

MUNICIPAL WASTE MANAGEMENT STRATEGY FOR TORBAY **2008 - 2025**



Supplementary Reports A to D

- A. Baseline Report**
- B. Technology Report**
- C. Legislation Report**
- D. Consultation Report**

February 2008

Municipal Waste Management Strategy for Torbay 2008 - 2025

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- D. Consultation Report**

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This report can also be accessed via the internet at:
www.torbay.gov.uk/wastemanagementstrategy

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1 Introduction

1.1 The Municipal Waste Management Strategy identifies how Torbay should manage its waste and has been produced in line with the guidance provided by Defra¹. The Strategy comprises of a number of documents which are summarised below in Figure 1.

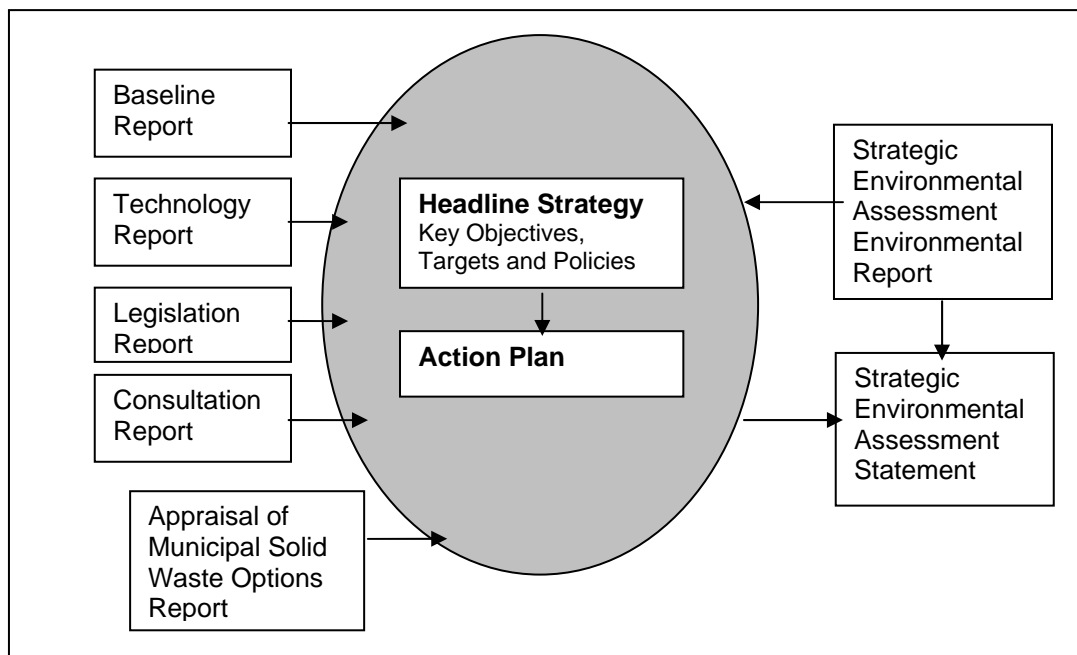


Figure 1: The Structure of the Municipal Waste Management Strategy

1.2 The Municipal Waste Management Strategy consists of the following documents:

The Headline Strategy

- *What's the problem, what are we going to do?*

The Baseline Report

- ***Where are we now?***

The Technology Report

- ***Explanation of possible technologies***

The Legislation Report

- ***Legislation for change***

The Consultation Report

- ***How have stakeholders and the community been involved?***

The Appraisal of Municipal Solid Waste Options for Torbay

- *Detailed analysis of options*

The Strategic Environmental Assessment (SEA) Environmental Report

- *Likely environmental effects of the Strategy*

The Strategic Environmental Assessment (SEA) Statement

- *How the findings of the SEA have been taken into account in the final Strategy*

This document contains the reports highlighted in bold above.

¹ A practice guide for the development of Municipal Waste Management Strategies, Defra 2005
www.defra.gov.uk

What does the Municipal Waste Management Strategy cover?

Municipal Solid Waste

1.3 The Municipal Waste Management Strategy covers the collection and disposal of municipal solid waste (MSW) which includes the following:

- Waste collected from households (domestic waste collection)
- Kerbside collected recyclables
- Some commercial waste collected as part of the domestic waste collection
- Recycling bring banks
- Bulky household items
- Hazardous and clinical household waste
- Waste collected at the civic amenity/recycling centre (CA/RC)
- Fly-tipped waste
- Waste from parks, gardens and beach cleansing

1.4 In 2005/06 Torbay produced 81,799 tonnes of Municipal Solid Waste, 34% of which was recycled.

Household Waste

1.5 Household waste is that which arises from dwellings of various types, mainly collected from the kerbside or brought to bring banks or the civic amenity / recycling centre site. Household waste is a large portion of municipal waste and in 2005/06 Torbay produced 63.648 tonnes of household waste, 25.6% of which was recycled.

Baseline data

1.6 The most complete data set for waste is available for the year 2005/06. Therefore most of the figures in this strategy relate to that year unless indicated otherwise.

What the strategy does not cover

1.7 The strategy focuses on municipal waste; it is not intended as a strategy for other types of waste such as agricultural waste, industrial waste or commercial waste collected by private operators. However other types of waste are referred to in the Baseline Report where appropriate.

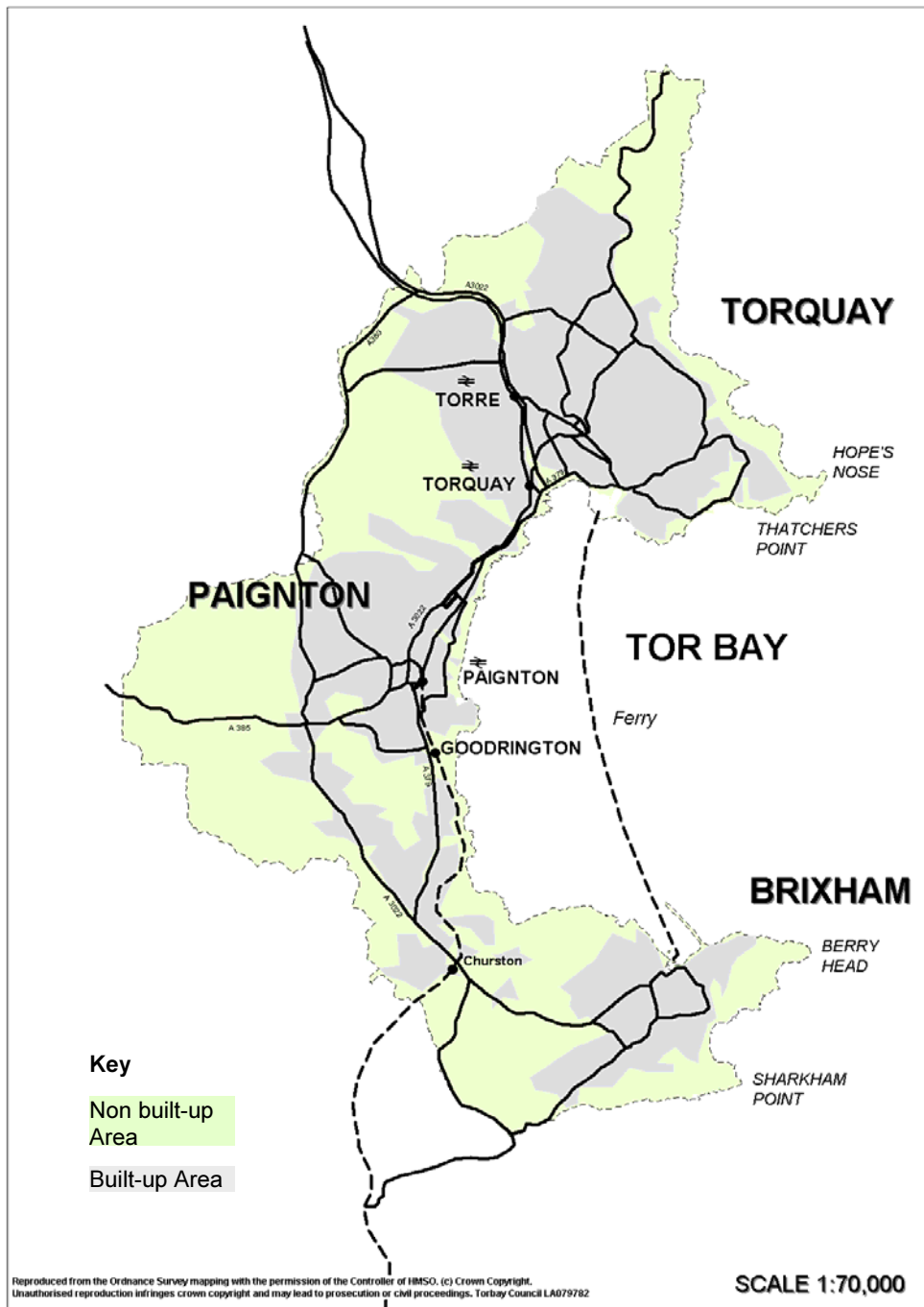
1.8 **This strategy does not cover the location of waste treatment facilities.** This will be covered through the emerging Torbay Local Development Framework² (LDF) which is currently in preparation. This strategy will inform the LDF in terms of facilities required.

² For more details about the LDF please go to: www.torbay.gov.uk/ldf

A. Baseline Report

2 Torbay vital statistics

Figure 2: The location of the three towns of Torbay



2.1 Torbay is a unitary authority located on the south coast of Devon, South-west England. There are three main towns: Torquay (population 63,998), Paignton

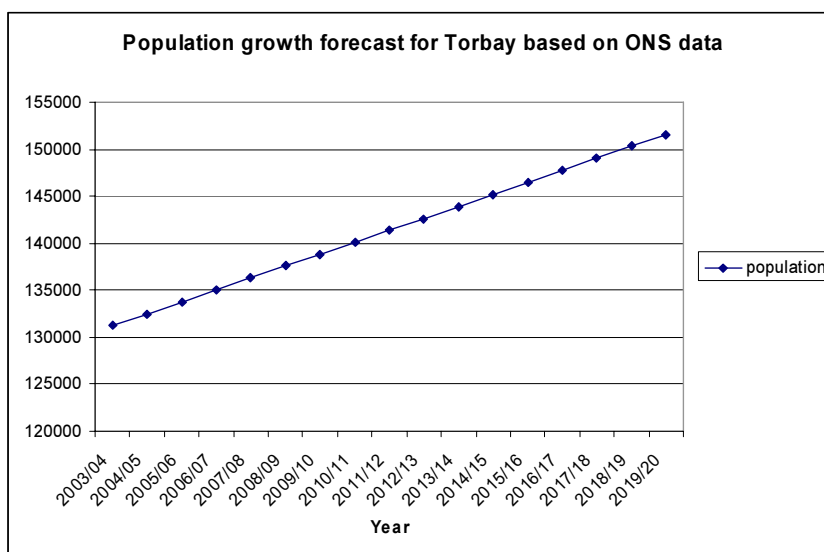
(population 48,251) and Brixham (population 17,457)³. These three towns comprise what is commonly termed the English Riviera and is well known as a premier UK tourist resort.

2.2 Torbay is characterised by high-density development and steep topography. This has perhaps been forced by the natural constraints placed on the area by its surrounding geography. The area is surrounded by beautiful and valued landscapes and rich biodiversity.

Population growth

2.3 Torbay’s population is estimated to grow over the next 25 years (see Figure 3), at an average rate of 1,200 persons a year, which is higher than average for the South West Region.

Figure 3: Population growth forecast



2.4 The figure below summarises the latest ONS projections and the implications for housing to keep up with this level of growth.

Figure 4: Population and housing forecasts for Torbay

Year	Population projections ⁴	Population growth	Additional homes needed per year (per 5 year period)
2004	132,500		
2006	135,600	3,100	720
2011	142,700	10,200	693
2016	149,700	17,200	731
2021	156,600	24,100	723
2026	163,000	30,500	681
Average number needed per year			693

Source ONS⁵

³ 2001 census information is the latest on the population of the three individual towns

⁴ Based on ONS predictions for Torbay 2006

⁵ Extracted from New Growth Points submission by Torbay Council (2006)

- 2.5 The above figures are subject to constant revision due to changes to population forecasts. Housing need forecasts vary from 500 dwellings per year⁶ to 1050 dwellings per year⁷.

Population in Context

- 2.6 Torbay is a popular retirement destination with an older person bias in the population. The population is an ageing one, with over half of Torbay residents predicted to be aged 50 and over within the next 20 years.
- 2.7 The overall proportion of residents of working age is expected to decrease. This could potentially place greater demand on those of working age to fund future services:
- 57% of Torbay's population are of working age, compared to 62% for England and Wales.
 - 26% of Torbay's population are of retirement age, compared to 18% for England and Wales.
- 2.8 Gross Value Added (GVA) 2003 figures show that Torbay has the lowest economic performance of the whole region, and the second lowest in England.

Deprivation

- 2.9 Despite Torbay's obvious environmental attractions, and areas of affluence, the Bay has pockets of severe deprivation often associated with seaside towns. According to the English Indices of Deprivation:
- Over one quarter of the population live in an area within the top 20% most deprived in England for the Rank of employment deprivation⁸.
 - Torbay is ranked as the 94th most deprived local authority in England (out of 354), just outside the top 25%.
 - 14% of the Torbay population live in an area that is within the top 20% most deprived in England for the Index of Multiple Deprivation.
 - Over one third of all dwellings (34.3%) are in the top 10% most deprived in England for social and private housing in poor condition⁹.

⁶ Draft Regional Spatial Strategy for the South West 2006 - 2026

⁷ ONS predictions 2007

⁸ For more information on Torbay please visit the Torbay website to view the Key Statistics <http://www.torbay.gov.uk/index/community/facts-figures.htm>

⁹ For more information on Torbay please visit the Torbay website to view the Key Statistics <http://www.torbay.gov.uk/index/community/facts-figures.htm>

3 Waste growth

Waste growth

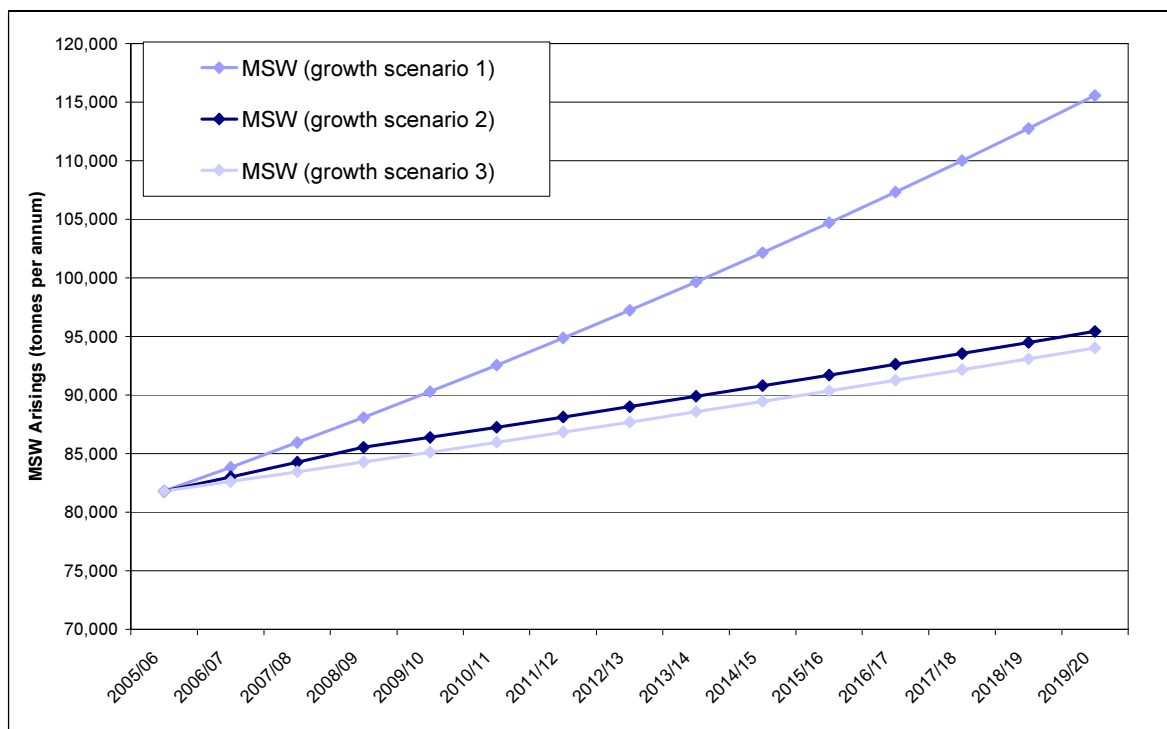
- 3.1 England and Wales produce over 100 million tonnes of waste each year – a figure which until recently was estimated to be growing at 3% per annum¹⁰. However a revised estimate from Defra is nearer 1.5%.
- 3.2 In contrast Torbay has experienced a reduction in the actual tonnage of municipal waste generated within the Bay between 2004 and 2005 of approximately 1.2%. However in the long term the growth in municipal solid waste has averaged at around 1% per annum since 2000/01.
- 3.3 It is a requirement of Planning Policy Statement 10 (PPS 10)¹¹ that this strategy predicts possible future municipal solid waste (MSW) growth. This is to help demonstrate infrastructure needs for the emerging Local Development Framework which will seek to accommodate such requirements¹².
- 3.4 This strategy has selected to use population growth as a major influence in predicting waste increase. Population growth in Torbay is predicted to rise by approximately 1% year on year up until at least 2020. Three scenarios for waste growth in Torbay are outlined below:
 - Growth scenario 1: High Growth (2.5%) - the Defra prediction for waste growth of 1.5% per annum is added to the predicted minimum waste growth of 1% from population increase.
 - Growth scenario 2: Forecasts total waste growth of 1.5%, declining to 1% by 2010.
 - Growth scenario 3: Low Growth - due to population increase, 1% per annum is the potential minimum that municipal waste will grow, even if waste produced per head remains constant.
- 3.5 The graph demonstrates that by 2020 municipal waste arisings are predicted to rise to between 94,026 (scenario 3) and 115,580 tonnes (scenario 1).

¹⁰ <http://www.gos.gov.uk/gosw/envrural/146423/>

¹¹ Planning for Sustainable Waste Management (PPS 10), ODPM, July 2005

¹² For more details about the LDF please go to: www.torbay.gov.uk/ldf

Figure 5: Predicted municipal waste from Torbay



year	ONS forecast population	Waste in tonnes		
		Scenario 1	Scenario 2	Scenario 3
2005	133800	81799	81799	81799
2010	140100	90,291	86,391	85,120
2015	146500	102,156	90,798	89,462
2020	152800	115,580	95,429	94,026

Figures in bold represent actual values

3.6 Torbay’s LATS predictions are based on low growth forecasts. However if a high waste growth rate is realised (scenario 3) then more biodegradable municipal waste will be sent to landfill, further exceeding Torbay’s LATS allowances (see Figure 6)¹³.

¹³ Details of the Landfill Allowance Trading Scheme (LATS) are available in the Legislation Report.

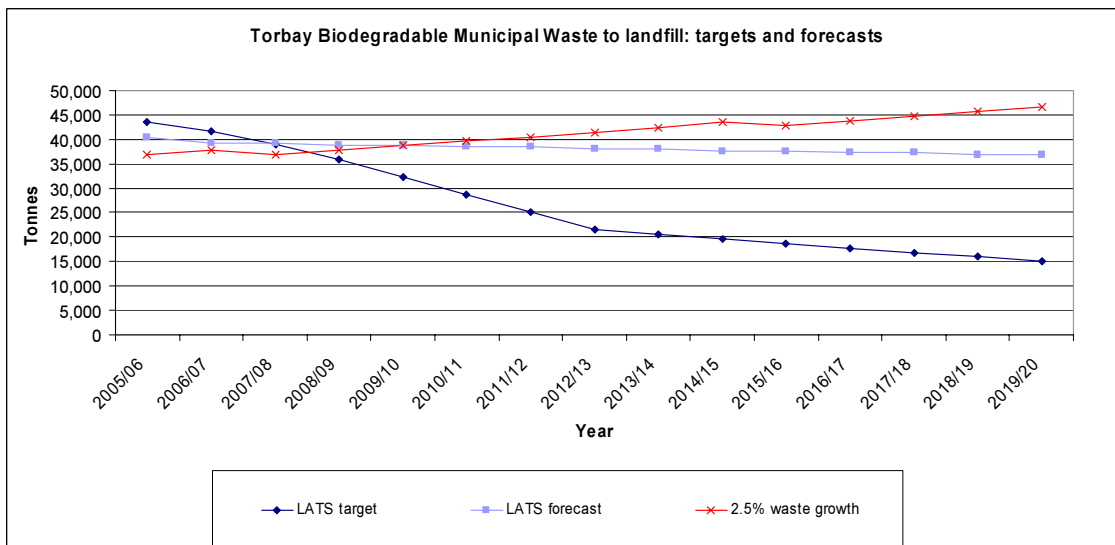


Figure 6: Biodegradable municipal waste predictions for Torbay

3.7 Torbay will face harsh fines for sending BMW to landfill above the LATS target, but with a high growth scenario (3) the fines could reach over £40 million (see Figure 7).

Figure 7: Predicted LATS penalties (without trading)

Year	LATS Forecast	Scenario 1 (high growth)
2005/06		–£599,186
2006/07		–£142,149
2007/08		£293,353
2008/09		£837,546
2009/10	£987,600	£1,392,881
2010/11	£1,467,450	£2,080,142
2011/12	£2,005,500	£2,769,641
2012/13	£2,485,950	£3,457,119
2013/14	£2,624,100	£3,751,231
2014/15	£2,704,950	£4,047,533
2015/16	£2,843,100	£4,081,442
2016/17	£2,924,850	£4,372,503
2017/18	£3,062,850	£4,669,842
2018/19	£3,145,050	£4,969,721
2019/20	£3,283,200	£5,272,026
Total fines	£27,534,600	£41,701,627

4 Waste infrastructure

Torbay's current waste infrastructure is listed in Figure 8 below:

Figure 8: Waste infrastructure

Existing Infrastructure	Number	Location/description
Transfer Station	1	Tor park Road, Yalberton, Paignton. For sorting and bulking material.
Materials Reclamation Facility	1	Owned and run by Community Waste in Oxfordshire
Civic amenity/ recycling centre	1	Tor park Road, Yalberton, Paignton
Bring banks	63	Various locations around the Bay (see headline strategy)
Composting facilities	2	Local farms
Landfill facility	1	Heathfield in Teignbridge
Residual treatment facility	0	
Collection Vehicles	Total 15	9 dust carts; 2 recycling collection vehicles; 2 bulky collections and garden waste collection vehicles; 2 vehicles to collect bin exchanges, clinical waste and miscellaneous items.
Transportation vehicles (to landfill)	Total 3	2 articulated vehicles, 1 hook loader

Waste collection

- 4.1 Torbay Council operates a household waste collection system to 61,714 households (data from 2006/07). Twin plastic bins have been issued by Torbay Council to 39,259 (63.5%) of these householders. The bins are collected on alternate weeks (i.e. a fortnightly cycle). The green bin is for dry recyclables and the grey bin is for residual waste.
- 4.2 The remaining households are on a black sack weekly collection. Bag and box schemes (for paper and glass collection) are in operation for 19,908 (32%) of households that are not suitable for twin bins. Additionally 368 properties within flats are served by a paper and cardboard collection.
- 4.3 Torbay also operates a (charged for) commercial waste collection service.

