# PART 1



## 1 INTRODUCTION

## 1.1 MANAGING WASTE IN DUBLIN

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 attract 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.

A high quality environment is defined by clean water, fresh air and clean soil, by the level of noise and the quality of light – all of these natural resources come under pressure in a society that is increasingly concerned with cycles of production and consumption, mobility, and economic expansion.

Managing waste in a *sustainable* manner is one of the key challenges for the Region, and one in which every citizen has a role to play. How we manage our waste says a lot about how highly we value our environment. There is consensus that we should minimise impact on the environment; this can be achieved by working to minimise the amount of waste we generate, and managing the waste we do create in the best manner possible.

The Dublin Region comprising Dublin City Council, Dun Laoghaire Rathdown County Council, Fingal County Council and South Dublin County Council adopted a coherent and ambitious *Waste Management Strategy* in 1997, setting out to replace a system that relied on landfill disposal with a new approach based on integrated waste management. The first Regional Waste Management Plan was made in 1998 (subsequently re-adopted in 2001), and the first formal Review of the Plan has taken place during 2004-2005.

In the intervening period significant progress has been made throughout the Region, in particular the improved recycling performance will be acknowledged by all householders and businesses. Nevertheless, many elements of the Strategy remain to be fully delivered. Further effort is required in the challenge to prevent, minimise and reduce waste. There are still gaps in the collection and recycling systems proposed. Delivery of infrastructure to achieve energy recovery and waste disposal capacity is behind schedule. This underlines the need for continued urgent and co-ordinated action to continually improve waste management across the Region in the years ahead.

This Waste Management Plan sets out a policy to implement a balanced, sustainable and affordable waste management system in the Region.

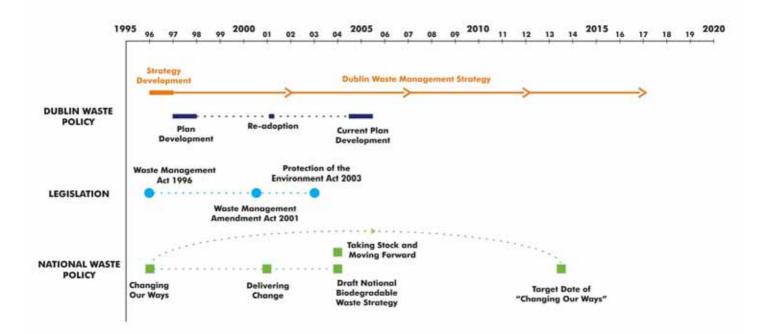
## 1.2 PURPOSE OF THE PLAN

The objective of this Plan is to answer a number of simple questions as follows:

- Where are we now? Detail current performance in waste management and outline areas for improvement
- What are our options? Reflect on recent and future developments in waste management and how the Region can benefit from these

- Where are we going? Outline the future strategy for managing waste in the Region, detailing the policies and objectives to be pursued
- How will we get there? Set out the roles and responsibilities in Plan Implementation, including those of the Local Authority and the private waste management sector, as well as the means of financing the strategy
- **How will we monitor progress?** Set targets for the future and identify the mechanisms by which these will be monitored





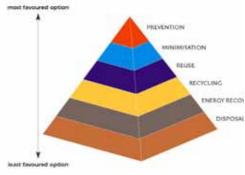
## 1.3 CONTEXT OF THE WASTE MANAGEMENT PLAN

This Plan can be viewed in two overlapping contexts: the waste management policy context and the planning and development context.

#### Waste Management Context

In terms of Waste Management Policy, the Plan falls into a hierarchy of policy derived from EU and National Level, and complies with national legislation on waste management plans.

EU waste management policy is set out in a series of Directives and more recently 'Thematic Strategies'. The EU Landfill Directive of 1999 sets the agenda for much of the changes in municipal waste management. Directives such as the Waste Electrical and Electronic Equipment Directive and the End Of Life Vehicle Directive require a new producer responsibility approach to be implemented across all Member



States. Much of the EU policy can be conveniently abbreviated by the 'waste management hierarchy' picture.

Irish Waste Management Policy has been set out in a series of Policy Statements, starting with 'Changing Our Ways' in 1998, which has been expanded and updated by 'Delivering Change' (2002) and 'Taking Stock and Moving Forward' (2004). The Draft National Biodegradable Waste Strategy of 2004 also sets new goals and objectives for municipal waste management. It is these policies that provide the overall waste planning framework, supporting the Regional waste management approach and other key concepts such as implementation of the 'polluter pays principle' and the 'producer responsibility' framework for several key waste streams.

The governing legislation for waste is provided by the Waste Management Act, 1996, as amended by the Waste Management Amendment Act 2001, and the Protection of the Environment Act, 2003. The 1996 Act has been brought into effect by the making of a series of Regulations, covering aspects such as waste collection, authorisation of waste facilities, transfrontier shipment of waste and specific waste streams such as packaging and farm plastics. The format and content of Plans is governed by the Waste Management (Planning) Regulations 1997.

#### Planning and Development Context

The National Spatial Strategy sets out the overall strategic framework for Ireland's development over the period 2002-2020. Development needs to be co-ordinated at a Regional level, and a series of 'Regional Planning Guidelines' (RPGs) have been prepared during 2003 – 2004. These Guidelines inform and guide Regional development including key infrastructural considerations, setting the overall objectives for the Region and helping to shape the City and County Development Plans of individual Local Authorities. **Map 1** outlines the greater Dublin Region as set out in the National Spatial Strategy.

The Regional Planning Guidelines for the Greater Dublin Area were published in 2004. Recognising the spatial influence of the Region, the Greater Dublin Area includes the four Dublin Local Authorities and also Counties Meath, Kildare and Wicklow.

The Guidelines make a number of general recommendations in terms of waste management, namely:

"A Regional approach to waste management should be adopted in the GDA which will:

Promote the development of new integrated waste management facilities in the GDA in the short term;

Permit inter-Regional transfer of waste to give appropriate economies of scale to new waste management facilities;

Provide for growth in capacity to mitigate the escalating costs of waste disposal;

Develop biological treatment facilities for organic waste, further recycling and waste to energy plants to serve the needs of the GDA."

The Regional Waste Management Plan therefore aims to fit into the RPG framework and to satisfy this element of the overall Spatial Planning policy of the Region. While counties Meath (part of the North East Waste Planning Region), Kildare and Wicklow lie beyond the boundary of the 'waste management Region' which comprises the four Dublin Local Authorities for the purpose of this Plan, significant levels of co-operation already exist, and waste movements into and out of Dublin are commonplace. Consultation with these Local Authorities has formed part of the Plan development.

