this waste being recyclable (cardboard, paper, etc).

With the increase in Landfill tax, and the banning of certain materials being accepted at landfill sites, it is becoming increasingly costly to dispose of waste.

The Council, as a commercial waste producer is also affected by higher disposal costs, and needs to reduce waste produced and to act responsibly to reduce the amounts of waste sent to landfill.

Advice and guidance is being provided to the business community to reduce waste and help set up recycling schemes by attracting commercial recyclers to

the Borough, which often results in a cost saving to a business, as no Landfill Tax charge is involved in a recycling collection.

Details of the Strategy

The recent County wide 'War on Waste' Public Consultation Process identified that the Communities Ethos is in line with those of the National Waste Strategy. We aim to keep waste arising to a minimum and increase recycling and composting as much as possible. These aims are the same as those of the rest of The County of Essex. Aiming to build a longer-term goal to replace a waste disposal solution based on landfill, with a solution centred on "front end" recycling with treatment of the residual stream.

Our Strategic Approach to Waste Management

The strategy includes the preparation of waste management contract(s) following consensus agreement of the partner authorities (Waste Collection Authorities (12), Waste Disposal Authority (1), and Unitary Authorities (2)).

The Council's Waste Management Working Party [comprising Members from all political parties] makes recommendations to this Council's Cabinet. Reports have been received in respect of the UK's Waste Strategy 2000, and progress in relation Waste and Emissions Trading Act 2003, Regulations and other EU Directives so that the implications could be understood.

The Council in conjunction with the other Authorities in Essex supports ReMaDe Essex which it helped to set up three years ago. This organisation is part of The Essex Economic Partnership to develop sustainable recycling/reuse markets for specific wastes created in Essex.

The Council is an active member of the 'Waste Advisory Board for Essex and the Unitary Authority of Southend and Thurrock'. The Board of senior member's representing all of the 15 local authorities in the county of Essex, advises their authority on the development and delivery of a Municipal Waste Management Strategy.

Three sub-groups of the Board [reporting to main board] have been formed to develop the strategy on an area basis. The Council is a member of the Thames Gateway South Essex Partnership Area Group comprising of members from Basildon District Council, Castle Point Borough Council, Essex County Council, Rochford District Council and Thurrock Council.

Southend on Sea Waste Strategy

Who will be affected by the Strategy?

- All householders,
- Visitors to the Town who drop litter in streets and
- Businesses who are provided with a collection/disposal service for their waste by the Council.

When will these changes take effect?

It is believed progressively from July 2005 the government is likely to set additional statutory targets each year for the recycling and composting of municipal waste for diversion from landfill, based upon the amount of waste handled by the Council in 2003/04.

What if the Council does not choose to comply with the changes?

The Government's proposed legislation (Waste and Emissions Trading Act 2003) provides powers to require Waste Disposal Authorities to pay a financial

penalty for non compliance with targets and requirements set by the Secretary of State. The Council would not be complying with the law and could face serious financial penalties

Who are The Key Players in the Strategy?

(a) **Householders** – generally those occupiers of domestic premises registered for Council Tax Purposes.

(b) **Businesses** – who voluntarily pay the Council for a waste collection and disposal service.

(c) **The Council** – in its role as Waste Collection and Disposal Authority and as a producer of commercial waste, to promote and implement policies to reduce the amount of waste created by its activity (i.e. administrative procedures at Council operated premises, special events undertaken and promoted, works undertaken using contractors/Direct Service Organisation etc)

How when and where will the Council manage the change required and how much is it likely to cost?