Civic amenity / recycling centre waste

- 4.4 The CA/RC site in Tor Park Road, Yalberton, enables Torbay domestic residents to recycle/dispose of most domestic bulky household and green garden wastes in reasonable quantities only.

Recycling banks

- 4.5 The council operates 63 recycling bring bank sites which collect paper, cans, glass, clothing and books. The number and location of these banks is regularly reviewed for local convenience and for efficiency. The locations of the Recycling Bank Sites are shown in the Headline Strategy.

Other wastes

Bulky waste and garden waste collection

- 4.6 Those bulky items such as furniture and garden waste that are not brought to the Transfer Station by residents can be collected by Torbay Council on request for a fee.

Commercial and trade waste

- 4.7 The priority for Torbay Council is in dealing with domestic waste. However, the waste transfer facility does accept commercial and trade wastes, and the Council has responsibility as a waste planning authority to consider the provision of waste facilities for the full range of wastes that arise within Torbay.
- 4.8 There are increasing requests for facilities for the recycling and re-use of such wastes, and in the interests of global sustainability it is important that all types of waste are taken into account. This is recognised within the Waste Strategy for England 2007¹⁴.
- 4.9 When considering the treatment capacity of any new recycling or recovery facilities, Torbay Council will pay particular attention to the needs of local commercial waste such as that from restaurants and hotels. This integrated approach would further reduce Torbay's environmental impact as a community, but is only viable as long as there are no harsh financial penalties associated with such activity, for example by incurring additional LATS costs.

Local businesses

- 4.10 There is help and advice available for businesses that wish to manage their waste more sustainably. The Groundwork Trust in Torbay provides support specifically for small businesses located within the Bay, through the **Envision programme**¹⁵. Businesses can also receive advice from schemes funded through the Business Resource Efficiency and Waste (**BREW**) Programme. These schemes are listed below in Figure 9.¹⁶

¹⁴ Waste Strategy for England 2007, Defra (May 2007), published by the Stationery Office.
www.defra.gov.uk

¹⁵ The Envision Programme <http://www.envisionsouthwest.org.uk>

¹⁶ For further information please refer to the BREW website
<http://www.defra.gov.uk/environment/waste/brew/index.htm>

Figure 9 Advice for businesses

Delivery Body	Activities
National Industrial Symbiosis Programme (NISP)	To continue to bring together companies from all business sectors with the aim of improving cross-industry resource efficiency by exchanging materials, energy and water and saving assets, logistics and expertise.
Envirowise	Providing direct support for businesses that need to improve their resource efficiency, through site visits, advice and financial support for resource efficiency clubs.
Waste and Resources Action Programme (WRAP)	Funding for work on market development for recycled materials and waste prevention.

Fly-tipped waste

- 4.11 The Environmental Protection Act 1990 gives local authorities and the Environment Agency the responsibility for dealing with fly-tipped or illegally deposited waste. There is an agreed protocol that determines which agency should respond to any given incident, and an expectation that enforcement action will be taken against people who illegally deposit waste in this way.
- 4.12 The fly-tipped waste removed by Torbay Council counts towards the total of municipal waste collected and will influence the targets set under the LATS system as well as incurring significant financial costs. To address this Torbay Council will enforce the Clean Neighbourhoods and Environment Act 2005 which strengthens the Environmental Protection Act 1990, putting provisions on clear up to the land owner and allowing local authorities and the Environment Agency to recover their costs.

Clinical Waste

- 4.13 Torbay Council collects clinical waste direct from householders if requested to do so by the local health authority. Clinical waste falls into five categories:
- Grade A: includes human tissue, blood and animal carcasses
 - Grade B: includes discarded syringes needles etc.
 - Grade C: includes microbiological cultures
 - Grade D: includes drugs
 - Grade E: includes items used to dispose of urine, faeces and dressings, as well as dog faeces.
- 4.14 Dog faeces are sent to landfill, and other clinical waste is sent for incineration at Derriford Hospital in Plymouth. Torbay Council will act with other authorities and agencies to encourage the use of re-useable items where sterilisation can be undertaken effectively, but recognises the limitations in reducing, re-using or recycling clinical waste.

Hazardous wastes

- 4.15 'Hazardous waste' is waste that is considered to be so dangerous that its management must be subject to special controls. These are set out in the Hazardous Wastes directive (91/689/EC) and incorporated into UK law by the Hazardous Waste Regulations 2005.
- 4.16 Recent changes have increased the number of materials classified as hazardous through the Lists of Hazardous Waste Regulations 2005. The additional classification now includes: single use cameras with batteries; ash containing dangerous substances; end-of-life vehicles; equipment containing CFCs and HFCs (fridges and freezers); computer monitors; fluorescent lighting; and televisions.
- 4.17 These materials are currently collected from the public or brought into the Civic amenity / recycling centre. These materials are handled under controlled conditions and can be subject of special arrangements. The costs of collection, treatment and disposal of these types of wastes are likely to increase significantly. This is exacerbated by the closure, under the new licensing regime, of many landfill sites that previously accepted hazardous wastes, resulting in increased transportation.

Waste Electrical and Electronic Equipment (WEEE)

- 4.18 The Waste Electrical and Electronic Equipment Regulations came into force in January 2007 (please refer to Legislation report for more information on WEEE regulations). WEEE consists of those items specified under the WEEE Directive (2002/96/EC). The Directive includes: household appliances; IT and telecommunications equipment; consumer equipment; lighting equipment; electrical and electronic tools (except large stationary items); and toys and leisure and sports equipment
- 4.19 Residents can bring those items that have been declared as WEEE to the Torbay civic amenity / recycling centre. Torbay will also collect large items for a charge. Torbay then arranges for these items to be collected and processed at an approved authorised treatment facility (AATF). This system was established through the 'distributor take-back scheme'.
- 4.20 Some companies have not joined the scheme and operate an in-store take back system instead, where old electronic appliances can be brought back when new items are purchased.

Waste batteries

- 4.21 Currently Torbay Transfer Station only collects car batteries not household batteries. Under proposed new legislation, from September 2009 facilities must be in place to enable batteries to be collected and re-processed.
- 4.22 However, it is not the intention of Torbay Council to wait until 2009 to make necessary changes. Facilities will be put in place to allow residents to bring their spent household batteries to the civic amenity / recycling centre as soon as possible.

Household rubble

- 4.23 Household rubble is delivered to a privately owned waste operator for processing and reuse in the place of aggregates.

Claylands recycling centre

4.24 Claylands was formerly a landfill site, for inert material, that is now licensed by the Environment Agency purely as a recycling site. Inert waste from highways is brought to the site and is now crushed for recycling purposes.

Transportation of waste

4.25 Torbay's municipal waste and all materials separated for re-use or recycling are currently collected and transported using road transport.

4.26 Material for recycling and the residual waste (sent for disposal to landfill), is bulked up at the Waste Transfer Station at Yalberton, to minimise the environmental and economic cost of transport. The recyclable material is then transported to Community Waste MRF in Oxfordshire. This recycling is transported using two compaction vehicles.

4.27 The residual waste is transported daily to the Heathfield landfill site in two 44 tonne articulated vehicles, supplemented by a 32 tonne hook loader vehicle when required.

4.28 At this point in time more research is required into the possibility of alternative methods of transportation for Torbay's waste. Hybrid vehicles have been trialed within the Bay but found to be uneconomic under present financial conditions. However Torbay Council will keep this option under review.

4.29 There is also scope for the transportation of materials by rail, although there is currently a lack of existing suitable loading facilities within Torbay. Development of rail as a transport option will require significant investment in rail infrastructure.

5 Current waste minimisation practices

Reducing waste

Alternate weekly collection

5.1 The kerbside collection of residual waste and recycling materials fortnightly on alternate weeks is designed to reduce waste arisings and boost recycling. The scheme began in Brixham in 1997 and rolled out across the Bay over approximately five years. An additional benefit is that the streets where the twin bin scheme is in operation are much cleaner, due to the waste being stored inside wheelie bins rather than black sacks. This storage prevents the bins from splitting and being preyed upon by vermin and seagulls.

Real nappies campaign 2006-7

5.2 Working as part of the Devon Real Nappy Group, Torbay promotes the use of real nappies rather than disposable ones. The real nappy group includes partners such as Torbay Hospital, NHS Trusts and the District, Borough and City Councils of Devon and Devon County Council. Promoting the use of Real Nappies is essential to waste minimisation and can help reduce the amount of waste sent to landfill. It also enables parents who live in alternate weekly collection areas to manage their waste more effectively.

5.3 “Nappuccino” mornings are planned for next year. These will involve demonstrations from local advisors and give visitors the chance to look at a selection of modern real nappies, ask for advice, talk about the benefits etc in an informal setting.

The Envision programme

5.4 The Groundwork Trust has been enabling businesses to minimise their waste through the ‘Envision Support Programme’. The initial phase of this programme (which ended in July 2005) enrolled 12 local businesses. The second phase ‘Envision 2’ has currently signed up six local businesses.

Enforcement

5.5 Torbay Council employs two full-time compliance officers as a way of constantly educating the public and its own staff. This has avoided the problem common to many other councils, where tonnages of waste have increased when 240 litre containers have replaced traditional sack/dustbin collections.

5.6 Regulations controlling the operation of the CA/RC and access by vans to the site were put into effect in October 2001. These are still operating successfully and have reduced the amount of undeclared trade waste received and are successfully controlling overall waste volumes received. To assist this control a number plate recognition system has been developed and implemented and this is working well. Site staff encourage the public to segregate their recyclables before they visit the Recycling Centre and hand out leaflets to underpin this need.

Home composting

- 5.7 The amount of material diverted from landfill by home composting is difficult to quantify. However, it makes a useful contribution to reducing the amount of biodegradable waste that is sent for landfill disposal, and produces a beneficial product for the residents to utilise in their gardens. The current estimate is approximately 248 tonnes per annum¹⁷.
- 5.8 The council supports home composting through an arrangement with a local company, West Country Worms, to supply reduced priced compost bins and wormeries to residents of Torbay. In 2005/06 175 compost bins and wormeries were sold to Torbay residents, making a cumulative total of 4957 bins sold over the last five years. (See section 7.11)¹⁸.

Compost road shows

- 5.9 The council works in conjunction with West Country Worms, to hold special sale days, where residents are able to purchase a reduced price compost bin and/or wormery. In 2005/06 Torbay held six compost road shows. It also holds compost clinics at Cockington throughout the year, which inform residents how to improve the compost they produce and gives advice and information on all aspects of home composting.

Community composting

- 5.10 Community composting has not been established successfully in Torbay. A pilot project was commenced with the Torbay Coast and Countryside Trust at Cockington, and whilst composting continues at the site, the community have not become significantly involved.
- 5.11 Community composting projects have proven to be more successful in rural authorities but are more challenging to maintain in more urban areas. The legal and other operational requirements of the composting operation can dissuade people from joining a community composting group¹⁹.

Re-use

SPARC

- 5.12 The Recycling Officer works with the community based charity South Devon Play Resource Centre (SPARC). SPARC operate a 'Scrapstore' at Dartington. The Scrapstore's ethos is to turn waste things into playthings. They collect non-toxic, non-hazardous waste from local businesses and then schools, playgroups, families, and individuals go along to the Scrapstore, pay an annual fee and collect scrap to turn into many different things. Torbay Council funds and runs joint scrap workshops which are free of charge for parents and children. These

¹⁷ Calculated by multiplying the cumulative total number of composter bins and wormeries sold (4957) by 0.05 tonnes

¹⁸ For more information on home composting visit: www.howtocompost.org or www.westcountryworms.co.uk

¹⁹ For more information on community composting please contact the Devon Community Composting Network www.dccn.org.uk

are usually run with the Torbay Coast and Countryside Trust. Similar workshops are also run in primary and secondary schools, making mosaics, running recycled fashion shows and creating sculptures from recycled materials.

Re-use of furniture

- 5.13 The council is working with local furniture projects Mutual Aid Self Help (MASH), Rowcroft Hospice and Refurnish, to enable re-usable furniture to be collected by these agencies and sold to people on low incomes or to raise money for the charity concerned. The council is also working on a trial scheme with the Devon Furniture Forum to divert any goods that may be reusable from the bulky household collections that the council currently undertakes to the Forum for resale.

Charity shops

- 5.14 In 2003, Torbay Council won the award of 'Most Supportive Local Authority' in the Annual Association of Charity shops national awards. Rowcroft Hospice nominated Torbay Council under a scheme run by the Association of Charity Shops and Torbay won the special award for the way it encouraged charity shops to get involved in recycling. Its recycling team has been working closely with Rowcroft Hospice for more than seven years, giving recycling advice to the hospice and its network of ten charity shops.
- 5.15 Nationally charity shops recycle and re-use more than 250,000 tonnes of textiles every year²⁰, as well as other items including books, toys and unwanted home wares. By undertaking house-to-house collections, charity shops are removing the cost of collection and disposal from local authorities. They provide another avenue through which people can ensure that unwanted materials enter the re-use and recycling chain.

²⁰ <http://www.charityshops.org.uk/faqs.html#textile%20recycling>

6 Current recycling practices

Community involvement

Alupro

6.1 Torbay's Recycling Officer was selected from all the councils in the UK to visit Africa with the Aluminium Packaging Recycling Organisation (Alupro) in 2006. Alupro is a not-for-profit company which represents the leading aluminium packaging producers and reprocessors in the UK. Alupro's role is to ensure that packaging waste recycling targets are met through working with local authorities and other partners, and through public education. Alupro is also the body responsible for working with Government on policy issues.

The Green Apple Awards

6.2 Torbay is an award winning authority for recycling and has won national 'Green Apple' awards for the last three years (2004 – 2006). These awards have been presented for Torbay's work with the elderly and for people with learning disabilities.

Work with the elderly

6.3 During 2005/06 the Recycling Officer visited 42 sheltered accommodation establishments with the assistance of local agencies such as Age Concern and, housing associations and lunch clubs. The Officer also ran workshops, gave talks at 11 lunch clubs, and ran 5 compost clinics and 6 road shows.

Recycling within schools

6.4 The majority of schools within Torbay have been provided with free paper recycling facilities by the council. A waste audit was conducted for local schools, funded via grant money from Defra. When the waste audits were carried out, it was found that around 90% of schools' waste is paper-related.

6.5 In June 2006, Torbay Council, in conjunction with the Chartered Institute of Wastes Management, ran a schools competition to produce a design for the sides of the refuse collection vehicles. Three winning designs were chosen and can now be seen around the Bay. The council is hoping to run a similar competition in the near future to enable more of the refuse fleet to have designs on the vehicles.

Eco –Schools

6.6 The Officer is also involved in the Eco – Schools project which involves criteria including waste minimisation and recycling. Eleven schools are now registered as Eco – Schools.

People with learning disabilities

6.7 The council works in partnership with Hollacombe and Torquay Community Resource Centres involving adults with learning disabilities. Clients are involved in recycling through collecting aluminium cans, plastic bottles and ink cartridges from local businesses and tourist attractions.

Recycling credits

6.8 The Environmental Protection Act (1990) introduced a range of measures aimed at stimulating recycling and reducing the amount of waste sent to landfill. Recycling Credits are a means to pass on to recyclers the savings in the disposal and collection costs, which result from recycling household waste. The payments

are made in respect of the tonnage of material removed by from the controlled waste stream for re-use or recycling.

- 6.9 The Government takes the view that authorities should use their power (but are not obliged by law) to pay recycling credits to community groups and charities, who collect household waste for recycling, thus reducing the amount of waste that authorities have to deal with.
- 6.10 Currently 45 organisations are registered to claim recycling credits from the council. In 2005/06 over 330 tonnes of textiles and 245 tonnes of paper were recycled via charities in Torbay.

Devon Authorities Recycling Partnership

- 6.11 Torbay is a partner with neighbouring district councils, Devon County Council and Plymouth City Council and the Environment Agency in the Devon Authorities Waste Reduction and Recycling Committee (DAWRRC), which co-ordinates sales of recyclable material for its members. Currently, Torbay is only involved with the contract arrangements that the partnership has arranged for glass recycling. DAWRRC funds many projects including the posts of a community composting co-ordinator, a community recycling co-ordinator, and re-use credits to local furniture projects.

South West Recycling Forum

- 6.12 Torbay is part of the South West Recycling Forum – the South-west arm of the Local Authority Recycling and Advisory Committee (LARAC). The Environment Agency, the Community Recycling Network and Government Office South West are also members.

Torbay Coast and Countryside Trust

- 6.13 The Recycling Officer also works with the Torbay Coast and Countryside Trust to promote composting.

Green waste

- 6.14 Green organic materials arise from a number of sources including: the council's parks and landscape gardens operation; waste brought to the Civic amenity / recycling centre (CA/RC); and garden refuse collected from householders by the council for a payment, as part of the bulky waste collection service. Composting of green and other organic waste is becoming an increasingly important method of treating waste as local authorities address the requirements of the Landfill Directive and the Landfill Allowance Trading Scheme, to divert increasing amounts of biodegradable waste from landfill.
- 6.15 All residents are asked to 'home compost' or bring their green waste to the Civic amenity / recycling centre at the Transfer Station in Paignton. Small quantities of garden/green waste are also collected as part of Torbay's (charged for) bulky household collection service. Garden waste is taken to a local contractor to be shredded and composted. During 2005/06, Torbay Council collected and hauled almost 7,000 tonnes of green waste to a local contractor, who was responsible for shredding the material and composting it on licensed farmland.

7 Current waste performance

7.1 This chapter will demonstrate Torbay's waste performance in terms of national Best Value Performance Indicators (BVPIs), The Landfill Allowance Trading Scheme (LATS) targets and other national, regional and local targets. The Best Value Performance Indicators will also allow comparison between Torbay and national averages as well as with other unitary authorities.

Figure 10: BVPI data for Torbay 2005/06

	BV 82a %	BV 82b %	BV 82c %	BV 82d %	BV 84 kg	BV 86 £	BV 87 £	BV 91 %
	Percentage household waste recycled	Percentage household waste composted	Percentage household waste used to recover other energy sources	Percentage household waste landfilled	kilograms household waste collected per head	Cost of household waste collection per household	Cost of waste disposal per tonne municipal waste	Percentage of residents served by kerbside recycling
Unitary								
Averages %	16.61	8.21	12.72	62.37	502	45.8	45.9	94.1
Median	16.68	7.50	0	73.27	509.8	43.73	43.86	99.1
Bottom Quartile	14.58	4.58	0	76.80	534.9	52.48	54.76	95.6
Top Quartile	18.59	10.42	0.77	62.68	472	36.74	36.53	100
Torbay	18.85	6.77	0	74.48	480	35.94	41.4	88
	Top ¼ Unitaries	Below median Unitaries and England	N/A	Between median and bottom ¼ Unitaries and England	Bottom ¼ England	Top ¼ England and Unitaries	Better than median Unitaries and England	Bottom ¼ Unitaries and England
England								
Averages %	17.62	8.95	11.94	62.25	438.4	47.71	45.83	94.6
Median	17.14	7.92	0.03	70.07	433.8	45.57	45.68	98.9
Bottom Quartile	14.22	3.54	0	77.41	478.5	52.42	53.51	93.5
Top Quartile	20.87	13.05	6.72	59.41	393.6	39.48	39.39	100

7.2 The most important points demonstrated in Figure 10 are that :

- The cost of waste collection per household is comparatively low (BV87).
- Torbay residents produce a relatively high amount of waste per head
- Torbay is among the top performing unitary authorities in terms of dry recycling (BV82a).
- Torbay does not score well in terms of the percentage of residents served by kerbside collection (BV91), which implies that extending the kerbside collection could yield good results. Data so far for 2006/07 has shown a promising improvement in BV91 and this is expected to have a positive impact on recycling.

Customer satisfaction

- 7.3 Torbay began customer satisfaction surveys for waste in 2003/04 and repeats them every three years. Currently therefore there is only data for 2003/04 for most of the surveys and Torbay is awaiting audit results for the year 2006/07.
- 7.4 It is difficult to comment on the survey results with only two sets of data, but overall there appears to be falling levels of satisfaction with waste collection, recycling and disposal services in Torbay. In addition to this collection and disposal services have fallen to well below target (see Figure 11 below)

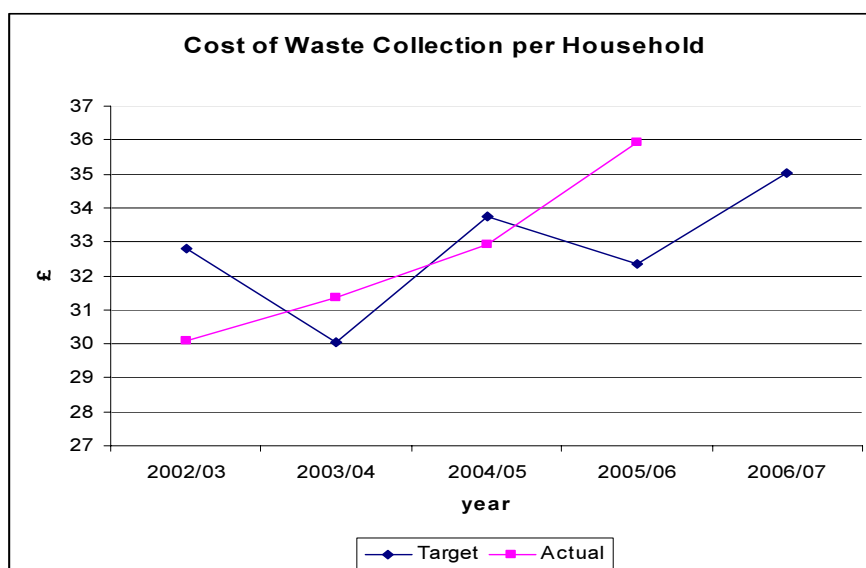
Figure 11: Satisfaction survey

	Actual	Best Value Target	performance
% satisfaction with household waste collection			
2003/04	81%	75%	On target
2006/07	78%	90%	Well below target
% satisfaction with recycling			
2003/04	75%	70%	On target
2006/07	72%	75%	On target
% satisfaction with disposal			
2003/04	86%	70%	Well above target
2006/07	78%	90%	Well below target

Cost of waste collection per household

- 7.5 The cost of waste collection per household has been rising steadily since 2002/03. This is mainly due to the ongoing costs from the introduction of the twin bin scheme for Torbay residents. The sharper increase between 2004/05 is accounted for by the introduction of the bag and box scheme. It is likely that the need for Torbay to meet recycling targets will incur further costs increases over the next few years.