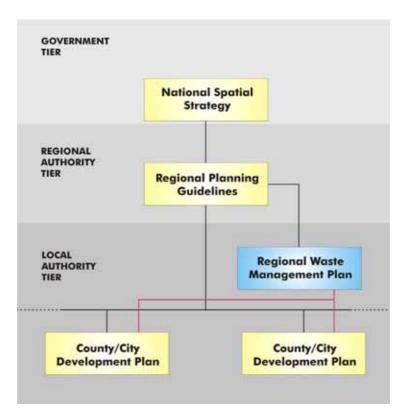
The primary purpose of the *Planning and Development Act 2000* is to establish a legal framework within which the planning system can operate efficiently. In relation to waste management, the *Planning and Development Act 2000* altered some elements of section 98 of the EPA Act 1992 to further encourage sustainable development and environmental protection.

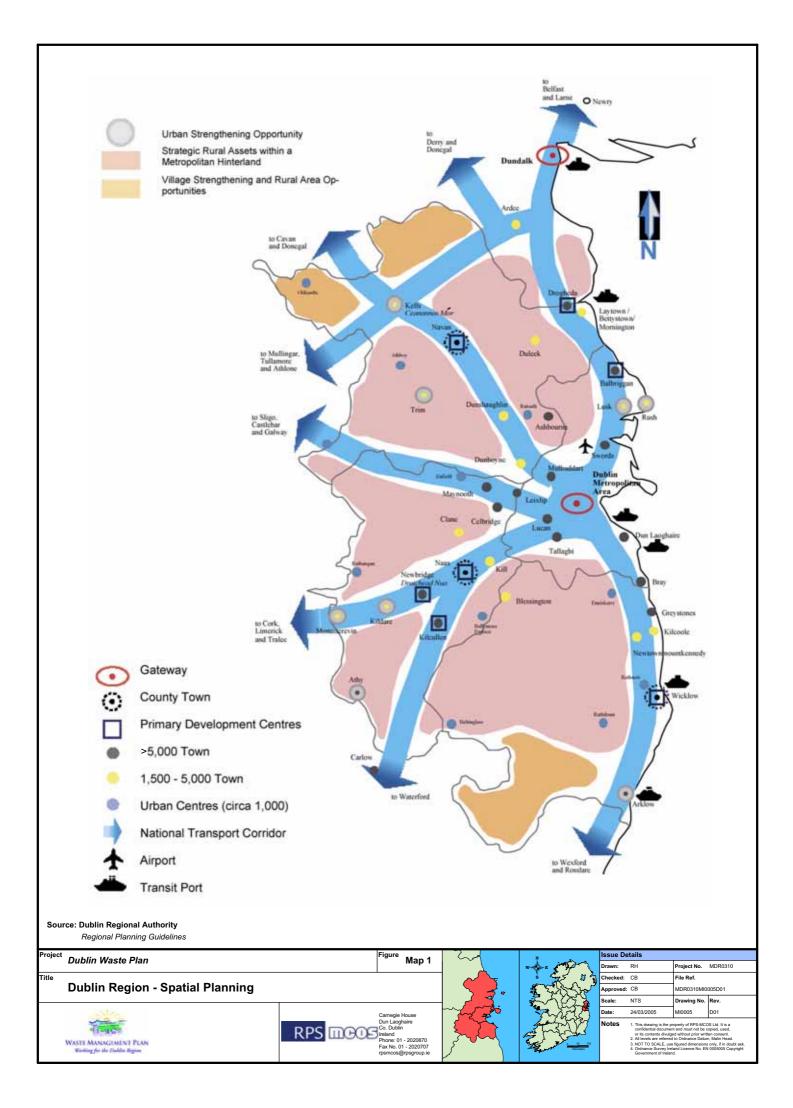
In terms of Planning and Development Policy, under the Protection of the Environment Act 2003 the Waste Management Plan plays a significant role in terms of future development of waste infrastructure. The 2003 Act set out to redress some uncertainties that had emerged in a range of recent environmental legislation, which includes changes to the *Planning and Development Act 2000* and the *Waste Management Acts 1996-2003*. Previous uncertainties had led to planning decisions which highlighted barriers to the development of waste management infrastructure.

Section 26 of the Act makes the review, variation or replacement of a Waste Management Plan an Executive Function of the City or County Manager, rather than a Reserved Function of the Elected Representatives. Policies in the Waste Management Plan become de-facto planning policies, and in cases where conflicting objectives are found, the Waste Plan effectively supersedes the County or City Development Plan. This places extra importance on setting clear policies within the Waste Management Plan, including details of locations for proposed waste facilities. In this Plan any proposed locations for waste management facilities have been included in so far as these have been identified at the time of preparation.

Figure 1.2 illustrates the current planning framework in Ireland. Whilst the National Spatial Strategy and the Regional Planning Guidelines are not binding in law, this Waste Management Plan has where appropriate taken the relevant polices and objectives into account.







The City and County Development Plans have also been taken into account, and regard has been had to the following strategies and plans:

- Dublin City Development Plan 2005 2011
- Dun Laoghaire Rathdown County Development Plan 2004-2010
- Fingal County Development Plan 2005-2011
- South Dublin County Development Plan 2004-2010
- Air Quality Management Plan for the Dublin Region 1999
- National Climate Change Strategy, October 2000
- National Hazardous Waste Management Plan (EPA) 2001
- The Seven EU 'Thematic Strategies' (see next Section)

## 1.4 EUROPEAN CONTEXT

The EU Sixth Environment Action Programme sets out objectives in the shape of Europe's future environment at the start of the 21<sup>st</sup> century. This vision "Environment 2010: Our Future, Our Choice" seeks the following aims.

- To decouple the generation of waste from economic growth by establishing more sustainable
- consumption patterns.
- For waste generated, these should represent very low risks to the environment and our health.
- We should maximise recycling and bring "final disposal to an absolute minimum"
- Waste should be treated as close as possible to where it is generated ("proximity principle")

Seven 'Thematic Strategies' were introduced as a way to tackle seven key environmental issues, which require a holistic approach because of: their complexity, the diversity of actors concerned and the need to find multiple and innovative solutions. The Seven Thematic Strategies are:

- Clean Air For Europe (CAFE)
- Soil protection
- Sustainable use of pesticides
- Protect and conserve the marine environment
- Waste prevention and recycling
- Sustainable use of natural resources
- Urban environment

The most advanced of these currently is the *Thematic Strategy on the Prevention and Recycling of Waste*. Among the many issues discussed was the development of material based recycling targets in articulation with end-of-life products based targets, the use of economic instruments (such as the plastic bag levy in Ireland) and to ensure that recycling is both easy and clean to maximise the resource value of waste.

