

EXECUTIVE SUMMARY

Plan Context

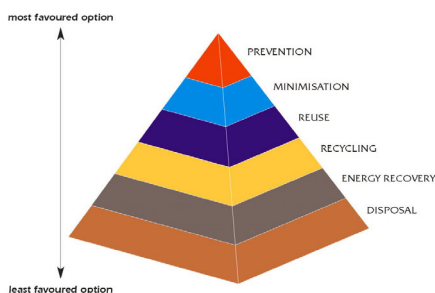
The Waste Management Plan for the Dublin Region has been developed jointly by Dublin City Council, South Dublin County Council, Fingal County Council and Dun Laoghaire-Rathdown County Council. The Dublin Region adopted a *Regional Waste Management Strategy* in 1997, which set out to replace a system that over-relied on landfill disposal with a new approach based on integrated waste management over a 20 year period. The first Regional Waste Management Plan became effective in 2001 and the first formal Review of the Plan has recently taken place during 2004-2005, culminating in this replacement Plan.

Dublin Region Profile

As the capital city, Dublin has been at the heart of Ireland’s economic resurgence in the past decade. This leading European Region continues to grow, attracting new residential, commercial and industrial developments. The influence of the capital is extending into the hinterland counties of Meath, Kildare, Wicklow and beyond. While the National Spatial Strategy envisages a more balanced growth in Ireland in the years ahead, there is no doubt that Dublin will continue to grow and compete in an international environment. Maintaining a high quality environment against this backdrop of growth is a significant challenge.

| KEY FACTS | | KEY TRENDS |
|----------------|--|--|
| Area | 92,227 Ha (1.3% of country) | Population Growth – 500,000 households by 2014 |
| Population | 1,122,821 (27% of country) | Economic Growth – strong output and employment forecast |
| No. Households | 379,372 (98% urban) | Development – intensification of land-use, more brownfield development and compact/high rise dwellings |
| No. Employees | 508,030 (44% of state commerce / industry) | Inward migration – a more multi-cultural Dublin is emerging, with more ethnic diversity |
| Tourism | 4.5 million visitors / €1Bn spend | |

Goals of the Strategy

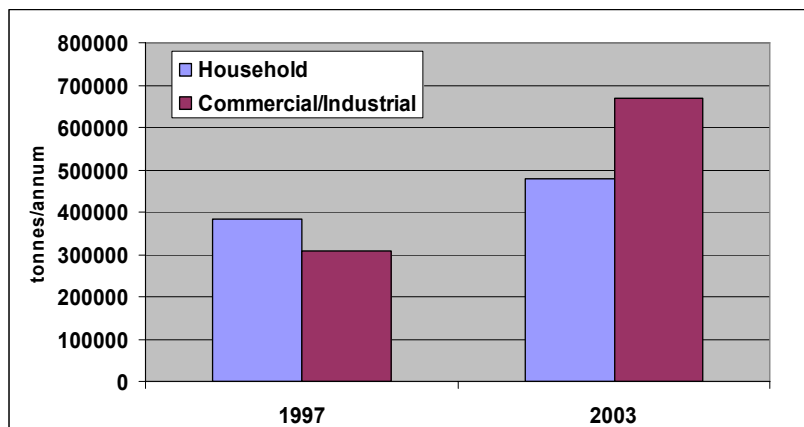


Dublin’s waste strategy goals are summarised by the EU waste hierarchy pyramid, which stresses that a new approach to managing waste is required to lead to more sustainable waste management. The strategy is to place emphasis on prevention, minimisation, reuse, recycling and recovery of energy in order to end the over-reliance on landfill disposal.

| | |
|-------------------|-----|
| Recycling | 59% |
| Energy Recovery | 25% |
| Landfill Disposal | 16% |

How much waste is there to manage?

