

Chapter 5

**Department of Environment, Heritage
and Local Government**

5.1 Landfill Targets

Biodegradable municipal waste (BMW) is waste that is capable of undergoing decomposition over time through natural processes. It comprises household waste as well as commercial and other waste which, because of its nature or composition, is similar to waste from households. It is typically made up of organic waste such as food and garden material, together with other biodegradable materials such as paper and cardboard, wood and textiles.

State Obligations

The 1999 EU Landfill Directive²⁸ imposed obligations on Member States in relation to Waste Management. The principal obligations imposed by the Directive include the requirement to

- progressively reduce the level of BMW disposed of by landfill in stages up to 2016
- publish a national strategy on waste management.

Ireland was required to bring into force, by July 2001, laws, regulations and administrative acts to give effect to the Directive. The Waste Management (Amendment) Act, 2001 was passed on foot of this obligation. Over the years the Department of Environment, Heritage and Local Government introduced a number of regulations to deal with aspects of the Directive – these were consolidated in 2004.

National Policy

The Department has issued a number of policy documents in recent years to address the waste issue, the first being *Waste Management-Changing Our Ways* published in 1998. This document set out national targets for municipal waste recycling and biological treatment, to be achieved over a fifteen year time period. These are the targets that are used by the Department when benchmarking progress.

The 1999 Directive required the submission of a national strategy on BMW to the EU by July 2003. The National Strategy on Biodegradable Waste was published by the Department in April 2006. The Strategy describes a range of measures designed to enable the State to meet the landfill diversion targets as set out in the 1999 Directive.

Implementation of Measures

The Waste Framework Directive of 1975 established the requirement for waste planning, licences for carriers and the polluter pays principle. On foot of obligations deriving from the Directive, waste management plans were prepared by each of the local authorities. The Waste Management Act, 1996 required local authorities to produce waste management plans either individually or jointly with other authorities. Subsequently, seven regions evolved, each representing a number of local authorities. Each of the seven regions produced a waste management plan for their areas, apart from three local authorities which prepared individual plans. In 2005 the regions published their second round of plans, generally for a five-year period up to 2009 or 2010. A Policy Statement produced by the Department in 1998 was based on an internationally adopted hierarchy of options for dealing with waste management. These options were, in order, prevention, minimisation, reuse, recycling, energy recovery and disposal. According to the Department's Overview Report on Waste Management Plans, published in 2004, the options chosen by local authorities in their waste management plans were recycling, thermal treatment and landfill, with recycling being the most favoured option.

²⁸ Council Directive 1999/31/EC

Recycling is facilitated by segregated household collection, bring banks, civic amenity sites, materials recovery facilities or transfer stations and biological treatment facilities. The provision of biological treatment facilities, which would deal with organic waste, is only at proposal stage in local authorities in all but two of the regions. However, increasing numbers of private sector facilities are coming on stream with others at the planning and development stages.

Although progress is evident in recycling some items of municipal waste such as glass and ferrous metals there is not the same success with BMW. A high proportion of organic materials and textiles are still being sent to landfill.

Reporting Progress

An EU Waste Statistics Regulation came into force in December 2002, with an obligation on the State to report on the 2004 data by June 2006. This will require greater harmonisation of waste statistics. The State has an option to apply for a derogation from this 2006 reporting date in relation to certain waste categories.

At national level the Environmental Protection Agency (EPA) is responsible for the collection and reporting of national statistics on the generation and management of waste. Since 2001 it has published information in relation to BMW. The information is based on an annual collection of data from local authorities and waste licence permit holders, using questionnaires.

A report by the Department²⁹ noted that local authority waste management plans highlighted the lack of consistent, reliable information on waste generation within the regions and that different approaches to data and statistics have been taken in the plans with the use of a variety of data estimation and presentation practices. Some plans used target rates or quantities, others expressed targets in terms of increases in the rates or quantities recovered or recycled, while targets were expressed in other plans in terms of decreases in the rates or amounts of waste to be managed in other ways (e.g. landfill). It also noted that the target achievement dates varied between plans and ranged from 2004 up to 2013.

A report published by Forfás³⁰ advocated greater co-ordination in the implementation of waste management plans and more effective national and regional co-operation in order to achieve an integrated network of waste management facilities.

The EPA recommended in its 2004 report that waste data should be supported by audits and other verification exercises by local authorities in order to enhance the credibility of the data, and that the development of waste information management systems at local and national levels should be actively supported.

Targets for Reducing Landfilled Biodegradable Municipal Waste

The reduction in the amount that could be sent to landfill under the 1999 Directive was set by reference to the total amount by weight of BMW generated in 1995. The maximum amount that could be sent to landfill was to be no higher than the following percentages of the 1995 level

- 75% by July 2006
- 50% by July 2009
- 35% by July 2016

²⁹ Waste Management; Taking Stock and Moving Forward, April 2004

³⁰ Key Waste Management Issues in Ireland, July 2003

The 1995 baseline figure for BMW generated was agreed between the EPA and the Department at just under 1.3m tonnes. This figure was arrived at after taking account of information and knowledge accumulated by the Agency since original 1995 data was compiled and was included in the Agency's National Waste Report 2004 which was published in 2006.