In 2000 the Lisbon Strategy set out an ambitious agenda of economic and social reforms to create a highly dynamic and competitive knowledge-based economy. In 2001 a broad Strategy for Sustainable Development was founded by the European Council in Gothenburg and in 2002 its external dimension was defined in Barcelona ahead of the UN's World Summit on Sustainable Development. On 9<sup>th</sup> February 2005 the EU Commission presented a Communication in the 2005 Review of the EU Sustainable Development Strategy. The Sustainable Development Strategy and the Lisbon Strategy share the same ultimate goal, namely to improve welfare and living conditions in a sustainable way for present and future generations.

Among the issues of relevance to the Regional Waste Management Plans in the 2005 Review of the Sustainable Development Strategy are the following: -

- Managing our natural resources protecting our water, air and land from threats to our biodiversity
- Protecting public health and environment
- Minimising poverty and social exclusion
- Tackling priority waste streams setting targets and monitoring performance
- Identifying policies to encourage creation of markets

Opportunities may exist to implement waste prevention and recycling in partnership with community networks to maximise resource recovery and provide employment thus minimising social exclusion. To maximise recycling markets at home, the pursuance of "green procurement policies" need to be encouraged in the plan to help create sustainable markets. We also need more recycling centres and parks to collect household, commercial, and selective industrial waste. (e.g. construction/demolition, electronic, packaging and end of life bulky items).



# 2 STUDY AREA

## 2.1 DESCRIPTION OF THE DUBLIN REGION

The study area for the Regional Waste Management Plan consists of the administrative areas of Dublin City Council (DCC), Dun Laoghaire – Rathdown County Council (DLRCC), Fingal County Council (FCC) and South Dublin County Council (SDCC) as shown on **Map 2**. The Region covers a total of approximately 92,227 hectares – 1.3% of the area of the country. However the Region has a population of 1,122,821 (CSO, 2002), which represents approximately 29% of the national population. The Irish Sea forms the eastern boundary of the area, to the south, Wicklow borders with Dun Laoghaire – Rathdown and South Dublin, Kildare lies to the west, and Meath borders with Fingal to the north and northwest.

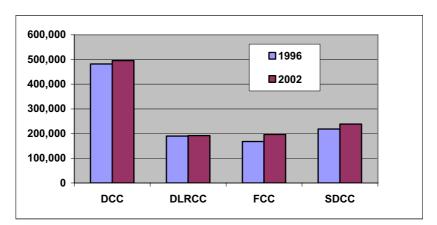
## 2.1.1 Population

The population of the Region is 1,122,821 (CSO, 2002) an increase of 64,557 or 6.1% since the previous census in 1996. Table 2.1 and **Map 3** shows the population for each Local Authority area. The most recent census figures (2002) show that the population growth in the Dublin Region is slightly below the national average of 8%.

Table 2.1	Change in Population Figures 1996-2002
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Local Authority	1996	2002	Increase
DCC	481,854	495,781	2.9%
DLRCC	189,999	191,792	0.9%
FCC	167,683	196,413	17.1%
SDCC	218,728	238,835	9.2%
Total	1,058,264	1,122,821	6.1%

#### Figure 2.1 Population of the Four Local Authorities, 1996 and 2003



## 2.1.2 Households

The total number of households in the Region is 379,372 (CSO, 2002) giving an average occupancy of approximately 2.96 people per household. Table 2.2 shows the number of households per Local Authority.

Local Authority	1996	2002	Increase
Dublin City	173,085	180,852	4.5%
Dun Laoghaire-Rathdown	61,649	64,132	4.0%
Fingal	47,721	60,872	27.5%
South Dublin	61,809	73,516	18.9%
Total	344,264	379,372	10.2%

Table 2.2Change in Number of Households for the Region 1996-2002

While the number of new residential units provided in DLRCC is relatively modest, the other 3 authorities have each accommodated between 12,000 and 17,000 new units in the intercensal period, with the percentage growth in Fingal and South Dublin being the most dramatic. This scale of growth is obviously influencing waste generation and increasing the capacity required for all infrastructure including waste. Map 3 demonstrates the population density in the District Electoral Divisions (DEDs) in the region.

## 2.1.3 Urban Rural Population Distribution

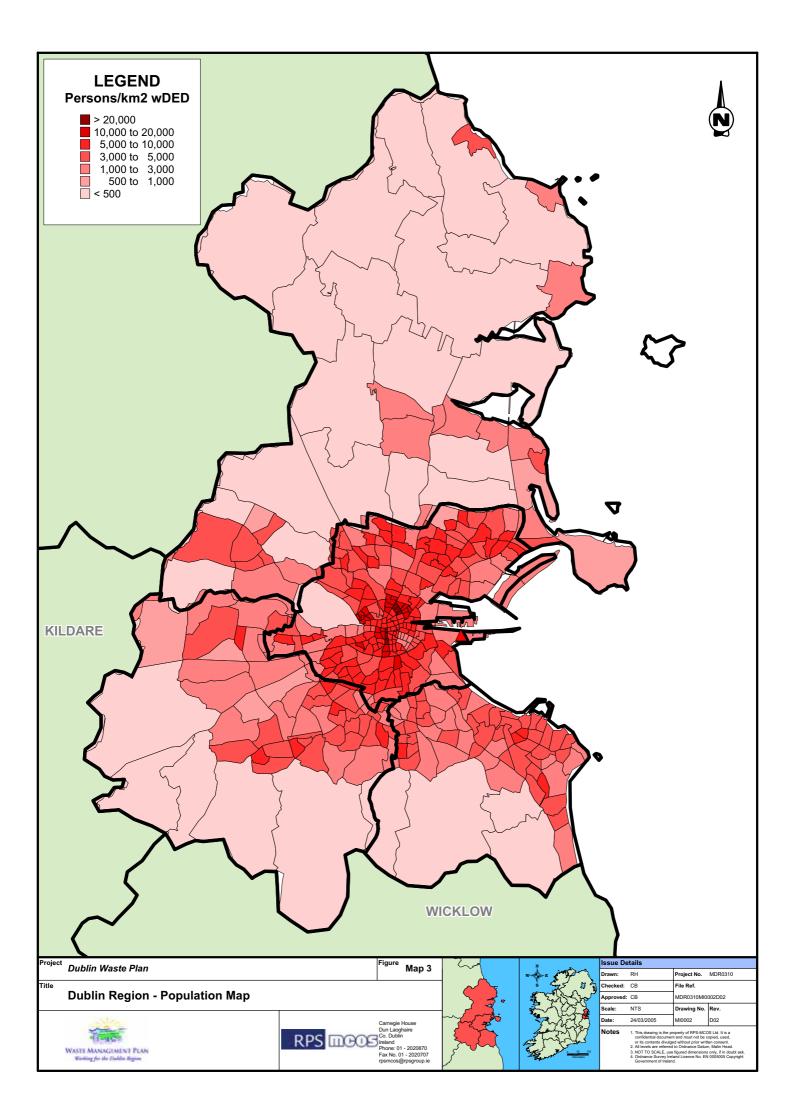
The most recent Census figures show that 98% of the population are urban dwellers and 2% live in the rural areas. Whilst 2% of the population appears relatively small, it equates to approximately 27,000 people or 9,100 rural households. Table 2.3 summarises the Urban/Rural population distribution for each Local Authority Area.