With the growth in population, employment and economic activity in the Region – and the increase in consumer spending power – the amount of waste generated is on the increase. There is 1.1 million tonnes of household, commercial and industrial waste produced each year. Each household now generates 1.2 tonnes of waste on average each year, approximately 24 Kg/week. Waste from business and industry has grown dramatically since 1998 – partly due to the economic boom of this period, and partly due to better control of the waste stream and reporting by the waste management industry. Waste from demolition work and new developments generates 4,000,000 tonnes per annum – three times more than estimated in 1997. Other significant waste streams include litter and street sweepings, sludge, and agricultural waste.



| | |
|---------------------------|--------------|
| Household | 480,000tpa |
| Commercial / Industrial | 670,000tpa |
| Construction / Demolition | 4,000,000tpa |

Key Achievements from 1998 – 2004

Through concerted effort by the Local Authorities, the waste management industry and the voluntary and community sector, Dublin has made significant strides in implementing its waste strategy. While it has taken longer than expected to reach certain targets, there has been substantial progress during the period of the current Waste Management Plan, between 1998 and 2004.

Prevention and Minimisation of Waste – from almost a standing start in 1998, the Region now has 6 full-time Environmental Awareness Officers working with schools, householders and business to prevent and minimise waste. A successful regional waste website has been established. The number of schools participating in the 'Green Schools' programme is a positive indicator of achievements to date. Other organisations in the Region are also playing a role in changing practices.



22,500 home compost bins and information packs provided since 2001

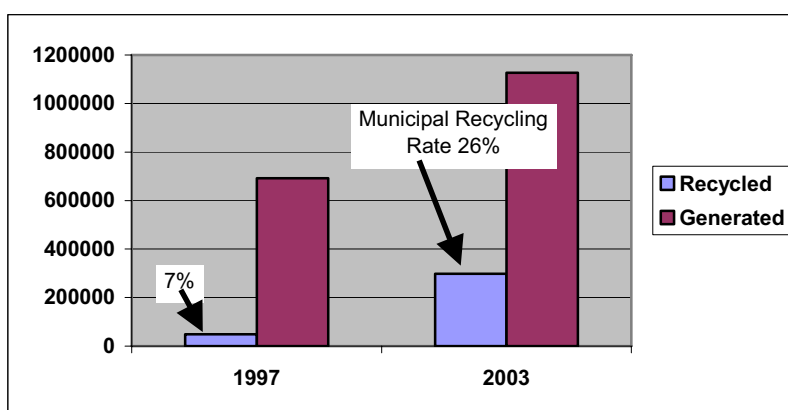
313 schools registered with the An Taisce Green Schools Programme – 54 Green Flags awarded

32 waste related projects sponsored under the Local Agenda 21 initiative

Involvement of voluntary groups, umbrella bodies and private companies in waste awareness activities

Community and Voluntary projects – a number of projects have been set up based on community initiative with the support of the Local Authorities. Projects such as Sunflower Recycling and Clondalkin Recycling Initiative are helping create employment and training opportunities while also providing waste solutions.

Recycling of waste – the overall municipal waste recycling rate has jumped from 7% in 1997 to 26% in 2003, and continues to increase. In 2003, 16% of household waste was recycled through the new Green Bin collection, Bring Banks, Recycling Centres (North Strand, Ballyogan, Coolmine) and the two green waste composting sites. Recycling of commercial/industrial waste reached 33% in 2003, thanks to the introduction of separate collection and recycling of packaging and other waste streams. Assisted by the innovation and progressive attitude of the private waste sector, there has been significant expansion in the number of Materials Recovery Facilities and in the standard of facility operation and management, which has shown a firm commitment to recycling and recovery in the Region.



Recovery of Energy – progress has been made in relation to the development of a Waste to Energy facility, which will recover energy from the 'residual waste' after recycling has been carried out. A public involvement programme has provided all the information the stakeholders sought to enable their participation in the statutory processes. The facility will be developed through a public private partnership and a preferred company has been appointed in 2005 to commence the planning and waste licensing stages.

Waste Disposal – The reliance on landfill is still high: 74% of municipal waste is landfilled annually. Landfill extensions have been secured and developed by both South Dublin County Council (at Arthurstown) and Fingal County Council (at Balleally) to provide short term capacity for the Region's disposal needs. A new baling station has been developed by Dun Laoghaire-Rathdown County Council as part of the Ballyogan Recycling Park, which will enable the closure and restoration of the landfill. A significant volume of C/I waste is landfilled at the private KTK landfill in Kildare.