The Council's Waste Management Working Party has considered the issues at a series of meetings and the conclusions have been subsequently accepted by The Cabinet:

Each source of Municipal Solid Waste (MSW) handled by the Council has been separately considered and the following conclusions reached:

[1] Commercial Waste

This service is currently undertaken on behalf of the Council by the Councils Cleansing Service Contractor. Depending upon the level of penalties imposed on the Council by the WET Act (Waste and Emissions Trading Act 2003) it may be advantageous to the Council to discontinue the service 'on behalf of the Council' but allow the current Cleansing Service Contractor to continue providing the service as a Private arrangement between the customer and the Contractor. In the mean time the Councils' contractor will investigate the level of interest with Commercial Waste Customers to recycle the waste they produce.

[2] Mini-Recycling Centres

Support the provision of mini-recycling centres and encourage the provision of additional sites at appropriate locations.

The Council should ensure that sites are maintained to provide a pleasing appearance. Emptying of containers very early in the morning should be avoided if possible.

[3] Civic Amenity Sites

Increase the range of materials that can be collected for recycling and re-use.

Investigate ways of phasing out the delivery of mixed waste to Civic Amenity Sites so that sites only receive separated material which can be recycled or re-used.

Rename the sites 'Material Resource Centres' and establish STAR (Second Time Around) shops at the sites to change the image of the sites from a

'Dump' to 'Resource Centre' Improve the site layout to make them more user friendly.

The remodelling of CA sites outlined above should be considered as part of the Waste Contract Strategy.

[4] Street Litter & Refuse

There are a few cost effective options to recycle or re-use street litter due to its contaminated nature.

The issue of dumped waste in the street is of concern to residents and adds to the quantity of contaminated street litter and refuse collected. The Council does not have effective powers to deal with this matter and the Council has made representation to the Government as part of the DEFRA Consultation on its proposed Fly-Tipping Strategy to (a) extend the Duty of Care for waste which exists for business waste, to household producers. This will enable the Council to ensure that householders waste is appropriately stored at the premises prior to collection and does not escape from the householder's control. As more house owners convert premises for rent it is acknowledged that there may not be adequate storage facilities for separated waste. (b) Register landlords with the Local Authority to enable local authorities to communicate with landlords to deal with such issues as the adequacy of storage facilities provided for tenants and lessees.

In order to encourage householders to properly contain their waste on their property, so that it is not 'attacked' by animals, the Council could offer one subsidised dustbin for sale to each household so that the householder can store household waste sacks prior to collection. This initiative would need to be phased over a number of years and kept under review.

[5] Collections from Households

During 2002/03 householders separated for recycling approx 20% of the Municipal Solid Waste (MSW). As a result of the 'War on Waste' consultation opinion poll householders believed they are recycling about 32%. The reason for this is thought to be that those householders who separate their waste do so for a high proportion of their waste but as the participation rate is approximately 50% the average reduces due to those who do not participate.

In order to achieve the 2005/6 Best Value Target of diverting 27% of Household Waste. An additional 7000 tonne p.a. (over the 2002/2003 level) will need to be diverted for recycling/composting from landfill which will require either collections of other recyclable waste streams from each household or the treatment at a factory of 'black sack' mixed waste, and street litter and refuse. The following has been considered:

Additional Door Step Collection for	***Quantity likely to be recovered***
Junk mail and brown card	1,500 tonne
Glass containers	1,500 tonne
Food Waste	7,000 tonne

However, having regard to the requirements of the WET Act the diversion of biodegradable waste is likely to lead to the following annual reduction in MSW taken to Landfill.

Year	*Expected Additional Diversion away from Landfill* (Tonne)*
2005/06	2,500 per year
2010/11	3,300 per year (Landfill Directive Target Year)
2013/14	8,100 per year (Landfill Directive Target Year)
2020/21	3,400 per year (Landfill Directive Target Year)

Total Expected Diversion 68,000 tonne 2005/06 to 2020/21
Allowance has been made for a 3% increase in MSW arising per year

Conclusion

The cost effective approach to achieve the foregoing is:

a) Continue to encourage householders to increase recycling and participation in the service currently provided by the Council but it is unlikely that the Best Value Target for 2005/06 will be met unless significantly more recyclable and compostable waste is diverted from landfill by householders.