Figure 12: Cost of waste collection per tonne



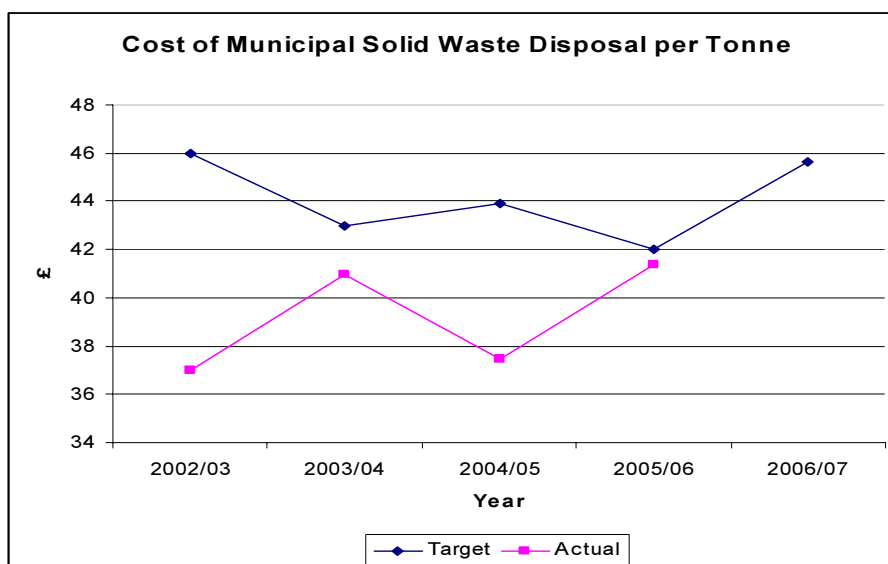
Year	Actual (£)	Best Value Target (£)	Status
2002/03	30.07	32.81	On Target
2003/04	31.38	30.04	On Target
2004/05	32.91	33.75	On Target
2005/06	35.94	32.37	Below Target

Cost of waste disposal

7.6 The graph below (Figure 13) demonstrates that so far Torbay’s waste disposal costs have been on target. The cost of waste disposal for Torbay has remained relatively low as all the waste which is not recycled has been sent to a nearby landfill at Heathfield in Teignbridge. This method of disposal has historically been relatively cheap. However the introduction of the LATS system and the escalating landfill tax mean that this situation will not continue.

7.7 The cost of waste disposal is likely to increase significantly, now that landfill is no longer an acceptable option, through the need for new infrastructure to dispose of Torbay’s waste and through the payment of LATS costs.

Figure 13: Cost of municipal solid waste disposal per tonne



Year	Best Value Target (£)	Actual (£)	Status
2002/03	46	37	On Target
2003/04	43	41	On Target
2004/05	43.89	37.46	On Target
2005/06	42.00	41.40	On Target

Waste minimisation performance

MSW reduction

7.8 Torbay’s target for waste reduction is set through the Municipal Waste Management Strategy for Devon 2005. **The target is to reduce waste growth to 1% per annum by 2009/10.** Although the long term growth is upwards, recently Torbay has been achieving this target, indeed **MSW has reduced by**

1.21% between 2004/05 and 2005/06, although it is too early to determine if this is a long term trend.

Household waste reduction

- 7.9 Household waste produced per head is approximately 480 kgs per annum, which is better than average for a unitary authority, although in the bottom quartile for England as a whole (see Figure 10).
- 7.10 Despite the fact that the long-term trend for household waste is up, **Torbay reduced total household waste by 651 tonnes between 2004/05 and 2005/06 (approximately 1%)**, even though national forecasts for household waste predicted an increase.

Home composting

- 7.11 The total tonnage processed through home composting and wormeries has been steadily increasing and in 2005/06, approximately 248 tonnes of compost are calculated to have been processed by these methods (see Figure 14). Home composting, however, would not be suitable for all areas in Torbay as there are large areas of dense population with limited or no garden space.

Figure 14: Home composting sales and estimated tonnages

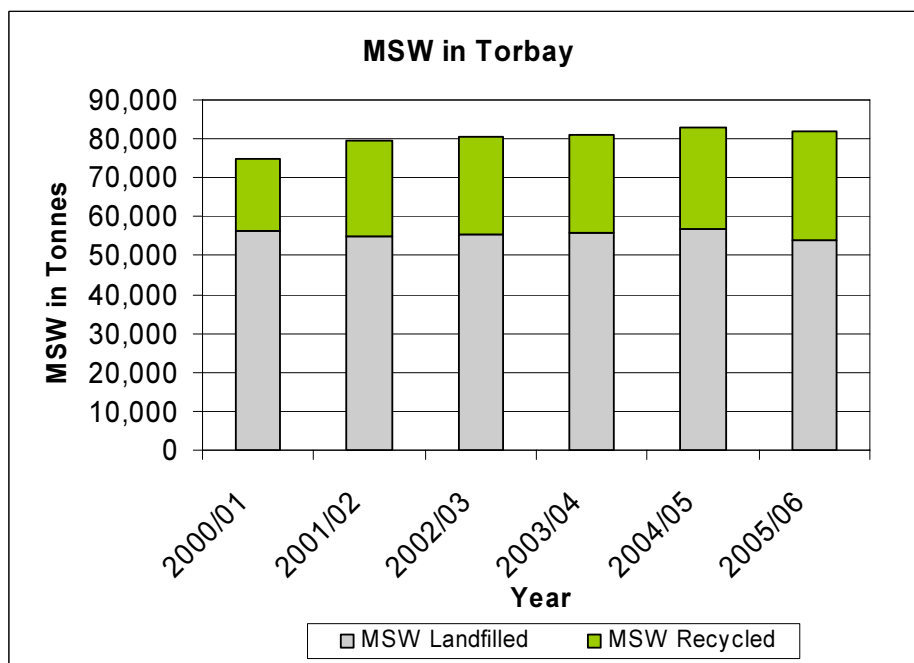
Year	Home Compost Bins and Wormeries Sold (Cumulative Total)	*Total Tonnage Processed
2000/01	3531	177
2001/02	3814	191
2002/03	4050	203
2003/04	4548	227
2004/05	4777	239
2005/06	4957	248

(*derived by multiplying units sold (4957) by 0.05 tonnes)

Recycling performance

Municipal solid waste (MSW) recycling

- 7.12 Figure 15 demonstrates that, although the actual tonnage of MSW has increased since 2000/01, the proportion of recycled has increased over the same period bringing the MSW recycling rate to approximately 34% (2005/06).

Figure 15: Municipal solid waste in Torbay

* Data taken from Figure 22

Household waste recycling

7.13 In 2005/06, 88% of dwellings were served by a kerbside collection of one or more recyclables and Torbay recycled 16,261 tonnes of household waste. Source material was collected by a variety of methods including;

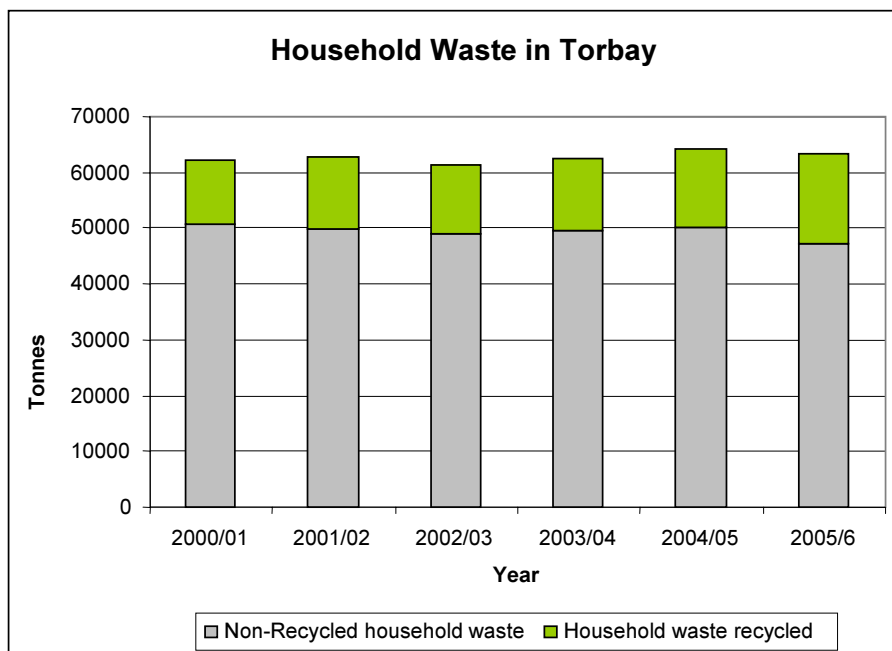
- 5,662 tonnes via kerbside collections,
- 2,900 tonnes from the council's 63 bring sites,
- 7,361 tonnes from the council's Civic Amenity/Recycling site
- 377 tonnes via third party schemes, for example charity shops.

7.14 Torbay's household recycling and composting target is currently set at 30% by 2005 (through the National Waste Strategy 2000). This target has so far not been achieved. **In 2005/06 household recycling and composting rate was 25.6%.**

7.15 **Torbay's new recycling targets (through the Waste Strategy for England 2007) are 40% household recycling and composting by 2010, 45% by 2015 and 50% by 2020. These will not be achieved without significant investment in new recycling infrastructure.**

7.16 Despite the fact that Torbay has not met its recycling target, Torbay's recycling rate has shown a long term increase (see Figure 16) and Torbay is ranked in the top quarter of all English unitary authorities in terms of household waste recycled (see BVPI 82a Figure 10).

Figure 16: Household waste recycling



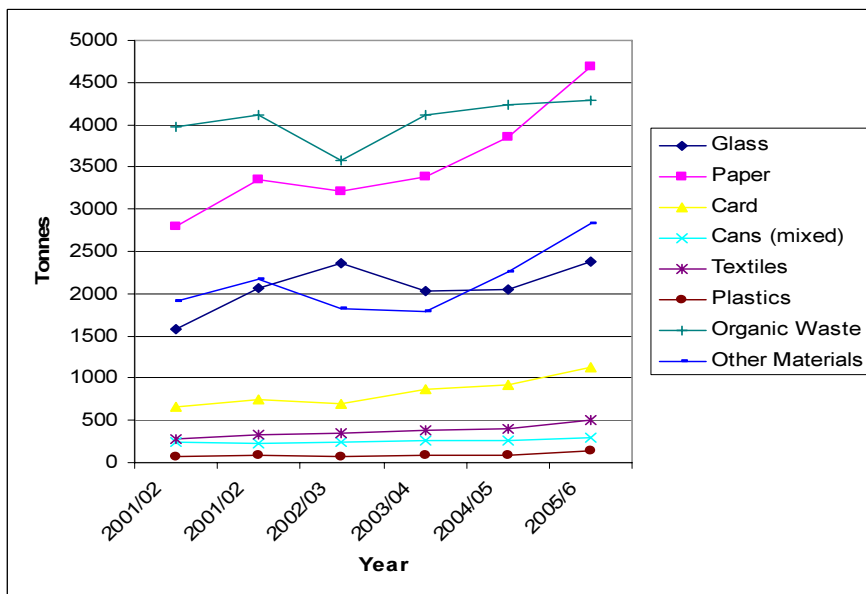
	Non-Recycled Household Waste	Household Waste Recycled	Household Waste Arising	Household Recycling Rate
2000/01	50779	11489	62268	18.45%
2001/02	49735	13094	62829	20.84%
2002/03	49034	12340	61374	20.11%
2003/04	49570	12934	62504	20.69%
2004/05	50081	14055	64136	21.91%
2005/6	47224	16261	63485	25.61%

7.17 The range of recycled material collected for household recycling is demonstrated in Figure 18.

Household recycling materials analysis

7.18 An analysis of the materials Torbay currently recycles shows that the tonnage recycled for these materials has increased. However, glass and organic waste have shown the largest fluctuations. For organic waste this is most likely due to weather changes which impact the amount of garden waste collected. The story is more complicated for glass, where a move nationally towards plastic bottles instead of glass, is thought to be a contributing factor, as is the introduction of kerbside collected glass in those areas not on the twin bin scheme.

Figure 17: Household recycling analysis



Materials for recycling	2000/01	2001/02	2002/03	2003/04	2004/05	2005/6
GLASS	1573	2073	2370	2032	2053	2386
PAPER	2787	3343	3215	3390	3853	4680
CARD	661	748	699	867	920	1125
CANS (mixed)	245	230	245	257	254	290
TEXTILES	272	337	340	390	396	506
PLASTICS	70	85	74	88	87	141
ORGANIC WASTE (composted)	3977	4110	3583	4122	4237	4296
OTHER	1904	2169	1816	1789	2255	2837
TOTAL HOUSEHOLD WASTES RECYCLED / COMPOSETED	11489	13094	12340	12934	14055	16261
TOTAL NON RECYCLED HOUSEHOLD WASTE	50779	49735	49034	49570	50081	47224
TOTAL HOUSEHOLD WASTE ARISING	62268	62829	61374	62504	64136	63485
HOUSEHOLD WASTE RECYCLED / COMPOSETED RATE	18.45%	20.84%	20.11%	20.69%	21.91%	25.61%

7.19 A summary of materials that can be recycled in Torbay is provided in the table below (see Figure 18)

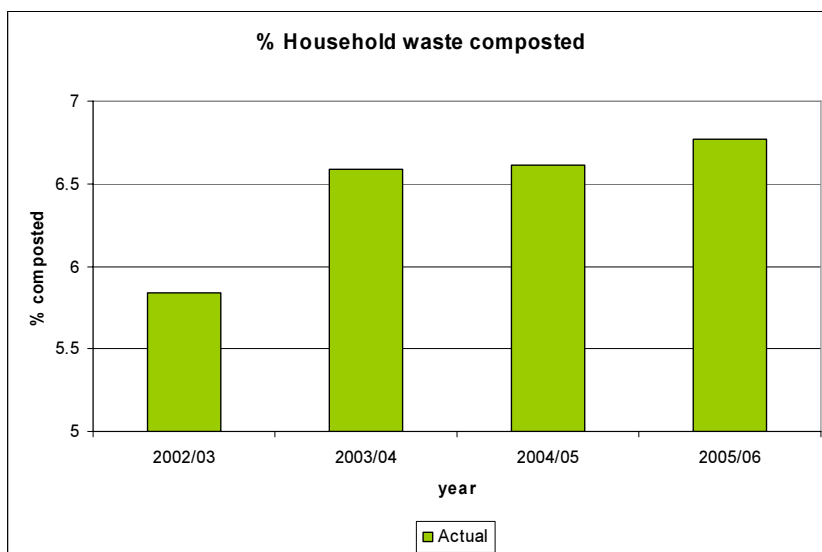
Figure 18: materials recycled in Torbay

Material	Recycled in Torbay	Can be recycled but not currently in Torbay
Telephone Directories	√	
Yellow Pages	√	
Steel Cans	√	
Aluminium Cans & Foil	√	
Newspapers and Magazines	√	
Plastic Bottles (HDPE & PET)	√	
Cooking Oil	√	
Engine Oil	√	
Cardboard	√	
Garden Waste	√	
Textiles	√	
Car Batteries (lead acid)	√	
Household batteries		√
Plastic (PVC, LDPE, PP,PS)		√
Food Waste		√
Mobile Phones		√
Toner cartridges		√

Composting performance

7.20 Despite the fact that Torbay’s composting figures are below both the national and unitary authority median value, the composting trends demonstrated in Figure 19 show that the trend has been towards a steady increase in composting since 2003. This figure includes all garden waste brought to the CA site and garden waste collected from householders through Torbay’s bulky household collection service.

Figure 19: Household waste composted



Year	Actual (Tonnes)	Best Value Target (Tonnes)	Performance
2002/03	7	5.84	No Data
2003/04	6.42	6.59	On Target
2004/05	7	6.61	On Target
2005/06	7	6.77	On Target

Recovery performance

- 7.21 Recovery from waste includes recycling, composting and energy recovery.
- 7.22 Energy is recovered from a small amount of Torbay's clinical waste which is disposed of at the Derriford Hospital incinerator in Plymouth. There is no historical data to demonstrate a trend but initial figures for the first half of 2006/07 indicate an approximate average of 0.0065% of household waste is used for energy recovery. This figure is too small to make an impact on recovery targets.
- 7.23 Torbay's MSW Recovery rate²¹ has, therefore, been derived from the recycling and composting rate for MSW of 34% (2005/06). **The target of 40% (Waste Strategy 2000) for this year has so far not been achieved.**
- 7.24 Targets for recovery (Waste Strategy for England 2007) have been set at 53% of municipal waste by 2010, 67% by 2015 and 75% by 2020. **Torbay will not achieve these targets without fundamental changes to waste management practices and significant investment in waste infrastructure.**

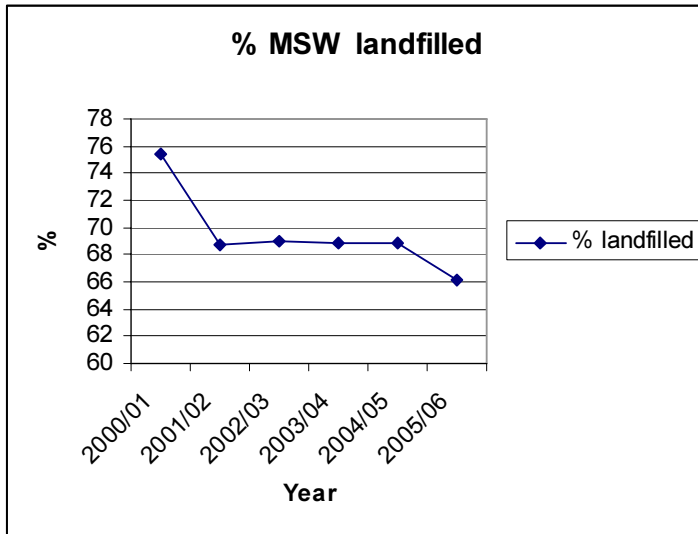
Disposal performance

MSW Sent to landfill

- 7.25 In 2005/06, 66% (54,091 tonnes) of MSW was sent to landfill. The percentage of MSW sent to landfill has decreased by almost 10% since 2000/01 (see Figure 20 below). However this will not be enough to achieve the LATS targets for diversion of biodegradable MSW from landfill as described in sections 3.6 and 3.7 and demonstrated in Figure 6. Therefore a radical change in the way Torbay disposes of its waste will be required.

²¹ As set by Municipal Waste Management Strategy 2000

Figure 20: % municipal solid waste sent to landfill

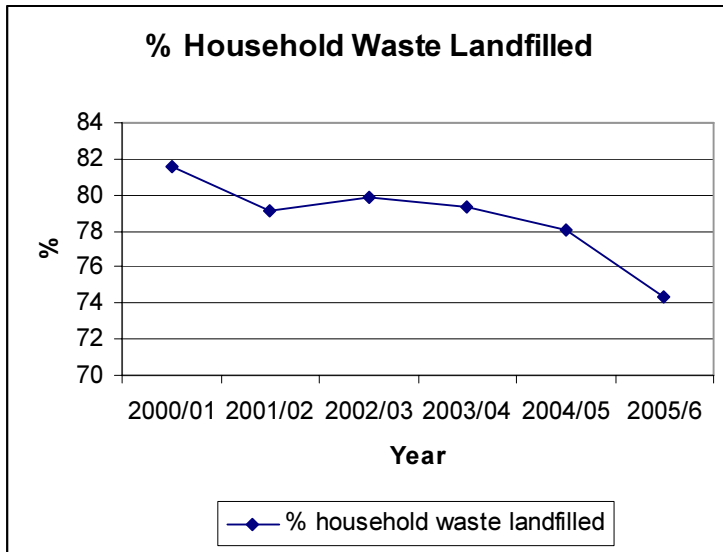


Year	MSW Landfilled (tonnes)	MSW Recycled (tonnes)	MSW Arising (tonnes)	% MSW landfilled
2000/01	56,371	18,385	74,756	75.41
2001/02	54,823	24,941	79,764	68.73
2002/03	55,609	24,915	80,524	69.06
2003/04	55,944	25,278	81,222	68.88
2004/05	56,997	25,803	82,800	68.84
2005/06	54,091	27,708	81,799	66.13

Household waste sent to landfill

7.26 All of Torbay’s household waste that is not re-used, recycled or composted is sent to landfill. Despite a reduction in waste sent to landfill since 2000/01, in 2005/06 74.39% of household waste was still disposed of in this way.

Figure 21: % household waste sent to landfill



Year	Household Waste landfilled (tonnes)	Household Waste Recycled (tonnes)	Household Waste Arising (tonnes)	% Household Waste Landfilled
2000/01	50779.00	11489	62268.00	81.55
2001/02	49735.00	13094	62829.00	79.16
2002/03	49034.00	12340	61374.00	79.89
2003/04	49570.00	12934	62504.00	79.31
2004/05	50081.00	14055	64136.00	78.09
2005/6	47224.00	16261	63485.00	74.39

8 Waste data flow information

- 8.1 The table below shows waste data flow information for Torbay from 2000/01 to 2005/06. The growth in MSW between 2000/01 and 2001/02 is due to the inclusion of waste from the Claylands site being included for the first time.
- 8.2 Additionally a restriction placed on the use of the CA/RC site by lorries and vans meant that civic amenity waste reduced between 2004/05 and 2005/06 leading to an overall fall in MSW between these years

Figure 22: Composition of Waste in Torbay

DEFRA Municipal Waste Survey	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
Description	Tonnage	Tonnage	Tonnage	Tonnage	Tonnage	Tonnage
Collection round household (bin) waste	35434	34665	36267	37,150	37,616	36,060
Other collected household waste	2159	1996	2606	2,465	2,612	2,788
Hazardous Waste						45
Civic amenity waste	13206	12089	10185	9,998	9,868	8,490
Collected non-household waste	5572	6073	6551	6,331	6,901	6,708
Non Recycled Total (B1)	56,371	54,823	55,609	55,944	56,997	54,091
Paper	2063	2352	2368	2,285	2,754	3,979
Card	472	576	506	645	707	903
Mixed Cans	243	193	213	257	254	290
Textiles	2	0	4	21		0
Plastics	70	85	74	88	87	141
Glass - Mixed					2	308
Kerbside Recyclables (C1)	2,850	3,206	3,165	3,296	3,803	5,622
Glass - Mixed	1573	2073	2371	2,032	2,075	2,088
Paper Banks	681	742	711	936	912	670
Paper Third Parties	42	249	136	168	165	30
Paper Commercial	30	56	20	72	54	51
Paper (Yellow Pages)	37	0	47	23	50	0
Household Card	189	171	193	222	213	216
Card Commercial	1690	1703	1607	1,536	861	831
Scrap metal & white goods - Electrical goods	1346	1321	949	847	908	996
Commercial Mixed Metals	401	21	277	331	260	343
Textile Banks	142	133	130	144	173	168
Household Textiles	10	15	16	7	6	6
Third Parties Textiles	117	189	187	218	225	331
Oil (1000 litres = 0.9 tonnes)	18	22	21	10	11	18
Household Waste for composting	3977	4110	3583	4,122	4,237	4,296
Commercial Green Composted	405	341	338	402	421	467
Seaweed Composted	1200	1176	1475	1,097	1,725	2,235
Household Wood (not for composting)	561	810	625	704	1,059	1,601
Commercial Wood (not for composting)	663	759	888	805	794	677
Household Fridges	0	0	0	0	188	222
Trade Fridges	0	0	0	0	7	11
Rubble @ Claylands	0	4629	6466	6,512	5,769	5,216
Rubble/DIY	2453	3215	1710	1,794	1,886	1,611
Bring (drop off) recycling & composting total (C2)	15,535	21,735	21,750	21,982	22,000	22,086
(a) Total MSW (B +C1+C2)	74,756	79,764	80,524	81,222	82,800	81,799
Municipal Solid Waste Growth	0.10	6.70	0.95	0.87	1.94	-1.21
Total Household Waste	62,324	61,791	61,192	62,324	64,268	63,648
Household waste growth		-0.85	-0.96	1.85	3.12	-0.96

Figures shaded contribute to household waste.