Regulation and Enforcement – the Local Authorities are now responsible for ensuring the activities of waste management companies and all waste producers are within the law and in keeping with the goals of this Plan. Dedicated regulation and enforcement units have been established by the Local Authority and the degree of compliance is improving. A Regional Enforcement Unit has been set up by Dublin City and Fingal to combat specific problems and provide a flexible and responsive unit working across administrative boundaries.

Review of the Waste Management Plan 1998-2004

A formal review of the Waste Management Plan was commissioned in 2004 and completed in 2005. This examined progress to date and involved a significant amount of consultation with the public and sectoral interests. It also took into account the changes and challenges facing the Region, and the advent of new policies and laws on waste from the EU and the Irish government. Some of the key findings of the review were as follows:

- Target dates of the original Plan were over-ambitious, bearing in mind the scale of the waste management challenge and the practicalities of implementing a variety of new collections and facilities in the largest city in Ireland.
- More consistency in implementation is desirable – between one Local Authority and the next, between one area and the next, including the charging systems for waste.
- Further progress on prevention/minimisation is sought, including greater responsibility from industry to minimise waste transferred to consumer level. Further development of community and voluntary sector initiatives will be fostered and encouraged.
- Progress in recycling has been very good, and is broadly welcomed by all sectors. Nevertheless, greater effort is required particularly with regard to collection and treatment of organic waste for composting/ biological treatment. Otherwise the Plan targets will not be met.



Green Bin Recycling Collection



Ballyogan Recycling Park

- There are still significant deficits in infrastructure to manage waste generated in Dublin and this is increasing costs and making it more difficult to achieve recycling and energy recovery targets. Progress in relation to organic waste treatment and the Dublin Waste to Energy Plant is critical in order to meet targets, and progress in relation to the Fingal Landfill project is critical to avoid a crisis in landfill capacity.
- With increased complexity in waste management, increased costs, and a growing private sector involvement, Regulation and Enforcement is of vital importance
- The desirability of more waste being recycled and reprocessed in Ireland is an underlying theme in consultation. A National Market Development Group is examining this issue.
- Construction and Demolition waste is the single largest waste stream in the Region. Management of this is improving but not to the extent required. A redoubling of efforts by the construction industry in tandem with Local Authorities is required, to achieve minimisation through good practice, higher recycling and more sustainable land use.
- The EPA's National Hazardous Waste Management Plan requires further action by the Local Authorities, to collect hazardous wastes such as batteries and waste oil from household and small business, to develop a register of all potentially hazardous waste disposal sites in the Region, and to examine the need for hazardous waste disposal capacity.

Waste Management Policy from 2005 – 2010

Responding to the consultation feedback, the findings of the Review, and the need to meet National and EU Objectives, the waste management policy for the Region has been revised and updated. Some of the key issues and objectives are as follows:

Prevention and Minimisation Policy

The prevention and minimisation activities of the Local Authorities will be directed to three target audiences – community, schools, and business - with goals and targets for each. Three officers will implement these tasks in each Local Authority:

- the Environmental Awareness Officer,
- the Green Schools Officer, and
- the Green Business Officer

The latter role will include implementing environmental management systems and green purchasing within the Local Authorities as well as supporting small and medium enterprises to reduce waste. Greater co-ordination of the waste prevention message will be achieved across the Region. The Local Authorities will encourage and support further community and voluntary sector initiatives throughout the Region.

Reuse and Repair

It is an objective to develop a 'resource recovery centre' in the Region enabling reuse/repair of household items. An online 'virtual' reuse centre for household goods will be developed on the regional waste website.

