

PART 2



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4 CURRENT STATUS OF WASTE PREVENTION AND MINIMISATION

4.1 INTRODUCTION

The central objective of the Midlands Waste Management Plan follows the waste management hierarchy, which, in order of priority, promotes: -

- Prevention and Minimisation
- Materials recovery (recycling/recovery)
- Energy Recovery
- Safe disposal including landfill

This hierarchy was originally set out in the Framework Directive on Waste (91/156/EEC) and is the basis of Irish policy as established in the Waste Management Act, 1996. The Waste Management (Planning) Regulations, 1997 state *"A plan shall describe measures in support of waste prevention and minimisation carried on by the Local Authority and, to the extent that information is available or may reasonably be obtained, by business and industry and give an assessment of the impact of such activities"*.

Progress in waste prevention and minimisation over the life of the current Plan has been limited. The reported figures in Chapter Six show an increase in recycling in percentage terms, but an increase in the generation of waste has also been observed, which is consistent with the national situation. On this basis, waste prevention and minimisation are key target areas for improvement, particularly with forecasts for further economic growth in the short to medium term.

The Government released its policy statement on Preventing and Recycling Waste, *"Delivering Change"*, in 2002. This statement highlighted the need to decouple waste generation from economic growth, emphasising the need to alter the existing culture of waste management generation, by prioritising the importance of prevention.

4.2 WASTE PREVENTION AND MINIMISATION – LEGISLATIVE REQUIREMENTS

4.2.1 General

The Waste Management Act, 1996 (Part III S. 28) specifies that: *"A person who carries on any activity of an agricultural, commercial or industrial nature (including the manufacture of any product) shall have due regard to the need to prevent or minimise the production of waste from that activity and, as the case may be, from any product manufactured by him or her as a result of such an activity, and shall take all such reasonable steps as are necessary for the purposes of such prevention or minimisation (including, where appropriate, steps as respects the design of any product aforesaid)"*.

The Act provides for the Minister to make regulations to prevent, minimise or limit production of waste, or specific classes of waste. Regulations may also be made requiring a person to conduct a waste audit and also to implement or operate a waste reduction programme.

The Environmental Protection Agency Act, 1992 gives the Agency the opportunity to promote the carrying out of environmental audits, and specific industries are required to obtain an Integrated Pollution Prevention and Control (IPPC) (formerly IPC) licence in order to operate facilities. The Agency shall not grant a licence or a revised licence for any activity unless it is satisfied that the principles of Best Available Techniques (BAT) as defined in the Protection of the Environment Act, 2003 are upheld.

One of the principal objectives of the IPPC licensing system is to secure, from licensees, annual improvements in waste minimisation. The information obtained through the annual report to the EPA must include amounts of raw materials usage, waste produced, off-site recovery and on-site recovery.

4.2.2 National Waste Minimisation Initiatives

A number of national initiatives have been introduced since the publication of the previous Midlands Waste Management Plan. Amongst these initiatives are:

- The Environmental Partnership Fund
- Environmental Research Technological Development and Innovation) ERTDI Research Programme
- Cleaner Greener Production Programme (CGPP)



- National Waste Prevention Programme
- EPA Core Prevention Team
- Enforcement Legislation

The Environmental Partnership Fund (Local Agenda 21) promotes sustainable development by assisting small-scale environmental projects at local level, which involve partnership arrangements between Local Authorities and local community groups, schools and environmental NGOs.

The ERTDI Research Programme is conducted by the EPA and supports R&D projects through grant awards. The Cleaner Greener Production Programme would fall under this Scheme, with a specific focus on cleaner, more environmentally friendly, sustainable production in small to medium enterprises.

In April 2004, the Minister of the Environment, Heritage and Local Government launched the National Waste Prevention Programme. The Programme will be implemented by the Environmental Protection Agency and aims to deliver substantive results on waste prevention and minimisation and will integrate a range of initiatives addressing awareness-raising, technical and financial assistance, training and incentive mechanisms.

The EPA Core Prevention Team established in the EPA, will be the key driver of the National Waste Prevention Programme (NWPP). It will develop and implement the NWPP in close co-operation with other key stakeholders.

It is anticipated that the introduction of enhanced Activity Enforcement and Pay by Weight/Use waste collection services will have an effect on waste prevention and minimisation at every level, as householders

and industry attempt to reduce waste costs by reducing their waste volumes.

4.3 PROGRESS TO DATE AND CURRENT INITIATIVES

Waste Prevention was in its infancy as a waste management option in Ireland, regionally and nationally during the period 1997/1998 when the first Waste Management Plans were prepared. Most Local Authorities at the time had very little experience of prevention. Similarly, there were no clear national definitions of prevention, nor any coherent guidelines for Local Authorities.

The Midlands Waste Management Plan outlined a number of ambitious and potentially effective measures for prevention and minimisation for the Midlands Region over the Plan period (2001-2005).

There has been modest progress made in this area, although progress has not been uniform across all sectors.

Household & Community Level

Environmental Awareness Officers (EAOs) have been appointed in each County, with a positive impact on waste minimisation and prevention on their primary focus group (the public). These EAOs are responsible for making the public aware of relevant aspects of the Waste Management Plans, which is generally achieved through the circulation of educational material on waste prevention and minimisation, and also visits to local schools and community groups.

EAOs have been central to much of the progress recorded to date. Over 19 projects have been awarded grants through the Local Agenda 21 Environment Partnership Fund, while 184 schools in the Region are registered with the An Taisce Green Schools Programme with 37 schools having currently achieved Green Flag Status. Local Authorities throughout the Region have delivered over 6000 home compost bins, at a subsidised rate, since 2000.



37 Green Flag Awards in the Region

Commercial & Industry Level

While dedicated Environmental Awareness Staff in each County have been appointed, these staff have been more focused on household/community initiatives. More emphasis does however need to be focussed at commercial and industrial level, and the appointment of additional staff is recommended in this Plan.

Most interaction with commercial waste producers is now through enforcement of the packaging regulations and in relation to waste permitting issues, although the potential to promote prevention via this method is limited.



Waste Awareness Workshop in Birr

Some awareness-raising seminars have been held in Longford and Westmeath, mainly on packaging regulations. A waste club has recently been initiated in Co. Laois where the Local Authority is facilitating and assisting companies in taking a joint approach to improve waste management.

Some success has been achieved through the IPPC Licensing system, and through small scale Projects through the ERTDI and CGPP Grant Schemes, but waste prevention practices are not being implemented on a region wide scale.

To address waste prevention in the long term, this Plan is recommending the appointment of a new role for each Local Authority - Green Business Officer. These new appointments will specifically target the commercial and industrial sectors and will aim to promote waste awareness, prevention and sustainable waste management.

Local Authority Level

Whilst most Local Authorities have appointed Environmental Awareness Officers, there has not been a concerted move towards Prevention and Minimisation Policies in the day-to-day operations of the Local Authorities.

Each of the Local Authorities in the Region have set up some form of in-house recycling although systems vary from department to department. None of the Local Authorities in the Region have put in place an approved internal Environmental Management System (EMS) or have adopted completely the principles of green procurement.

Audits have been undertaken in Longford, Westmeath and Laois County Councils, but the results and impacts of these audits on subsequent policies were not apparent.

Other Influences

On a national basis, the implementation of IPPC licensing by the EPA, the increase in waste charges and disposal, landfill and plastic bag levies, ERTDI and CGPP funding would have all had positive impact on prevention and minimisation of waste arisings in the Region.

5 COMMUNITY BASED WASTE MANAGEMENT

5.1 INTRODUCTION

Community based waste management initiatives are slowly evolving in Ireland. Many of these are serving to increase employment and minimise social exclusion. To date there are several case studies of small-scale projects that have got off the ground due to partnerships with Local Authorities, FÁS or through central government funding. There are bound to be many more examples happening throughout the country but due to limited funds for advertising, media or production of annual reports information is not readily available or accessible.



Longford - Cullyfad Community Group

The new Waste Management Plans for Ireland need to address the role the community/voluntary sector can play in reducing the quantity of waste sent to landfill. Excellent kerbside recycling schemes have been rolled out the length and breadth of the country, however there is still a need for householders to think twice before they put electrical goods, bulky waste (furniture), books, scrap metal/parts toys, clothes etc in the rubbish bin. This 'trash' can be another man's treasure.

Community groups/partnerships and 'Not for Profit' groups are in an ideal position to set up small-scale facilities to receive this waste. The opportunities for repair and resale are available and will go a long way towards diverting waste from landfill and improving the local environment. It is also an effective way of developing social inclusion, and strong sense of identity and community spirit.

The 2001 Waste Management Plan included objectives for the EAOs to identify appropriate community and voluntary groups and establish databases to facilitate and foster the exchange of information and ideas. Below are two examples of successful community recycling/recovery initiatives that have resulted in the Region.

5.2 MIDLANDS REGION

5.2.1 Adopt-a-Bring Bank Scheme

Within the Midlands Region, local community groups, in conjunction with the Local Authority and the Tidy Towns Associations, are taking responsibility for their local Bring Banks through the 'Adopt a Bank Scheme'. Each participating community group maintains the Bring Banks to a high standard and advise the Local Authority if servicing is not adequate. The scheme has proved highly successful, particularly in more rural areas of the Region.

5.2.2 Litter Management

The An Taisce Litter Management Programme for Ferbane and Banagher is aimed at implementing a sustainable approach to litter and waste in the immediate local area. A committee has been formed undertaken by pupils from the local secondary schools and attended by members of the community, tidy towns and Small to Medium Enterprises (SMEs) in the area. It has been extremely successful in raising awareness in the area for both businesses and households.