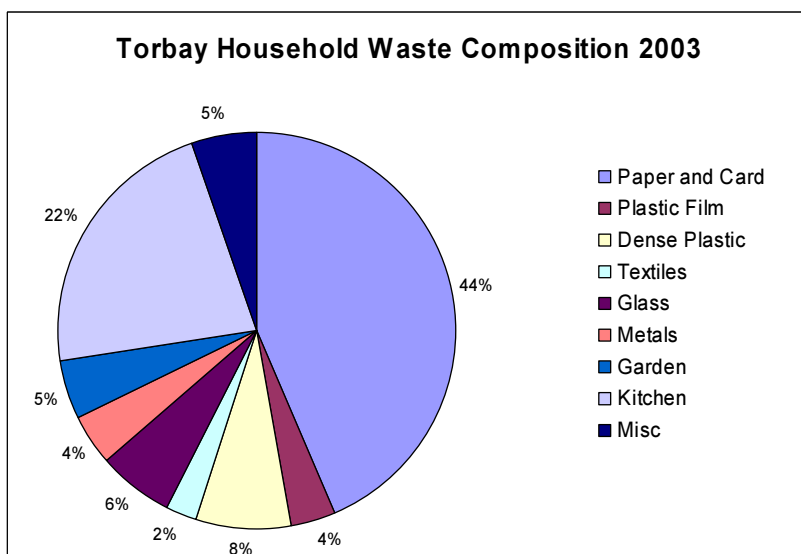
9 Kerbside waste analysis

- 9.1 In June 2003 Torbay Council with MEL consultants undertook a waste analysis to examine the content of Torbay's recycling and residual waste bins. This was to enable Torbay to target improvements in recycling. A second waste audit is currently underway organised through the Devon Authorities Waste Reduction and Recycling Committee (DAWRRC), which will give more accurate figures over a calendar year for 2007.
- 9.2 Full details of the 2003 survey are available on the Torbay Council Website²². The following provides a brief summary of that analysis.

What's in the bin?

- 9.3 The results demonstrate that a large proportion of residents' waste consists of paper and card (44%). This supports Torbay's focus on paper and card as the prime targets for recycling collection in harder to reach areas such as flats.
- 9.4 The second highest constituent is kitchen waste (22%). The data demonstrates that there is a potential to capture 6,000 tonnes of kitchen waste through kerbside collection, taking into account that only two thirds of residents are on the twin bin scheme.

Figure 23: Household waste composition (based on 2003 survey results)



Torbay average residual waste and recycling June 2003

- 9.5 In June, on average Torbay households disposed of 5kg/hh/wk of residual waste. Of this 0.7kg or 15% was made up of potentially recyclable material.
- 9.6 The majority of the weight of waste was putrescible, particularly non-compostable kitchen waste. Figures for garden waste and kitchen compostable waste were

²² <http://www.torbay.gov.uk/household-waste-study-kerbside-collected.pdf>

found to be very low suggesting these materials are being removed perhaps for home composting.

- 9.7 The majority of the dense plastic remaining in the residual waste came from packaging such as yoghurt pots.
- 9.8 Of some surprise was the low figure for glass which suggests like the compostable waste that this material is being recycled elsewhere.

Recycling

- 9.9 In June, on average Torbay households recycled 4kg per week of material. Of this 0.6kg or 16% was made up of contaminants i.e. materials that are not included in the kerbside recycling scheme.
- 9.10 Materials capture rates within Torbay are demonstrated below in Figure 24.

Figure 24: Materials capture rates

Participation rate in the kerbside recycling scheme	84%
Total materials diversion rate	37%
Paper and card capture rate	87%
Plastic capture rate	81%
Textiles capture rate	47%
Ferrous metal capture rate	65%
Non ferrous metals capture rate	51%

- 9.11 The majority of the weight of the material recycled was paper and card, particularly newspapers. This is also where the majority of the contaminants were – non recyclable paper.
- 9.12 The second significant weight came from dense plastic packaging which, like paper and card showed a good capture rate. The figures for textiles may be low as not all of this material may have been reusable; this has not been taken in to account. Future analyses will need to make a distinction between what can be recycled and rags.
- 9.13 Figure 25 below shows the average residual waste composition and generation for Torbay. Figure 26 shows the average recycling composition and generation figures. Figure 27 combines the two sets of data. The figures show that under the current recycling scheme 45% of the total material could be diverted. Torbay is currently diverting 37% of kerbside collected materials only 8% behind the total potential.

Figure 25 Household residual waste composition and generation rates June 2003

		Average residual waste bin - June			
Primary category	Sub-category	Concentration %		kg/hh/wk	
Paper and card	Newspapers	3.71	15.21	0.18	0.74
	Magazines	1.27		0.06	
	Directories and catalogues	0.36		0.02	
	Yellow pages	0.56		0.03	
	Other recyclable paper	0.84		0.04	
	Non-recyclable paper	5.32		0.26	
	Non-recyclable liquid cartons	0.43		0.02	
	Corrugated cardboard	0.57		0.03	
	Other card and paper packaging	2.14		0.10	
	Other card	0.00		0.00	
	Books	0.00		0.00	
Plastic Film	Refuse sacks	0.88	4.75	0.04	0.23
	Packaging film/carrier bags	3.87		0.19	
	Other Film	0.01		0.00	
Dense Plastic	PET bottles	0.43	6.19	0.02	0.30
	HDPE bottles	0.61		0.03	
	PVC bottles	0.15		0.01	
	LDPE bottles	0.00		0.00	
	PP bottles	0.00		0.00	
	Polystyrene	0.20		0.01	
	Other packaging	2.78		0.14	
	Other dense plastic	2.02		0.10	
Textiles	Natural fibres	0.92	2.27	0.04	0.11
	Man-made fibres	1.35		0.07	
Misc. Combustible	Shoes	0.50	5.44	0.02	0.27
	Disposable nappies/sanitary	2.73		0.13	
	Wood	0.95		0.05	
	Wood and cork packaging	0.01		0.00	
	Carpet and underlay	1.00		0.05	
	Unclassified	0.26		0.01	
Misc. non-	Ceramics	1.82	2.65	0.09	0.13
	Hardcore	0.37		0.02	
	Unclassified	0.46		0.02	
Glass	Clear bottles and jars	4.98	10.10	0.24	0.49
	Green bottles and jars	3.93		0.19	
	Brown bottles and jars	0.81		0.04	
	Other glass	0.38		0.02	
Ferrous metal	Food cans	1.15	1.89	0.06	0.09
	Beverage cans	0.04		0.00	
	Aerosols	0.41		0.02	
	Batteries	0.07		0.00	
	Other ferrous packaging	0.00		0.00	
	Other ferrous	0.22		0.01	
Non-ferrous metal	Food cans	0.01	0.97	0.00	0.05
	Beverage cans	0.36		0.02	
	Aerosols	0.10		0.00	
	Aluminium foil	0.43		0.02	
	Other non-ferrous packaging	0.03		0.00	
	Other non-ferrous	0.05		0.00	
Putrescibles	Garden waste	7.80	48.69	0.38	2.38
	Kitchen compostable/vase flowers	14.41		0.70	
	Kitchen non-compostable	23.25		1.14	
	Unidentified	3.23		0.16	
Fines	Particles passing a 10mm screen.	1.47	1.47	0.07	0.07
WEEE	Separately listed	0.00	0.00	0.00	0.00
Hazardous	Separately listed	0.38	0.38	0.02	0.02
Total		100.00	100.00	4.88	4.88
Total potentially recyclable		15.20		0.74	

Figure 26: Household recycling composition and generation rates June 2003

Primary category	Sub-category	Average recycling bin - June			
		Concentration %		kg/hh/wk	
Paper and card	Newspapers	29.97	76.49	1.14	2.91
	Magazines	11.13		0.42	
	Directories and catalogues	3.99		0.15	
	Yellow pages	0.51		0.02	
	Other recyclable paper	6.18		0.24	
	Non-recyclable paper	4.92		0.19	
	Non-recyclable liquid cartons	0.44		0.02	
	Corrugated cardboard	9.43		0.36	
	Other card and paper packaging	8.80		0.34	
	Other card	0.26		0.01	
	Books	0.85		0.03	
Plastic Film	Refuse sacks	0.03	2.11	0.00	0.08
	Packaging film/carrier bags	1.90		0.07	
	Other Film	0.17		0.01	
Dense Plastic	PET bottles	2.87	9.47	0.11	0.36
	HDPE bottles	2.72		0.10	
	PVC bottles	0.07		0.00	
	LDPE bottles	0.04		0.00	
	PP bottles	0.02		0.00	
	Polystyrene	0.24		0.01	
	Other packaging	2.31		0.09	
	Other dense plastic	1.20		0.05	
Textiles	Natural fibres	1.69	2.69	0.06	0.10
	Man-made fibres	1.00		0.04	
Misc. Combustible	Shoes	0.46	1.22	0.02	0.05
	Disposable nappies/sanitary	0.23		0.01	
	Wood	0.50		0.02	
	Wood and cork packaging	0.00		0.00	
	Carpet and underlay	0.02		0.00	
	Unclassified	0.01		0.00	
Misc. non-	Ceramics	0.16	0.17	0.01	0.01
	Hardcore	0.00		0.00	
	Unclassified	0.00		0.00	
Glass	Clear bottles and jars	0.21	0.31	0.01	0.01
	Green bottles and jars	0.00		0.00	
	Brown bottles and jars	0.00		0.00	
	Other glass	0.10		0.00	
Ferrous metal	Food cans	3.29	4.38	0.13	0.17
	Beverage cans	0.50		0.02	
	Aerosols	0.09		0.00	
	Batteries	0.01		0.00	
	Other ferrous packaging	0.00		0.00	
	Other ferrous	0.49		0.02	
Non-ferrous metal	Food cans	0.02	1.19	0.00	0.05
	Beverage cans	1.01		0.04	
	Aerosols	0.04		0.00	
	Aluminium foil	0.10		0.00	
	Other non-ferrous packaging	0.00		0.00	
	Other non-ferrous	0.01		0.00	
Putrescibles	Garden waste	0.70	1.14	0.03	0.04
	Kitchen compostable/vase flowers	0.36		0.01	
	Kitchen non-compostable	0.07		0.00	
	Unidentified	0.00		0.00	
Fines	Particles passing a 10mm screen.	0.83	0.83	0.03	0.03
WEEE	Separately listed	0.01	0.01	0.00	0.00
Hazardous	Separately listed	0.00	0.00	0.00	0.00
Total		100.00	100.00	3.81	3.81
Total contamination		16.43		0.63	

**Figure 27: Household residual waste and recycling composition and generation rates
June 2003**

		Both wheeled bins - June			
Primary category	Sub-category	Concentration %		kg/hh/wk	
Paper and card	Newspapers	15.21	42.06	1.32	3.66
	Magazines	5.59		0.49	
	Directories and catalogues	1.95		0.17	
	Yellow pages	0.54		0.05	
	Other recyclable paper	3.18		0.28	
	Non-recyclable paper	5.14		0.45	
	Non-recyclable liquid cartons	0.43		0.04	
	Corrugated cardboard	4.45		0.39	
	Other card and paper packaging	5.06		0.44	
	Other card	0.12		0.01	
	Books	0.38		0.03	
Plastic Film	Refuse sacks	0.51	3.60	0.04	0.31
	Packaging film/carrier bags	3.01		0.26	
	Other Film	0.08		0.01	
Dense Plastic	PET bottles	1.50	7.63	0.13	0.66
	HDPE bottles	1.53		0.13	
	PVC bottles	0.12		0.01	
	LDPE bottles	0.02		0.00	
	PP bottles	0.01		0.00	
	Polystyrene	0.22		0.02	
	Other packaging	2.57		0.22	
	Other dense plastic	1.66		0.14	
Textiles	Natural fibres	1.26	2.46	0.11	0.21
	Man-made fibres	1.20		0.10	
Misc. Combustible	Shoes	0.48	3.59	0.04	0.31
	Disposable nappies/sanitary	1.63		0.14	
	Wood	0.75		0.07	
	Wood and cork packaging	0.00		0.00	
	Carpet and underlay	0.58		0.05	
	Unclassified	0.15		0.01	
Misc. non-combustible	Ceramics	1.09	1.56	0.10	0.14
	Hardcore	0.21		0.02	
	Unclassified	0.26		0.02	
Glass	Clear bottles and jars	2.89	5.81	0.25	0.50
	Green bottles and jars	2.21		0.19	
	Brown bottles and jars	0.45		0.04	
	Other glass	0.26		0.02	
Ferrous metal	Food cans	2.09	2.98	0.18	0.26
	Beverage cans	0.24		0.02	
	Aerosols	0.27		0.02	
	Batteries	0.04		0.00	
	Other ferrous packaging	0.00		0.00	
	Other ferrous	0.34		0.03	
Non-ferrous metal	Food cans	0.01	1.06	0.00	0.09
	Beverage cans	0.64		0.06	
	Aerosols	0.07		0.01	
	Aluminium foil	0.29		0.02	
	Other non-ferrous packaging	0.01		0.00	
Putrescibles	Garden waste	4.69	27.85	0.41	2.42
	Kitchen compostable/vase flowers	8.25		0.72	
	Kitchen non-compostable	13.09		1.14	
	Unidentified	1.82		0.16	
Fines	Particles passing a 10mm screen.	1.19	1.19	0.10	0.10
WEEE	Separately listed	0.00	0.00	0.00	0.00
Hazardous	Separately listed	0.21	0.21	0.02	0.02
Total		100.00	100.00	8.69	8.69
Potentially recyclable material		45.16		3.92	

10 Contractual arrangements

Refuse collection

10.1 Refuse collection is carried out under the provisions of a Service Level Agreement (SLA) between Torbay Council and Direct Services and Waste. The current SLA was due to expire at the end of 2004/05 but has continued pending possible changes to this arrangement. This agreement encourages both parties to work together in order to achieve a cost effective and high standard service within the limitation of the council's budget in order to demonstrate the principles of Best Value.

The main provisions are as follows²³:

- To provide and undertake a weekly household waste collection service to all domestic dwellings within the Torbay area, with special arrangements at Christmas and Bank Holidays. This service is to include the collection of prescribed household wastes in accordance with council policy, i.e. waste from composite hereditaments (buildings used for both commercial and residential purposes).
- To supply and implement a twin bin and or other recycling systems to all domestic dwellings where practical and financially viable.
- to provide a sack/dustbin collection service where twin bin or wheeled bins cannot be used
- To provide a separate household 'bulky' items collection service (to include household garden waste) at a reasonable cost that will ensure the service is self-financing but non profit making. Maintain and update a record of all such collections undertaken
- To procure, provide and distribute all containers that are required for the containment of household refuse. These to include stocks of new-wheeled bins as required, to the agreed specification. Stock levels to be maintained at workable levels
- To provide a confidential separate household clinical waste collections service direct to the public upon request, including supply of all containers and operating to health and safety requirements at all times. Dispose of the clinical waste via an acceptable disposal method. Maintain and update records of all such collections and disposals
- To provide help to the disabled or infirm in the form of assisted refuse collections. Receive and process applications from householders requiring the service, making site visits where necessary. Maintain, up-date and periodically review a list of households that receive the service
- To operate an exchange and replacement bin/bag service as required and maintain for redistribution where possible.

²³ Refuse Collection – Service Level Agreement Between Torbay Council's Community and Contract Services Divisions (Torbay Council)

Other service requirements are:

- To empty wheeled bins / other approved receptacles from the kerbside or collection point and to return to that location.
- To process 'missed bin' reports and action accordingly for both the twin bin and traditional collection systems. This will include assessing the validity of reports and when substantiated, to collect the missed collection within one working day or sooner where possible. To investigate and reduce the incidence of those properties that experience repeated missed collections.
- To receive and respond to other public enquiries and complaints in connection with the refuse collection service. This includes maintaining a 'free phone' telephone enquiry service and also the processing of written responses where necessary in line with corporate policy. Design, create and distribute recycling information leaflets to be utilised as and when necessary with regard to public education.
- To further implement the 'front edge of curtilage' recycle service wherever possible in-line with council policy and budgetary availability. Survey new properties to assess their suitability to receive twin bins in liaison with Torbay Development Planning Department and developers.
- To create, maintain and update a register of dwellings forming 'composite hereditaments' (buildings used for both residential and commercial purposes) and provide an enquiry facility to answer telephone, written and personal enquiries in connection with the collection of household waste from such properties.
- To provide and undertake a commercial waste collection service on a reasonable charge basis to those businesses who so request such a service.
- To limit the degree of 'trade' abuse from the commercial side of composite properties and of general trade abuse in order to reduce domestic waste disposal costs.
- Meet regularly with Community Services to review performance. Adopt an open book attitude to all financial matters and agree operational changes that need to take place within the limitations of budget.

10.2 The following responsibilities have been added to the contract provisions to further develop the refuse collection and recycling service to increase the amount of materials recycled and to meet Government targets.

- Survey all properties in areas not considered suitable for twin bin scheme and convert to 're-usable seagull proof bags' wherever practicable.
- Conduct trials of differing collection methods.
- Set up a trial in these same areas of a separate collection of newspapers, magazines and junk mail and consider other materials for separate collection in the future. The properties concerned to be supplied with the necessary containers, instructions on their use and frequency of collections. This collection is likely to be fortnightly from the front curtilage of properties.

10.3 The following responsibilities were added in 2003.

- To inform all business producers of waste of their responsibilities under the law by representative visits or by telephone and leaflets.

- To assist in the process of evidence gathering, where waste is not properly managed, in order that spot fines/legal action may be issued or undertaken by the council.
- Carry out inspections under the requirements of BVPI 199 (street cleansing) three times per year.
- To inform those household residents when their waste escapes their control of their responsibilities by visit, leaflet and letter, retaining evidence for future reference where necessary and assisting in the process of issuing spot fines or other legal process that may be undertaken by the council.

Street cleansing

10.4 The Street Cleansing Service is currently provided in-house for Torbay Council by Direct Services and Waste. The service is provided under the provisions of a service level contract relating to street cleanliness (including surface car parks). In addition there are separate contracts concerning beach cleaning, dog bin emptying and multi-storey car park cleaning. The main contract provisions are as follows and are provided within the budgets and prioritisation agreed with the Community Services Directorate in line with the published priorities of Torbay Council.

- To clean all adopted highways, car parks, shopping precincts and associated highway features to EPA Grade 'A' via hand or mechanical means.
- To empty street litter bins on a programmed basis, collect and dispose of fly tipped materials, wash pavement in highway areas and remove chewing gum from pavements, clean elements of street signage and remove hypodermic syringes from public and private property.
- To apply a frequency of cleaning for each location in accordance with the agreement.
- To provide a rapid response service to deal with degradation in standards and hazards on the highway.
- To respond to reported reductions in cleanliness standards within the timescales laid down under the Environmental Protection Act (EPA) 1990.
- To clear sand and tidal debris from the highway after storms or high tides.
- To clear leaves from the highway and highways verges during the autumn.
- To collect and dispose of dead animals and birds on the highway or in open spaces.
- To deal direct with public complaints and service enquiries, keep records of these including incidence of fly tipping and discarded hypodermic needles. Keep and maintain incident log for statistical purpose.
- To provide out of hours emergency service and message taking service via Aspen Way control.
- To meet regularly with Community Services to review performance. Adopt an open book attitude to all financial matters and agree operational changes that need to take place within the limitations of budget.

Waste disposal

- 10.5 Waste disposal is carried out under the provision of a contract between Torbay Council and Viridor Waste Management Limited. Torbay's residual waste is sent to landfill at Viridor's Heathfield Landfill Site. Discussions are ongoing between Torbay Council and Viridor for the extension of the contract and currently there is an agreement for the contract to be continued from 1 January 2005 on a six-month rolling contract basis.

B. Technology Report

11 Waste treatment technologies

11.1 This chapter reviews the technologies which are under consideration for treating Torbay's waste. These are generally regarded as 'new technologies', except for energy from waste via incineration which has long been established for treating municipal solid waste (MSW). The technologies reviewed in this section can be broadly separated into three categories: biological, thermal oxidation and physical processing.

Biological

In-vessel composting



Figure 28: Dano Drum In-vessel composter²⁴

How does it work?

11.2 In-vessel composting (IVC) reactors come in a variety of forms and have varying degrees of automation. However, the basis of reactor composting is that materials are enclosed in a drum, silo, or similar structure (Figure 28) and air is injected into the composting material to maintain the optimum conditions for composting.

11.3 Reactor or enclosed composting allows much greater control over the process and this helps with the consistency (hence quality) of the compost product and allows food waste to be processed safely into an agricultural soil conditioner. The process is shown in Figure 29 below.

²⁴ Courtesy of the Waste Information Network (WIN): David Greenfield

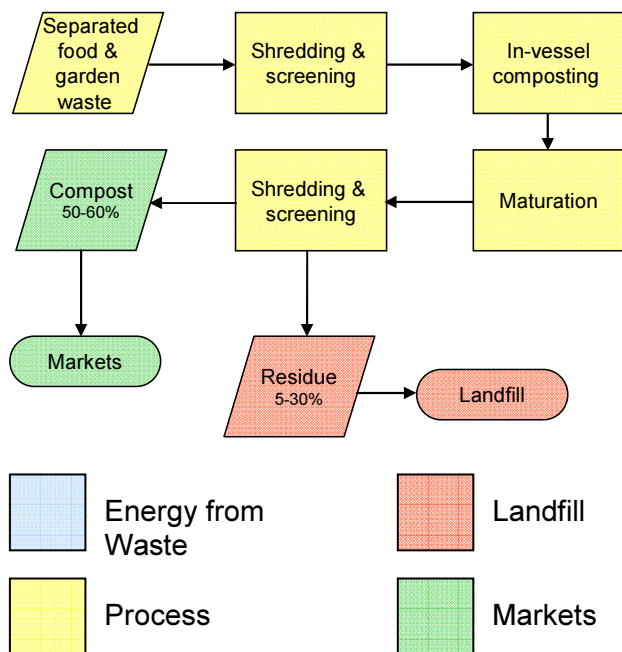


Figure 29: The IVC Process

Suitability for Torbay

- 11.4 Based on national and local waste surveys, it is estimated that Torbay could potentially collect approximately 8,000 to 12,000 tonnes of food and garden waste from the kerbside to go into an IVC. These calculations will be confirmed by a second waste survey within Torbay taking place throughout 2007 (to account for seasonal variations).
- 11.5 IVC facilities typically compost around 30,000 tonnes per annum. There are smaller enclosed IVC vessels available for around 8,000 tonnes (as shown in Figure 29 above), which would be more suitable for Torbay, although most of these are still in the experimental stage of development.
- 11.6 An IVC would not dispose of Torbay's waste. It could, however, be used as part of a wider integrated waste strategy, as a method of increasing recycling targets and diverting biodegradable waste from landfill. Markets would need to be found for the compost material produced through IVC.
- 11.7 An IVC facility would require Torbay Council to develop a kerbside collection system for kitchen waste and could include specified garden waste and cardboard. This collection system would require a major capital investment.
- 11.8 The In-vessel Composting facility at Heathfield, Newton Abbot, has been developed by Viridor in partnership with Devon County Council, Teignbridge District Council and South Hams District Council (and was funded by Defra). This plant currently has no spare capacity to take food and garden waste from Torbay.