To divert as much biodegradable municipal waste from landfill as possible. The introduction of a doorstep collection of junk mail and brown card as part of the existing weekly dry recyclable waste collection should be implemented as soon as the necessary finance becomes available.

b) To increase the diversion of waste away from landfill by establishing a Treatment Factory to obtain additional recycling and composting from mixed municipal waste (black sack waste). It is likely that residues produced by the Treatment and sorting process will be disposed of at Landfill and therefore the Treatment Factory will need to be as close to a Landfill as possible to reduce cost and vehicle mileage. However, it is unlikely that the 2005/06 targets will be met as the procurement, planning approval, licensing, and construction of a Treatment Factory will take longer than the time available.

[6] Site for a Treatment Factory

In order to comply with the impending legislation, the provision of a Treatment Factory is becoming a high priority.

The proximity principle is important to minimise the overall environmental impact and minimise the additional cost to the Council of a Treatment Factory. A Treatment Factory would need to be located at a distance no further than the distance currently travelled to the Barling Landfill site. This site is located approximately 6.5 road miles from the centre of the Borough. The Council needs to consider as soon as possible the identification of suitable sites, and seek necessary planning permissions for such a Factory to enable a tender to be offered for a competent contractor to construct and operate the facility. The view of the public when consulted supported ***"small local sites even in local neighbourhoods"*** (refer to page 25)

A local Treatment Factory will require planning permission to meet the tests contained in The Essex and Southend Waste Local Plan.

The keys tests are:

- demonstration of need for the facility to manage locally arising waste
- the proposal represents Best Practical Environmental Option (BPEO)
- conformity with the proximity principle
- adequate road access and protection of residential amenity

Having regard to the need to progressively divert more biodegradable waste from landfill each year it is recommended that if possible, the factory is built as a Pilot Plant to be developed as technology evolves to divert progressively increasing quantities of waste each year.

The following waste treatment technologies (refer to section – Waste Treatment on page 7 for an overview of technologies) appear promising and cost effective:

- Autoclave
- Biological Mechanical Treatment
- Mechanical Biological Treatment
- Anaerobic Digestion

It is likely that a cost effective option will result from the Council working with Rochford District Council (Waste Collection Authority) and Essex County Council (Waste Disposal Authority), as the waste from the Borough and half of Rochford District is currently transported to the Barling landfill site. This could be achieved by jointly using waste management facilities for the southeast area of Essex.

A Municipal Waste Management Strategy for the Thames Gateway Area is also being formulated whereby the future needs of Basildon District Council, Castle Point Borough Council, Essex County Council, Rochford District Council, Southend on Sea Borough Council and Thurrock Council are being considered. The provision of a south east Treatment Factory, Materials Recycling Facility, Waste Transfer Facility could also be cost effectively provided by a package procured for the Thames Gateway area or other areas of Essex. Initial treatment or a mixed waste transfer facility could pre-treat or transfer waste to the site at Courtauld Road, Basildon identified in the Essex and Southend Waste Local Plan.

Alternatively the Council currently delivers Waste Services by an integrated Waste Contract, and consideration needs to be given to extending the scope of this contract to achieve a higher diversion of waste from landfill with more recycling/composting of waste.

The Council is encouraged to provide a strategy which delivers government targets at the lowest additional cost to the community of the Borough hence each of the foregoing options must be carefully considered together with the best location for establishing such facilities.

It must also be recognised that as UK landfill disposal costs are relatively low, the cost of this strategy will inevitably significantly increase the cost of dealing with householders, visitors to the Borough's and business waste.

As the UK develops its Waste Management infrastructure, awareness of strategies of neighbouring areas need to be considered as opportunities may exist along the south of the River Thames to exploit river transportation and new infrastructure and facilities provided in these areas.