The 1999 Directive allows Member States which consigned more than 80% of collected municipal waste to landfill to postpone achievement of these targets by a period not exceeding four years. According to the *National Waste Database Report 1995* Ireland consigned some 92% of municipal waste to landfill in that year. The European Commission was formally notified by letter of 22 December 2005 that the National Strategy on Biodegradable Waste will be based on a first phase target date of 2010 (deferred from 2006) and a second phase target date of 2013 (deferred from 2009), with the stated intention that the Irish authorities are strongly committed to achieving the targets at the earliest possible dates and that efforts will focus on achieving the necessary BMW diversion from landfill in advance of these revised target dates.

The National Strategy also states that Ireland will review the position in relation to the available four-year derogation from 2016 to 2020 and will come to an informed decision on the prospects for achievement of the third phase diversion targets as soon as practicable.

Current Performance on Diversion from Landfill

The biodegradable element of municipal waste was first itemised separately in the EPA's 2001 National Database Report. BMW is categorised under the headings of wood, paper and cardboard, organics and textiles.

In 2004, the latest year for which statistics are available, some 1.3m tonnes of BMW was still being disposed of by landfill. The total amount of BMW being produced was over 1.9m tonnes.

When this production is broken down by category the position is set out in Table 25.

Table 25 Biodegradable Municipal Waste Managed in 2004³¹

Category of Waste	Tonnes Managed	Tonnes Landfilled	Tonnes Recovered	% Landfilled
Wood	175,330	14,180	161,150	8.1
Paper and Cardboard	821,903	446,306	375,597	54.3
Organics	780,460	696,955	83,505	89.3
Textiles	157,521	146,986	10,535	93.3
Total	1,935,214	1,304,427	630,787	67.4

Waste recovered in 2004 was diverted from landfill mainly through recycling and other recovery operations. This was implemented through separate collections of mixed dry recyclables via kerbside schemes and organic waste, together with dry recyclables collected through bring facilities.

³¹ Source: EPA National Waste Report 2004

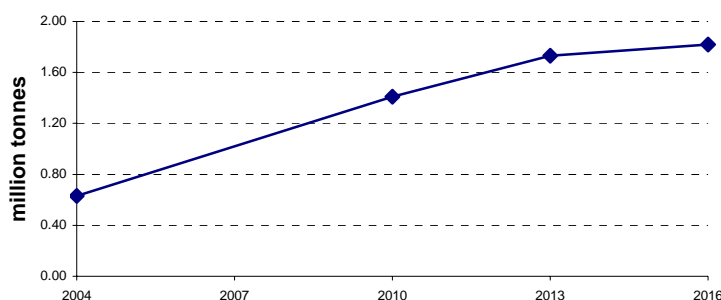
Two major trends are apparent in the management of BMW in recent years

- The overall amount produced has grown significantly since 1995 and is continuing to grow – up from 1.5m tonnes in 2001 to 1.9m tonnes in 2004. This upward trend over the period has been ascribed to population growth and increased economic activity.
- There have been some inroads into reducing the proportion sent to landfill. By 2004, 67% was going to landfill compared with 85% in 2001. However, in absolute terms slightly more was being landfilled in 2004 than in 1995.

Diversion Required to Meet Targets

Notwithstanding the reduction in the percentage of BMW going to landfill it has been estimated that, taking account of the expected growth in the BMW production, the amount diverted from landfill would need to increase as set out in Figure 3

Figure 3 Diversion necessary to meet targets^{32/33}



Audit Concerns

While the overall percentage of BMW going to landfill has been reducing the volume going to landfill has continued to increase in the period 1995 to 2004. It would appear, therefore, that there is a significant risk that Ireland will fail to meet the targets set down in the Landfill Directive. In the light of the possibility of EU financial penalties arising from any such failure, I sought the views of the Accounting Officer on the effectiveness of the measures taken to date and on the action proposed to meet the specified targets.

Accounting Officer's Response

The Accounting Officer informed me that he is confident that the National Strategy on Biodegradable Waste forms a credible basis for the achievement of the landfill diversion targets. The Draft National Strategy on Biodegradable Waste was subjected to a public consultation process under which submissions were received from many key stakeholders. These submissions facilitated the preparation of a more informed, robust and coherent Strategy, which should have high levels of support from stakeholders. The published strategy forms a comprehensive programme of measures and actions which is designed to comply with the Landfill Diversion targets as contained in the Landfill Directive.

³² Source: National Strategy on Biodegradable Waste.

³³ These projections are based on a derogation of four years for the 2006 and 2009 targets.

He pointed out that considerable progress had already been made on the management of BMW between 1995 and 2004. Almost 33% of waste was recycled in 2004 compared with 11% in 1995. This is shown in Table 26

Table 26– Biodegradable Municipal Waste Recycled 1995, 2001 - 2004

Year	Gross Quantity Available Tonnes	Landfill Tonnes	Recycled Tonnes	% Rate
1995	1,289,911	1,147,320	142,591	11.1
2001	1,525,315	1,291,464	233,852	15.3
2002	1,727,490	1,365,628	361,862	20.9
2003	1,855,505	1,317,560	537,944	29.0
2004	1,935,214	1,304,426	630,788	32.6

He also outlined the measures which are proposed within the Strategy, in addition to those in operation in 2004, in order to facilitate achievement of the landfill diversion targets in the areas of prevention, recycling and biological treatment, and residual waste treatment.