5.2.3 Community Programmes for 2006

A Community based home composting programme is proposed and will involve people from a housing estate/small street that are all trained in composting and thus will hold training workshops themselves and become the village composting mentors.

5.2.4 Charity/Second Hand Shops

There are a number of charity and second hand shops in the Region and whilst their main purpose is not to prevent waste, it is in fact a result of their activities.



Charity Shops accept second hand items

The Irish Cancer Society, Oxfam, Cerebral Palsy Ireland, St Vincent de Paul, and Gorta, are examples of shops providing outlets for second hand clothing, furniture and household appliances to be sold for reuse. Local Authorities should encourage the public to donate and purchase second hand goods from charity and second hand shops where possible, as broadcast in the current TV Race Against Waste advertisements.

5.3 OTHER REGIONS

The following case studies are from around the Country and illustrate how recycling facilities can be developed by the community for the benefit of local interests.

5.3.1 Sunflower Recycling – Dublin

Sunflower Recycling was established to create employment in Dublin's inner city in 1995. The project employs 26 long-term unemployed via Community Employment and 3 through the Full Time Jobs Initiative. The project collects recyclable material from inner city offices and community groups. These are brought back to the depot to be sorted, graded and baled. The main funding for the project is through FÁS and the project is operated in partnership with Dublin City Council.

The project has achieved a lot in a relatively short period. Two separate EU Projects were created, INTERGRA and YOUTHSTART both aimed at training the long-term unemployed. 42 people have been employed within the recycling industry, 39 have trained and moved on to further employment and 9 have gone on to further education. The project has also gained recognition for recycling as an option for future job creation.

5.3.2 Clondalkin Community Recycling Initiative

The Clondalkin Partnership, with support from South Dublin County Council, and under the auspice of the FÁS Social Economy Programme, has created the successful Clondalkin Community Recycling Initiative. Approximately 15 staff from the South Dublin Area are trained and employed to collect white and electrical goods for recycling and resale. This initiative is providing a necessary service to those who cannot access a Civic Amenity Facility or suitable service. The scheme has put South Dublin at the top of the league for management of WEEE in the Region and Nationally.

5.3.3 D.U.M.P

'The Disposal of Unused Medications Properly' project was initially started in the South Western Area Health Board (SWAHB) to combat the high rate of parasuicide attempts involving drug overdoses and also the number of accidental poisoning of small children (10% of accidental deaths in childhood relate to poisoning).

A significant number of people are unaware that pharmacies will dispose of unused medicines for them (however, the pharmacies are not obliged to do this). Consequently medication accumulates in the home thus being present for attempted suicide or as a risk of accidental poisoning. Alternatively, it would appear that people flush unused medication down the toilet or dispose of them in the rubbish bin, which can pose a significant risk to the environment.

A publicity campaign aimed at the catchment area of the relevant Region was run, with six pharmacies involved in the project provided with waste disposal containers. The general consensus amongst the pharmacists was that the campaign was a success. The results of the trial are as follows:

The average collection yielded 9 kg per pharmacist per collection. To put this into perspective, if the trial had been carried out with the 168 pharmacies in the whole SWAHB Region, the quantity per collection would have been 1,512 kg. Other estimates suggest an annual collection of 35.15 kg per pharmacist per annum. A correlation was observed between the medication returned and the medication of choice as a method of overdose.

Recommendations as a result of the trial were as follows:

- The prescribing and dispensing practices of medicines, that have a high return rate, should be reviewed.
- There is a need to raise awareness about why unused medicines should be returned.

The East Coast Area Health Board also intends to begin a DUMP project in 2005 with the help of the Shared Services Eastern Region. There are 76 pharmacies in this area.

5.3.4 Limerick/Kerry Leader Groups

Limerick and Kerry County Councils supported Leader Groups in developing a community business programme using action training to create enterprises in the recycled goods sector. The Consultants have completed the feasibility study and it is hoped that this will be disseminated to all project partners and relevant organisations within the month. Leader Groups will use the blueprint to encourage the growth of community based recycling projects in line with their Regional Waste Management Plan

5.4 WHERE TO FROM HERE?

These case studies show that what is found lacking in Ireland and is perhaps hindering the progress of other community initiatives (both large and small scale) is the lack of a robust support structure to ensure the community groups initiatives are successful and, most importantly, sustainable.

In Europe there are many examples of community initiatives in action and their longevity and success is due to the support networks available to them from the initial planning stages through to ongoing funding and ultimately assisting other community groups to do the same.

The following organisations from the UK provide three examples of support structures that have led to many successful community composting and recycling initiatives:

5.4.1 Community Composting Network

The Community Composting Network (CCN) provides help and support to over 200 community groups that are in some way involved in organic waste management. CCN is a member's organisation self

managed by an elected committee of members. The CCN has expertise in the following areas:

- Establishment and development of composting projects.
- Promotion of home composting.
- Composting policy and legislation.
- Development of innovative composting solutions.
- Centralised composting.
- Building links with the sector and local, regional and national government.

Ultimately CCN provide:

- Information and support to new and existing community composting projects.
- Promote community composting at a national level (government and public).
- Put new groups in touch with experienced composters.
- Provide a consultancy service to members.
- Provide basic business support and funding advice.

5.4.2 Community Recycling Services

Community Recycling Services Ltd (CRS) is a partnership of seven leading edge practitioners from the community and not-for-profit sectors. It is dedicated to providing high quality services to Local Authorities. The aim is to support and develop local community based solutions to meet current and future sustainable 'waste' resource management methods. CRS works closely with existing organisations to build their capacity or to establish new ones with local partners to deliver recycling and reuse services.

5.4.3 The Furniture Recycling Network

The FRN is a UK based co-ordinating body for furniture recycling projects that collect a wide range of household items to pass onto people in need. The FRNs objectives are to:

- Provide information services, training and support to furniture recycling projects.

- Promote the reuse of unwanted furniture and household effects for the alleviation of need, hardship and distress.
- Promote a national identity for furniture recycling and to be the media contact on generic rules.
- Campaign and raise public awareness on those issues that affect the FRN members and those people in receipt of their services.
- Promote good practice and high quality standards of service delivery from member projects and those people to which they provide a service.



Community Resource Centres are Growing

These examples represent progressive community networks and similar initiatives could be considered for the Midlands Region and between neighbouring Regions. New networks should build upon the good progress and existing community schemes.

6 CURRENT WASTE GENERATION

6.1 INTRODUCTION

Since the making of the first Midlands Waste Management Plan in September 2001, waste arisings have continued to grow in the Midlands Region reflecting the National trend. The waste quantities presented in the original Midlands Waste Plan were based on the best available data from 1998 and 1999. The sources included the Midlands Waste Management Strategy (1999), Local Authority records, Regional surveys and questionnaires, and the EPA National Waste Database (1996).

Since then, the reporting and recording mechanisms for waste data have improved significantly, particularly for household, commercial and construction and demolition (C&D) waste streams. Nevertheless nationally, there remains a lack of consistent data and poor reporting systems for specific waste streams such as industrial wastes, sludges and priority waste streams.

6.2 MIDLANDS REGION WASTE QUANTITIES

The Waste Management Plan Review commenced in August 2004 and as such, the waste quantities presented in this Plan are based on annual figures returned from all licensed and permitted facilities and collectors for 2003. These are typically submitted to the relevant Local Authority and processed in the spring of the following year. The key sources for Waste Quantities in the Midlands Region include:

- EPA National Waste Database Report 2001
- EPA National Hazardous Waste Management Plan 2001
- Local Authority (EPA) National Waste Database Returns 2003
- Waste Licensed/Permitted Facilities – Annual Environmental Reports (AERs)
- Waste Collection Permits: AERs

Table 6.1 lists the key waste categories and corresponding quantities in the Midlands Region for the year ended 2003.

Table 6.1: Quantities of Waste Arisings in the Midlands Region (2003)

Waste Type	Quantity (Tonnes Per Annum)	Source
Household (Collected and Uncollected)	113,550	Local Authority EPA National Waste Database Returns 2003
Commercial waste	63,996	Waste Collectors Annual Environmental Reports (AERs) Waste Licensed Facilities AERs
Industrial waste	24,758* 251,570**	* Local Authority EPA National Waste Database Returns 2003 **Estimate using NACE Codes and EPA Factors. Based on no. employees sourced from Compass Business Directory
Construction and Demolition waste	265,000	Waste Permitted Facilities (Soil and Stone) Local Authority EPA National Waste Database Returns 2003
Litter and street sweepings	3,474	Local Authority EPA National Waste Database Returns 2003,
Contaminated soils	2,297	Local Authority EPA National Waste Database Returns 2003
Mining and quarry waste	1,165,337	IPPC Licensed Facilities AERs
Ash and other incineration residues	65,520	IPPC Licensed Power Stations
Healthcare Waste	196	AER for Sterile Technologies Ltd
Water Treatment Sludges	596	Local Authority Sludge Plans/Strategies
Wastewater Treatment Sludges	6,797	Local Authority Sludge Plans/Strategies
Industrial Sludges	3,522	Local Authority Sludge Plans/Strategies
Total (Non-Agri Waste)	1,715,043	Industrial waste quantity of 24,758t

Table 6.1 (Cont): Quantities of Waste Arisings in the Midlands Region (2003)

Waste Type	Quantity (TPA)	Source
Agricultural waste	568,230 (tds)	Local Authority Sludge Plans/Strategies

It shows that the present non-agricultural waste generated in the Midlands Region is 1,715,043 tonnes of municipal and industrial (incl. mining/quarrying) waste per annum.

In addition, it is estimated that there are 568,230 tonnes dry solids per annum of agricultural waste arising in the five counties.