[7] Waste Minimisation

Generally the consumer economy drives the production of municipal waste and it is the consumer/waste producer that can reduce or influence the amount of waste they produce. Hence the community is key in creating awareness to influence long term behaviour. The European Union is also developing a raft of legislation for industry in order to reduce the amount of waste produced and to convert waste into a future resource.

What can the Council do to help?

- Develop initiatives to re-use bulky household items collected from households which are suitable for re-use
- Encourage home composting by the sale of subsidised compost bins each year
- Encourage the use of Real Nappies by a limited subsidised scheme each year.

[8] Communicating with the Community

Communicating with the community to explain the necessary changes needed in managing the communities waste is recognised as being a very important feature of this strategy.

The Council needs to develop a publicity plan to inform the community of the changes needed in order to manage their waste. Such a plan will need to effectively communicate with housing in multiple occupation, single households and businesses. The Plan should utilise the Civic News [which is regularly delivered to every household] The publicity plan should be reviewed annually.

When will the Council implement the Strategy?

An Implementation Plan based upon the above components has been devised. Due to the uncertainties to exact dates and guidelines of regulations to be introduced through the Landfill Directive and Waste Emissions Trading Act 2003, the Strategy will need to be reviewed after 2 years in 2006/07

Planning a Waste Infrastructure

Southend currently has two landfill sites which it uses for the disposal of household wastes located in Pitsea and Barling.

Barling has planning permission for operation until 2013, when it the will need to see if further operations can continue, this will obviously include information as to how much capacity is left to take more waste. (Source Cory Environmental)

Pitsea also has planning permission for operation until 2013, and as with Barling will need to apply for an extension if capacity allows. (Source Cleanaway)

Within the next decade both the landfill sites could close, or have an extension of time for operation, so it is important to review how long the sites will be available to deal with Southend waste.

Waiting until the landfill closes is not an option; changes need to be made now with a view to providing an alternative infrastructure.

New infrastructures need to be put in place to support reuse, recycling, recovery and safe residual disposal at landfill.

This new waste infrastructure needs to have defined areas or locations to include recycling facilities and depots, inert waste recycling plants, composting facilities, mixed waste treatment and energy recovery facilities, and reprocessing facilities for recyclables.

Funding

Cost is the biggest factor in setting up the infrastructure. Landfill is the cheapest option and therefore used the most. (UK rates for landfill disposal are less than a third of the cost compared to other European countries).
In order to address the cost and review the true price of disposal the Government has introduced the Landfill Tax which increases by £1.00 per tonne per year to 2004/05 (a total of £15 per tonne) and by £3.00 per tonne per annum from 2005/06 up to £35.00 per tonne. The Government is considering how Local Government will fund the significant additional cost of waste management, the proportion to be funded by the Government and the proportion to be funded by locally raised funding from residents and businesses.

Municipal Waste Contracts

Southend currently contracts Cory Environmental Municipal Services Ltd to collect and dispose of household waste. The existing contract runs to 31st March 2008, and has provision to collect recyclables and compostable green waste alongside mixed black sack waste.

Within existing and new contracts Southend Borough Council need to make provision for the further collection of a larger volume of recoverable material to meet Government targets.

Future Costs

The cost implication on the Council of the raft of new legislation related to waste management is difficult to estimate at this time. The landfill tax of up to £35 per tonne will increase current costs by an extra £2 million per annum if the Council does nothing. The War on Waste Consultation indicates likely cost increases which applied to the Council's 2002/3 budget indicates that the cost of alternative treatment facilities, and waste transfer facilities, (to avoid future landfill costs) would be at least an additional £2.5 million per annum.

Summary – Main Components

A. This Municipal Waste Management Strategy needs to:-

(i) Deliver compliance with the future raft of Government legislation

(ii) Result in a cost effective solution and at the lowest cost to the Council having regard to the 'Best Available Techniques Not Entailing Excessive Cost' (BATNEEC)

(iii) Have regard to the views of the public, stakeholders and other interest groups gathered as a result of the "War on Waste' Consultation Opinion Poll of Borough Residents.