Prevention

- National Waste Prevention Programme – a module to deal specifically with BMW is to be developed following publication of the Strategy.
- The introduction of a “Pay-by-Use” system of waste management on 1 January 2005.
- The continuation of the “Race against Waste” campaign with the objective of improving environmental behaviour.

Recycling and Biological Treatment

- A Market Development Group of key stakeholders was established in late 2004 with the objective of driving forward the development of existing markets for recyclables and identifying new applications and markets for recyclables and secondary recycled products. Separate Working Groups were established for the priority BMW streams of paper/ cardboard and organics.
- Local Authorities will use the Waste Collection Permitting system to introduce a requirement for separate collection policies in a uniform manner across their functional area.
- Bye-laws governing the presentation and collection of waste will be adopted by local authorities to support the implementation of separate collection systems.
- Regulations will be reviewed on a regular basis to ensure that the legislative provisions for waste collection and waste treatment facilities support the objectives of the Strategy to the greatest extent practicable.
- The provision of pre-treatment (e.g. Material Recovery Facilities) and biological treatment facilities by local authorities will be supported by capital grant assistance.

Residual Waste Treatment

- Residual waste treatment will be required to at least cater for the proportion of BMW which cannot be prevented or recycled (including either material recycling or biological treatment) and which is not allowed to be landfilled under the provisions of the 1999 Directive.

- Thermal Treatment with energy recovery is seen as a robust residual waste treatment technology which can also cater for non-BMW and industrial wastes. The 10 Waste Management Plans for the regions/ counties of Ireland recognise this integrated policy role of thermal treatment and facilities have been proposed by local authorities for the treatment of residual waste within 6 of the regions.
- Mechanical-Biological Treatment (MBT) – generally followed by thermal treatment or landfill - can also play a role in the pre-treatment of residual waste, particularly in the short-to-medium term when thermal treatment capacity is being developed. MBT capacity developed should be compatible with the treatment of source-separated organics in the future.

The Accounting Officer stated that the National Strategy on Biodegradable Waste sets out the total annual tonnage which must be diverted from landfill at a national level each year to meet Irish landfill diversion targets. These diversion requirements correspond to the available capacity which will be needed for alternative treatment methods to process the BMW diverted from landfill. The capacity will include appropriate waste collection infrastructure, pre-treatment infrastructure (such as Material Recovery Facilities) and final processing capacity for the prepared recyclable materials.

In order to optimise flexibility for the Strategy to achieve national targets, latitude was devolved to individual waste planning regions/ counties to decide how their Waste Management Plans could best address the landfill diversion requirements within the overall framework of the national targets. Each region/ county would be required to either provide the required capacity directly or alternatively to source the necessary capacity outside the region/county. These projected figures for alternative treatment requirements are to be kept under continuous review and updated regularly by each region/ county in order to ensure that sufficient capacity is available to facilitate the achievement of the required BMW diversion targets.

Evaluating Performance

In terms of the performance evaluation of local authorities by the Department, the Accounting Officer stated that the success of implementation of the management measures for the BMW stream will be measured against the level of waste generation, the rates of recycling and recovery for various materials, and ultimately the amount of BMW sent to landfill. The Strategy will be reviewed at regular intervals and will be subject to further development which will be designed to deliver the principal objectives and targets which have been established.

The Accounting Officer acknowledged that monitoring and review of strategy implementation will be crucial if the challenging targets are to be achieved. The following monitoring measures are proposed

- Simple performance indicators outlining current performance and future targets in terms of BMW generation, paper/ cardboard recycling rates, textile recycling rates, wood recycling rates, biological treatment rates for organic waste, residual waste treatment rates and the level of landfill of BMW (See Table 27).
- The EPA will issue regular reports on these performance indicators in its National Waste Report publications.
- Each Annual Implementation Report to be prepared by local authorities on the implementation of the Waste Management Plan will record progress made in relation to the National Strategy on Biodegradable Waste over the previous year.
- The Strategy Implementation Group will provide qualitative information in relation to the particulars of Strategy implementation and will make recommendations on the manner in which improved performance can be achieved.

In terms of the individual materials within the BMW stream, the following target levels are proposed.

Table 27 Proposed Target Levels

Material Recycling	Targets
Paper/ Cardboard	55% in 2010, 65% in 2013 and 67% in 2016
Wood	90% to 95% between 2010 and 2016
Textiles	15% in 2010, 20% in 2013 and 25% in 2016
Biological Treatment	Targets
Overall Diversion of food and garden waste	35% in 2010 and 48% in 2016
Home Composting	13.5% in 2010 and 2013, 16% in 2016
Separate Collection and Centralised Biological Treatment	25% in 2010, 33% in 2013 and 36% in 2016