Priority wastes designated by the European Union which include tyres, end of life vehicles, electronic/electrical equipment waste, packaging waste, batteries and accumulators, PCB's and waste oils, are considered in Section 6.5.

6.2.1 Household Waste

The quantity of household waste generated in the Region in 2003 was calculated to be 113,550 tonnes. This figure consists of mixed household waste collected; separately collected household waste, household waste estimated to be uncollected and organic household waste estimated to be home composted.

The percentage of uncollected household waste is approximately 37% of the household waste generated in the Region. It is estimated that about two thirds of the uncollected household waste is brought by householders to one of the four regional landfills. There remains a significant quantity of material that is being disposed of illegally or through backyard burning and this is estimated to be approximately 9-10% of the total household waste arisings.

6.2.2 Commercial Waste

The quantity of commercial waste recorded in the Region in 2003 was estimated to be 63,996 tonnes. This figure consists of collected mixed commercial waste and separately collected commercial waste and represents an increase of 32,211 tonnes from the previous Plan. While this would suggest a significant increase in commercial waste arisings over the period of the last Plan, in reality, much of the increase could

be attributed to the improved reporting by private waste collectors through the waste collection permit system.

6.2.3 Industrial Waste

The industrial waste amount of 24,758 tpa presented in Table 6.1 represents the quantities recorded by Local Authorities in the Region. This figure is primarily the Industrial waste generated from industrial activities and can include sludges, processing waste and municipal type industrial waste which is reported through the Local Authority waste collection and waste facility permit systems.

It is considered however that this figure does not accurately reflect the level of industrial waste arisings generated from the industrial sector and IPPC Licensed facilities in the Region as much of the waste is either recycled on site or stockpiled/stored/disposed of on site.

The industrial waste estimate of 251,570 tpa was calculated using industrial sector NACE Codes and EPA waste per capita factors and is likely to be a closer estimate of the total industrial waste generated in the Region.

6.2.4 Construction and Demolition (C&D) Waste

Construction and Demolition waste arisings generated in the Region in 2003 are estimated to be 265,000 tonnes. This figure includes C & D waste disposed of at waste permitted facilities, landfill remediation sites, and separately collected C & D waste in the Region. This represents a growth of 220,000 from the available figure reported in the first Midlands Waste Management Plan (2001). Much of this increase is due to the reporting systems that are now in place through the Waste Permit Regulations however there is also likely to have been a significant 'real' increase in C & D waste generated due to the economic growth that has been experienced in the Region.

6.2.5 Agricultural Waste

The Waste Management (Planning) Regulations 1997 requires that a quantity for agricultural waste be reported in each Regional Waste Plan. In the Midlands Region, agricultural waste primarily consists of:

- Agricultural Sludges (Animal slurries/manure)
- Spent Mushroom Compost
- Farm plastics

Table 6.2 provides a waste quantity for each of the key agricultural waste fractions.

The National waste policy for the management of farm films is set out in the Waste Management (Farm Plastics) Regulations, 2001, which revised and replaced the previous 1997 Regulations. Since 1997 a government approved body known as the Irish Farm Film Producers Group (IFFPG) has established a nationwide collection scheme. The scheme has enjoyed considerable success and to date has diverted over 33,000 tonnes of plastics from landfill. In 2003 over 9,500 tonnes nationally were recycled which is an increase of 32% on 2002 and is 36% over the government target.

Table 6.2: Agricultural Waste Quantities Generated in the Midlands (2003)

Waste Type	Tonnes Dry Solids Per Annum
Agricultural Sludge	560,588
Spent Mushroom Compost	7,642
Farm Plastics	Not Available
Regional Total	568,230

Source: Midlands Regional Authorities Sludge Management Plans/Strategies

Potentially hazardous agricultural wastes such as sheep dip and veterinary medicines that arise on farms are considered in the EPA National Hazardous Waste Management Plan.

6.2.6 Mining and Quarrying Waste

The EPA reported in the National Waste Database 2003 that 1.7 million tonnes of mining and quarrying waste was generated in Ireland. The representative arisings in 2001 for the Midlands Region was 1,165,337 tonnes. The Lisheen Mining operation accounted for 1,163,557 tonnes of this material, which was disposed of at the on-site tailings lagoon.

6.2.7 Sludges (Municipal/Industrial)

The municipal and industrial sludge arisings recorded for the Midlands Region in 2003 are shown in Table 6.3 and have been sourced from the relevant Sludge Management Plans/Strategies.

Table 6.3: Sludge Quantities Generated in the Midlands Region (2003)

Waste Type	Tonnes Dry Solids Per Annum
Municipal (Includes 876 tonnes of septic waste)	8,629
Industrial Sludges	3,522
Regional Total	11,791

Source: Midlands Local Authorities Sludge Management Plans/Strategies

6.2.8 Ash/Incinerator Residues

The ash and incinerator residues for 2003 in the Midlands were estimated from power stations in the Region. The ESB, Bord na Móna and Edenderry Power were contacted and an estimate has been provided. Fly ash comprises 95% of the total ash generated at these power stations and is collected by means of electrostatic precipitators.

Table 6.4: Ash Residue Arisings, 2003

Source of Ash	Bottom Ash	Fly Ash	Total
Lanesboro Generating Station	1,500	11,500	13,000
Shannon-bridge Generating Station	3,000	20,000	23,000
Edenderry Power	5,490	24,030	29,520
Total Ash Produced			65,520

Table 6.4 shows the quantities of both bottom and fly ash generated at the power stations. All of the ash generated was non-hazardous. All ash residues generated are disposed of at EPA Licensed landfill facilities operated by Bord na Móna and the ESB.

6.2.9 Healthcare Wastes

Table 6.1 provides an estimated quantity of the healthcare (Risk) waste generated in the Region sourced from hospitals in the Midlands Region. Sterile Technologies Ireland (STI), who collect risk healthcare waste from hospitals across Ireland handled 144 tonnes, Eco-Safe Systems collected 32 tonnes, with the remaining quantities handled by various other specialist waste contractors.

6.2.10 Contaminated Soils

Laois County Council was the only Local Authority to report contaminated soil generated in their functional area in 2003. The amount reported was 2,297 tonnes. The potential for contaminated soils tends to result from discovery during one-off construction projects and for this reason annual quantities can vary from one year to the next.

6.2.11 Hazardous Component of Waste Arising in the Midlands Region

In accordance with the Waste Management (Planning) Regulations, 1997 it is also required to identify the hazardous component, if any, of the wastes identified in Table 6.1.

Table 6.5: Hazardous Component of Wastes Arising in the Midlands Region (year)

Waste Type	Hazardous Waste Component (Estimate)
Household	190
Commercial	3,857
Industrial	1,991
C&D Waste	126
Contaminated Soils	2,297
Healthcare	196

Source: Local Authority National Waste Database 2001

The hazardous waste quantities of the industrial waste stream were recorded by Local Authorities through the Trans-Frontier Shipment and C1 Form systems.

6.3 WASTE MOVEMENTS IN THE MIDLANDS

The movement of wastes into and out of the Midlands Region can be difficult to identify as almost 99% of the waste generated in the Region is collected and managed by the private sector. The private sector operating in the Midlands Region comprises a mix of local, regional and national waste collectors and waste can often be transported across regional boundaries for treatment or disposal in neighbouring regions.

Table 6.6 summarises the movement of waste quantities into and out of the Region for household, commercial, industrial, and C&D waste as recorded by the Region's authorities in 2003. The quantities presented represent the bulk of the waste movements into and out of the Region.

Table 6.6: Inter-Regional Waste Movements in the Midlands Region (2003)

Waste Type	Waste Imported (Tonnes Per Annum)	Waste Exported (Tonnes Per Annum)
Household	7,892	11,103
Commercial	2,632	15,679
Industrial	22,591	11,628
Construction and Demolition	21	665
Contaminated Soils	29,438	29,400
Total	62,574	68,475

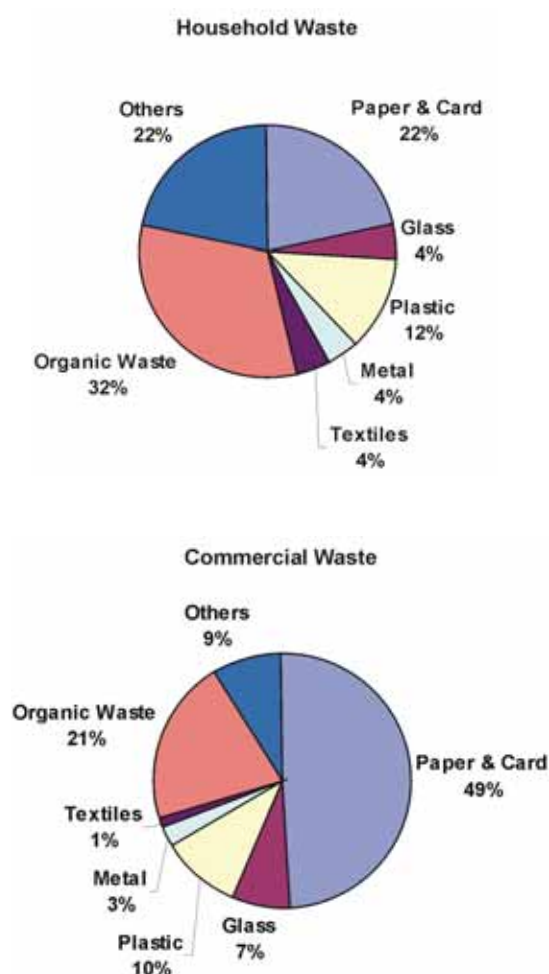
Source: Local Authority National Waste Database Returns 2003

6.4 WASTE COMPOSITION IN THE MIDLANDS

To estimate quantities for each of the waste streams, waste compositional data for household and commercial waste sourced from the EPA National Waste Database Report (2001) has been used. Figure 6.1 illustrates the EPA compositional data for household and commercial wastes. The compositions are based on waste characterisation surveys carried out by Local

Authorities under the EPA guidance from 1995 to 2002.