#### Table 2.3Urban/Rural Population Distribution in the Region

Local Authority	Urban 2002	Rural 2002
Dublin City	495,781	0
Dun Laoghaire-Rathdown	189,590	2,202
Fingal	178,746	17,667
South Dublin	231,680	7,155
Total	1,095,797	27,024

## 2.1.4 Employment

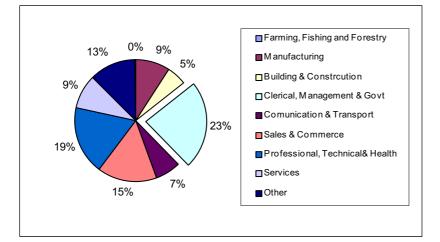
According to the 2002 Census there was a total of 508,030 people employed in the Region. Table 2.4 shows the breakdown of the number of employees for each Local Authority in 2004.



Local Authority	Number Employed
Dublin City	224,300
Dun Laoghaire-Rathdown	81,930
Fingal	91,699
South Dublin	110,101
Total	508,030

Figure 2.2 shows that the highest percentage of employment is in the Clerical, Management and Government sectors accounting for 23% of the total employment in the Region. It also shows that farming, fishing and forestry accounts for the lowest percentage (0.4%) of employment in the Region.

Figure 2.2 Employment by Sector

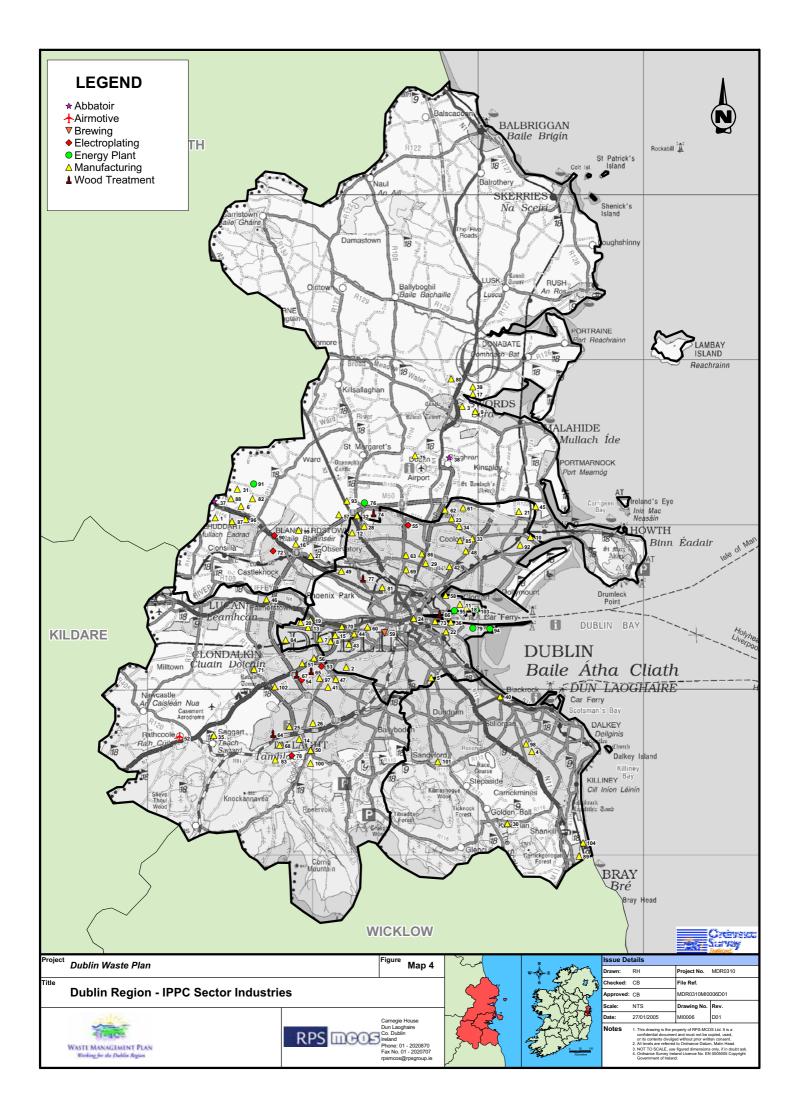


The sectors in the chart above, which could be regarded as being Commercial, are: Clerical, Management & Government, Communication & Transport, Sales & Commerce, Professional, Technical & Health, Services and Other. This gives a 86% employment rate in the commercial sector, compared with the national average of 66%.

The sectors which could be regarded as being Industrial are: Farming, Fishing and Forestry, Manufacturing and Building and Construction. This gives a 14.6% employment rate in the Industrial sector.

## 2.1.5 Commerce and Industry

Dublin City Centre remains the largest location for employment in the State. Located within the general city centre area are clusters of specialised industrial/commercial activity such as the Port, the Irish Financial Services Centre and the emerging high technology cluster focused on the digital hub in the Liberties. It is envisaged that the City will remain the prime location of employment, particularly office based. Decentralisation of Government Departments could have an impact on the City Centre. Outside of the City Centre there are significant employment clusters in the surrounding Metropolitan Area, which have grown significantly over the last twenty years. These include Dublin Airport, the North Blanchardstown area, City West and the Sandyford area. **Map 4** shows the main industries in the Dublin Region.