Anaerobic digestion



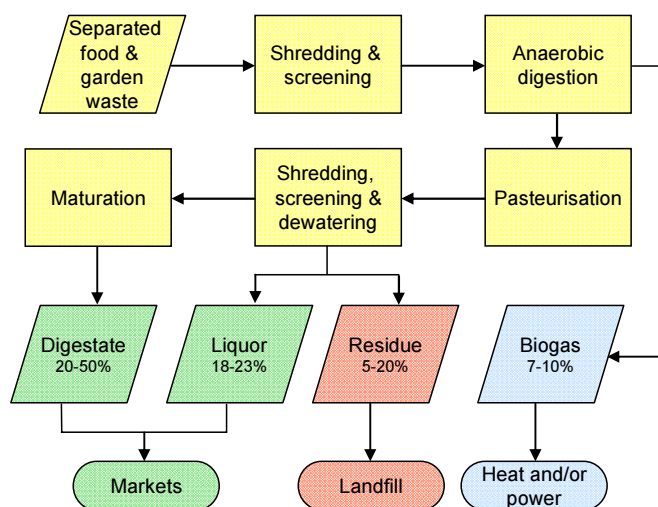
Figure 30: Anaerobic digester²⁵

How does it work?

11.9 Anaerobic digestion (AD) is similar to composting but is performed in the absence of air. The main products from this process are a solid residue similar to compost called digestate, biogas (a mixture of methane and carbon dioxide) and a liquid fraction containing water and nutrients. An anaerobic digester can be set up to accommodate mixed municipal solid waste in a mechanical biological treatment plant (see section 11.15 below), or for kerbside separated waste.

11.10 The biogas can be used to generate electricity, but it is more efficient to generate heat for combined heat and power (CHP). Anaerobic digestion plants come in varied sizes but usually process around 100,000 tones per annum and are relatively unproven in the UK. The process is described below in Figure 31.

Figure 31: The AD Process



²⁵ Courtesy of Enviro Consulting

Suitability for Torbay

- 11.11 Anaerobic digestion using kerbside separated kitchen and garden waste would require major capital investment in a new Kerbside collection system.
- 11.12 Anaerobic digestion usually takes place within large plants, although smaller experimental plants are currently under trial. Torbay has a relatively small amount of MSW (typically 54,000 tonnes per annum).
- 11.13 An AD plant would not dispose of Torbay's waste. It would be a method of diverting biodegradable waste from landfill and recovering energy. Markets or a disposal method would need to be found for the digestate material produced through the AD process. There is currently spare capacity within Devon at Holsworthy anaerobic digestion plant run commercially by AnDigestion.
- 11.14 Due to potential problems with odour and pests, AD plants are usually located away from housing.

Mechanical biological treatment



Figure 32: Recyclable material extraction within the MBT process²⁶

How does it work?

- 11.15 Mechanical Biological Treatment (MBT) treats residual waste using physical and biological processes, there is usually no requirement for Kerbside separation. A typical MBT process is shown in Figure 33, but a combination of the following is usually employed depending on the size and constituents of the waste to be processed:
- Recyclable material extraction (Figure 32); screening and shredding allows as many recyclable materials as possible to be extracted from the waste.
 - MBT can be designed produce a compost-like product suitable for use as low-grade land remediation material. This is due to the presence of plastic and glass

²⁶ Courtesy of Enviro Consulting

contaminants as well as heavy metals from batteries and light bulbs within the waste stream.

- Anaerobic digestion; the residual waste is anaerobically digested to produce methane (for electricity generation of combined heat and power)
- Refuse Derived Fuel (RDF); the end product is processed into RDF either for combustion on – site, or at a separate facility, for example cement kiln.

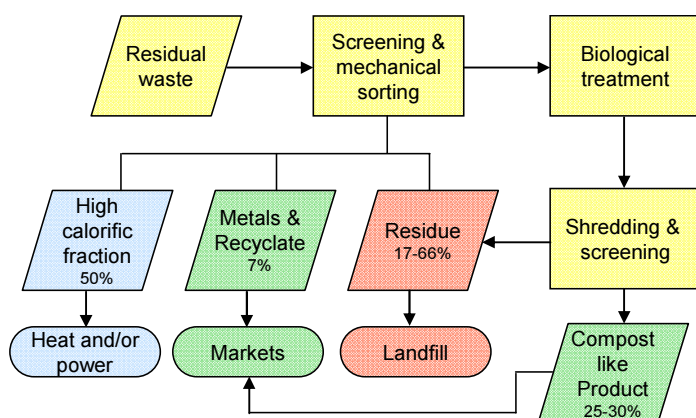


Figure 33: A Typical MBT Process

Suitability for Torbay

- 11.16 MBT is able to take grey bin and black bag waste from households without the need for the separation of kitchen and garden waste at the kerbside. There are potential problems with odour but less so at more modern plants.
- 11.17 The size range is from 20,000 tonnes per annum upwards, although usually larger, and can be adapted to suit a locality. MBT plants can be in modular form and can therefore be as large or small as required.
- 11.18 An MBT plant would not dispose of Torbay's waste. It would be a method of diverting biodegradable waste from landfill. Markets would also need to be found for the residual material produced through the MBT process. These materials could include a compost-like product or a digestate (suitable for low grade land remediation), and a fibre.
- 11.19 In June 2004 initial trials of a very small tonnage (54 tonnes of household residual waste) were conducted at the Canford facility run by New Earth Solutions. The trial showed that Torbay's waste could suit a similar facility, although trials of a much larger nature would need to be undertaken.

Thermal oxidation

Incineration with energy recovery



Figure 34: An incinerator on the Isle of Man²⁷

How does it work?

- 11.20 The burning of municipal waste in an incinerator (Figure 34) is a mature and strictly regulated technology, and is subject to Integrated Pollution Prevention and Control. It is not acceptable under current legislation to incinerate waste without energy recovery under present legislation. Energy recovery can take the form of electricity generation or combined heat and power, for example in a district heating scheme.
- 11.21 During burning the waste is heated quickly to avoid the formation of chemicals such as dioxins. After incineration the emissions need to be cleaned before they can be released.
- 11.22 Incineration typically involves the combustion of unprepared municipal solid waste but can be designed to accept pre prepared waste such as refuse derived fuel (RDF). The waste is moved through the furnace on a moving grate through a 'fluidised bed' of sand or by an oscillating kiln. Typically temperatures are in excess of 850°C and the waste is converted to carbon dioxide and water. Any non-combustible materials (for example glass) remain as solid, known as bottom ash. This bottom ash is typically 20 to 30% of the original volume (Figure 35).

²⁷ Courtesy of the Isle of Man Guide. URL: <http://www.iomguide.com/right-photos.php?2089>

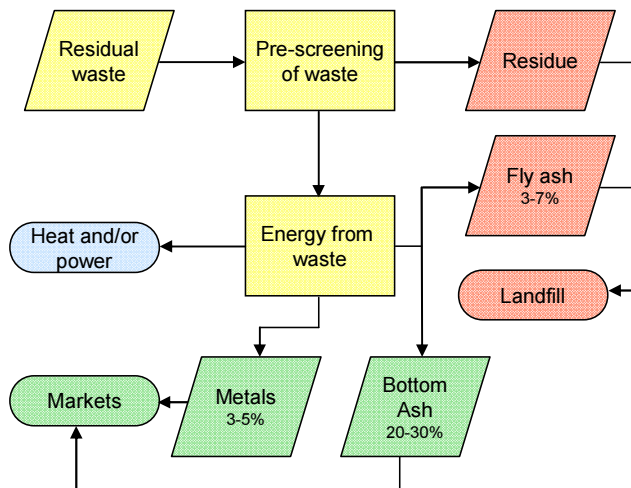


Figure 35: The Incineration Process

Suitability for Torbay

- 11.23 Incineration would completely dispose of Torbay’s biodegradable municipal waste, thereby solving the problem of LATS fines. The final residue would go to landfill but this is much reduced in volume.
- 11.24 Incinerator plants can be located much closer to housing than biological treatment plants as they are less prone to problems of odour and pests.
- 11.25 Typically incinerators are built to accommodate 100,000 tonnes of waste per annum and upwards, due to the benefits of economies of scale. However smaller plants for around 60,000 tonnes are also available, although the costs per tonne of waste processed is much higher in smaller plants.
- 11.26 It is unlikely that the potential combined heat and power (CHP) benefits of energy from waste could be utilised within Torbay as there is little heavy industry, although incinerators can be designed to generate electricity only.

Advanced thermal treatment



Figure 36: Inside an advanced thermal treatment plant²⁸

How does it work?

11.27 Advanced thermal treatment (ATT) is different to incineration in that the emissions are reduced and that rather than combusting the waste, it is subject to heat treatment whilst being deprived of air. The final char or ash which remains is typically only 20 to 30% of the original waste volume. The technology is usually in two forms: gasification and pyrolysis, which can be used separately or in combination.

i. Gasification

11.28 Gasification is the conversion of a solid or liquid feedstock into a gas by partial oxidation under the application of heat. Partial oxidation is achieved by restricting the supply of air. For organic based feedstocks, such as most wastes, the resultant gas is typically a mixture of carbon monoxide, carbon dioxide, hydrogen, methane, water, nitrogen and small amounts of higher hydrocarbons.

11.29 Gasification is not a new technology, although its application to waste feedstocks is still being developed. Coal gasification has been used since the early 1800s to produce town gas and the first four-stroke engine was run on this gas in 1876.

ii. Pyrolysis

11.30 Pyrolysis is thermal degradation of a material in the absence of oxygen, which results in the production of gas, liquid and char (Figure 37). These products can have several uses depending on the nature of the feedstock, however for waste based feedstocks the most likely use is as a fuel for energy generation.

²⁸ Courtesy of Enviro Consulting

11.31 Although regarded as a new technology it is in principle an upgraded method of charcoal manufacture.

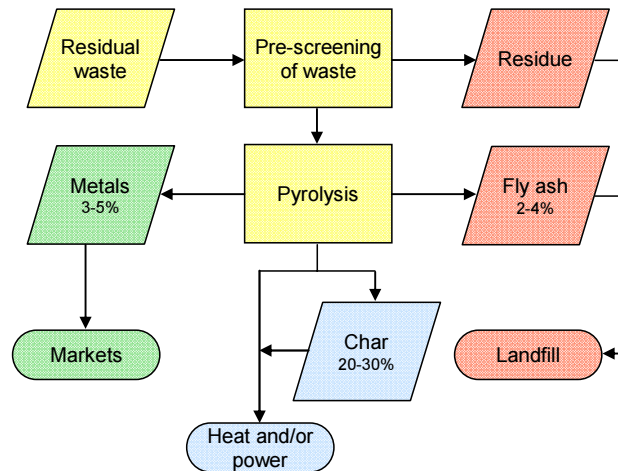


Figure 37: The Pyrolysis Process

Suitability for Torbay

11.32 Advanced thermal treatment would dispose of the majority of Torbay’s biodegradable municipal waste, thereby solving the problems of LATS fines. Waste unsuitable for the ATT process and the final residue would go to landfill but this is much reduced in volume.

11.33 ATT plants can be located much closer to housing than biological treatment plants as they are less prone to problems of odour and pests.

11.34 Typically ATT plants are made up of modular units each accommodating 25,000 to 35,000 tonnes of waste per annum which would suit Torbay.

11.35 It is unlikely that the potential combined heat and power (CHP) benefits of energy from waste could be utilized within Torbay as there is little heavy industry, although ATT plants can be designed to generate electricity only.

Physical

Autoclaving



Figure 38: The product of the autoclaving process²⁹

How does it work?

11.36 After charging with waste, the autoclave drum is sealed and rotation is re-started. Saturated steam at 160°C is injected for approximately 15 minutes. The pressure is maintained for 45 minutes to allow the process to fully cook the waste. The waste volume is reduced by 60%.

11.37 The primary product is a fibre which can be processed into products such as Refuse Derived Fuel. The secondary streams are: mixed plastics, normally softened and deformed; a glass and aggregate stream (this can be clean of both plastic and paper and metals); and a metals stream for recycling which is of high quality (Figure 39).

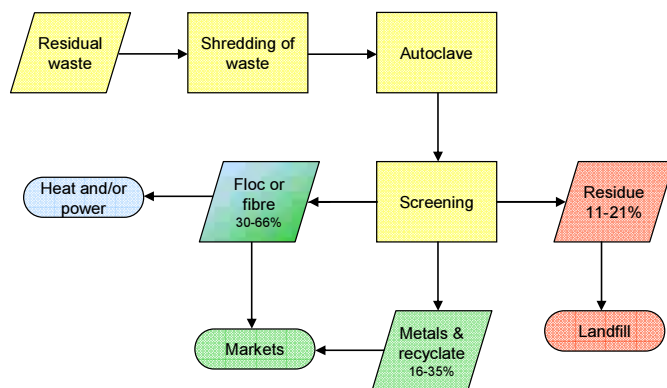


Figure 39: The Autoclave Process

Following the autoclaving process the materials are effectively separated in a Materials Reclamation Facility (MRF). There are three main phases to this process

²⁹ Courtesy of Enviro Consulting

- Waste reception and storage
- Waste feeding and autoclaving
- Materials separation with recyclates recovery

Suitability for Torbay

11.38 Autoclaving is new technology to the UK. The system can be designed to take varying amounts of MSW, although usually around 100,000 tones.

11.39 An autoclave plant would not dispose of Torbay's waste. It would be a method of diverting biodegradable waste from landfill. Markets would also need to be found for the fibrous material produced and for the secondary streams.

11.40 Due to potential problems with odour an autoclave plants would need to be located away from housing.

Additional Information

11.41 For additional regularly updated information concerning specific new Technologies please go to the Environment Agency Website³⁰.

11.42 Figure 40 below provides a technical summary the options discussed above for waste treatment. Figure provides a brief issues and benefits summary.

³⁰ Environment Agency Waste Technology Data Centre website <http://www.environment-agency.gov.uk/wtd/>

Figure 40: Technical summary of options for residual waste treatment

	Kerbside Separated	Mechanical Biological Treatment (MBT)		Thermal Treatments		Physical Treatment
		MBT (composting)	MBT (Anaerobic digestion)	Incineration	Advanced thermal treatment (ATT)	
Capital cost (£) (variable data)	£6 million (30Ktpa)	£6 million (25k t/pa)	£12 million (75ktpa)	£25 million (50ktpa) to £60 million (250ktpa)	£30 million	£7million (150ktpa)
Gate fee (variable data)	Approx £55/tonne	£30 to £90	£40 to £90	£45 to £80	£75	£30 upwards
Collection costs	Y: approx. £1.2 million first year, additionally 250,000 pa	N	N	N	N	N
Land take	1 to 4 hectares	2 to 5 hectares	1 to 4 hectares	3 to 5 hectares	2 to 4 hectares	1 to 4 hectares
Tonnes pa	6,000 to 200,000 (usually 30,000+)	25,000 to 500,000	75,000 plus	60,000 to 500 000 (usually 100,000+)	30,000 – 85,000+	30,000 to 150,000
Proximity	Away from housing	Away from housing	Away from housing	Close to housing	Close to housing	Away from housing
Planning Time	12 to 24 months	18 to 24 months	24 months	6 to 10 years	6 to 10 years	18 to 36 months
Additional Infrastructure required*	2010/11 dependent upon efficiency of collection	2013/14 to 2015/16 (longer if RDF produced)	?	2020 and beyond	2020 and beyond	2009/10 or past 2020 dependent upon markets for fibre

*Additional infrastructure would be required to meet Torbay' LATs targets.

Figure 41: Summary of issues and benefits of residual waste treatments

	Kerbside Separated		Mechanical Biological Treatment		Thermal Treatments		Physical
	In-vessel composting	MBT (composting)	MBT (AD)	Incineration	ATT	Autoclave	
Issues	<ul style="list-style-type: none"> • Kerbside separation of food/garden waste required • Legislative barriers to use of outputs • Odour/pests 	<ul style="list-style-type: none"> • Markets required for outputs • BMW reduction uncertain • Legislative barriers to use of outputs • Limited track record • Odour/pests 	<ul style="list-style-type: none"> • BMW reduction uncertain • Legislative barriers to use of outputs • Limited track record • Odour/pests 	<ul style="list-style-type: none"> • Most cost effective at a larger scale • High Capital cost • Can have negative public perception 	<ul style="list-style-type: none"> • New technology, unproven in UK • High capital cost • Needs to sell CHP to be economically viable 	<ul style="list-style-type: none"> • Unproven technology on MSW • Markets required for outputs • Process does not reduce BMW • Odour/pests 	
Benefits	<ul style="list-style-type: none"> • Reduces BMW • Adds significantly to recycling targets • Part of integrated strategy • Process near top of waste hierarchy 	<ul style="list-style-type: none"> • Reduces BMW • Flexible • Reduces waste volume • Part of integrated strategy • Low capital cost 	<ul style="list-style-type: none"> • Reduces BMW • Flexible • Reduces waste volume • Part of integrated strategy • Qualifies for renewable energy subsidies 	<ul style="list-style-type: none"> • Proven on MSW • No BMW outputs • Almost all outputs recycled • Reduces waste volumes • Small scale alternatives available 	<ul style="list-style-type: none"> • No BMW outputs • Reduces waste volume • Suits small scale, facilities • Qualifies as renewable energy • Very low emissions 	<ul style="list-style-type: none"> • Outputs can be put to varied uses • Sanitises waste • Produces clean recyclable material • Low capital cost 	

12 Technology compatibility

- 12.1 The size of a waste stream has a very important role in decision making. It influences which technologies are most suitable, but also which would be most economically viable, as many technologies are prohibitively expensive without the benefits of economies of scale. With approximately 50,000 tonnes of residual waste, independently Torbay has fewer choices for waste disposal technologies as demonstrated in Figure 42.
- 12.2 Torbay must consider in which circumstances it is better to work with our local authority partners within Devon, and when Torbay should be self-sufficient for waste treatment.

Figure 42: A comparison of options for independent waste treatment compared to a partnership approach

	IVC	MBT compost-like process	MBT anaerobic digestion	EFW Incineration	ATT	Autoclave
Partnership Approach	Highly compatible: IVC usually for 30,000 tonnes +	Highly compatible: plants usually 100,000 tonnes +	Highly compatible: plants usually 100,000 tonnes +	Highly compatible: plants usually 100,000 tonnes +	Compatible: Modular, can be tailored to suit size of waste stream	Compatible: vary in size
Independent Torbay Solution	Compatible: but technology new on small scale	Highly compatible: modular plants suitable for smaller waste streams	Not compatible: unlikely to be appropriate on small scale	Compatible: small Scale incinerators are in operation in UK, but costs are high	Highly compatible: modular and therefore suitable on small scale	Compatible: vary in size

13 Funding options

Minimisation and recycling funding

- 13.1 It is envisaged that most of the actions for waste minimisation can be met through a combination of existing council resources, funding bids and diversion of savings.
- 13.2 However recycling options 2 and 3 include proposals that will require additional capital funding. These are:
- The regeneration of the existing transfer station: removing the civic amenity / recycling centre (CA/RC) function; and upgrading the Materials Reclamation Facility (MRF)
 - Additional CA/RC sites to accommodate the needs of Brixham, Paignton and Torbay
 - Extending the collection of dry recyclables at the kerbside
- 13.3 Recycling option 3 would also require the procurement of infrastructure such as vehicles and containers necessary to collect food and possibly garden waste from the kerbside. Additionally modifications to the Heathfield IVC to accommodate Torbay's waste; or a small-scale IVC within Torbay would be needed.
- 13.4 A small proportion of the costs of recycling option 3 are likely to be offset by reduced costs of landfilling waste and from the sale of LATS certificates.

Residual waste

- 13.5 Significant financial resources will be needed for treating residual waste. Some of this outlay will be offset by reduced landfilling costs and the sale of LATS certificates. However the council will have to secure the majority of the financial resources necessary by considering the options in Figure 43.
- 13.6 In addition to the capital and running costs, there will also be expenses associated with the procurement of waste management facilities. Procurement costs can be as much as 20% of overall costs.

Figure 43: Funding options for waste treatment technologies

Funding Option	Description
PFI Credits	Long term contract PFI credits from government Unitary payment by LA Usually larger projects Lengthy procedure Currently for MBT and EfW
Prudential borrowing	Prudential system set out under Local government Act 2003 Extends LA borrowing limit Subject to robust business case For exceptional circumstances Must be affordable Repayment of principal and interest on borrowing funded from Council Revenue Budget.
Private Sector Finance (Public Private Partnerships – PPP)	Contract with Private investor Contractor funds development Charge translated into 'gate fees' Inherent cost likely to be higher than prudential borrowing
Other Capital resources	Impact on existing Capital Plan
Revenue resources	Charges made against revenue budgets

C. Legislation Report

The following legislation has been instrumental in driving the agenda for change in waste management practices.

14 The Landfill Allowance Trading Scheme (LATS)

- 14.1 **The Waste and Emissions Trading (WET) Act 2003** was introduced in England on the 1st of April 2005 to divert waste from landfill as set out in the EU Landfill Directive (refer to page 63). Failure to meet the requirements will result in the UK receiving substantial fines from the EU, It specifically targets the diversion of biodegradable waste from landfill through the Landfill Allowance Trading Scheme or LATS as it is generally known.
- 14.2 Torbay has been set a target of reducing its 2005/06 allowance of 43,481 tonnes of BMW landfilled to 15,018 tonnes by 2020/21 – a 65% reduction. Within this range, annual targets have been set. A single landfill allowance permits an authority to landfill one tonne of BMW.
- 14.3 If an authority exceeds its target tonnage in any year, then a fixed penalty of £150 per tonne is applied. In addition, in defined ‘target’ years, if the UK fails overall to achieve its required BMW reduction, then the EU will impose significant fines on the UK Government and these will be passed on pro rata to those authorities contributing to the failure (in addition to the standard fine).
- 14.4 Because of the significant time span needed for authorities to evaluate, build and operate technologies to meet the diversion targets and to reflect the varying degrees of diversion currently experienced by authorities, the Government has introduced the Landfill Allowance Trading Scheme (LATS).
- 14.5 The scheme revolves around the ability of authorities to trade ‘allowances’ with other authorities. In addition, authorities can bank (save) and borrow their own allowances between financial years. These processes will enable authorities to alter the rate at which they reduce the amount of BMW landfilled from that dictated by their target, to match their waste and investment strategies.
- 14.6 To prevent England breaching its Landfill Directive targets, certain restrictions have been built into the scheme as follows:-
- (i) Authorities may only borrow up to 5% of the following year’s allowance.
 - (ii) Borrowing may not be used to supplement allowances in ‘target’ years or years immediately preceding ‘target’ years to avoid the number of allowances available for use varying from the target.
 - (iii) In the target year and the year after, banking may not be used to supplement allowances in ‘target’ years or years immediately preceding ‘target’ years. Unused surpluses become forfeit.
- 14.7 Figure 44 is a tabular representation of the above:

Figure 44: LATS banking and borrowing

YEAR	BANKING INTO FOLLOWING YEARS	BORROWING FROM FOLLOWING YEARS
2005/06	Unlimited	5%
2006/07	Unlimited	5%
2007/08	Unlimited	5%
2008/09	None	None
2009/10	None	None
2010/11	Unlimited	5%
2011/12	None	None
2012/13	None	None
2013/14	Unlimited	5%
2014/15	Unlimited	5%
2015/16	Unlimited	5%
2016/17	Unlimited	5%
2017/18	Unlimited	5%
2018/19	None	None
2019/20	None	None

For further information on how LATS will operate please refer to the DEFRA website³¹.