Figure 6.1: Composition of Household and Commercial Waste



A new programme of municipal waste characterisation surveys is currently underway by the EPA (under the National Waste Prevention Programme) and revised compositional factors will be published in the next National Waste Database report. Currently accurate compositional data for industrial waste has not been compiled.

Industrial Waste would appear to be too heterogeneous and inhibits the development of representative waste composition data for all sectors within industry.

Table 6.7 provides a waste tonnage estimate for the listed waste streams.

Table 6.7: Waste Compositional Quantities for Household and Commercial Waste

Waste Stream	Household Waste (Tonnes per annum)	Commercial Waste (Tonnes per annum)	Total
Organic	36,336	13,435	49,771
Paper	24,981	31,348	56,329
Plastics	13,626	6,399	20,025
Glass	4,542	4,478	9,020
Metal	4,542	1,919	6,461
Textiles	4,542	640	5,182
Others	24,981	5,760	30,741
Totals	113,550	63,996	177,546

6.5 PRIORITY WASTE STREAMS

The EU Resolution of May 7th, 1990 on Waste Management Policy within the Community considered that it was desirable to establish programmes to deal with certain types of wastes. In 1991, the commission initiated its programme on Priority Waste Streams whereby project groups were established to determine solutions for a number of waste streams. The following waste streams were given priority in the EU Resolution:

- Scrapped cars (or End of Life Vehicles)
- Tyres
- Batteries
- Electrical and electronic waste
- Construction and demolition waste
- Hospital waste (healthcare waste)
- PCB's
- Packaging and packaging waste
- Waste Oils

Table 6.8 estimates the waste arisings for those wastes that have not already been referenced. The presented quantities for the Midlands Region are based on figures calculated from the Local Authority National

Waste Database 2003 Returns and additional sources listed in the table.

Table 6.8: Estimated Quantities of Priority Waste arising in the midlands

Priority Waste Stream	Quantity (Tonnes Per Annum)	Source of Information
WEEE	117	<i>Local Authority EPA National Waste Database Returns 2003</i>
Batteries & Accumulators	440	
Oils	917	
Polychlorinated Bi Phenyls	N/A	
Tyres	1,211	Irish Tyre Industry Assoc.
ELV	7,999	Calculation using EPA Methodology

6.6 WASTE MANAGEMENT DATA

Data is now collected from all operators of licensed facilities and all permit holders in the form of an Annual Environmental Report, and collated by each Local Authority. Compilation of this data is undertaken in order to give an estimate of the amount of waste generated, treated, recycled or disposed of within each county. Further analysis yields Regional figures.

The importance of this data is paramount to successful waste management planning, both annually and for the duration of each waste plan. Underestimated or overestimated figures, or erroneous data, can have serious implications in terms of the infrastructure provided.

Each Local Authority is responsible for submitting an annual return to the EPA in a prescribed format, detailing all waste arisings and movements within the Local Authority area.

In ceding the collection of waste to private contractors, the direct control of waste and waste data is, in effect, no longer controlled by the Local Authorities in the Midlands.

With regard to waste collection permits, the Region is represented by a central authority, responsible for issuing permits and recording and maintaining all records on AERs. Offaly County Council currently performs this role, but the successful outcome of this role is highly dependent on an unambiguous reporting system, operated efficiently by all participating Local Authorities, and complimented by a robust recording system.

It is considered that the current system could be improved and this area should be reviewed by the participating Local Authorities with a view to standardising the way that figures are collected and reported.

In particular, commercial and industrial wastes are not sufficiently reported, and this is an area that will require significant attention over the Plan period.

6.7 DEFICIENCIES IN WASTE STATISTICS

Since the original Midlands Waste Management Plan, there has been a significant improvement in the reporting systems for waste arisings in the Midlands Region, particularly for the household and Construction & Demolition waste streams. The waste collection and facility permit mechanisms are ensuring that waste collectors report waste collected and treated on an annual basis. However there remains a lack of reliable data for key waste streams such as commercial and industrial and priority waste such as WEEE, batteries and accumulators, PCBs, tyres, sludges and waste oils.

Currently Local Authorities submit annual waste quantities returns to the EPA, which feed into the National Waste Database, and these returns were used as the primary source of waste data for this Plan. The Local Authorities accept that there are inconsistencies in the quality of data being submitted to the EPA for the Midlands Region. The current Plan will aim to improve the data collection and reporting procedures further to ensure that the current deficiencies are eliminated. This is addressed further in Section 11.2.

7 CURRENT WASTE COLLECTION SERVICES

7.1 HOUSEHOLD WASTE

Waste Management Practice in the Midlands has evolved over the duration of the original Plan, with the collection area, and the number of households provided with segregated household waste collection, now significantly expanded.

Waste collection is, in the main, privatised, with only Westmeath County Council still providing some waste collection services. For all other Local Authorities, private companies control the waste collection service.

Waste collection operators are now obliged to operate a use-related (pay per weight/volume/lift) system since January 1st 2005.

Household waste generated in the Midlands Region is collected, treated and disposed of through an increasingly integrated system, which has developed since the completion of the first Midlands Waste Management Plan.

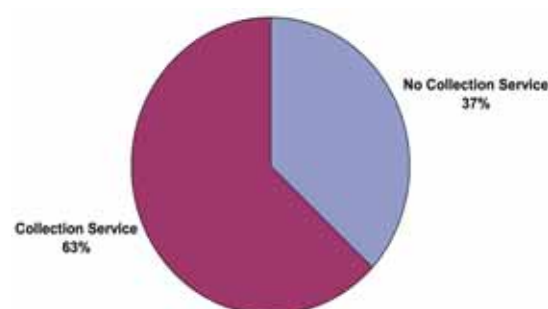
Many households have a separate bin or bag for mixed dry recyclables in addition to the normal mixed household waste bin. In addition a comprehensive network of Civic Amenity Facilities and Bring Banks has been developed in the Region and recycling of household waste is increasing.

7.1.1 Household Collection Services

Household waste collection in the Midlands Region is predominantly operated by the private sector, with Westmeath County Council the only remaining Local Authority still providing a collection service. In 2002, the Central Statistics Office reported a total of 92,648 households in the Midlands Region.

Figure 7.1 shows the estimated percentage of these households provided with, and availing of, a collection service and those in the Region, which are not.

Figure 7.1: Percentage of Household Availing of a Collection Service in the Region



As a whole, the Region is relatively sparsely populated and there exists a difference in the spatial coverage of households between urban and rural catchments that are served by a collection service. In general, the Regional urban centres are well served with a relatively high coverage rate. On the other hand, some rural areas in the Region are not yet served by collection services, with most householders finding alternative ways of disposing of their waste. Quantities for collected and uncollected household waste are presented in Table 9.1.

7.1.2 Local Authority Household Collection Services

Westmeath County Council is the only Local Authority in the Midlands Region still involved in waste collection. Its traditional collection scheme was contracted out in 2004 to a private waste collector, Allied Waste Management (AWM), who will continue to serve long-standing household and commercial customers. In total about 14,000 householders are served by the Local Authority controlled collection. The contract between the Local Authority and AWM will run for 5 years and is the largest household collection scheme in the county.

7.1.3 Private Waste Collection Services

In the Midlands Region, private waste collectors service about 76% of households availing of a collection service. Householders are typically provided with a wheelie bin for the disposal of their residual waste. Table 7.1 lists the key waste collectors currently operating in each county in the Region.

Table 7.1: Private Waste Collectors operating in Midlands Region

Local Authority	Waste Collectors
Offaly	Advanced Environmental Solutions (AES), Oxigen
Laois	AES, Oxigen, Wheel-It
Longford	Mulleadys
North Tipperary	AES, Ryan Brothers
Westmeath	AWM, Wallace Recycling, AES, Mulleadys

Private waste collectors are regulated by the Local Authority through the waste collection permit system, which requires private operators to report household quantities collected on an annual basis.

During 2005, all private waste collectors servicing householders are required to implement a pay by weight/volume refuse collection, in accordance with National Policy.

7.1.4 Household Kerbside Collection

Good progress has been made on the rollout of segregated household collection of dry recyclables in the Region during the original Plan period. By the end of 2003 approximately 29,000 households in the Region had been provided with either a wheelie bin or bag for dry recyclable collections and 5,221 tonnes of material was diverted from landfill and recycled.

This rollout of the collection scheme has continued to grow in 2004 and 2005 with the rollout of a dry recyclable collection to all household customers of Westmeath County Council. Table 9.1 summarises the household waste quantities collected in the Region in 2003 including from separate 'kerbside' collections.

**Dry Recyclables Collection Westmeath**

7.1.5 Civic Amenity Facilities

There are currently 9 Civic Amenity Facilities in operation in the Midlands Region. Civic Amenity Facilities are distinct from Bring Banks in that they are generally located within purpose built sites, are manned by permanent full-time staff – either from Local Authority or private contractor, have restricted opening hours, and accept an extensive range of materials. A list of the Civic Amenity Facilities is presented in Table 7.2.

**Athlone Civic Amenity Facility**

The waste quantities collected through the regional facilities in 2003 are reported in Table 9.1. New Civic Amenity Facilities are currently under construction or at an advanced stage of planning at Birr and Mullingar and a redevelopment of the Kyletalesha facility is underway.