D	INDUSTRY NAME	LOCATION	REG NO	INDUSTRY TYP
	Yamanouchi Ireland Co. Ltd.	Mulhuddart, Dublin 15	7	Manufacturing
	Leo Laboratories Ltd. Swords Laboratories	Cashel Road. Crumlin, Dublin 12 Watery Lane, Swords, Co. Dublin	8	Manufacturing Manufacturing
	Pfizer Ireland Pharmaceuticals	Pottery Road., Dun Laoghaire, Co. Dublin	19	Manufacturing
	Smurfit Paper Mills	Clonskeagh, Dublin 6	32	Manufacturing
	Mallinckrodt Medical Imaging	Damastown, Mulhuddart, Dublin 15	50	Manufacturing
7	BOC Gases Ireland Ltd.	Bluebell, Dublin 12	51	Manufacturing
8	Kayfoam Woolfson	Bluebell Ind. Estate, Dublin 12	58	Manufacturing
9	Arch Chemicals B.V.	Watery Lane, Swords, Co. Dublin	60	Manufacturing
10	Reheis Ireland	Kilbarrack Road, Dublin 5	71	Manufacturing
	Alumina Chemicals Ltd.	Tolka Quay, Dublin 3	74	Manufacturing
	Burgess Galvin & Co. Ltd.	Jamestown Road, Finglas, Dublin 11	75	Manufacturing
	Loctite (Ireland) Ltd.	Ballyfermot, Dublin 10	78	Manufacturing
	Loctite (Ireland) Ltd.	Whitestown, Tallaght, Dublin 24 Bluebell Ind, Estate, Dublin 12	79 80	Manufacturing
	Irish Asphalt Ltd.	Rosemount Business Park, Blanchardstown	81	Manufacturing Manufacturing
	Evode Industries Ltd.	Newtown, Swords, Co. Dublin	83	Manufacturing
	Irish Tar & Bitumen Suppliers	Alexandra Road, Dublin 1	86	Manufacturing
	Ultra Packaging Ltd.	Kylemore Road, Dublin 10	92	Manufacturing
	CVP Ltd.	Kylemore Road, Ballyfermot, Dublin 10	94	Manufacturing
21	Newport Synthesis Ltd.	Baldoyle, Dublin 13	97	Manufacturing
22	Van Leer Ireland Ltd.	Beggars Bush , Dublin 4	107	Manufacturing
	Global Switch Property Ltd.	Clonshaugh, Dublin 17	109	Manufacturing
	Independent Newspapers	90 Middle Abbey Street, Dublin 1	111	Manufacturing
	C-Fab Ltd.	Tallaght Business Park, Dublin 24	114	Manufacturing
	Print & Display Ltd.	Tallaght, Dublin 24	116	Manufacturing
	Kinerton Ltd.	Blanchardstown Industrial Park, Dublin 15	117	Manufacturing
	Alcan Packaging Dublin Ltd.	Jamestown Road, Finglas, Dublin 11	119	Manufacturing
	Lithographic Web Press Ltd.	Glasnevin, Dublin 9	120	Manufacturing
	International Coatings Ltd.	Ballycorus, Kiltiernan, Dublin 18	122	Manufacturing Manufacturing
	Helsinn Chemicals Ireland Ltd.	Damastown, Mulhuddart, Dublin 15	125	Manufacturing Manufacturing
	Wood-Printcraft Ltd.	Jamestown Road, Finglas, Dublin 11 Coolock Ind. Estate, Dublin 17	131	Manufacturing
	Modus Media International	Clonshaugh, Dublin 17	143	Manufacturing
	Brittas Plastics Ltd.	Saggart, Co. Dublin	149	Manufacturing
	The Irish Bottle Co. Ltd.	Ringsend, Dublin 4	150	Manufacturing
	Kepak Clonee	Clonee, Co. Dublin	167	Abbatoir
	AIBP T/A AIBP Dublin	Cloghran, Swords, Co. Dublin	189	Abbatoir
	Swords Laboratories	Watery Lane, Swords, Co. Dublin	206	Manufacturing
	Synthesis Ltd.	Woodbine Road, Blackrock, Co. Dublin	216	Manufacturing
	Irish Printed Circuits Ltd.	Ballymount Drive, Walkinstown, Dublin 12	217	Manufacturing
	Everlac Paints Ltd.	Fairview, Dublin 3	220	Manufacturing
43	BASF Printing Systems Ltd.	Bluebell Ind. Estate, Dublin 12	228	Manufacturing
	Sun Chemical Inks Ltd.	Bluebell, Dublin 12	230	Manufacturing
	IBC Ltd.	Baldoyle Ind. Estate, Baldoyle, Dublin 13	231	Manufacturing
	Coates of Ireland Ltd.	Palmerstown, Dublin 20	241	Manufacturing
	Circle Paints Ireland Ltd.	Greenhills Road, Walkinstown, Dublin 12	245	Manufacturing
	Crown Berger (Ireland) Ltd.	Malahide Road, Coolock, Dublin 17	248	Manufacturing
	Manders Coatings & Inks Ltd.	Ashtown, Dublin 15	250	Manufacturing
	INX International Ink Co. Ltd	Cookstown Ind. Estate, Tallaght, Dublin 24	252	Manufacturing
	Packaging Inks & Coatings Lufthansa Airmotive Ireland Ltd.	Western Ind. Estate, Naas Road, Dublin 12 Naas Road, Rathcoole, Co. Dublin	253	Manufacturing Airmotive
	Hitech Plating Ltd.	Ballymount Ind. Estate, Walkinstown	276	Electroplating
	Just The Plating Co. Ltd.	Mulcahy Keane Estate, Dublin 12	277	Electroplating
	Computer Plating Specialists Ltd.	Santry Avenue Industrial Estate, Santry	278	Electroplating
	Galco Steel Ltd.	Ballymount Road, Walkinstown, Dublin 12	284	Manufacturing
57	W.I. Ltd.	Jamestown Road, Finglas, Dublin 11	293	Manufacturing
58	Cahill Printers Ltd.	East Wall Road, Dublin 3	298	Manufacturing
	Diageo Ireland	St. James Gate, Dublin 8	301	Brewing
60	B.G. Flexible Packaging Ltd.	South Circular Road, Dolphins Barn, Dublin 8	305	Manufacturing
	Forest Labs Ireland Ltd.	Clonshaugh Ind. Estate, Dublin 17	306	Manufacturing
	Barclay Chemicals Ltd.	Lilmar Ind. Estate, Dublin 9	317	Manufacturing
	Protim Abrasives Ltd.	Tolka Ind. Park, Glasnevin, Dublin 11	326	Manufacturing
	T.J. O'Mahony & Sons Ltd. Heiton Buckley Ltd.	Ballymount Cross, Tallaght, Dublin 24	336	Wood Treatmen
		Robinhood Road, off Longmile Road, Dublin 22	340	Wood Treatmen
	Brooks Thomas Ltd.	Upper Major Street, Dublin 1 Greenhills Road, Walkinstown, Dublin 12	345 346	Wood Treatmen
	CCM Ltd. T/A/ Kenn Truss Cross Vetpharm Group Ltd.	Greenhills Road, Walkinstown, Dublin 12 Airton Close, Tallaght, Dublin 24	346	Wood Treatmen Manufacturing
	Lithographic Web Press Ltd.	57 Botanic Road, Glasnevin, Dublin 9	381	Manufacturing
	Jamestown Metal Resources Ltd.	Jamestown Road, Inchicore, Dublin 8	392	Manufacturing
	Metal Processors Ltd.	Station Road, Clondalkin, Dublin 22	401	Manufacturing
	Hitech Plating Ltd.	Ballycoolin Business Park, Blanchardstown	434	Electroplating
	Everlac Paints Ltd.	Hanover Quay, Dublin 2	468	Manufacturing
	Patrick Kelly Timber Ltd.	Kilshane Cross, North Road, Finglas, Dublin 11	474	Wood Treatmen
75	FLS Aerospace (Irl) Ltd.	Dublin Airport, County Dublin	480	Manufacturing
	Huntstown Power Co. Ltd.	Huntstown Quarry, Finglas, Dublin 11	483	Energy Plant
	James McMahon	North West Business Park, Ratoath Road	484	Wood Treatmen
	APW Enclosures Ltd.	Airton Road, Tallaght, Dublin 24	485	Electroplating
	Synergen	Ringsend Generating Station, Dublin 4	486	Energy Plant
		Watery Lane, Swords, Co. Dublin	492	Manufacturing
	Swords Laboratories			
81	Colorman (Ireland) Ltd.	Broombridge Ind. Estate, Broombridge Dublin 11	496	Manufacturing
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In Dublin City and Dun Laoghaire/Rathdown there is a particular trend towards the redevelopment of brownfield sites with a consequent increase in the plot ratio of development. An example of this is the evolution of Sandyford industrial estate. Within the Dublin Region there are significant areas of land that are zoned for industry but as yet undeveloped.