Objectives for Household Recycling

Further success in this area depends on two aspects: the motivation and enthusiasm of the householder, and the provision of practical and convenient recycling services by the Local Authorities. The former challenge will be addressed by an ongoing and co-ordinated information campaign that reaches across all elements of the community, including new populations and ethnic groups. To improve access to recycling, further expansion of existing services will be carried out. This will involve:

- Extending and improving the green bin service to include new materials.
- Providing additional Recycling Centres where bulky waste and priority wastes can be delivered.
- Providing Green Waste reception facilities at selected locations.
- Providing further Recycling Centres at community level.
- Installing new Bring Banks across the Region – targeting high-density areas and using new techniques such as underground banks.



In addition, the Local Authorities will require all apartment blocks to provide a dry recyclables collection service. The Plan contains guidelines for developers of new housing developments to ensure recycling is included at design stage, in both dwelling units and public open spaces.

Commercial/ Industrial Recycling

Most businesses have responded well to new waste practices, but good practice needs to become the norm and not an optional extra for companies. In order to support this, a two-pronged approach will be implemented

1. Develop an information and promotion campaign (building on the 'Small Change' and 'Action at Work' campaigns developed by the national Race Against Waste campaign).
2. Regulation of waste producers and collection companies to require source segregation for recycling.

This will apply first of all to dry recyclables (paper, packaging, glass etc.) and subsequently to organic waste. Co-operation of the waste collection industry will be required, and a phased implementation will be established.

Biological Treatment

The next big recycling challenge for the Region is to introduce separate collection and biological treatment of organic waste (vegetable, fruit & garden waste) from households and business. This is a firm objective of the Plan, and will include the following actions by the Local Authorities:

- Rolling out a third 'brown-bin' collection to households starting in 2006 – this will require a specific public information and support campaign for the Region.
- Developing two facilities to treat the organic waste collected. Two modern composting plants will be built one at Ballyogan, and a second plant will follow in Kilshane to serve the northern half of the city.
- Separate collection of food and other organic waste by business and industry, using Collection Permits and Waste Bye-Laws to ensure fair regulation of the collection market.
- Expanding the capacity to accept green waste at selected locations.

Waste Management Policy from 2005 – 2010

Energy Recovery Policy

The policy of the Plan is to make the best use of residual waste – that is waste collected by the grey/ black bin collection or otherwise not suitable for recycling – by extracting thermal energy. The Plan policy is to develop a Waste to Energy (Incineration) plant at the preferred location in Poolbeg Peninsula, Dublin 4. This will have a capacity of between 400,000 and 600,000 tonnes/annum, and will treat non-hazardous municipal waste. By using this facility, the Region can ensure that the obligations of the *EU Landfill Directive* and the *Draft National Biodegradable Waste Strategy* to reduce landfilling of biodegradable waste are met. As well as generating electricity, the possibility of using heat energy in a ‘district heating’ network is being explored.



Landfill Policy

A critical shortage of municipal landfill capacity is imminent with the closure of Ballyogan Landfill in 2005, Arthurstown Landfill in 2007, and Balleally Landfill in 2008 approximately. Urgent delivery of the proposed Fingal Landfill is essential to replace these facilities and provide adequate safe disposal for residual waste in accordance with this Plan. While the Dublin WTE facility will divert significant volumes of waste from landfill, there will remain a significant requirement for residual disposal. The Plan policy is to develop a municipal waste landfill with up to 10 million tonnes capacity in Fingal for this purpose. A short term capacity deficit may arise prior to the opening of the Fingal landfill and the WTE facility: to address this a further short term extension to the

Arthurstown landfill, and the use of available capacity in counties outside Dublin is proposed.

Regional Co-operation & Movement of Waste

The Dublin Region will aim to become self-reliant in terms of waste management infrastructure: waste generated in Dublin should be managed in Dublin as far as possible, in the interests of sustainability. The Dublin Region lies within the Greater Dublin Area (GDA) for the purpose of spatial and strategic planning. The Dublin Local Authorities are supportive of co-operation with neighbouring counties to enable efficient development of infrastructural capacity for waste management. This translates into the following policies:

- The Dublin Local Authorities will be receptive to treating waste from outside the Dublin Region if it is in accordance with the Waste Management Plan of the area in question.
- It is expected that there will continue to be a need to treat certain waste arising in Dublin in neighbouring counties including in the short term municipal waste for disposal, composting of green waste and recycling/disposal of C&D waste.
- Where infrastructure deficits arise in the Dublin Region, facilities in other regions with spare capacity should be employed until this deficit is corrected and if required in accordance with this Plan.