(iv) The Strategy needs to be reviewed after two years in 2006/07.

B. The Way Forward –

(i) Council Commercial Waste Collections –
Review the service in order to reduce the quantity of waste collected which is currently taken to landfill

(ii) Borough Wide Mini Recycling Centres –
Continue to support of the provision of mini-recycling centres and encourage the provision of additional sites at appropriate locations.

Increase the range of materials collected at sites to include junk mail and other paper.

(iii) Civic Amenity Sites –
When possible increase the range of materials that can be separated for recycling or reuse and phase out the delivery of mixed (unsorted) waste to the sites; Rename the sites 'Material Resource Centres'

(iv) Collection from Households –

[a] In order to assist householders to prevent litter and refuse escaping into streets encourages householders to use plastic dustbins to contain their waste.

[b] Continue to provide a weekly edge of premises collection for dry recyclables and green garden waste contained in sacks and a weekly seasonal collection of green waste in wheeled bins.

Extend the range of materials collected in the dry recyclable sack to include junk mail, paper/brown card when possible.

Encourage greater householder participation to separate waste materials at home.

[c] Deal with the increasing reduction in waste being taken to landfill by establishing a Treatment Factory for mixed waste material and separately collected waste materials for sorting.

(v) Waste Minimisation –

[a] Develop initiatives to re-use or recycle bulky household items

[b] Continue to encourage home composting by the sale of subsidised compost bins

[c] Continue to encourage the use of Real Nappies by a subsidised scheme.

(vi) Communication with the Community –

[a] A publicity plan to be developed to inform the community of the changes needed in order to manage their waste.

Public Consultation 'War On Waste' December 2002

A Public Consultation was conducted by the 15 councils of Essex, comprising Essex County Council, the District and Borough Councils of Essex, and the unitary authorities of Southend-on- Sea Borough Council and Thurrock Council. An advisory board to examine how to deal with the growing amount of municipal waste in our area over the next 25 years was put in place to look at the growing waste problem and the best methods of to dealing with waste.

Last year, Essex produced about 170,000 extra tonnes of waste (24.4 per cent more waste than was produced five years ago). A majority of the waste (78 per cent) was disposed in one of eight of the county landfill sites, while the rest was recycled and composted.

Waste in Essex has grown on average by 4.9 per cent each year. If the current growth rate continues, by 2020 there will be twice the amount of rubbish that there is now, perhaps needing twice as many sites to deal with it.

The Consultation Paper provided details of methods of disposing of waste, household participation, infrastructure required, costs and environmental effects for each method.

(For more information on the War on Waste Consultation Paper and outcomes see www.waronwaste.org)

In conjunction with the War on Waste Consultation, Southend Borough Council conducted a separate opinion poll of the residents of Southend.

The questions provided an insight to the views of the community in respect of the challenge confronting them with the following outcome.

1. How do residents view increases to Recycling, Composting and Waste Reduction?

Residents think they recycle about 32% of their waste.

(a) Donate used good to Charity (91%)
(b) Recycle paper, glass, cans etc (88%)
(c) Repair things (72%)
(d) Compost at Home (48%)
(e) Remove name from Junk mail lists (31%)

2. Residents suggested a positive reaction to increasing Recycling Composting and Waste Reduction.

3. How achievable are set recycling targets?

(a) 75% of respondents believe 33% recycling target is achievable
(b) 50% of respondents believe 45% recycling target is achievable
(c) 60% of respondents believe 60% recycling is unlikely to be achievable

54% of residents think that it will be 'difficult' or 'very difficult' to achieve high levels of recycling/composting by householders separating the waste.