Day to day commerce (shops, restaurants, services) is still strong in the city centre. There is an even distribution of shopping and town-centres located in suburban districts and towns outside the city area. A number of shopping-mall type facilities situated near the peripheral M-50 road have been established, such as the Blanchardstown and Tallaght shopping centres and more recently Liffey Valley and Dundrum.

The banking and financial aspect of commercial activity is a major employer in the area. The flagship for such institutions is the International Financial Services Centre, in the city centre area. Headquarter buildings for several major banks, insurance and legal firms are located in the city area. However, these are distributed more evenly over the study area. A recent trend has been the establishment of *"Business Parks"* by the IDA, often closely located with light industrial businesses in suburban areas of the city.

Educational facilities are again centred on the City area, with several third-level colleges in the core of the city centre, and further on the northern and southern periphery of the city. These swell the daytime users of a given area and influence other businesses such as shops, restaurants etc. Secondlevel and primary level schools are relatively evenly distributed according to population.

The major healthcare facilities are becoming less centralised, for example the city centre hospitals of Meath, Adelaide and Harcourt Street hospitals have relocated to a new Tallaght Hospital in June 1998. Apart from two principal hospitals (St. James's and Mater) the acute and casualty hospitals are located towards the edge of the city area. The Eastern Regional Health Authority-(formerly Eastern Health Board) is responsible for a number of smaller hospitals and clinics distributed over the study area. Altogether there are between 30 and 40 hospitals in the study area.

#### 2.1.6 Integrated Pollution Prevention Control Sector Companies

A system of Integrated Pollution Prevention Control (IPPC) Licensing applies to certain industrial sectors in Ireland, covering large employers and activities with a potential to create pollution. The licensing procedure is administered by the Environmental Protection Agency, and progressively various industrial production scenarios are being included in this system. The licence will only be issued on the basis that environmental impact including waste is minimised, and typically the applicant will be required to undertake regular environmental audits or implement a complete environmental management system. The IPPC Sector companies in Dublin are shown on **Map 4**.

#### 2.1.7 Transport

The Dublin Transport Office (DTO) has undertaken a number of Integrated Framework Plans for Land Use and Transport, in association with the Local Authorities. These allow for higher density development at local level, improved walking and cycling environments, and local bus services. The Integrated Framework Plans for Urban Transport are expected to inform the review of the City/ County Development Plans in the Region, and have been a successful joint initiative. The following key transport infrastructure is shown on **Map 5**.



#### Road

Progress has been made on transport priorities with the completion of the Southern Cross section of the M50, the M1 upgrading between the M50 and Dundalk, the Celbridge Interchange on the N4 and the second West Link toll bridge. Significant improvements and upgrades of the non-national road network within the M50 have also occurred.

By the end of the current NDP (2006) the M50 and the Dublin Port Tunnel are likely to have been completed and further improvements to the major inter-urban routes into the capital will have taken place (incl. the Kildare Bypass on the N7, and the Kilcock-Kinnegad motorway on the N4). Outstanding priorities at that stage are likely to include the widening of the M50 and upgrading of its interchanges, and the proposed Eastern bypass.

#### Public Transport

Public transport improvements have included the introduction of LUAS, new and additional DART capacity and improvements to the DART network, substantial increases to the Dublin Bus fleet, improvements to various parts of the suburban rail network and capacity, and notable achievements in traffic management areas including Quality Bus Corridors, cycle routes and park and ride facilities.

The outstanding public transport priorities seem likely to include the METRO project (including a heavy rail link to the airport), extensions to the LUAS system, a possible heavy rail link to Navan, other improvements to the suburban rail system including the possible electrification of western lines, and ongoing increases in the suburban bus capacity.



#### LUAS

Luas, a light rail system, is in cost terms the largest public transport infrastructure project ever undertaken in Dublin.

Line B – Heuston St to Sandyford is operational

Line C – Tallaght to Connolly is operational and will be extended to the Docklands.

Line C1 - Public consultation phase is underway on - Connolly – Docklands.

Line B1- Sandyford to Cherrywood - Detailed design work has been undertaken and consultation is underway

#### Rail

A national strategic rail review was published in February 2003. This is the largest review of the network in the last two decades. A major programme of investment is recommended up to 2022.

#### Suburban Railway

The suburban railway is capable of delivering peak hour passenger line flows of in excess of 12,000 along each of the routes subject to the necessary development works being undertaken. These need to be addressed as a priority. larnród Éireann is currently preparing a priority investment programme for the period 2003 – 2008. There have been significant improvements in DART in recent years. Phase 1 of a capacity upgrade is underway, and will see capacity for DART and commuter services increase from 11,800 to 16,000 passengers per hour per direction. The Kildare route Project is currently underway – this involves increasing the capacity of the network between Kildare and Heuston Stations, including the laying of new tracks and physical improvements to platforms and

stations on the line. Rail freight continues to play a role in logistics in the Dublin Region, the main hubs are at Dublin port and Heuston Station.