Directing Waste

In order to meet Plan objectives, the Dublin Local Authorities will if necessary and/or appropriate direct that certain waste or waste streams must be delivered to a certain tier in the waste hierarchy (e.g. reuse, recycling, biological treatment, energy recovery) This will be achieved by means of the Waste Collection Permit system or other appropriate regulatory or enforcement measures.

Construction and Demolition Waste

Improving waste management is a major challenge to this sector. Solutions can be found if each of the stakeholders plays its role:

- Construction Industry must employ best practice at the design, planning and construction stage to ensure waste prevention and recycling opportunities are identified and implemented. A new Voluntary Industry Initiative requires C&D Waste Management Plans to be drawn up at the Planning stage for significant projects and subsequently implemented during construction.
- Waste Collectors are required to introduce source-separation of recyclables and introduce graduated charges to incentivise better site practices.
- Local Authorities will ensure the voluntary industry code is applied to development control, to regulate the collection and treatment of waste to meet the Plan objectives, and also work to develop markets for recycled materials.



In addition, an increase in facilities to recycle C&D waste is required, and the practice of sending C&D waste to permitted agricultural sites will be restricted in favour of better alternatives.

Hazardous and Priority Wastes

The Plan contains objectives for improving the management of household hazardous waste, including awareness measures and collection systems. This also applies to hazardous waste from small business. A register of potential hazardous waste disposal sites will be drawn up, and the Dublin Local Authorities will also consider the feasibility of establishing a hazardous waste landfill cell in the Region. New policies are also included to improve systems for collection and recycling of Waste Electrical and Electronic Equipment and scrap cars.

Implementing The Plan

Local Authority Action Plan

Reflecting on the challenge of Plan implementation, four subsets of waste management services in the Region have been set out, as shown in the figure opposite. A specific set of actions is required in each area. The existing Waste Steering Group, comprising management of the four Local Authorities, will be responsible for leading the implementation and co-ordinating actions on a regional level. This is particularly important since most services are delivered on a regional basis. They will also report on progress and drive the infrastructural development.



Regulation and Enforcement is a key area over the coming Plan period and further resources and training will be used to support staff in this field. Regulation by means of Waste Collection Permits and Waste Bye Laws will be a key tool used in implementing the Plan. A Regional Enforcement Unit will continue to support the Local Authority in their day to day activities. Better data provision is required from the private sector, and further auditing will be carried out by the Local Authorities. Furthermore, implementation will require horizontal integration of Local Authority services, including close co-operation with the Planning sections.

Roles and Responsibilities

While the Local Authorities are responsible for leading implementation, the success of the Plan will depend on the actions of the entire society.

The **General Public** has a responsibility to prevent and minimise waste where possible, and to use the facilities made available for safe collection and disposal of waste. They need to participate in source separation and recycling services provided, and remove household hazardous waste for safe disposal.

The **business and Industrial** sectors need to implement best practice in relation to waste prevention, minimisation, recycling and waste disposal, and to implement greener policies in-house. They will ensure that all waste leaving their premises has appropriate documentation and is handled by legal operators.

The **Packaging Industry (including Repak)**, is responsible for improving packaging waste reduction, reusability and recyclability, as well as funding recycling and recovery of packaging.

The **private waste sector** will continue to expand collection and recycling services, provide innovative technologies and assist in the promotion of awareness on waste management. They are required to follow the waste hierarchy and waste plan objectives. Improvements in data reporting and compliance are required.

Voluntary NGO & Community Groups are encouraged to undertake waste projects at local level. Increased responsibility will be taken for waste management through community schemes with support from Local Authorities.