Table 7.2: Civic Amenity Facilities in the Midlands

Local Authority	Name/Location
Offaly	Derryclure, Edenderry, Tullamore (AES)
Laois	Kyletalesha
Longford	Mulleadys (Drumlsh)
North Tipperary	Nenagh, Ballaghveny
Westmeath	Marlinstown, Athlone (operated by AES on behalf of Westmeath County Council)

7.1.6 Bring Banks

The development of Bring Banks in the Midlands Region has continued to grow steadily over the last five years.



Clonbullogue Bring Bank – Offaly

In 2003 the number of Bring Banks in the Midlands Region had reached 187, exceeding the figure of 174 recommended in the Plan. This represents excellent progress during the life of the previous plan, when a total of 27 Bring Banks was in place in the Region. There is now one Bring Bank per 1,531 population, which is significantly better than the national average of one Bring Bank per 2,394 people.

7.1.7 Waste Charges

In 2005 use-related charges are being introduced to householders across the country either through a weight or volume based system. The development of direct user charges was founded in the Government policy document 'Preventing and Recycling Waste: Delivering Change' (2002) and aims to encourage waste reduction and recycling.

In the Midlands Region, private waste collectors are operating a variety of systems ranging from tag-a-bag/bin through to on board weighing of bins utilising microchip technology. In general waste collectors have the discretion to decide the precise form of system they use, provided that it respects the principle of use-based charging.

Enforcement of the particular collection system is the responsibility of the Local Authorities in the Region who regulate collectors through the waste collection permit system.

7.2 COMMERCIAL AND INDUSTRIAL WASTE

Commercial and Industrial waste in the Midlands Region is similarly collected by the

private sector. The Region's authorities are not involved in the collection of commercial or industrial waste with the exception of Westmeath County Council who continue to service about 1000 commercial customers.

Commercial and Industrial businesses operating in the Region contract private waste collectors to serve their needs in terms of waste collection. The largest proportion of waste collected from the sector is mixed commercial and industrial waste with approximately 40,060 tonnes collected in the Region in 2003. Separate collections of packaging waste, glass, metals and other recyclable materials are carried out by waste collectors, who encourage businesses to separate packaging waste at the source. In 2003 over 22,000 tonnes of recyclable material was collected through separate collections.

Presently there are no Bring Banks or Civic Amenity Facilities solely for commercial or industrial waste in the Region.

7.3 CONSTRUCTION AND DEMOLITION (C&D) WASTE

Private waste collectors and permitted contractors within the construction industry collect and transport C&D waste in the Region. Contractors transporting C&D waste arisings from construction sites are required to obtain a Waste Collection Permit from the relevant Local Authority. Local Authorities encourage contractors to re-use (where possible) C&D waste on site or alternatively to transport the material to a separate site for recovery.

7.4 SPECIAL WASTE/PRIORITY WASTES

There is no separate collection of hazardous waste from households. A mobile collection service of hazardous waste i.e. Chemcar was operated by some Local Authorities within the Region but this was stopped due to escalating costs. Householders are encouraged to bring hazardous waste materials such as batteries, light bulbs, and waste oil to their local Civic Amenity Facilities for collection. These materials are typically stored on site until sufficient quantities have been collected. Generally the Local Authorities will arrange for the collection of

these materials with specialist waste contractors.

**All Island Contract for the
Management of Fridge/Freezers**

Recent EU funding has provided for the setting up of the all Island contract for the collection and management of household fridges and freezers from Local Authority Civic Amenity Facilities.

Householders can deposit their unwanted fridges and freezers at Civic Amenity Facilities for collection, which are collected by KMK Recycling in the Republic. The goods are sent on to the UK for dismantling and recovery. No charge is made for acceptance of fridges and freezers at the Civic Amenity Facilities. This scheme will run up until August 2005 when transfer of responsibility will move from the Local Authorities to the producers, in line with the EU Directive on Waste Electrical and Electronic Equipment (WEEE).

7.4.1 Commercial/Industrial Sectors

In the commercial and industrial sectors, priority wastes such as waste oils and batteries are typically collected by specialised waste collectors who operate in the Region. These operators often operate nationwide with the wastes brought to a centralised facility for treatment. All hazardous materials collected and transferred into or out of the Region must be accompanied by a C1 Transfer Form, which is issued by Local Authorities.

8 PACKAGING WASTE

8.1 INTRODUCTION

Packaging is defined in the Waste Management Act, 1996, as *“any material, container or wrapping, used for or in connection with the containment, transport, handling, protection, promotion, marketing or sale of any product or substance, including such packaging as may be prescribed”*. Hence this includes a very broad amount of waste ranging from food wrapping and shopping bags to the containers and boxes used in industry. The European Commission considers packaging waste a priority waste.

8.2 LEGISLATIVE ENVIRONMENT

8.2.1 European Packaging Waste Directive

The EU Directive on Packaging and Packaging Waste (94/62/EEC) is based on the Polluter Pays Principle with producer responsibility a fundamental principle. The Directive sets recycling and recovery targets for packaging waste, which must be achieved by specific deadlines.

The first target for implementation of Directive 94/62/EEC in Ireland required a 25% recycling rate to be achieved by 1st July, 2001. This target was ultimately achieved with the recovery of 25.3% of packaging waste by this deadline.

Additional targets in the Directive include:

- Between 50% and 65% (by weight) of packaging waste to be recovered in Ireland by 2005.
- For each type of packaging (paper, plastic etc.) a specific recycling target is set for that type of packaging material.

The Directive also emphasises prevention and reuse of packaging in Articles 4 and 5 respectively. Article 13 of the Directive states that measures must be taken within two years of 30th June 2001 (in the case of Ireland) to ensure that users of packaging,

including, in particular, consumers, obtain necessary information about the following:

- The return, collection and recovery systems available to them
- Their role in contributing to reuse, recovery and recycling of packaging and packaging waste
- The meaning of markings on packaging existing on the market
- Appropriate measures to address packaging waste must be incorporated into Waste Management Plans.

8.2.2 Waste Management (Packaging) Regulations

The Waste Management (Packaging) Regulations 2003 superseding the 1997 Regulations are focussed on ensuring that the end of 2005 target of 50% packaging waste recovery is met.

Producers with a company turnover greater than €1M and which place 25 tonnes or more of packaging onto the Irish Market each year are considered to be a “Major Producer” and are bound by the requirements of the Regulations.

To comply with the regulations, producers must either:

- Participate in an approved waste recovery scheme or
- self-comply with the regulations by registering with their Local Authority and by accepting back waste from their customers and the public.

To self-comply with the regulations, Major Producers must fix a notice in the premises stating that packaging will be accepted, free of charge for the purpose of recovery.

Producers below the threshold of Major Producers are also bound by the requirements of the Regulations and must ensure that packaging waste does not go to landfill and is separated at source according to material type and collected for the purpose of recovery/recycling or transferred back to the supplier.

A producer who is participating in a scheme for the recovery of farm plastics such as the Irish Farm Film Producers Group Limited (IFFPG) is exempt from the requirements of the Regulations

A Local Authority is not obliged to collect any waste plastics where it considers compliance with the Regulations is not in place. Private collectors are not allowed to accept plastic waste from a producer for disposal, unless they are supplied with a written declaration, which states that they are compliant with the Regulations.

There are additional obligations placed on major producers of packaging waste to: -

- Ensure that specified packaging waste does not go to landfill.
- Specified packaging waste is either separated at source and collected for recovery/recycling or transferred back to the packaging supplier.

Specified categories according to the Regulations include glass, aluminium, steel, paper and fibreboard, plastics, wood and textiles or such other categories as may be specified by the Minister.

A further Amendment to the Packaging Regulations was issued by the Minister for the Environment in late 2004. The main changes were to increase the registration fees payable by self-complying major producers to Local Authorities, and to advertise the take back facilities operated by self-complying major producers.

8.3 REPAK

REPAK is the only approved packaging compliance scheme in the country. It was established by a voluntary agreement between industry and the Department of the Environment and Local Government in response to the EU Directive on packaging and packaging waste (94/62/EC).



REPAK's role is to fulfil the recycling and recovery obligations for packaging waste on behalf of industry. One of the ways this is achieved is by funding recycling by means of a subsidy to individual waste recovery operators for each tonne of commercial packaging waste that they demonstrate they have sent for recovery and/or recycling. The level of subsidy is based on the material type, recovery activity for that material, the market value of the material and the tonnage that REPAK is committed to achieving within the current year. A subsidy is paid on the six specified packaging materials: glass, paper, plastic, steel, aluminium and wood.

In recent years, most of the progress across Ireland has been with commercial waste, but the subsidy for these materials has been gradually scaled back. In the short term the subsidy will be concentrated more on the household sector.

8.4 ESTIMATION OF PACKAGING WASTE

Packaging waste is quantified by determining, first, the quantities of waste generated for a sector, and later, applying a factor derived from waste composition studies.

Household packaging waste quantities recovered are reported separately for Bring Banks, Civic Amenity Facilities and Kerbside collection. For Bring Banks and Civic Amenity Facilities, no composition studies have been undertaken to date and therefore, with the exception of paper, the remaining waste types i.e. plastic, metal and glass, are assumed to be entirely packaging.

For household waste, the composition data is taken from studies carried out in both rural and urban areas on mixed residual waste, commissioned by the EPA in 2004. For C/I waste, the composition data is taken from studies on waste destined for landfill, commissioned by the EPA in 2001, as outlined in the EPA National Waste Database Report 2001

The quantities of dry recyclables collected from the commercial waste sector include paper and cardboard, glass, plastic, aluminium cans, other metals, wood, textiles and composite packaging. No composition studies have been undertaken to date on recovered commercial and industrial waste,

and in the absence of this data, the remaining waste types, with the exception of other metals, are assumed to be all packaging. Tonnages are reported for an additional category 'mixed dry recyclables', and similarly, this is assumed to be packaging. It is noted that for paper and cardboard, the reported figure will include a certain amount of newspapers and magazines. A breakdown of the quantities of commercial packaging waste recovered is presented in Table 8.1.