#### Bus

Quality Bus Corridors were first introduced in 1997. There are now 9 Quality Bus Corridors in full operation. There are a significant number of additional bus priority measures in the process of implementation by the recently formed Quality Bus Network Project Office. Numbers using Dublin Bus in the morning peak hour have increased by over 46% since 1997. Results in 2002 show for the first time that the bus mode is increasing its market share. Almost 85,000 of the 464,000 morning hour peak commuters now use the bus to travel to work.

#### Cycling and Pedestrian

There are 170 kilometers of two-way cycle route existing in the Greater Dublin Area. A total of  $\in$ 19.6 million was spent on the provision of cycling facilities since 1994. Cycle facilities are also an integrated part of the design of Quality Bus Corridors in which  $\in$ 72 million has been invested. The objective is to achieve a target of 10% of all trips of less than 6 km being made by bicycle by 2006. Almost 20,000 of peak hour commuters now cycle to work.

## 2.1.8 Tourism

In 2003 over 4.5 million people visited the Dublin Region, according to figures compiled by Bord Fáilte. Of these, 24% were Irish visitors, with the overseas visitors comprising British, Europeans and North Americans in that order. This tourism brought approximately  $\leq 1.2$  billion into the economy. Of these tourists 44% came to the Region on holiday, 27% for business or conferences, and 22% to visit family relatives. The most popular season to visit Dublin is Autumn through to Spring. Tourism activity is mainly focussed on the city centre where the bulk of accommodation and commercial facilities are also located, although there are a number of high-profile visitor attractions throughout the Region, including sport and recreation, heritage and the arts, and natural amenities.



Viking Splash Tours in the Grand Canal Basin

## 2.1.9 Topography

The relief in the Dublin Region is varied. To the south, the Dublin Mountains form the natural physical boundary with much of Co. Wicklow. The high ground extends westward forming the border between South Dublin and Kildare. The western and northern boundaries of the study area merge evenly with the agricultural plains of Kildare and Meath. The River Liffey valley runs west-east through the centre of the Region and is subject of a Special Amenity Area Order.

The Dun Laoghaire-Rathdown boundaries take in the variable coastline to the elevated areas in the Dublin mountains. There are some rural communities in the south of the county along the boundary with Co. Wicklow. The elevated ground of South Dublin falls gradually towards the city centre. The terrain of Fingal is characterised by level fertile agricultural land stretching towards Co. Meath. There are a number of hills of less than 200m elevation in north Fingal, towards Garristown and Naul. There are a number of rivers in the north of the county, which drain independently eastwards towards the sea.



## 2.1.10 Coastline

Much of the coastline of the study area is classified as a Natural Heritage Area as shown in **Map 6**. Fingal's coastline comprises mud, sand and shingle banks, with a small number of beaches and three seaside towns. Two separate estuaries -Malahide and Rogerstown- along with North Dublin Bay are proposed candidate Special Areas of Conservation.

Dublin Bay arcs from Howth Head in the north to Killiney Head in the south. The Port area which extends into the Bay is largely reclaimed land. The southern shore of the Bay is predominantly sandy. Further south, the coast between Killiney and Bray has sandy and rocky stretches.

Bull Island lies in north Dublin Bay. Accessible by bridge it is the subject of a Special Amenity Area Order (1994), as Is Howth Head. There are a number of small uninhabited islands close to the coast of the study area, including the Skerries Islands, Lambay, Irelands Eye, and Dalkey Island, all of which are classified as National Heritage Areas.

#### 2.1.11 Land Use

It is the policy of each of the Local Authorities that environmentally sensitive and high amenity areas be protected and this aim is highlighted in each of their respective County Development Plans. This is usually done by imposing planning restrictions to these areas. The Department of Environment Heritage and Local Government (Formerly Dúchas Heritage Service) has also designated some environmentally sensitive areas as proposed National Heritage Areas. **Map 6** and Table 2.5 show the location of environmentally sensitive and protected areas in the Region.

# Table 2.5National Heritage Areas, Special Areas of Conservation and Special ProtectionAreas

Rockabill Island	Feltrem Hill	South Dublin Bay
Skerries Islands	Sluice River Marsh	Booterstown Marsh
Knock Lane	Ireland's Eye Spa	Dalkey Coastal Zone and Killiney Hill
Bog of the Ring	Santry Demesne	Dodder Valley
Loughshinny Coast	Howth Head	Fitzsimon's Wood
Rogerstown Estuary	North Dublin Bay	Lugmore Glen
Lambay Island	Royal Canal	Slade of Saggart and Crooksling Glen
Portrane Shore	Liffey Valley	Glenasmole Valley
Malahide Estuary	Grand Canal	Loughlinstown Woods
Ballyman Glen	Dolphins, Dublin Docks	Dingle Glen
Wicklow Mountains	Knocksink Wood	Ballybetagh Bog

#### Special Amenity Area Orders:

Liffey Valley - Lucan Bridge to Palmerston (Confirmation Order) S.I. No. 59 of 1990 North Bull Island (Confirmation Order) S.I. No. 70 of 19951994 Howth Head 1999

## 2.1.12 Geology

The bedrock geology of County Dublin can be summarised into five basic groups:

Upper Paleozoic Rocks. Kilcullen Group. Ribband Group. Bray Group. Granite.

The Bray Group is the oldest sequence of rocks in the Region and occurs on Howth and in the south eastern part of the Region. It consists of greywackes and quartzites, and is Cambrian in age. This is overlaid by the Ribband Group which comprises mudstones, siltstones and associated quartzites, and volcanics. This is upper Cambrian to lower Ordovician in age. The Kilcullen Group is Silurian in age and consists of greywackes and shales, primarily deposited as turbidities.

The dominant rock group is the upper Paleozoics which occur throughout Fingal County, Dublin City and much of South Dublin. This group is entirely composed of calcareous shales and limestones. They range however from basinal facies through ramp facies and into shallow water limestones.

## 2.1.13 Hydrology

The River Liffey catchment covers a large part of the Dublin Region; the river rises in the Dublin Mountains near Brittas and loops around through Counties Wicklow, Kildare and Meath over 129 Km before entering Dublin Bay. The principal tributaries near Dublin are the Camac to the south and the Rye-Water to the West. There are two hydroelectric generating plants on the Liffey, at Golden Falls and Leixlip.