Producer Responsibility

An objective of the Plan is that producers and suppliers will play a greater role in preventing, minimising and recycling waste, and will share the burden more fairly with the end-user of the product:



Full cost of collection, sorting and recycling of packaging waste will be recovered from producers as defined in the Regulations

National initiatives for waste electrical & electronic equipment, scrap cars and tyres will be implemented eventually enabling free delivery of the end-product for recovery by industry

Producers of materials such as newspapers, junk mail and telephone directories will be required to contribute to the cost of collecting, sorting and recycling the material

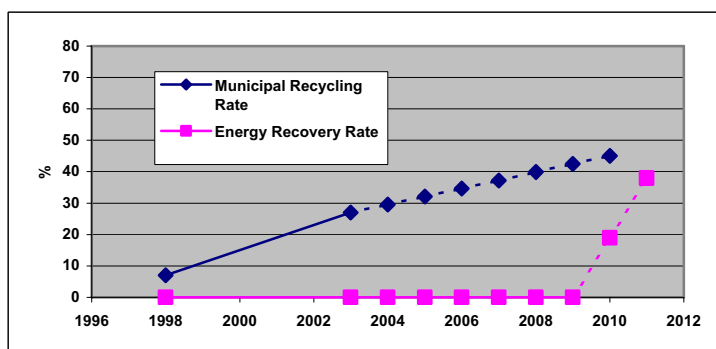
Greater producer responsibility will be sought for materials such as batteries, paints, medicines and other household hazardous waste

How will we monitor progress?

An Annual Report will be prepared by the Local Authorities to update on progress in plan implementation. The Annual Report will synthesise information from each of the four Local Authorities and is expected to include details of performance in relation to Key Performance Indicators.

The Dublin Local Authorities recognise the need for input of the various stakeholders in waste management in plan implementation. It is proposed to invite the various stakeholders in the Region to comment on the Annual Report. This is an opportunity to provide feedback on the implementation of the Plan, and to bring forward new proposals or innovations as they arise. The consultation will be developed through a 'Regional Waste Forum' - the annual forum will enable better partnership between the stakeholders in the coming years.

Increased engagement with the private sector will be a feature of Plan implementation.



Financial Implications

Local authority costs of providing waste services have increased more than fivefold since 1997 to €176 million in 2004. This is due to the expansion of waste services, roll-out of new recycling schemes, the increased standards at landfill sites, and other factors such as general inflation. In 1997, only 25% of costs were recovered mainly via landfill gate fees. This situation has improved thanks to the introduction of household waste charges and increased landfill gate fees, nevertheless the overall service is still €59m in deficit annually. Looking ahead, expenditure in prevention/minimisation, recycling and recovery will increase to €211 million by 2010 but a significant gap between expenditure and income is forecast. The Local Authorities will continue to employ, adjust and introduce user fees for waste services and facilities provided in order to deliver a cost effective and affordable system having regard to the polluter pays principle.

Public Consultation and Involvement

Public consultation and involvement played a major role in the formulation of this Plan. In order to obtain maximum feedback reflective of all sectors of the Region, consultation was sought using a number of methods:

- Newspaper advertisement calling for written public submissions
- Consultation days for the waste industry
- Regional Stakeholder Meeting
- Consultation with Elected Members of the Region

The issues that were common to all audiences were:

- Planning/Permit Process
- Awareness/Prevention
- Inter-regional movement of waste
- Infrastructure/facilities
- Regulation and Enforcement

The submissions, meetings and briefings in the pre-Draft phase resulted in numerous ideas and initiatives which were included in the Draft Plan, and have been considered in the development of implementation plans for the Region. A second phase of consultation took place on the Draft Plan from April – June 2005, the feedback from which led to a series of revisions and amendments to the Draft before it was finally adopted.

Useful Websites

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| Dublin City Council | www.dublincity.ie |
| Dun Laoghaire Rathdown County Council | www.dlrcoco.ie |
| Fingal County Council | www.fingalcoco.ie |
| South Dublin County Council | www.sdublincoco.ie |
| South Dublin Regional Website | www.southdublin.ie |
| Dublin Waste Regional Website | www.dublinwaste.ie |
| Environmental Protection Agency | www.epa.ie |
| Department of Environment Heritage and Local Government | www.environ.ie |
| Information on the Environment | www.enfo.ie |