	Target Years
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14.8 Figure 45 identifies the annual target allowances set for Torbay over the period 2005/06 to 2019/20, our estimated tonnages based on current recycling and disposal operations and the potential annual fines incurred based on these tonnages.

Figure 45: LATS allowances

YEAR	GOVERN'T TARGET (Tonnes of BMW)	TORBAY FORECAST (Tonnes of BMW)	VARIANCE (Tonnes of BMW)	POTENTIAL FINES AT £150 PER TONNE	NET CREDITS (Tonnes of BMW)
2005/06	43,481	40,424	(3,057)	-	(3,057)
2006/07	41,604	39,200	(2,404)	-	(5,461)
2007/08	39,103	39,200	97	-	(5,364)
2008/09	35,976	38,808	2,832	-	(2,532)
2009/10	32,224	38,808	6,584	£987,600	-
2010/11	28,637	38,420	9,783	£1,467,450	-
2011/12	25,050	38,420	13,370	£2,005,500	-
2012/13	21,463	38,036	16,573	£2,485,950	-
2013/14	20,542	38,036	17,494	£2,624,100	-
2014/15	19,622	37,655	18,033	£2,704,950	-
2015/16	18,701	37,655	18,954	£2,843,100	-
2016/17	17,780	37,279	19,499	£2,924,850	-
2017/18	16,860	37,279	20,419	£3,062,850	-
2018/19	15,939	36,906	20,967	£3,145,050	-
2019/20	15,018	36,906	21,888	£3,283,200	-
TOTAL FINES				£27,534,600	

³¹ www.defra.gov.uk/waste/localauth/lats/intro.htm

- Note (1): The Government already has in place a Landfill Tax which is currently (2007) £24 per tonne. This is to increase by £8 per tonne each year from 2008/09 until at least 2010/11 when it is set to reach £48 per tonne.
 - Note (2) the forecast tonnages do not allow for demographic growth at this stage which will put further pressure on achieving targets (see Baseline Report).
- 14.9 The main conclusion from the above table is that if BMW diversion to the required targets is not achieved, the council could face potential cumulative fines of between £27.53 million. Buying LATS certificates is, therefore, an important weapon in Torbay's armoury to mitigate this.
- 14.10 To minimise the impact of penalty charges that would arise if Torbay exceeded its allowance targets for that year, it is proposed that Torbay Council will enter the allowance trading market and acquire the requisite number of allowances for 2009/10.
- 14.11 The trading strategy for 2010/11 and onwards will be finalised after the Torbay MWMS has been published and considered by the Council. An assessment of the likely impact of the MWMS recycling and disposal options on landfill allowance requirements has been undertaken in the Appraisal of MSW options report.
- 14.12 Experience of economic markets would indicate that an increase in the number of buyers for limited supplies of products or services will push up prices. Officers believe that as we approach the landfill allowance target year of 2009/10, more Waste Disposal Authorities will be in a position to assess their requirements and enter the market. Although there may be an increase in the number of authorities offering allowances for sale, there is no guarantee that this will be commensurate with the number of buyers. Supply may not match demand. In addition, officers do not recommend waiting until the financial year 2009/10 has ended and the Council has the 6 month reconciliation period to acquire the allowances it needs (see paragraph A1.14). There is even more likelihood that prices at this time will exceed the market average. It is proposed, therefore, that the DEFRA website is 'posted' with the Council's intention to acquire a minimum of 7,240 (6,584 plus 10%) landfill allowances for 2009/10 and that this be undertaken, within budgetary considerations, in the current financial year.

15 European Directives

The Waste Framework Directive (2006/12/EC)

- 15.1 **The Waste Framework Directive** (previously 75/442/EEC) is the foundation legislation for sustainable waste management. The Framework Directive places obligations on plan making authorities to have regard to certain objectives, such as encouraging the prevention or reduction of waste.
- 15.2 A key objective is the minimisation of waste and where possible the encouragement of materials recycling and energy recovery. EC Directive sets out to ensure that waste is recovered or disposed of without endangering human health and without using processes or methods which could harm the environment.
- 15.3 It requires a system for the co-ordinated management of waste within the community; it defines waste and introduces the principles of the waste hierarchy, proximity principle and regional self sufficiency.

The Landfill Directive (99/31/EC)

- 15.4 This directive (implemented July 2001) was transposed into English and Welsh legislation through the Landfill Regulations 2001. It is aimed at reducing harmful effects of landfill to the environment and generally improving waste practices. In particular it seeks to reduce the amount of methane generated by biodegradable material in landfill and thereby seek to reduce the effects of waste on climate change as methane is a potent greenhouse gas.
- 15.5 provisions include:
- Requiring pre-treatment of hazardous waste (2004) and all other wastes (2007)
 - Setting targets for the reduction of biodegradable waste sent to landfill:

Figure 46: Landfill Directive targets

Reduce biodegradable waste sent to landfill to	Target date
75% of 1995 levels	by 2010
50% of 1995 levels	by 2013
35% of 1995 levels	by 2020

Hazardous Waste Directive (91/689/EEC)

- 15.6 This directive is incorporated into UK law by the Hazardous Waste Regulations 2005. Provisions include:
- Singling out specific waste materials as a consequence of their potential impact upon health and the environment
 - Defining a single list of hazardous wastes has led to an extra 180 wastes being classified as hazardous. Many small businesses now find themselves dealing with hazardous wastes for the first time.

- Extending range of hazardous waste materials listed beyond scope of UK Special Waste Regulations, which is now incorporated into UK law by the Hazardous Waste Regulations 2005.

Packaging and Packaging Waste Directive (94/62/EC)

15.7 'The Packaging Directive' is concerned with minimising the creation of packaging waste material and promotes energy recovery, re-use and recycling of packaging. The Packaging Directive covers all packaging placed on the market within the EU, and all packaging waste disposed of at industrial or commercial sites, or from private homes. This directive is intended to establish producer responsibility for packaging waste

Waste Electrical and Electronic Equipment (WEEE) (2002/96/EC)

15.8 Adopted in February 2003 by the EU, and came into force in the UK in January 2007. The Directive introduces:

- Restrictions on the generation of waste, and promotes reuse, recycling and other forms of recovery
- Restrictions on the use of hazardous substances in electrical and electronic equipment
- It aims to prevent the disposal of WEEE as unsorted MSW.
- The directive sets minimum targets for the collection of WEEE at 4-6kgs per person, for the UK that is 236,000 tonnes.

15.9 Those items specified under the WEEE Directive must be taken back by distributors free of charge to the householder, either through in-store facilities at individual retail outlets or the retailer may join the distributor take back scheme (DTS). One consequence of this is that local authorities are likely to have a role in collecting/receiving WEEE items at civic amenity / recycling centre sites.

15.10 Full responsibility for treating and recycling household WEEE began in July 2007.

Batteries and Accumulators Directive (2006/66/EC)

15.11 Adopted by the EU on the 6 September 2006. The aim is to cut the amount of hazardous substances - in particular, mercury, cadmium and lead - dumped in the environment; this should be done by reducing the use of these substances in batteries and accumulators and by treating and re-using the amounts that are used.

- It promotes a high rate of collection and recycling of waste batteries and accumulators and improvement in the environmental performance of all involved in the life-cycle of batteries and accumulators, including their recycling and disposal.
- Member States also have to ensure that, from 26 September 2009 at the latest, batteries and accumulators that have been collected are treated and recycled using the best available techniques. Recycling must exclude energy recovery.
- Member states have to make arrangements enabling end-users to discard spent batteries and accumulators at collection points in their vicinity and have them taken back at no charge by the producers. Collection rates of at least 25%

and 45% have to be reached by 26 September 2012 and 26 September 2016 respectively.

16 UK legislation

The Environmental Protection Act (EPA) 1990

- 16.1 The requirements of the waste framework directive were implemented through the EPA 1990. It defines the roles of waste collection and waste disposal authorities and for unitary Authorities such as Torbay. The Environmental Protection Act 1990 anticipated the advent of nationwide kerbside recycling schemes. This Act, along with the Controlled Waste Regulations 1992, places a duty on local authorities to manage specified wastes and regulated waste management, defining how waste should be dealt with.
- 16.2 Part II of the EPA sets out the main duties and responsibilities. It details all the generic obligations for local authorities regarding where and how MSW should be collected and managed (sections 45 to 52).
- 16.3 The Act prohibits the unauthorised or harmful deposit, disposal or recovery of waste and sets in place the waste management licensing regime (sections 35 to 44).
- 16.4 The EPA also forms the basis of legislation relating to fly tipping. Section 59 gives local authorities the power to serve notice on the occupier of land where waste is illegally deposited, requiring them to clear the land. The local authority also has the power to clear the land and recover its costs from the perpetrator.
- 16.5 Figure 47 below summarises the key provisions of the EPA 1990.

Figure 47: Key provisions of the EPA 1990

Section	Title	Key Provisions
33	Prohibition on unauthorised or harmful deposit, treatment or disposal	Controlled waste must not be deposited, disposed of or recovered unless a waste management license is in force and the deposit is in accordance with the license. Waste must not be deposited, disposed or recovered in a manner likely to cause pollution of the environment or harm to human health.
34	Duty of care	Any person who imports, produces, carries, keeps, treats or disposes of controlled waste, or is a broker of waste must take all reasonable measures: To prevent any person contravening section 33 of the EPA; To prevent the escape of waste from his control or that of any person; To transfer waste on to an unauthorised person; On transfer of waste, to exchange written description of the waste (a waste transfer note).

Section	Title	Key Provisions
		Local authorities may impose fixed penalty notices on those who fail to produce waste transfer notes when requested to do so.
S35 to 44	Waste management licenses	Provisions for application and granting of licenses, surrender, revocation, modification and transfer of licenses and fees payable.
S45	Collection of controlled waste	Sets out the duties with respect to the collection of household and commercial waste.
S46	Receptacles for household waste	Local authorities may specify the type and number of waste receptacles a householder must use and where they must place it for collection. A charge may be made for the receptacle or the householder may be required to supply it.
S47	Receptacles for commercial or industrial waste	A local authority may supply receptacles for the collection of industrial and commercial waste where they have been requested to collect it. A fee may be payable.
S51	Functions of Waste Disposal Authorities	Local authorities must arrange for reasonably accessible places to be provided where residents may deposit their household waste.
S52	Payments for recycling and disposal of waste	Local authorities may make payments to third parties equivalent to the collection and disposal savings made.
S59	Powers to require the removal of waste unlawfully deposited	Local authorities may serve notice on the occupier of land where waste has been illegally deposited, requiring him to clear the waste. The local authority may clear the waste and recover costs from the perpetrator. The owner of the land may also, in certain circumstances, be required to clear the land.
S75	Meaning of controlled waste, household, commercial and industrial waste	Provides definitions of controlled waste, household, commercial and industrial waste
Part IV S86 to 99	Litter	Sets the offence of depositing litter and the fixed penalties available. Sets the duties of local authorities for the clearance of litter.

Adapted from Information sheet 5 of 'A Practice Guide for the Development of Municipal Waste Management Strategies'³²

³² A Practice Guide for the Development of Municipal Waste Management Strategies, Defra (with Eunomia research and consulting) (November 2005) www.defra.gov.uk

Landfill Tax Regulations 1996 (Revised 2007)

- 16.6 The Government introduced the Landfill Tax Regulations in 1996 to discourage the disposal of waste to landfill. Landfill tax was set to increase the cost of landfill by £3 per tonne each year until it reached £35 per tonne in 2010/11.
- 16.7 However, a revision to the Landfill Tax Regulations in the April 2007 budget means that the standard rate of landfill tax will now increase from £21 per tonne to £24 per tonne on 1 April 2007 and then from 1 April 2008 onwards it will increase annually by £8 per tonne until at least 1 April 2010. This is a very significant increase in landfill tax which will rise from £21 per tonne today to £48 per tonne by 2010.
- 16.8 Although the landfill tax will encourage more sustainable waste management practices, such as recycling, local authorities will have real increases in the cost of waste management for the foreseeable future.

Waste Minimisation Act 1998

- 16.9 Local Authorities can undertake waste minimisation initiatives as required. This applies to controlled waste of any description within its area.

Waste Strategy 2000

- 16.10 In response to European legislation, and international concern over the environmental impacts of waste disposal, the Government published Waste Strategy 2000. It was both a national waste management plan and a strategy to divert waste away from landfill.
- 16.11 The Waste Strategy 2000 was based on the waste hierarchy and aims to ensure that the UK implements sustainable waste management practices. The Strategy set out a national framework for reducing the amount of waste going to landfill by moving towards more sustainable waste management options. The overall aim was to tackle the growth in waste production and, where waste is produced, maximise the amount recovered through re-use, recycling, and composting and energy recovery. The targets are shown below:

Figure 48: Waste Strategy 2000 Targets for Torbay

National Targets	2005	2010	2015
Overall national recycling and composting of household waste	25%	30%	33%
Torbay recycling and composting of household waste	30%	30%	33%
Recover value from municipal waste	40%	45%	67%

Targets replaced by Waste Strategy for England 2007

- 16.12 Waste Strategy 2000 was replaced in May 2007 by the Waste Strategy for England 2007, which is outlined below.

Waste strategy for England 2007 (May 2007)

- 16.13 The aim of the Waste Strategy for England 2007 is to move towards 'One Planet Living' by reducing waste and break the link between economic growth and waste growth. The key objectives are:

- decouple waste growth from economic growth and put more emphasis on waste prevention and re-use
- meet and exceed the Landfill Directive diversion targets for biodegradable municipal waste in 2010, 2013 and 2020;
- increase diversion from landfill of non-municipal waste and secure better integration of treatment for municipal and non-municipal waste;
- secure the investment in infrastructure needed to divert waste from landfill and for the management of hazardous waste; and
- Get the most environmental benefit from that investment, through increased recycling of resources and recovery of energy from residual waste using a mix of technologies.

16.14 The overall impact of this strategy is expected to be an annual net reduction in global greenhouse gas emissions from waste management of at least **9.3 million tonnes of carbon dioxide equivalent per year compared to 2006**.

16.15 A greater focus on waste prevention will be recognised through a new target to **reduce the amount of household waste not re-used, recycled or composted from over 22.2 million tonnes in 2000 by 29% to 15.8 million tonnes in 2010 with an aspiration to reduce it to 12.2 million tonnes in 2020** – a reduction of 45%.

16.16 This is equivalent to a fall of 50% per person (from 450 kg per person in 2000 to 225 kg in 2020).

16.17 New, more ambitious, national targets have been set in Waste Strategy for England 2007, which replace those in Waste Strategy 2000 (see Figure 49 below)³³.

Figure 49 Waste Strategy for England 2007 targets

National Targets	2010	2015	2020
Recycling and composting of household waste	40%	45%	50%
Recover value from municipal waste	53%	67%	75%

The Animal By-Products Regulations 2003

16.18 The Animal By-Products Regulations require food wastes sent for processing must ensure that all pathogens are reduced to an acceptable level of 10 per cent. The principal impact on municipal waste management is that domestic kitchen waste cannot be composted in open windrow conditions, although it can still be landfilled. The only way this material can be composted is in an 'In-vessel composter' (please refer to Technology report).

Household Waste Recycling Act 2003

16.19 The Household Waste Recycling Act states that where English waste collection authorities have a general duty to collect household waste, they shall ensure that by the end of 2010, with exceptions in some circumstances, they will collect at least two recyclable wastes separate from the remainder of the waste. In 2005/06 Torbay extended this service to 88% of residents.

³³ For further information on the Waste Strategy for England 2007, please use the following link:
<http://www.defra.gov.uk/environment/waste/strategy/review/index.htm>

16.20 Waste should generally be managed as close as possible to where it is produced in order to limit the environmental impact and cost of its transportation, and create a more responsible approach to waste generation.

Clean Neighbourhoods and Environment Act 2005

16.21 This Act repeals the requirement on local authorities to transfer waste disposal functions to companies and amends the payments of recycling credits between Waste Collection and Waste Disposal Authorities.

16.22 The Act extends the powers of local authorities in relation to illegal waste activities and includes the following measures:

Figure 50: Key measures from the Clean Neighbourhoods and Environment Act 2005

Subject	Outline of measures
Fixed Penalty Notices:	Makes greater use of fixed penalties as an alternative to prosecution, in most cases giving local authorities the flexibility to set their own rates.
Abandoned Vehicles:	Gives local authorities the power to remove abandoned cars from the streets immediately.
Litter	<p>Makes it an offence to drop litter anywhere, including private land and rivers ponds and lakes;</p> <p>Gives local authorities new powers (litter clearing notices) to require individuals and businesses to clear litter from their land;</p> <p>Strengthens existing powers for local authorities to require local businesses to help clear up litter they generate (street litter control notices);</p> <p>Enables local authorities to restrict the distribution of flyers, hand-outs and pamphlets that can end up as litter;</p> <p>Confirms that cigarette butts and discarded chewing gum are litter.</p>
Graffiti and fly-posting	<p>Extends graffiti removal notices to include fly posting</p> <p>Improves local authority powers to tackle the sale of spray paints to children</p> <p>Strengthens the legislation to make it harder for beneficiaries of fly-posting to evade prosecution;</p> <p>Enables local authorities to recover the costs of removing illegal posters.</p>
Waste	<p>Amends fly-tipping provisions by:</p> <ul style="list-style-type: none"> • Removing the defence of acting under employer's instructions • Increasing the penalties • Enabling local authorities and the Environment Agency to recover their investigation and clear-up costs • Extending provisions on clear up to the land owner in the absence of the occupier

Subject	Outline of measures
	<p>Gives local authorities and the Environment Agency the power to issue fixed penalty notices (and for local authorities to keep the receipts from such penalties):</p> <ul style="list-style-type: none"> • To businesses that fail to produce waste transfer notices • To waste carriers that fail to produce registration details or evidence that they do not need registration • For waste left out on the streets (local authorities only) <p>Introduces a more effective system for stop, search and seizure of vehicles used in illegal waste disposal;</p> <p>Introduces a new provision covering the duty of care and the registration of waste carriers;</p> <p>Repeals the divestment provisions for waste disposal functions to provide greater flexibility for local authorities to provide waste management services in the most sustainable way;</p> <p>Reforms the recycling credit scheme to provide increased local flexibility to incentivise sustainable waste management.</p>

Outline of measures taken from the Defra website³⁴

End of Life Vehicles Regulations 2003

16.23 These regulations transpose the requirements of the End of Life Vehicles Directive (2000/53/EC) which aims to reduce the amount of waste produced from ELVs and increase the recovery and recycling of ELVs that do arise.

Producer Responsibility Obligations (Packaging Waste Directive 1997 as amended)

16.24 The Producer Responsibility Obligations (Packaging Waste) Regulations 1997 (as amended) ("the packaging Regulations") are intended to encourage the minimisation of packaging and packaging waste, incentivise reuse and increase the recovery and recycling of packaging waste. The amount of packaging waste producers have to recover and recycle is determined, in part, by the amount of packaging they handle.

16.25 Each year there are recovery and recycling targets for UK businesses to meet which are designed to enable the UK to meet the recovery and recycling targets in the Packaging and Packaging Waste Directive by 31 December 2008 as required. The UK has "business" targets that are set to meet the national targets. These are different because a number of smaller businesses are excluded from the obligations, and those that are obligated have to share the obligation between them. Thus, as currently published, there is a business recovery target of 70% in 2008 to meet the Directive target of 60%.

³⁴ Outline of summary measure available from the Defra Website at <http://www.defra.gov.uk/environment/localenv/legislation/cnea/legbill-summary.pdf>

Planning Policy Statement (PPS) 10: Planning for sustainable waste management July 2005

- 16.26 This document is concerned with delivering sustainable development by driving waste planning up waste hierarchy, addressing waste as a resource and looking to disposal as the last option.
- 16.27 It also emphasises the need for communities to take more responsibility for their own waste, and the sufficient provision of waste facilities to meet the needs of their communities.
- 16.28 The guidance requires the integration of waste management strategies with planning strategies. The MWMS should specify 'what' will be required in terms of facilities for municipal waste. It is for the Local development framework to set out site specific proposals. The MWMS, however, should also consider the likely land opportunities for its preferred service development options.

Meeting the Energy Challenge – A White Paper on Energy May 2007

- 16.29 The Energy white Paper confirms support for energy from waste for waste which cannot be prevented, re-used or recycled. The paper confirms that energy generated either directly from waste or through the use of a refuse derived fuel has benefits for security of supply. In addition, the biodegradable fraction of waste is a renewable resource.
- 16.30 Waste used in good quality CHP stations and power stations using gasification, pyrolysis, and anaerobic digestion is to continue through renewables obligation certificates (ROCs). There is also a proposal to bring forward new legislation to help overcome the current barriers to eligible energy-from-waste power stations receiving ROCs.

17 Regional policies

The Regional Waste Strategy for the South west 2004 – 2020: From Rubbish to Resource

- 17.1 The Regional Waste Strategy aims to ensure that by 2020 over 45% of waste is recycled and reused and less than 20% of waste produced in the region is landfilled. By 2030 the south West Region is to become a minimum waste producer with businesses and households maximising opportunities for reuse and recycling.
- 17.2 The Regional Waste Strategy and its policies have been constructed with the following strategic principles in mind:
- Priority for initiatives and facilities to encourage and promote waste reduction and reuse;
 - Local authorities to work together, with regional partners, the business sector, the Environment Agency, the waste industry, non-government organisations and community groups to ensure integration of strategies and proposals for waste management with the regional strategy's aims;
 - Sub-regional partnerships should have regard to the policies and guidelines for the amount of waste to be dealt with in the Regional Waste Strategy.

Draft Regional Spatial Strategy 2006 – 2026

17.3 The current Draft of the Regional spatial strategy contains a small section on Waste Management (7.4). Policy W2 in particular states that:

- Waste should be managed on the site where it arises wherever possible;
- Waste that is not managed at its point of arising should be managed according to the proximity principle.

Municipal Waste Management Strategy for Devon March 2005: Don't Let Devon go to Waste

17.4 This strategy was produced by all the local authorities in Devon working together including those that constitute Devon County Council, Plymouth City Council and Torbay Council as well as the Environment Agency. All of these bodies are committed to work together to achieve the policies and targets set out in the document.

17.5 This strategy endorsed the targets that were set out in Waste Strategy 2000. It also sets a number of its own targets, which are even more ambitious than those of the New Waste Strategy for England 2007. The targets are summarised within the document as:

- To recycle or compost 30% of household waste by 2005/06
- To recycle or compost 40% of municipal waste by 2009/10
- To recycle or compost 50% of municipal waste by 2014/15
- To recycle or compost 60% of municipal waste by 2019/20
- To recycle or compost 65% of municipal waste by 2025/26
- To recover value from at least 40% of municipal waste by 2005/06, 45% in 2010/11 and 67% in 2015/16
- By 2010 to reduce the amount of biodegradable municipal waste to 75% of that produced in 1995
- By 2013 to reduce the amount of biodegradable municipal waste to 50 % of that produced in 1995
- By 2020 to reduce the amount of biodegradable municipal waste to 35 % of that produced in 1995
- The strategy endorses the national waste hierarchy and waste reduction is at its core. It sets a target of reducing waste growth to 1% per annum by 2009/10

18 Local policies

Turning the tide for Torbay, the Torbay Community Plan 2007 – 2027

18.1 In June 2007 Torbay launched its new Community Plan called 'turning the tide'. There are four main themes titled: Pride in the Bay; Learning and skills for the future; Safer, stronger communities; and the new economy.