It is interesting to note that residents believe they are recycling about 32% of their waste when the current average is of the order of 18% [the 2003/04 target]. This over expectation needs to be borne in mind when consideration is given to the level of recycling/composting which the Council will expect residents to achieve by separation at home

4. What is the biggest obstacle to Recycling/Composting?

The biggest obstacle to Recycling/Composting is lack of interest by residents and therefore more information needs to be provided to residents. There is also a lack of awareness of the cost of Waste Management.

Positive publicity will need to be undertaken for the Council to work with residents to reduce the amount of waste they produce and present waste in a manner that can be dealt with to achieve the Landfill Directive targets. The most difficult premises to develop an approach for are likely to be those in multiple occupations.

5. Where should Recycling/Composting sites be located?

Waste Management sites for recycling/composting should be small local sites even in local neighbourhoods.

The support of residents to the proximity principal appears to be accepted which is very encouraging.

Document Availability and Alternative Formats Translations

Albanian
Nëse dëshironi këtë dokument të përkthyer në gjuhën tuaj, ju lutemi shkruani në adresën e mëposhtme duke dhënë hollësitë e plota të kontaktit tuaj

Bengali
আপনি যদি আপনার ভাষায় এই কাগজটির অনুবাদ চান, তাহলে অনুগ্রহ করে নিচের ঠিকানায় লিখুন করুন এবং আপনার সাথে যোগাযোগের ব্যাপারে সম্পূর্ণ বিবরণ দিন।

Chinese
若你想獲得這份文件的中文譯本，請寫信到以下地址，並說明你的詳細聯絡資料。

Czech
Chcete-li mít tento dokument přeložen do Vašeho jazyka, napište prosím na níže uvedenou adresu a sdělte podrobnosti, jak Vás kontaktovat.

Farsi
"چنانچه مایل به دریافت نسخه ای از ترجمه این متن می باشید، لطفاً با ذکر مشخصات کامل خود با آدرس ذیل مکاتبه نمائید."

French
Si vous aimeriez que ce document soit traduit dans votre propre langue, veuillez écrire votre adresse ci-dessous en donnant vos coordonnées complètes

Gujarati
''જો તમને આ દસ્તાવેજનું ભાષાંતર તમારી ભાષામાં જોઈતું હોય તો, મહેરબાની કરીને નીચે લખેલ સરનામે પત્ર લખો અને તમારો સંપર્ક કરવા માટેની સંપૂર્ણ માહિતી આપો''

Hindi
"यदि आप इस दस्तावेज का अनुवाद अपनी भाषा में करवाना चाहते हों तो कृपया अपना पूरा सम्पर्क विवरण देते हुए नीचे दिए पते पर लिखिए"

Polish
Jesli chcialby Pan/Pani otrzymac tlumaczenie tego dokumentu we wlasnym jezyku, prosimy napisac do nas na ponizszy adres oraz podac nazwisko, adres i numer telefonu kontaktowego.

Punjabi
ਜੇ ਤੁਹਾਨੂੰ ਇਸ ਦਸਤਾਵੇਜ਼ ਦਾ ਤਰਜਮਾ ਆਪਣੀ ਭਾਸ਼ਾ ਵਿਚ ਚਾਹੀਦਾ ਹੈ ਤਾਂ ਮਿਹਰਬਾਨੀ ਕਰਕੇ ਹੇਠਾਂ ਲਿਖੇ ਪਤੇ ਤੇ ਖ਼ਤ ਲਿਖੋ ਅਤੇ ਤੁਹਾਡੇ ਨਾਲ ਸੰਪਰਕ ਕਰਨੇ ਲਈ ਆਪਣੀ ਪੂਰੀ ਜਾਣਕਾਰੀ ਦਿਓ।

Urdu
"اگر آپ کو اس دستاویز کا ترجمہ اپنی زبان میں چاہیے تو برائے مہربانی نیچے دیئے ہوئے پتے پر خط لکھیں اور آپ سے رابطہ کرنے کے لئے اپنی پوری تفصیلات دیں۔"

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The Waste Management Strategy is also available on the Council website www.southend.gov.uk.

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