Table 8.1: Breakdown of Recovered Commercial Packaging Waste

Waste Stream	Quantities (t)
Paper/ Cardboard	7,505
Plastic	43
Glass	467
Wood	4,283
Aluminium	10
Other	1,282
Total	13,590

Source: Midlands Local Authority NWD Returns and AERs from Waste Collectors (2003).

It is currently estimated that packaging waste forms 24% of household waste (based on a survey in Longford in 2004), and 45% of commercial and industrial waste landfilled (based on EPA data).

8.5 QUANTITIES OF PACKAGING WASTE ARISING IN THE MIDLANDS

The quantity of packaging waste arising in the Midlands is estimated from AERs and a further quantity estimated for the amount of packaging that is landfilled. This latter figure is estimated through a consideration of waste composition data and applying a factor calculated for the average proportion of packaging materials within the total quantities of household and commercial waste landfilled. All waste from street-cleaning is also landfilled so that an estimate of the packaging waste here is calculated and this is also considered.

Table 8.2: Estimated Annual Arisings of Packaging Waste in the Midlands

Packaging Waste (Tonnes)			
Arisings	Landfill	Recovery	Recovery Rate (%)
58,467	38,191	20,276	34.7

Assuming that the level of recovery is increasing each year, and considering that the recovery rate for the Midlands Region for 2003 was 34.7%, the indications are that the Region is contributing positively to Ireland achieving its overall 2005 target of 50%.

However, the total quantity of packaging waste landfilled in the Midlands Region per annum is 38,191 tonnes which would suggest that there is a considerable amount of packaging waste that can yet be diverted from landfill.

8.6 PROGRESS TARGETS AND OBJECTIVES OF THE MIDLANDS WASTE MANAGEMENT PLAN

The Midlands Waste Management Plan (2001) adopted the targets set down under the EU Packaging Directive (94/62/EC). The 2001 target of 25% recovery nationally of packaging waste by December 2001 has been achieved, and with an estimated 34.7% recovery achieved in the Midlands Region by the end of 2003, Ireland is progressing towards the minimum target of 50% recovery by December 2005.

With respect to prevention and minimisation, public awareness campaigns run by the DEHLG, Local Authorities and REPAK have contributed to the achievement of the targets. The introduction of the Plastic Bag Levy in March 2002 has resulted in a significant decrease in the quantity of plastic generated.

For household waste, the target set down in the 2001 Midlands Plan with respect to the density of Bring Banks has been exceeded, and significant progress has been made towards the provision of additional Civic Amenity Facilities with nine facilities currently in place and four sites currently at design or construction stage. In 1998, kerbside collections in the Region were operating in North Tipperary only, in the towns of Nenagh and Thurles. This has now been extended across the entire Region, all of which has contributed to improving the recycling rates for packaging waste in the Midlands.

8.7 FUTURE MANAGEMENT OF PACKAGING WASTE

8.7.1 Packaging Waste from Households

Over the life of the previous Plan, packaging waste from households was primarily managed through the recycling infrastructure provided throughout the Region.

In order to maintain progress and to meet or exceed the targets imposed through the Packaging and Packaging Waste Directives, the current infrastructure of Bring Banks and Civic Amenity Facilities will need to be expanded to serve a wider area, targeting areas that may not have been served sufficiently.

Continued education and awareness in terms of locations of facilities, importance of source segregation of waste etc. will be required, and it is considered that continued involvement from the Environmental Awareness Staff in each county will be central to continuing the success to date.

8.7.2 Commercial & Industrial Sector

The management of packaging waste in this sector over the Plan period shall be achieved by a combination of providing information to producers of packaging waste and enforcement of the Packaging Regulations. The Midlands Local Authorities are responsible for the enforcement of the Regulations, which, up to date, has not been maximised because of funding and resourcing shortfalls.

The Midlands Environmental Awareness Officers will also play a major role in dissemination of information to producers of packaging waste.

The Waste Management Packaging Regulations require source segregation of packaging waste to facilitate separate storage and collection of recyclable waste from commerce and industry.

8.8 ENFORCEMENT OF THE PACKAGING REGULATIONS

In Ireland, the Local Authorities are responsible for the enforcement of the Packaging Regulations. Article 21 of the

Waste Management (Packaging) Regulations 2003 states that:

“Each Local Authority shall be responsible for the enforcement of these Regulations within their functional areas and shall take such steps as are necessary for this purpose.”

Enforcement to date has been of limited success on account of funding and resource shortfalls. Consequently, concerted enforcement of the Packaging Regulations is a relatively new initiative, with central support from government providing impetus through the recent establishment of the Office of Environmental Enforcement (OEE).

In October 2003, the Government established the Office of Environmental Enforcement (OEE) within the Environmental Protection Agency. This new Office is dedicated to the implementation and enforcement of environmental legislation in Ireland. One of its aims is to improve the enforcement of the Packaging Regulations.

The recent establishment of waste enforcement units at a national overseeing level and at local county level will be a significant benefit in ensuring that the Regulations are sufficiently policed and enforced.

The OEE in conjunction with other Public Bodies subsequently established an enforcement network with participants from all local and public authorities, state agencies and Government Departments with responsibilities for the implementation and enforcement of environmental legislation. The Network's overall objective is to foster co-operation between the various agencies to achieve a higher and more consistent standard of enforcement throughout the country. A number of working groups have been set up within the Network, including a Packaging Working Group. This group has recently developed a protocol for Local Authorities for identifying Major Producers and taking enforcement action. Local Authorities have started to set up dedicated Waste Enforcement Teams responsible for the implementation and enforcement of environmental legislation in their functional areas. These teams are working closely with the OEE through the working groups.

Further development in the enforcement of the Regulations by the Local Authorities, as well as the provision of thermal treatment, to

recover energy from packaging waste, will contribute significantly to the continued increase in recovery of packaging waste through to 2011 and beyond.

8.8.1 Enforcement in the Midlands Region to Date

Identification of major producers in the Region is currently underway and is at varying stages of completion within each of the five Local Authorities. Each of the five Local Authorities currently has either one or two registered major producers, all of which have been inspected. Owing to the small number of registered self-compliers in the Region, the amount of compliance auditing has been small. It is expected that this will increase following identification of more major producers and as the number of self-compliers increases.

Direct measures to enforce the ban on landfilling of packaging waste involve inspections at the weighbridge of Local Authority Landfills. If packaging waste is identified, the enforcement team at the respective Local Authority is notified.

In general, the enforcement of the Packaging Regulations as well as the landfill levy, serve to divert packaging waste from landfill.

The rate of enforcement of the Regulations is dependent on the effectiveness of the procedures applied, the competence of enforcement staff, and the number of enforcement officers available.

8.9 FUTURE IMPROVEMENTS

8.9.1 Prevention

Public consultation revealed a sense of frustration among Midlands households and business that industry should be more responsible for reducing packaging waste at source - once a product is bought the consumer has the problem (and cost) of managing the associated packaging. This supports the approach to prevent waste as a priority, particularly packaging waste.

The new National Waste Prevention Programme and the establishment of a Core Prevention Team within the EPA will contribute to providing additional support to the Midlands Local Authorities concerning

prevention and minimisation, particularly in relation to packaging waste.

The plastic bag levy is seen as one of the most successful initiatives in the field of waste prevention to date, and it is considered that further national initiatives will benefit the Midlands. Chief amongst these is the introduction of more producer-responsibility initiatives in this area, particularly to minimise packaging and regulate it to ensure that only recyclable materials are used.

8.9.2 Recycling and Recovery

REPAK currently supports public campaigns such as National Recycling Week, National Spring Clean, Tidy Towns, Green Christmas and Cash for Cans (in schools), and also runs award schemes that include promotion of products that reduce packaging. Greater co-ordination of REPAK initiatives with those of the Government and Local Authorities will help to maximise effectiveness.

Standardisation of packaging is required within industry to facilitate the development of markets for recycling/recovery of all packaging. This should be supplemented by the provision of recovery infrastructure such as thermal treatment.

Measures are required to address the recovery of packaging waste from small businesses that are producers of packaging waste. Affordable alternatives need to be put in place by the collection companies to encourage small businesses to meet their obligations.

Local Authorities engaged in collection should urgently introduce a separate collection of packaging waste from commercial customers. Where Local Authorities do not control waste collection, the implementation of a Commercial Waste Bye-Law to ensure separation of packaging waste by business is required. This will make compliance with the landfill ban of the 2003 Packaging Regulations a reality and will enable better regulation of the private waste collection industry.

Many businesses that are not producers of packaging do generate arisings of packaging on their premises e.g. offices. Currently, non-producers of packaging are not obliged to recover their packaging waste and measures are therefore required to capture this portion of packaging waste. Again an effective

Commercial Waste Bye-Law can be used as a tool to increase recovery of packaging material.

8.9.3 Enforcement

Whilst in previous years lack of resources was the main obstacle to the enforcement of the Packaging Regulations, this situation has improved due to staffing budgets provided by the DEHLG from the Environment Fund. The main challenge is to continue to develop expertise through training of enforcement staff and implementation of the protocol recently produced by the Packaging Working Group.

9 CURRENT WASTE RECOVERY AND RECYCLING

The overall recycling target for the Midlands Region is to achieve 46% recycling by 2013 and the Region is progressing steadily towards this. Since 2001 the Regional recycling infrastructure has continued to expand and develop. The expansion of the dry recyclable collection services, and the rollout of Bring Bank and Civic Amenity Facilities is promoting and increasing recycling and recovery in the household waste stream. Similarly in the commercial and industrial sector, source separation and separate collections of recyclable materials have developed and are contributing to an improved recycling system.