18.2 Waste is included under the heading of Pride in the Bay within the Community Plan. The main priorities are:

- Promoting and maintaining a clean and attractive environment
- Ensure that all new developments are 'carbon light' and energy efficient.
- Promote the use of sustainable energy
- Improve the appearance of the gateways to the Bay at Edginswell and our railways stations
- Make existing employment areas more attractive
- Clear the streets and public places of litter, graffiti and other forms of dumping and discarding
- Make our parks safer and more attractive.
- Develop our parks and gardens as part of the tourism offering
- Protect and enhance our coastal areas and aim to be a World Geopark.

Targets for reducing waste sent to landfill and for household recycling will be implemented through the Local Area Agreement (LAA) Action Plan. Currently these are based on Torbay's BVPI targets (refer to Baseline report).

Torbay Local Plan 1995 - 2011

18.3 The adopted Torbay Local Plan sets out the land use implications for waste management and disposal development. The Plan encourages an increase in the proportion of waste managed by options towards the top of the waste hierarchy. Reduction and re-use are, however, activities which do not have such a direct relation to development or use of land. Therefore the emphasis is towards policies that are related more closely to options for recovery and disposal. The Municipal Waste Management Strategy is intended to complement the Local Plan to address a wider range of waste management and recycling issues than those relating to land use.

18.4 The plan-led system means that decisions on planning applications will be made in accordance with the provisions of the development plan unless material considerations indicate otherwise. Policy W1 states that development is operated on the basis of sustainable development principles, regional self sufficiency, the proximity principle and the waste hierarchy.

Torbay Local Development Framework (2005 – 2026)

18.5 The Local Plan will in due course be replaced by the Local Development Framework. This is not a single publication but a series of documents designed to cover all aspects of planning in Torbay. The Local Development Framework will contain policies for waste planning as part of the Core Strategy Development Plan Document (DPD). The Core Strategy reflects the Regional Spatial Strategy at a local level setting out how Torbay will manage predicted growth. Potential waste sites will also be incorporated into the framework as part of the Site Specific Policies and Proposals DPD.

19 Forthcoming legislation

19.1 The Table below summarises upcoming legislation which should be considered by local authorities

Figure 51: Forthcoming legislation

Title	Implications	Reference
Waste Framework Directive	<p>A European Commission revision of the Waste Framework Directive. This may have implications for:</p> <p>The underlying objectives of the Directive;</p> <p>Definitions of disposal/recovery;</p> <p>When waste ceases to be waste and becomes a product, for example composted materials;</p>	
Thematic Strategy on Waste Prevention and Recycling	A strategy which investigates ways to promote waste prevention and recycling and which may include waste prevention targets.	http://europa.eu.int/comm/environment/waste/strategy.htm
Thematic Strategy on Soil Protection	A European Commission strategy to protect soils. This may provide a basis for establishing standards regarding composted / digested materials and how they can be used.	http://europa.eu.int/comm/environment/soil/index.htm

D. Consultation Report

20 Introduction

- 20.1 Torbay Council is committed to ensuring a thorough consultation process, and to engaging with the local community and other external partners actively and at an early stage. In order to achieve this aim the consultation process has been ongoing since 2004 when the process of preparing the Municipal Waste Management Strategy (MWMS) began.
- 20.2 The consultation process has also included key internal stakeholders (such as planning, transport, finance and elected Members) to ensure that the strategy proposals have financial and political backing.
- 20.3 The Strategy was consulted upon in line with Defra guidance on the Development of Municipal Waste Management Strategies³⁵. It was developed in three main parts: Part 1 was initial early consultation to help identify the existing understanding of waste issues within the Bay; Part 2 was undertaken during the development of the Strategy to identify suitable options for the strategy; and part 3 was consultation on the draft strategy itself. Part 3 was undertaken with advice from the Environment Agency and thanks are extended to all internal and external organisations and individuals who took part in the consultation process.

21 Part 1: Initial consultation

- 21.1 An initial consultation was carried out following the publication of the first Draft Municipal Waste Management Strategy for Torbay 2005-2025 in May 2005. This consultation consisted of focus groups and a questionnaire.

Focus groups

- 21.2 During July 2004, Torbay Council held three focus groups in Brixham, Paignton and Torquay. A sample of panel members, from Torbay's Viewpoint Panel, were invited to attend a local focus group to ascertain their understanding of Torbay's waste and recycling issues. Viewpoint is a 1,500 strong residents' research panel statistically representative of the population of Torbay, acting as a statistically reliable thermometer of their thinking and accurate to within three percent. Viewpoint was set up during the summer of 1998, following a mail out to 10,000 local people selected, at random, from the electoral register. The 1991 Census data was used to balance the first panel, ward by ward, using quotas for gender, age and working status.
- 21.3 The focus groups were held to determine residents' knowledge and views on issues concerning waste and recycling. Attendees ranged from 18 – 80, male and female. Fifteen people attended each focus group and feedback from all the groups was collated and helped the council understand residents' needs and comprehension of waste. This assisted the development of the waste questionnaire that accompanied the first draft of Torbay's Municipal Waste Management Strategy.

³⁵ Defra (2005) 'A Practice Guide for the Development of Municipal Waste Management Strategies

Initial questionnaire

21.4 The questionnaire was sent out to a random sample of 544 Torbay residents, who were selected and posted a paper copy. A total of 151 completed copies were returned, giving a response rate of 28%. A further version of the questionnaire was also available online through the Torbay Council website. The online copy received 74 completed entries. This gives a total of 225 completed questionnaires.

21.5 A brief summary of the results is given below:

- 43% of respondents said they would be prepared to home compost, and a further 20% said they might be prepared to do so
- 80% of respondents said they would be willing to separate their kitchen and garden waste and cardboard, for a separate kerbside collection
- The most popular method chosen for residual waste treatment, by respondents, was anaerobic digestion, followed by Energy from Waste by incineration
- Almost 78% of respondents used the 'Civic amenity / recycling centre'
- The most commonly brought waste was garden waste
- 80% of respondents used the bottle banks, most commonly for glass
- Respondents' most preferred method of communication was through the post or Torbay Council's 'Bay View' publication.

22 Part 2: Developing the Strategy

Initial waste stakeholder workshop³⁶

22.1 In November 2006 Torbay Council and Entec UK© held a waste workshop in order to actively involve stakeholders in identifying key priorities and contributing to the preparation of the strategy. Representatives were invited from a number of different areas within the council, from external stakeholder organisations (based on their roles as representatives) and from neighbouring authorities. Participants were asked to select preferences from the options shown in Figure 52, which were developed with Entec UK©.

³⁶ The Workshop was run by Entec© consultants on behalf of Torbay Council. All information supplied by Entec©.

Figure 52: Torbay waste workshop options

			Disposal options			
			A	B	C	D
			Export to landfill only	Export to facility outside Torbay	Work in partnership with neighbours	Build facility in Torbay
Collection options	1	Continue current system	1A <i>Continue with current collection system and export residual waste to landfill elsewhere</i>	1B <i>Continue with current collection system and export to alternative facility elsewhere</i>	1C <i>Continue with current collection system and work in partnership with neighbours to deal with residual waste</i>	1D <i>Continue with current collection system and build facility in Torbay to deal with residual waste</i>
	2	Build on current system*	2A <i>Build on current collection system and export smaller amount of residual waste to landfill elsewhere</i>	2B <i>Build on current collection system and export smaller residual waste to alternative facility elsewhere</i>	2C <i>Build on current collection system and work in partnership with neighbours to deal with remaining residual waste</i>	2D <i>Build on current collection system and build a facility in Torbay to deal with the remaining residual waste</i>

* Implies a step change in recycling services available at the kerbside.

22.2 Conclusions from the workshop are summarised below³⁷:

- Participants identified time pressures as a key issue
- All groups wanted Torbay to be the best, but most participants expressed a preference towards ‘tried and tested’ technologies
- All groups identified the need to optimise collection and recycling services
- The need to educate and engage residents of Torbay to encourage local ownership of Torbay’s waste issues was expressed. Effort should be made to communicate with the public regarding the issues and dilemmas faced by Torbay.

22.3 The preferred options from the Waste Workshop were:

- **2A** Build on current collection system and export smaller amount of residual waste to landfill elsewhere (as a short term solution);
- **2C** Build on current collection system and work in partnership with neighbouring authorities to deal with remaining residual waste (using technologies likely to become available within the sub-region);
- **2D** Build on current collection system and build a facility in Torbay to deal with the remaining residual waste (requires analysis of those technologies most appropriate to Torbay).

³⁷ A more detailed Workshop Outcomes Report is also available at: www.torbay.gov.uk/wastemanagementstrategy

Appraisal of Municipal Solid Waste options workshop

22.4 On 4th June 2007, RPS© consultants ran a waste analysis workshop for Torbay Council officers instrumental in implementing the Waste Strategy. Business Units attending the workshop included Strategic Planning, Development Control, Property and Procurement, Direct Services and Waste and Environmental Policy. The workshop was run with the following objectives:

- To raise understanding of waste treatment technologies;
- To discuss the potential planning, technical, environmental, social and economic issues associated with the technologies;
- To establish a set of appraisal criteria against which each of the waste management options could be appraised;
- To invite participants to allocate weightings to each of these criteria.

22.5 Presentations were delivered by RPS on waste treatment options and on a proposed list of appraisal criteria. The list of appraisal criteria was discussed by workshop participants and a finalised list was agreed. Participants were asked to provide a breakdown of weightings for the 4 headline groups of criteria (Planning; Technical; Environmental & Social; and Economic). Stakeholders were then sent a breakdown of the agreed criteria and requested to allocate weightings within each headline group. The total stakeholder allocations (of 100%) were then calculated for the entire set of criteria.

22.6 The results of the consultation on appraisal criteria are presented in summary form in Figure 53. These criteria and weightings were then used to help assess which waste management options would be most suitable for Torbay. Further information on the criteria and weightings, and the results of the options appraisal, can be located in Supplementary Report E: Appraisal of Municipal Solid Waste Options for Torbay.

Figure 53 Weighted criteria for options appraisal

	High	Low	Average	Allocation
PLANNING CRITERIA (16%)				
Public support and engagement	70%	20%	48%	8%
Planning & development timescale	80%	30%	52%	8%
TECHNICAL CRITERIA (20%)				
Energy balance	40%	10%	21%	4%
Technical reliability and robustness	70%	10%	34%	7%
Flexibility	50%	10%	25%	5%
Future proofing	40%	10%	19%	4%
ENVIRONMENTAL & SOCIAL CRITERIA (25%)				
Greenhouse gas emissions	50%	3%	16%	4%
Local emissions	20%	5%	11%	3%
Local amenity impacts	18%	5%	11%	3%
Visual impact (not site-dependent)	20%	5%	10%	3%
Local landscape/environmental impact	20%	0%	6%	2%
Transport impacts and accessibility	20%	0%	10%	3%
Jobs created	10%	0%	5%	1%
Residues to landfill	30%	5%	10%	3%
Recycling BVPI	20%	3%	9%	2%
Energy recovery BVPI	12%	0%	6%	2%
Site footprint requirements	15%	0%	5%	1%
ECONOMIC CRITERIA (39%)				
Cost	70%	10%	33%	13%
Bankability	60%	10%	22%	9%
LATS compliance	50%	10%	27%	11%
Adequate market capacity/suppliers	30%	10%	18%	7%
				100%

23 Part 3: Consulting on the Draft Municipal Waste Management Strategy

Second waste stakeholder workshop

23.1 In November 2007 the Council held a second stakeholder workshop to consult stakeholders specifically on the proposals set out in the Draft Waste Management Strategy. The workshop sought to collect the views of stakeholders on the options and recommendations contained within the strategy in relation to waste minimisation, recycling and waste treatment/disposal.

23.2 This summary document presents the key messages from the consultation. A full report documenting all comments is available on request.

Waste Minimisation

The Strategy proposes that the Council actively promotes waste minimisation.	Agree: 28 Disagree: 0
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23.3 In addition to waste minimisation and education, enforcement of waste limitation was supported provided it is policed carefully and fairly. Stakeholders were keen to see as much recycled as possible.

23.4 Stakeholders were keen to include the following within a Waste Minimisation Action Plan:

- The use of doorstepping and local press campaigns to raise awareness.
- Encourage reuse, repair within the Bay and include initiatives such as Freecycle.
- Raise awareness of the costs of waste management, including fines if targets are not met.
- Target food waste.
- Introduce a pilot Waste Reduction Ward.
- To Work in partnership with national programmes.
- For Torbay Council to allocate extra staff to help communication.
- Torbay Council to lead by example with paperless offices.

23.5 The key groups for waste minimisation messages to be targeted at were identified as:

- High waste producers – identify and target those groups that generate the most waste.
- Young people – education to be targeted at schools as children then educate their parents.
- Hard to reach groups – need a long-term education programme that uses visual materials/radio (not just the written word).

- Commercial operators – work with local businesses to tackle waste generation, publicise their involvement in the Waste Minimisation Campaign.
- Construction companies – new developments should be planned to minimise construction waste.

Recycling

The Strategy proposes that the Council pursues Recycling Option 3	Support: 12	Support with some concerns: 16	Strong concerns: 1
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- 23.6 The key concern for recycling option 3 is the strategy’s recommendation to introduce a kerbside collection scheme for food and/or garden waste. The key barriers to introducing this scheme were identified as: cost, public amenity and public perception. A cost analysis of the proposed service would need to demonstrate value for money. Care would need to be taken to ensure that public opinion of the scheme is positive.
- 23.7 The other points highlighted at the workshop in relation to recycling are summarised below:
- 23.8 Civic amenity sites: an additional civic amenity site is needed; accessibility and waiting times need to be improved; a re-use area at the CA site would be an effective way to reduce waste.
- 23.9 Garden Waste Bring Sites: Support for plans though some concern that only residents with a vehicle could make use of the service.
- 23.10 Street Recycling Bins: Widespread support for the installation of street recycling bins around Torbay, provided they were adequately serviced and maintained.
- 23.11 Kerbside Recycling Collections: Education is a priority to raise participation and capture rates of the different materials; Maximise the number of households on the collection rounds; Undertake a cost benefit analysis of MRF vs. kerbside sort; closed loop recycling should be pursued and alternative transport methods explored.
- 23.12 Materials Recovery Facility (MRF): Local facilities are preferred; a partnership with a private company or neighbouring authority would be beneficial; continue to explore the opportunity of the Joint Venture Company establishing a MRF within the Bay.
- 23.13 Education: Extra staff would be helpful to educate residents and visitors; Community champions and award schemes for businesses would also be beneficial.

Treatment and Disposal

The Strategy proposes that the Council enters a sub-regional partnership for an EfW facility		
I support the Strategy’s proposals: 19	I support the Strategy’s proposals with some concerns: 5	I have strong concerns about the Strategy’s proposals: 1

23.14 Stakeholders comments included the following:

- Economic advantages make a partnership the preferred approach.
- There was general support for thermal treatment as modern energy from waste (EfW) facilities are very clean; and for high levels of energy recovery, preferably in the form of combined heat and power (CHP); Stakeholders recognised the need for a phased approach of waste treatment and an interim solution to avoid LATS fines.
- Stakeholders are aware that landfill capacity is running out and that an alternative solution is urgently required.
- Affordability still needs to be key; Sustainable transport and co-treatment with commercial waste streams should be explored.

The Municipal Waste Management Strategy Questionnaire

23.15 The survey was carried out via Torbay's 'Bay View' magazine. This Council publication is delivered free to households throughout the Bay. The questionnaire was also made available at libraries and Connections offices in Torbay and on the Torbay Council website.

23.16 Additionally, Torbay Council Officers and representatives from the Environment Agency held consultation days in Brixham, Paignton and Torquay where residents could ask questions about the Strategy and complete a questionnaire.

23.17 A total of 399 forms were returned which is a very good response for a municipal waste strategy consultation. The majority of responses (73.7%) were from the 'Bay View' magazine. The results of the consultation questionnaire are summarised below.

Minimisation

23.18 86% of respondents thought that further resources should be directed towards reducing the amount of waste we produce in Torbay

23.19 The most common suggestions on how to minimise Torbay's waste were for Torbay Council to work with local businesses to reduce packaging, and provide better recycling facilities and more information for residents.

Recycling

23.20 Almost 69% of respondents supported Option 3 as the preferred option. Only 8% thought Torbay should continue as at present.

Food and Garden Waste

23.21 Around 82% of respondents were in favour of building a treatment plant in Torbay to treat food and /or garden waste. Only around 11% were against such a facility.

The Civic Amenity site

23.22 Approximately 16% of respondents thought that the Paignton Civic Amenity/Recycling centre was adequate to meet the needs of Torbay's residents. 70% thought that this facility was not adequate to meet their needs.

- 23.23 The most frequent comments about the Paignton civic amenity / recycling centre site concerned the frequent queuing to use the site (84 comments), the layout and organisation of the site (80 comments), the fact that it is considered to be too small and too busy to meet the needs of the whole of Torbay (74 comments), its location and the distances residents must travel to recycle (61 comments), and the fact that Newton Abbot is considered a better facility in comparison (29 comments). There were also respondents who thought that there should be a resale facility at the Paignton site (11 comments).
- 23.24 81% of respondents would be in favour of additional civic amenity/recycling centres to serve Torquay and Brixham, although much more extensive consultation would be needed when considering where to put this type of facility.

Waste Disposal

- 23.25 There was no outright favourite method for treating Torbay's residual waste and it was clear that many respondents felt that there was not enough information to make this judgement. The survey did not contain more than a basic summary of the different methods and respondents did not necessarily have access to the Waste Management Strategy document when completing the survey.

Kerbside collections

- 23.26 53% of respondents would support stronger enforcement action being taken against abuse of the collection system, for example waste being put out on the wrong day or the wrong type of waste being put out for recycling. However, almost 41% would not support such action.
- 23.27 Additional comments included a desire by respondents for a better kerbside collection service of recyclables (76 comments), for more and better facilities (61 comments), for residents to be able to recycle more types of materials, particularly plastics (52 comments), and for better information to be available to residents, particularly concerning what they can recycle and how to recycle it (50 comments).

Overview and scrutiny

- 23.28 At its meeting on Monday 12 November 2007, the Pride in the Bay Scrutiny Board received Report 281/2007 on the Municipal Waste Management Strategy.
- 23.29 The Board recognised the need for the Council to implement a robust strategy to deal with municipal waste management in Torbay. The Board was mindful that the Council should lead the local community in reducing waste, recycling and reusing materials where possible.
- 23.30 The Board recognised the recycling initiatives already implemented in Torbay, specifically those aimed at providing education and raising awareness. The Board also debated the various options listed within the Strategy in terms of the creation of additional sites in Torbay or the development of a sub-regional facility in partnership with neighbouring local authorities.

Overview and Scrutiny Specific comments

23.31 Specific comments made by the overview and Scrutiny board are listed in the table below with the MWMS response:

Topic	Comment	Response
Strategy Aims and Objectives	The Scrutiny Board endorses the aims and objectives of the Municipal Waste Management Strategy as indicated on page 16 of the Headline Strategy (consultation draft).	Aims and objectives included in finalised Strategy (page 15).
Proposals for Waste Minimisation	The Board endorses the proposals set out for waste minimisation on pages 29-31 of the Headline Strategy (consultation draft). The Board made reference to the enforcement of the existing Waste Limitation Scheme and recommend that the text within the Strategy be expanded to clarify the 'targeted' nature of enforcement by the Council.	Text now amended in Headline Strategy (paragraphs 10.14 and 10.15).
Recycling Options	The Board endorses option 3 for recycling as indicated in the Headline Strategy (consultation draft) namely: to introduce a step change in recycling, including improved kerbside collection and civic amenity/recycling centre facilities with the additional collection of food and/or garden waste from the kerbside	
A Phased Approach to Waste Management	The board recognised the need for a phased approach to waste management in order to avoid LATS fines.	

Topic	Comment	Response
Policy Proposals	<p>The Board endorses the policy proposals as outlined on pages 46 and 47 of the Headline Strategy (consultation draft).</p> <p>The Board was mindful that should the range of materials to be collected at the kerbside increase, that appropriate levels of awareness raising and education are conducted to ensure the service is unambiguous for users.</p>	<p>Now pages 48 - 49 of MWMS.</p> <p>The need for awareness raising to support the proposed changes is acknowledged in the MWMS paragraphs 10.1 to 10.4 and paragraphs 12.9 and 12.32.</p>
Additional comments	<p>The Board recommends, inline with the consultation process, that a report on the future of the Materials Recycling Facility be presented to Members as a matter of urgency</p>	<p>The need for this report is acknowledged within the Strategy paragraph 12.10 and 12.11.</p>

Organisational Responses to the Draft Municipal waste Management Strategy

23.32 The organisations consulted during the consultation included neighbouring local authorities, the Environment Agency and Natural England. Torbay would like to thank all of these organisations for their contributions to the MWMS.

23.33 Many of the comments were similar to those made during the Consultation Workshops, by questionnaire respondents and by the Overview and Scrutiny Board.

23.34 Some of the most frequent comments included the following:

- The approach of the Strategy was well supported; following the waste hierarchy to reduce and reuse waste as much as possible, to recycle material that cannot be re-used and to recover value from waste that cannot be recycled.
- The waste minimisation campaign/education programme in particular was recognised as needing support in terms of resources.
- Torbay needs to engage with local businesses to recover paper and cardboard.
- A more uniform kerbside recycling service is needed throughout the Bay.
- A facility to process food waste will need partnership either with neighbouring authorities or with the commercial sector. A detailed cost/benefit analysis will be required before a final decision is taken.
- Torbay urgently needs improved civic amenity / recycling centre facilities.
- A partnership solution with neighbouring local authorities for waste disposal is well supported but transport issues need to be carefully considered.

- A phased approach to waste management is necessary to avoid LATS fines.
- The Strategy will have to be well resourced and implemented if Torbay is to achieve its targets and avoid excessive costs.