However there remains a lack of development in treating key waste fractions such as biodegradable waste and C&D waste, which needs to be addressed if the Regional target is to be achieved.

9.1 CURRENT HOUSEHOLD RECYCLING RATE

Table 9.1 overleaf summarises the situation in the Midlands Region regarding household waste in 2003. In accordance with the EPA National Waste Database Report 2001, the estimated home composting quantities are included with the collected and uncollected mixed household waste in calculating a total household waste arisings figure. The total recycled quantities represented the materials collected through kerbside collection services, Bring Banks and Civic Amenity Facilities.

The overall household recycling figure for the Region is calculated to be 10% in 2003, which is slightly below the national average of 13% reported by the EPA in 2001.

The recycling rate for the Region has continued to grow since 2003 with new recycling infrastructure in place and the continued expansion of the recyclable bin scheme. In November 2004, Westmeath County Council started the rollout of recyclable bins to its 14,000 household customers.

Recycling is increasing but the number of varying recyclable collection schemes and waste charges is hindering household participation and waste recovery. At present, there are no separate collection schemes of household biodegradable waste in the Region and this material is being landfilled as part of the mixed household waste stream. The ambitious recycling target set for the Region requires that this fraction of the household waste stream is recovered and biologically treated.

9.2 COMMERCIAL WASTE

Since the previous Plan, recovery and recycling rates have increased significantly in the commercial waste stream. This is in part due to legislative and enforcement measures such as the implementation of the Waste Management (Packaging) Regulations 2003 and waste acceptance restrictions on certain waste streams at landfills. These factors coupled with a dramatic rise in landfill gate charges have seen private waste collectors reduce their reliance on landfill. Table 9.2 shows the commercial waste quantities generated in the Midlands Region in 2003.

The mixed commercial waste stream represents non-source separated material, which, following collection, is typically disposed of at landfills, located either inside or outside of the Region.

Table 9.2 also shows that source separation and separate collections of specific commercial waste fractions such as packaging, metals, etc. are in place and represent a significant quantity of the overall commercial waste stream. For the purpose of this report it has been assumed that the separately collected commercial fraction is recovered/recycled in Ireland or abroad. Based on these assumptions, the recovery rate for commercial waste generated in the Region is estimated to be 36%.

Table 9.1: Recycling Rate for Household Waste in 2003

	Offaly	Laois	Longford	North Tipp	Westmeath	Midlands Region
	Tonnes	Tonnes	Tonnes	Tonnes	Tonnes	Tonnes
Bring Banks	769	445	189	573	1,088	3,064
Civic Amenity Facility	226	753	0	879	825	2,683
Kerbside	884	1,853	1,028	1,456	-	5,221
Total Recycled	<u>1,879</u>	<u>3,051</u>	<u>1,217</u>	<u>2,908</u>	<u>1,913</u>	<u>10,968</u>
Collected Waste	10,495	14,161	8,462	17,121	22,470	72,709
Home Composting	65	212	104	200	100	681
Uncollected Waste	11,993	10,523	5,437	8,776	3,432	40,160
Total Arisings	<u>22,553</u>	<u>24,896</u>	<u>14,003</u>	<u>26,097</u>	<u>26,002</u>	<u>113,550</u>
% Recycling	8%	12%	9%	11%	7%	10%

Table 9.2: Commercial Waste Reported in the Midlands Region in 2003

Waste Type	Regional Total
Mixed Commercial Waste	41,235
Commercial Waste – Separate Collections	22,761
Commercial Total	<u>63,996</u>
Recovery Rate %	<u>36%</u>

9.3 INDUSTRIAL WASTE

Industrial waste is defined as waste arising from manufacturing or industrial activities and Table 9.3 details the industrial waste arisings reported by the Midlands Local Authorities in 2003. The table also includes a scaled-up estimate of the total industrial waste for the Region, calculated using NACE factor codes and employee data.

Table 9.3: Industrial Waste Generation in the Midlands Region 2003

Waste Type	Regional Total
Industrial (Non-Hazardous)	22,224
Industrial Sludges	543
Industrial (Haz)	1,991
Industrial Total	<u>24,758</u>
Industrial Total (NACE Codes)	<u>251,570</u>

The industrial (non-hazardous) waste figure reported in the table does not include industrial waste generation through IPPC Licensed facilities, which are reported annually to the EPA. Large-scale IPPC operations typically treat and re-use waste generated by in-house industrial processing on-site. The on-site industrial wastes generally do not appear in the recorded industrial stream, which exemplifies the difficulties in reporting and quantifying industrial wastes. Due to the lack of data on the industrial waste stream and its heterogeneous nature, it is not possible to report a recovery/recycled rate.

9.4 CONSTRUCTION/DEMOLITION (C&D) WASTE

The C&D waste stream is very significant in terms of meeting National and Regional targets due to its high recycling potential. The EPA reported that in 2001, 3.6 million tonnes of C&D waste was generated in Ireland. At the time of preparing the previous Midlands Waste Management Plan, reporting systems were not in place to record this waste stream and a figure of 145,000 tonnes was estimated for the Region. The reporting situation has improved and the current Waste Permit and Waste Collection Permit systems ensure that accurate quantities of C&D waste arisings are now reported.

In 2003 it was reported that a total of over 265,000 tonnes of C&D waste was generated in the Region. Table 9.4 provides a categorical breakdown of the quantities generated in the waste stream.

Table 9.4: Construction/Demolition Waste Generation in 2003

	Category	Quantities (Tonnes per Annum)
1	C&D waste (incl soil) accepted at EPA licensed landfills	74,610
2	C&D waste (incl. Soil) accepted at Local Authority-permitted facilities	186,712
3	C&D waste collected through skip collections etc	4,322
	Total	265,644

The quantity of C&D waste accepted at landfills in the Region shown in Row 1 in the above table was primarily used for recovery purposes e.g. daily cover of landfill, landfill remediation and capping, and construction of internal service roads. The quantity used in these recovery applications amounted to 66,077 tonnes, a recovery rate of 89% of the total waste accepted at landfills. Similarly it is assumed that the quantities collected through skip collections were recovered.

The situation is not as clear with the quantities of C&D waste, including soil accepted at Local Authority permitted sites.

A site can only be permitted to accept soil or construction and demolition waste provided the material is uncontaminated and the landspreading activity is of benefit to the land. There is a lack of environmental controls, data recording and regulation by the permit holders at most of these sites and until the system is improved it is not appropriate to include these quantities as recovery.

At present, there are no large-scale C&D recycling facilities in the Region and there is only one waste permitted facility, in Granard, Co. Longford, for C&D processing. It is hoped that changes in the upcoming Waste Permit Regulations and recent changes to National Standards for the reuse of crushed concrete and stone will encourage contractors within the industry to establish facilities within the Region.

Since the preparation of the original Midlands Waste Management Plan the National Construction & Demolition Waste Council (NCDWC), has been established. The Council is a pan-industry body, tasked with achieving the National recycling targets and which has launched a Voluntary Initiative in October 2004 setting out a range of elements for the implementation of C&D waste recycling. This includes Best Practice Guidelines, prepared by DEHLG, for the preparation of C&D Waste Management Plans for developments above certain stated thresholds.

10 CURRENT WASTE DISPOSAL

The first Midlands Waste Management Plan (2001) aimed to reduce the Region's over-dependence on landfill through waste prevention, re-use and recycling in order to achieve a targeted reduction in disposal of household, commercial, industrial and C&D waste going to landfill to 17% by 2013.

At the time of writing the first Plan, there were five landfills in operation across the Region. Rationalisation of regional landfills commenced with the closure of Marlinstown Landfill in 2000. Although the situation has improved with increased awareness and recycling, there are four Local Authority owned landfills in place and over 60% of household, commercial and industrial waste streams are still disposed of to landfill.

10.1 QUANTITIES OF WASTE TO LANDFILL

The total amounts of household, commercial and industrial waste disposed to landfill in the Midlands Region in 1998 and 2003 are shown in Table 10.1. The figures shown do not include litter/street sweepings.

Table 10.1: Waste Disposal to Landfill in the Midlands 1998 – 2003

Waste Type	Tonnes Per Annum (1998)	Tonnes Per Annum (2003)
Household Waste	80,432	86,126
Commercial/ Industrial Waste	26,011	28,629
Non-Hazardous Industrial Waste	16,352	8,387
Other	27,315	18,642
Total	150,110	141,784

Table 10.1 shows that although the level of waste disposal in the Region has decreased since 1998, landfilling remains the primary treatment outlet for municipal and industrial waste in the Region. The 'Other' category

comprises a mixture of C&D waste and sludges accepted at the site.

Since the original Plan, controls have been put on the acceptance of the type of material accepted at facilities.

10.1.1 Household Waste Disposal

The total household waste landfilled in 2003 represents 76% of the total household waste arisings in 2003. The quantity shown does not include the mixed household waste collected and processed at the Mulleady's Transfer Station in Longford. This material was screened and processed and the stabilised fines are sent off site for composting. The remaining 4,100 tonnes of residual material was disposed of outside of the Region.

Regarding the movement of waste into and out of the Region, Table 6.6 details the quantities recorded by Local Authorities in 2003. About 28% of the total household waste disposed of to landfill is uncollected waste and is brought for disposal by householders directly to the four Regional facilities. This figure has been calculated using household data from Landfill AERs and mixed waste collected by private waste contractors. The growth in uncollected household waste reflects the unwillingness of householders to pay increasing waste charges for waste collection.

10.1.2 Commercial and Industrial Waste Disposal

The quantity of mixed commercial waste landfilled in the Region in 2003 has decreased since 1998 and represents 43% of the total collected commercial and industrial arisings. Overall the level of commercial and industrial waste generated in the Region is difficult to quantify as arisings are often not recorded through Local Authority procedures. The dramatic increase in the cost of landfill since the last Plan has encouraged the private sector to seek alternative treatment outlets.

10.2 LANDFILLS IN OPERATION

At present there are four EPA licensed Local Authority landfills in operation in the Region:

- Derryclure (Offaly County Council)

- Ballydonagh (Westmeath County Council)
- Kyletalesha (Laois County Council)
- Ballaghveny (North Tipperary County Council)

Historically landfill sites were traditional unlined facilities and were operated with little or no environmental controls. Today, facilities are licensed and regulated by the EPA and are operated to the highest International Standards in compliance with the EU Landfill Directive.



Cell Construction at Ballaghveny Landfill

10.2.1 Remaining Void Capacity

In response to the slow development of alternative waste treatment facilities, all 4 landfills have applied for a review of their existing EPA Waste Licence. To date all facilities, with the exception of Ballaghveny, have been re-issued a Waste Licence by the EPA.

Table 10.2 summarises the current situation and provides the approximate remaining capacity at each facility and the expected year of closure.

Table 10.2: Remaining Void Capacity for Landfills in the Midlands Region

Facility	Remaining Landfill Capacity (Tonnes)	Expected Year of Closure at Current Filling Rates
Ballydonagh	240,000	2011
Derryclure	260,000	2011
Kyletalesha	565,228	2016

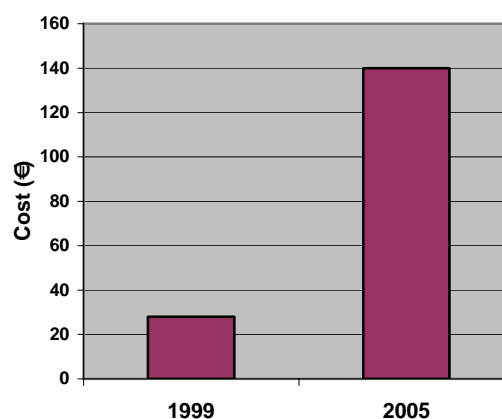
Ballaghveny	210,000	2010
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10.3 LANDFILL GATE FEES

Municipal landfill charges in Ireland are based on the tonnage of waste disposed and in the Midlands, charges are in the range of €135 to €150 per tonne of waste. This charge includes a €15 per tonne landfill levy introduced under the Waste Management (Landfill Levy) Regulations 2002.

Landfill gate fees have escalated steeply in the last 5 years reflecting the capital and long-term operational and management costs associated with modern landfill facilities. Figure 10.1 compares the average landfill gate charge in the Region in 1999 against the 2005 figure.

Figure 10.1: Landfill Gate Charges 1999 - 2005



Since opening new landfills is a difficult and slow process there is no immediate prospect of disposal fees falling sharply. Gate fees are likely to decrease with the development of alternative treatment facilities in the Region i.e. Biological Treatment and Waste to Energy, which will provide much needed competition in the sector.

10.4 CLOSED LANDFILLS

In accordance with Section 22 (7)(h) of the Waste Management Act (1996) the Midlands Local Authorities have prepared a list of closed landfill sites within the Region for the purposes of identifying what, if any, remedial measures are required to be carried out at the sites.

Landfill closure, restoration, monitoring and aftercare is determined by the terms of the Waste Licence and regulated by the EPA. In

general sites in operation up to and during the 1990's have been closed and covered by the Local Authorities or the landfill operator. Public sites are typically restored by means of soil capping and in some cases have been redeveloped. The list of closed landfill sites in the Midlands Region is presented in Table 10.3.

Table 10.3: *Closed Landfills Owned or Operated by the Local Authorities in Midlands Region

County	Name	Closed Since
Offaly	Birr (R440)	1997
	Edenderry	1997
	Ballydaly (Tullamore)	Pre-1984
	Clara (Kilbride)	Pre-1984
	Ferbane	Pre-1984
	Kilcormac (Ballybrack Little)	Pre-1984
	Ballydrohad	1975
Laois	Stradbally	1988
	Kilmainham	1988
	Durrow (x2)	1985
	Abbeyleix	1985
	Portarlinton	1988
	Trumera	1988
Longford	Longford	1965
	Cartron	1989
	Lanesborough	1982
	Edgeworthstown	1982
	Granard	1984
	Ballymahon 1	1958
	Ballymahon 2	1993
	Longford 2	1958
	Drumlisk	1998
North Tipperary	Thurles	1999
	Roscrea	1985
	Borrisokane	Pre 1985
	Cloughjordan	Pre 1985
	Toomevara	Pre 1985
	Nenagh (x2)	Pre 1985
	Bawn	Pre 1985
	Portroe	Pre 1985
	Newport	Pre 1985
	Ballina	Pre 1985
	Templeree	Pre 1985
	Silvermines	Pre 1987
	Templemore	1997

County	Name	Closed Since
Westmeath	Ballinlig	
	Castlepollard	
	Coole	1979
	Delvin	1975
	Golden Island, Athlone	
	Kilbeggan	1978
	Killucan	1977
	Marlinstown	2002
	Milltownpass	1980
	Moate	
	Rochfordbridge	1980
	Tyrrellspass	1987

*Based on the best available information at this time

11 CURRENT WASTE MANAGEMENT INFRASTRUCTURE

11.1 WASTE MANAGEMENT INFRASTRUCTURE

The number and variety of waste management facilities in the Midlands Region has grown dramatically since the previous Plan was produced in 2001, reflecting a more diversified approach to managing waste.

Waste facilities can be placed in two broad categories:

- **Licensed Waste Facilities** – by virtue of their large scale and type of activity, these are regulated by the Environmental Protection Agency.
- **Permitted Waste Facilities** – these are generally smaller facilities involved in recycling, materials recovery or waste transfer, regulated by the Local Authority.
- **Maps 7 and 8** give the position of the Licensed and Permitted facilities in the Region. The permitted sites that are established on a temporary basis to place soil on land are not included as these sites are generally short-term operations.

Based on Waste data collected, and in some instances estimated, the previous Waste Plan made recommendations for the expansion of the existing Waste Infrastructure in the Region, particularly targeting provision of recycling facilities.

Specifically, the plan provided for the provision of:

- **174 Bring Banks:** More than 187 has been provided by the end of 2004.
- **12 Civic Amenity Facilities:** 9 Facilities currently in operation, with a number of additional facilities at varying stages of development.
- **Thermal Treatment Capacity** for 100-150,000 tonnes per annum was specified for the Region although little progress has been made in this area.

- **1 Biological Treatment Facility:** Currently, no facility has been provided although there is private sector interest in developing up to 3 such facilities.
- **1 Central Materials Recovery Facility (MRF) and 2 Transfer Stations:** Currently 3 privately operated MRFs service the Midlands Region.

11.2 DEFICIENCIES IN WASTE MANAGEMENT INFRASTRUCTURE

Significant progress has been achieved in the provision of waste infrastructure in the Midlands Region. Further progress and additional treatment capacity is required in order to meet the waste recovery targets of the Plan. In addition, there has been a significant increase in population in the Region in recent years, which in turn increases the demand for infrastructure.

Considering the hierarchy in terms of waste management, it is possible to review the current infrastructure and highlight the deficiencies that currently exist.

Prevention/Minimisation: No infrastructure required.

Reuse: Waste Repair/Reuse centres are recommended in the previous Plan, but have not been provided.

Recycling: The number of Bring Banks provided in the Region since the making of the last plan has exceeded its targets. However, the increase in population in the Region would merit an ongoing review of the infrastructure provided. An equally important aspect to providing waste infrastructure is servicing the infrastructure.

The number of Civic Amenity Facilities currently operating is below the number provided in the original Plan although a number of additional facilities are under construction or in planning stages. It is important that progress continues to be made on developing these sites in order to provide alternative outlets for the public to recycle, particularly with the introduction of pay by weight charges challenging the public to rethink its waste management habits.

Energy Recovery: At present, there is no existing infrastructure within the Region for the recovery of energy from waste. The previous Plan specified the provision of a thermal treatment plant with a capacity of 100,000-150,000 tonnes of waste, but little progress has been made in procuring this infrastructure.

Disposal: Disposal, the least favoured option for Waste Management, is currently well served in terms of infrastructure, with four landfills currently operational within the Region. It is estimated that there is a remaining capacity of 1.2M tonnes in the Midlands Region, which would represent approximately 5-10 years of capacity.

11.3 PUBLIC / PRIVATE INVOLVEMENT

The current waste management infrastructure throughout the Region is shared between the public and private sectors.

In general, all landfill sites in the Region are owned and operated by the Midlands Local Authorities, with a consequent onus to plan for their life cycle costs, including remediation and aftercare. The majority of Civic Amenity Facilities in the Region are also owned by the Local Authorities, although, increasingly, these are being operated by private companies, who are contracted to operate the facility and source markets for materials collected.

In terms of privately owned and operated facilities, there are a number of waste transfer stations in the Region, in addition to recycling facilities. Planning and Licence Applications have been submitted by private industry for other facilities. Currently An Bord Pleanála and the EPA are adjudicating on the award of these licences.

It is a firm ambition to provide timely and sufficient infrastructure as part of the Waste Management Plan for the Midlands Region. The Midlands Local Authorities recognise the value of private investment in realising this aim.

It is also recognised that the private sector will be critical to the development of larger facilities such as biological and thermal treatment in the Region.