23.35 Details of the responses received and how the MWMS has responded are in the table below:

Organisation	Comment	Response
<p>The Environment Agency</p>	<p>Resource efficiency and waste reduction We are encouraged to see waste minimisation as a priority in Torbay and would like to see more time and resources put into running education programmes and initiatives to reduce waste.</p>	<p>Waste minimisation is a strategy priority and will require further resources for campaigning and education. This issue was also highlighted at the stakeholder workshop.</p> <p>Further details of the waste minimisation initiatives will be in the forthcoming Action plan.</p>
	<p>We support your policies to promote waste minimisation and prevent abuse of kerbside residual waste collection.</p>	<p>This support is welcome.</p>
	<p>We would recommend partnership working with us and local business support organisations such as NISP, Envision, Business link and Envirowise to encourage waste reduction and resource efficiency in local businesses in Torbay.</p>	<p>The Strategy’s waste minimisation proposals include ‘engaging with local businesses’. The help of the Environment Agency is therefore very welcome.</p>
	<p>We would also support the banning of plastic bags in the Borough and policies on alternate weekly collections of recycling to reduce waste.</p>	<p>Introducing a ‘plastic bag free zone’ is part of the waste minimisation proposals and Torbay would welcome working with the EA.</p> <p>There are no policies on alternate weekly collections as Torbay already has this scheme over most of the Bay. The strategy proposes introducing more ‘uniform collections’ (policy 4) which includes extending this scheme as far as possible although, not all areas within the Bay are suitable.</p>
	<p>The proposal to limit the amount of residual waste the charities can take for free to the recycling centres will discourage the reuse and recycling of unwanted goods and possibly encourage fly-tipping.</p>	<p>Agreed. This proposal has been removed from the strategy.</p>

Organisation	Comment	Response
	<p>Waste Education Programme We would like to see a targeted waste reduction education campaign linked in with the Devon Authorities campaign to ensure the Don't let Devon go to Waste message continues to be spread as their multi media campaign does cover Torbay and the brand is recognised and linked in with the national waste campaign.</p>	<p>As a member of the Devon Authorities Waste Reduction and Recycling Committee (DAWRRC) Torbay's campaign will be tied with the campaigns of neighbouring Devon authorities and with the national campaign.</p>
	<p>A properly funded and resourced education programme is required to ensure that householders and businesses reduce, reuse and recycle as much of their waste as possible.</p>	<p>Additional funding for education will be sought through the Action Plan.</p>
	<p>There is an additional need to educate the many tourists which come to Torbay each year to ensure they carry on recycling. We would also encourage joint partnership working with neighbouring Teignbridge and South Hams to encourage an education programme to run over the holiday period. We will be happy to support and participate in the programme.</p>	<p>Torbay welcomes the EA's support.</p>
	<p>We are encouraged to see you will be working in schools to raise the profile of recycling and waste reduction. It is important that Torbay continue to support the Devon Waste Education Strategy to ensure more funding is found to support waste education in schools and encourage the establishment of further recycling and composting in schools.</p>	<p>The importance of waste education and the support of recycling within schools was a key theme of the stakeholder workshop.</p>
	<p>Zero Waste The concept of 'zero waste' is not mentioned in the Strategy or SEA. We would like to see Torbay consider ways of working towards zero residual waste and running competitions/campaigns to encourage as much waste reduction as possible.</p>	<p>The concept of 'zero waste' is included as a Strategy Objective (Chapter 3)</p> <p>In addition the ideal of 'zero waste' will be a key part of the waste minimisation campaign.</p>

Organisation	Comment	Response
	<p>Fly tipping We are committed to working with Torbay to tackle fly-tipping.</p>	This support is welcomed.
	<p>Meeting the Targets We would like Torbay to aim for higher recycling and recovery rates. The predicted recycling and recovery targets for recycling options 2 and 3 don't meet the national targets. If you have more up to date information available this should be used to show that you can actually meet the targets.</p>	<p>Torbay's initial modelling by RPS consultants projected that Torbay will not meet the national recycling and recovery rates even with implementing the Strategy, although recycling option 3 was very close.</p> <p>The modelling has been subject to revision and has been updated. The revised projection (Chapter 12) demonstrates that implementing recycling option 3 will allow Torbay to reach long-term national targets for recycling and composting.</p>
	<p>At present with the facilities and systems in place Torbay will not meet the LATS targets for 2009/10.</p> <p>Torbay must find the funds to purchase landfill trading permits to meet its LATS allocation. This may mean purchasing the permits before the deadline to ensure lower priced permits.</p>	Agreed. Torbay is in the process of buying LATS for 2009/10.
	<p>Recycling We like to see a greater range of materials recycled to help increase the recycling rate</p>	Agreed. This is included in policy 4
	From talking to residents at the road shows the lack of facilities or materials available to recycle was actually becoming a barrier and disenchantment with the service was actually leading people to stop recycling.	Agreed. This message was also apparent in the responses to the Waste Strategy questionnaire. Only by implementing and resourcing the waste strategy can Torbay begin to reverse this trend and restore public opinion.
	There is also a need to offer 100% coverage and a more uniform service to householders in the borough to avoid confusion and disenchantment over what materials can be recycled.	Agreed. This is contained in policy 4
	Education is needed to help residents understand the different services that might be	Agreed. The strategy now contains this information in Chapter 12

Organisation	Comment	Response
	offered across the Borough when new services are offered in the future. We would also like to see more community recycling facilities to residents who live in flats or sheltered accommodation.	
	We feel it is also important to review the location of the recycling banks and provide more bring banks to encourage those residents that cannot recycle at home to use easily accessible bring banks.	Agreed. The location of the bring banks is constantly reviewed. The strategy now contains this proposal more specifically in paragraph 12.22
	Incentives and reward schemes could be considered to encourage people to increase their recycling rate.	Agreed. This was also identified at the stakeholder workshop and will form part of the recycling initiatives to be included in the forthcoming Action Plan.
	<p>Infrastructure It is essential that a new MRF is built as the old one was damaged in a fire and materials are being sent to a MRF in Oxford at present.</p> <p>We support the plan to produce a MRF Action Plan.</p>	A MRF Action Plan has been identified as necessary within the Waste Strategy and was recommended as a priority by Torbay's Overview and Scrutiny Board.
	We support the separation of the transfer station at Yalberton from the recycling centre to help improve recycling rates in Torbay	The support is welcome. This is a major infrastructure requirement for a 'step change' in recycling and is fundamental to the strategy.
	We welcome the introduction of street public recycling bins to encourage recycling in public places.	This is to improve recycling rates for residents and from tourists. The aim is to have more of these facilities on beaches and in the town centres.
	<p>Community composting We would like to see greater links with Devon community composting Network.</p>	Torbay already works with this organisation and will explore this further.
	<p>Recycling Centres and additional green waste collection points We support your proposal for more recycling centres in Torbay. The present site is too small and there is a need for more than one facility in better locations in the Bay to help</p>	This support is welcome. The proposal is included in the preferred recycling option (option 3) chapter 12

Organisation	Comment	Response
	increase the amount of household waste recycled and to help reduce the traffic congestion at the present site at Yalberton.	
	A monetary incentive should be put into the contract to ensure a high recycling rate is achieved at the centres.	This advice will be considered for new contracts.
	Better signage and a reuse/resale area should be provided at new recycling centres.	This advice will be considered for new recycling sites.
	Green waste collection points could also be considered for the Bay to encourage householders to compost their green waste if biodegradable non-food waste is not collected at the kerbside.	Contained in MWMS paragraph 12.24
	Business Waste Collection We support the collection of trade waste recycling of cardboard and paper.	This support is welcomed.
	We would encourage Torbay to inform businesses about the waste recycling directory and netregs website to encourage local businesses to recycle or treat as much of their waste as possible.	This will be considered as part of the work to collect more recyclables from local businesses.
	Option 3 ... appears to be the best option to meet your statutory recycling requirements. We support this proposal.	This is the strategy's preferred option and the EA's support is welcome.
	Food Waste collections We would recommend Torbay improve their present recycling kerbside collection service and range of materials offered before introducing another food recycling bin to the collection rounds.	This advice will be given serious consideration when developing the Waste Action Plan. It is proposed that a uniform dry recycling collection scheme will be implemented first (in the short term) and food waste collection in the medium term.
	In vessel composting We would need assurance from the facility provider that there was enough capacity to accept the waste and that it would not jeopardise performance and cause non-compliance with the waste management license.	There is no IVC facility within Devon which has capacity for Torbay's food and garden waste at the present time.

Organisation	Comment	Response
	<p>Commercial and Industrial Waste We would recommend that Torbay look at the possibility of building a facility with a local commercial waste producer.</p> <p>We would recommend a workshop is set up with local waste industry and producers to discuss this possibility.</p>	<p>Torbay is exploring commercial partnership for a biological facility and a MRF. The EA's advice is very welcome.</p>
	<p>Residual Waste After all the materials have been reduced, re-used and recycled or composted we support there is a need for the treatment of residual waste. We are encouraged to see you are looking at alternatives to sending waste to landfill.</p> <p>We accept that extra landfill capacity will need to be found to accommodate certain residual wastes.</p>	<p>The EA's support for the waste strategy proposals is welcome.</p>
	<p>It would be good if the pros and cons and possible costs of each facility type were made available in the strategy and summary documents.</p>	<p>This information is now clearer in the strategy in chapter 14. The Appraisal of MSW Option report is dedicated to examining the pros and cons of each option.</p> <p>In addition the Technology Report (Supplementary Report B) contains a summary table of the pros and cons of each technology at the end of the report.</p>
	<p>Residual waste treatment chapter would benefit from an introduction to say why these facilities are needed.</p>	<p>Agreed. Amendment paragraph 13.1</p>
	<p>The options analysis table outlines the different residual options available. This table would be better understood with further explanation about the combination of waste activities that can accompany MBT as it stands at the moment it is a little confusing.</p>	<p>Agreed. This information is now simplified in the strategy in chapter 14.</p>

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	<p>The graph on page 42 outlines the options appraisal for option 2 –should there be a graph here for option 3 as this is your preferred option?</p> <p>We would encourage a simpler layout and plainer English to support the interpretation of the graphs.</p>	<p>Option 2 was considered more compatible with all the disposal options. Therefore for baseline modelling purposes it was better to use Option 2 to help identify a preferred disposal option.</p> <p>More detailed modelling, concentrating on the preferred options, will be produced for the Waste Action Plan.</p> <p>A simpler layout has been introduced in Chapter 14 as suggested.</p>
	<p>I understand the location of facilities is not required in this strategy but it would be helpful to have a map showing possible locations or ideas about where they might be considered, even if this is to highlight there is not enough space for any facilities.</p>	<p>This work is being prepared through the local development framework. It is not sufficiently progressed to accompany the MWMS.</p>
	<p>We would encourage partnership working with other local authorities to develop a sub regional energy from waste facility.</p> <p>The Council will have to consider the impact of transporting waste out of the Bay area. You must consider the environmental impact of the distance the waste has to travel, fuel price increase, rail transportation and air quality issues and vehicle movements with moving waste to a sub regional facility.</p>	<p>The EA's support is welcome.</p> <p>Transport issues were taken into account for waste modelling in the Appraisal of MSW options report (Supplementary report E).</p> <p>Further modelling is underway to accompany the Outline business Case submission for PFI credits for the sub regional facility.</p> <p>This includes WRATE modelling of potential environmental impacts from transporting the waste.</p>
	<p>If a sub regional facility is chosen there is an urgent need to ensure that recycling is maximised as soon as possible to meet the 50% recycling rate to qualify for funds available from DEFRA.</p>	<p>This is understood to be a condition from DEFRA for PFI credits for the sub regional facility.</p>
	<p>If MBT were to be considered a suitable option in the interim period you must ensure that there is a suitable market for the end product to be used.</p>	<p>The EA's support is very welcome.</p>

Organisation	Comment	Response
	<p>We would be happy to work with you in your decision for an interim facility.</p>	
	<p>Phased approach We are encouraged by the phased approach to finding a solution to managing Torbay's waste. The greatest concerns are the short time scales and need to obtain planning permission, gain consensus from councillors and find the necessary funds to develop recycling and residual waste facilities.</p>	<p>The support for the phased approach is welcome.</p> <p>The EA's concerns are acknowledged. Timescales are tight and Torbay has to deliver the Strategy quickly or face harsh financial penalties over the long term.</p>
	<p>Building trust with communities We would encourage Torbay to consult with the public on waste facilities as early on in the consultation process as possible.</p> <p>We have developed a consultation process called Building Trust With Communities which we are more than happy to share and develop with you.</p>	<p>This support is very welcome.</p>
	<p>Funding We would encourage Torbay to use available government funding from WRAP, WIDP and LIFT and work with other authorities to unlock potential funds.</p>	<p>This advice is welcome.</p>
	<p>Public Consultation We would encourage Torbay to do some additional consultation work with members of the public in smaller workshops and citizen's panels.</p>	<p>This work was undertaken in 2004, but will be considered further as part of testing the effectiveness of the education campaigns for minimisation and recycling.</p>
	<p>Education about residual waste facilities Extra time may need to be given to the press, Councillors and planners to educate them on the types and benefits of residual waste facilities and site visits could be arranged to educate them.</p>	<p>This advice is welcomed and site visits are recognised as necessary for Councillors and Officers.</p>
	<p>Internal environmental</p>	<p>This proposal is included in the</p>

Organisation	Comment	Response
	<p>management We recommend that Torbay Council also try to improve their own internal environmental management.</p> <p>We are happy to share our own plans and staff education programmes.</p>	<p>Strategy (paragraph 10.7).</p> <p>The EA's support would be most welcome.</p>
	<p>Adaptation to climate change Torbay should consider how you will adapt to climate change and consider the carbon footprint of the new facilities in the Strategy and forthcoming Action plan.</p>	<p>This has been taken into account in the WRATE analysis (Supplementary report E) and SEA, and is included in the SEA monitoring proposals.</p>
	<p>Recycling Markets It is important that there is an end market for any products or resources leaving waste facilities. We would encourage you to work with the RDA to ensure they develop recycle markets in the SW especially for organic products.</p>	<p>The strategy contains the intention to encourage more local markets for recyclable materials (paragraph 12.33).</p>
	<p>This is a challenging strategy which will significantly change the way waste is managed in Torbay. Torbay will need to ensure they find sufficient money to fund this strategy be it individually or partly in partnership with other local authorities and a waste provider.</p> <p>We are pleased to be working with you and hope to work more closely with you in the future to turn you strategy into action.</p>	<p>The support of the EA has been fundamental to the development of this strategy and Torbay is committed to taking into consideration the EA's advice.</p> <p>Torbay is also pleased to have the continuing support of the Agency.</p>
Natural England	<p>Strengthen wording relating to the protection of environmental assets. Although Plan is not site specific there needs to be a stronger line directing developers away from foraging areas of Greater Horseshoe Bats.</p>	<p>New policy for environmental protection is now included as policy 11 in MWMS, with specific reference to ensuring waste infrastructure does not adversely affect sites of international nature conservation importance.</p>
English Heritage	<p>No comment</p>	<p>N/A</p>
The Highways Agency	<p>The Agency is fully supportive of the Council's commitment to improving its performance</p>	<p>This support is welcomed.</p>

Organisation	Comment	Response
	against recycling and composting targets, and to reduce waste sent to landfill	
	The Agency would recommend that a facility for residual waste is provided locally within Torbay.	<p>Torbay is seeking to work in partnership with Devon County and Plymouth City Councils, to provide an energy from waste facility within the Plymouth area. This would be the nearest facility with sufficient capacity and of sufficient size to be economically viable.</p> <p>Extensive options appraisal work (Supplementary report E) shows that a sub-regional energy from waste facility performs well.</p>
	The Agency is interested in the minimisation of Heavy goods vehicle (HGV) movements affecting the strategic road network.	<p>Torbay currently moves 2 to 3 lorry loads of residual waste per day to Heathfield 13 miles away. This destination would be re-located to Plymouth approximately 30 miles distant, adding 17 miles to the journey, but most likely affecting the A38. The Strategy's aim to reduce residual waste should keep traffic movements to 2 lorries per day.</p> <p>The feasibility of rail transport will also be explored</p>
	Any formal proposals for dealing with residual waste should be supported by a transport assessment which considers potential highway implications of facility. In particular how operational and commercial waste movements would be managed, particularly during peak periods.	Any formal proposal would be accompanied by a transport assessment. In particular Torbay is seeking to incorporate the use of rail facilities to transport residual waste, and to transport waste during 'off peak' periods for travel if rail is not possible.
Devon County Council	Waste Minimisation: Torbay has managed to hold its waste growth rate to 1% over the last 6 years which is certainly commendable.	The Strategy seeks to reduce waste growth further to minimise costs and protect the environment
	Following stakeholder discussions it would appear that there may be a need for additional enforcement Officers	The enforcement aspect for Torbay is currently under review to reduce 'enviro crime' across the Bay. It is as part of this

Organisation	Comment	Response
	in Torbay.	process that persistent waste nuisance and hazard will be addressed.
	It may also be worth offering residents smaller bins as a waste reduction initiative	Smaller bins are currently available for residents who request them. They may become more popular once additional recycling facilities are available.
	Home composting: Whilst WRAP offers are tempting, it is hoped that DAWRRC authorities will consider maintaining their close relationships with local providers such as West Country Worms and Original Organics	Torbay is committed to its work with DAWRRC and has no intention of changing its current relationship with local suppliers. However Torbay is seeking to strengthen its relationship with WRAP in a wider context including the re-organisation of collection rounds to enable more efficient collection of recyclable materials.
	Recycling Torbay's recycling and composting rate of 26% does need to be improved upon to reduce potential fines; meet targets and to qualify for PFI credits in any joint venture with Plymouth and Devon. Therefore Option 1 cannot be recommended	The Strategy confirms this view and Devon County's support is welcome.
	With respect to Option 2 there are a number of issues: There is an obvious need to improve the CA site facilities in Torbay. Whilst planning permission is a challenge and costs are high for sites such as these, two sites within Torbay, well placed in terms of transport links and population would seem sensible.	Improvement of CA/RC site facilities has been a clear message from the public consultation and the Waste Strategy supports this view. However more detail is currently required on potential costs at this stage. This detail will be available in the pending Action plan. Site specific issues will be addressed through the emerging Local Development Framework.
	A financial incentive based contract and re-sale areas would also be recommended to optimise costs and recycling rates	The consultation has demonstrated public support for re-sale areas within the CA/RC site and will be considered in plans for new CA/RC sites.
	Torbay clearly needs to consider the way forward with regards to a MRF. A MRF solely for Torbay would prove expensive. A partnership approach might	Although currently Torbay's recyclable materials is transported to Oxfordshire (since the fire in 2007), the strategy recommends that an options

Organisation	Comment	Response
	prove better value. However, adjacent authorities run box based recycling schemes. There is an opportunity here to stand back and consider whether a box scheme might prove more efficient. All options should be considered before such a major decision is made	appraisal is necessary and this has been recommended during the Overview and Scrutiny process. This appraisal would include a box scheme.
	A mobile garden waste collection service might reduce pressure on any current or new CA site	The strategy supports this view and garden waste collection will be included in the Action Plan.
	All steps in option 2 should be given serious consideration	The Strategy demonstrates that without these steps Torbay will not significantly improve its recycling rate. All steps will be subject to rigorous analysis during the drafting of the Action Plan.
	Option 3: In addition to the proposals to improve recycling rates, measures need to be taken to improve composting rates, thereby reducing BMW to landfill and reducing the number of LATS permits that would otherwise have to be purchased. Nevertheless, the cost of collecting garden/food waste and providing a facility would be considerable and careful cost/benefit analysis would be required to determine the best option.	The strategy recommends Option 3 but this would be subject to the analysis during the drafting of the Action Plan. The initial analysis has shown that significant costs will be involved but that Torbay will not reach 50% recycling and composting without Option 3.
	If an IVC were to be were to be considered then cardboard should not be entertained and a partnership arrangement with the private sector providing the infrastructure might be an option. Given that garden waste can be open windrowed and charged for it might be worth giving serious consideration to collecting food waste only, weekly and researching an AD facility. These too are costly and a private sector approach might prove suitable.	<p>Technical advice from our neighbouring LAs is very welcome and has been extremely helpful in the drafting of Torbay's MWMS. Certainly IVC and AD are both under consideration.</p> <p>As suggested, Torbay is looking for a partnership approach to recycling and composting food waste from both the public and private sector.</p>
	There is currently no capacity at	Torbay Council supports Devon's

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	Heathfield IVC for any extra organic waste.	success in recycling and composting, although it is regrettable that there is no existing spare capacity at the Heathfield IVC.
	Torbay Council needs to carefully analyse the options for dealing with organic waste versus paying LATS fines. If higher recycling and composting rates are Torbay's priority then Option 3 needs to be chosen. The County council considers that it is important that Torbay increases their recycling and composting rate in order to qualify for PFI credits , given Torbay's proposal to join the partnership bid for an EfW plant in Plymouth	The Strategy recommends Option 3 as the Council does prioritise recycling and composting. Torbay Council has joined Devon County and Plymouth City councils in the partnership bid and is aware that PFI credits are dependent on reaching the National recycling targets. However, as recommended by Devon County Council, further analysis will be undertaken to ensure cost effectiveness. Analysis so far (In the Appraisal of MSW options - Supplementary report E) has supported this approach
	Disposal DCC is pleased that Torbay Council has joined with DCC and Plymouth City council in an expression of interest for PFI credits for and EfW plant in Plymouth. Overall the phased approach proposed by Torbay Focusing waste reduction, improved recycling, potential organic waste composting and an EfW sub regional partnership for residual waste treatment appears to be a sensible way forward and has the support of the County Council	The County Council's support is very welcome.
Plymouth City Council	I am pleased to see that both the Plymouth and Torbay Strategies contain the option to develop a sub-regional solution for the treatment of residual waste.	Plymouth's support is very welcome. A sub-regional solution for the treatment of residual waste is fundamental to Torbay's Waste Strategy.
Teignbridge District Council	Teignbridge District council kindly completed the Waste Strategy Questionnaire and their comments are included within the questionnaire responses. Additional specific comments include:	Torbay is severely constrained in terms of available sites, and the residual waste stream is not large enough to support a range of specialist facilities independently. Facilities such as the Civic Amenity Site and Transfer

Organisation	Comment	Response
	Paragraph 3.10.3 and 5.5.5.5 of the Devon Waste Local Plan make it clear it would be expected that facilities catering for waste originating within Torbay would need to be located within this settlement unless it can be demonstrated that no existing permitted sites for this type of facility are available within the principal urban area.; no suitable potential sites are available within the PUA; or a more sustainable option is available outside of the PUA.	station are located within the Torbay PUA and the Strategy envisages that these facilities would be improved. Torbay, Devon county and Plymouth are working together in partnership to provide and EfW plant for the sub-region which is a specialist facility. This will be the nearest facility of this type with capacity to accept Torbay's waste. Currently some waste from the South Hams West Devon and Teignbridge are also under consideration for the new facility. Options analysis so far has demonstrated that waste minimisation and increased recycling together with a reduction of waste to landfill and energy recovery make this a sustainable solution.
	It would be interesting to see what sort of financial investment is expected to meet the objectives 3.1, 10.1 and 10.10.	The Waste Action Plan will include further information on waste minimisation costs.
	IVC doesn't necessarily provide a faster biodegradation process, it is designed to achieve the destruction of pathogens associated with composting cooked food waste and meet the requirements of the Animal By – product regulations	As the host of an IVC facility Teignbridge's advice on IVC process is welcomed and changes to the strategy have been put in place.
	Options 7 and 8 fail to mention that the landfill is outside Torbay.	All options assume that landfill is outside Torbay. The strategy now makes this clearer in chapter 14.
	Has any consideration been given to providing a sub regional EfW facility in Torbay thereby overcoming scale issues?	This option was considered at an early stage in the options appraisal process and did not pass the initial criteria for further analysis. Part of the reason is that the availability of sites within Torbay is severely constrained. Additionally it would be more suitable to locate such a facility near to the larger Plymouth PUA.
	Has consideration been given to the procurement of an EfW	This proposal is included in the full options appraisal as EfW

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	<p>facility in Torbay in partnership with private waste companies? This could treat commercial and municipal waste and generate external investment and overcome plant scale issues.</p>	<p>within Torbay. In this option additional capacity is allocated for commercial waste. A large amount of additional capacity was not modelled for the reasons outlined above and due to uncertainty concerning the commercial market.</p>
	<p>Policy proposals: Policy proposal 7 doesn't mention that kerbside sorting options will be considered.</p>	<p>Paragraph 12.10 now makes this more explicit within the Headline Strategy.</p>



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