The other main rivers to discharge to Dublin Bay are the Dodder and the Tolka. The former drains part of the southern city suburbs and enters the Liffey estuary at Ringsend. The Tolka flows from Meath through the north of Dublin City and into Dublin Bay at Fairview. The Santry River is a short river flowing from the northern city suburbs into the Bay near Bull Island.

Fingal has a number of smaller rivers, typically draining directly west to the Irish Sea from a distance of no more than 30 Km inland. The River Mayne flows into Portmarnock estuary and the Broadmeadow River and the Ward River enter the Malahide estuary near the town of Swords.

In the southern part of the Region, the Kill of the Grange Stream and the Shanganagh River are the more important flows which drain Dun-Laoghaire Rathdown. The catchment of the River Dargle covers the southern edge of the Dublin Region.

Regard has also been had to the following documents:

- Draft River Liffey Water Quality Management Plan 1993
- Three Rivers Final Report 2002
- Eastern River Basin District Draft Initial Characterisation Report 2005

## 2.1.14 Hydrogeology

#### Aquifer

In general the aquifer potential of the Dublin Region is poor. To date, the Geological Survey of Ireland (GSI) have not drawn up an aquifer protection plan for the Region, and there is no published Regional aquifer protection map. However, a National Draft Bedrock Aquifer Map and a National Draft Gravel Aquifer Map are available for viewing on line at <u>www.gsi.ie</u> and give an indication of aquifer potential for the Region.

Permeable strata exist within the limestone bedrock which are responsible for higher than expected yields, for example, within the Clondalkin Formation. The North Dublin Fault zone has an associated aquifer within which a water supply has been developed at Bog of the Ring in Fingal County. The granite and metamorphic sediments are classified as poor aquifers with groundwater flow confined to localised discontinuous systems, most of which occurs in the upper weathered zone.

Where significant sands and gravels occur they provide good water yields for example in Dublin City (10-20m), in Tallaght (35-42m) and the Glencullen and Dargle Valleys (up to 45m).

The Eastern River Basin District Study, currently underway, is in the process of delineating groundwater bodies in the Dublin Region. This forms part of the work being undertaken to meet the objectives of the EU Water Framework Directive.

#### Groundwater Supplies

In the absence of a national system of registration or licensing of groundwater abstraction, a detailed description of groundwater users in the county is not possible. Geological Survey and data held within the four Local Authorities indicates that a public water supply scheme is abstracting from the groundwater at Bog of the Ring in Fingal County Council. In addition there is a public water supply at Glencullen in Dun Laoghaire-Rathdown. The Clondalkin aquifer has records of industrial abstraction and the Tallaght aquifer also has potential for groundwater supply.

#### **Groundwater Protection**

The GSI in conjunction with Fingal County Council have delineated source protection zones for the Bog of the Ring public water supply, which is abstracted from a limestone aquifer. Fingal County Council is developing a protection plan for this source. In the meantime, in the absence of defined aquifer protection schemes, aquifer vulnerability must be inferred from the overburden (Quaternary Geology) map, which details soil type and depth of cover of bedrock and appropriate protection strategies applied.

## 3 CONSULTATION

## 3.1 PRE DRAFT CONSULTATION

Public consultation forms a fundamental part of the waste planning process. In order to fulfil the statutory requirements for consultation for the review of the Waste Management Plan the Local Authorities must comply with Section 23 of the Waste Management Act. This provides an opportunity for all stakeholders in the Region to raise issues, however in reality the statutory periods often result in a limited number of submissions. To ensure that feedback is more reflective of all sectors within the Dublin Region, consultation was proactively sought from all audiences, using a number of methods.

## 3.2 CONSULTATION PROCESS

People in the Dublin Region have been targeted to get their views on how waste management should be planned and implemented in the Region. This was done in a three-phase approach:

- Newspaper advertisement calling for written public submissions
- Consultation days for the waste industry
- Regional Stakeholder Meeting



In addition consultation with Elected Members of the Region took place by means of a meeting in November 2004 where all four Councils were invited to a presentation on the Review process with a subsequent discussion.

## 3.2.1 Public Submissions

A newspaper advertisement was placed in the Irish Independent with a deadline of August 31, 2004.

The Local Authorities also advertised the call for submissions through their local community groups/newsletter, local newspapers, and on their websites. The deadline was then extended to October 15 and re-advertised in the same media. In total 27 submissions were received from 12 individuals, 12 organisations (political, community, NGO) and from 3 waste collectors or waste treatment operators.

#### 3.2.2 Consultation with Waste Industry

Whilst many of the waste contractors operate on a national basis, the opportunities, barriers and situations vary from Region to Region. Therefore to get a clear picture of the present and future role all waste collection permit holders were invited to discuss what questions, issues and concerns they have regarding the plan. 14 service providers attended, representing waste collectors/disposal companies, recycling operators, End of Life Vehicles companies and transfer station operators.

Separate meetings were held with the Irish Waste Management Association (which represents a number of larger waste management companies) and REPAK (packaging Industry umbrella group).

### 3.2.3 Regional Stakeholder Meeting

Potential participants for the Regional Stakeholder Group were identified through the Regional Steering Group and Local Authority Environmental Awareness Officers. The group was be made up of a variety of organisations, to represent the interests of specific sectors within the Region. The following organisations were represented:

Irish Waste Management Association Construction Industry	FAS – Govt. Training & Employment Body
Federation	Dublin Airport Authority
REPAK - Packaging Industry Umbrella Group	Eastern Health Board
ACRA – Residents Representative Group	VOICE – Environmental NGO
University College Dublin	Dublin Chamber of Commerce

The meeting was chaired by an independent facilitator and the purpose of the meeting was not to build consensus but rather to proactively engage with as many sectors as possible so a wide variety of views could be considered.

## 3.3 KEY ISSUES RAISED

The variety of consultation methods used in the review process allowed individuals, business, community and industry an opportunity to comment on the previous Plan and play a role in how the revised Plan will be shaped and implemented. The submissions and meetings provided constructive criticism and numerous ideas and initiatives worthy of inclusion in the revised Regional Waste Management Plan. The issues that were common to all audiences were:

- Planning/Permit Process
- Prevention/Awareness
- Regulation and Enforcement / Charging Systems
- InterRegional Movement of waste
- Infrastructure/Facilities

The following summarises the general comments and views expressed.

#### 3.3.1 Permitting System

- Lack of consistency in issuing waste permits across the Region.
- Discrepancies are apparent from Local Authorities within the same Region and the information provided on permitting/ regulation varies from each Local Authority.
- The waste permits need to be streamlined, they are generally too complicated and there are too many conditions relative to the scale of the facility.

- Several service providers are keen to provide infrastructure, but believe the authorisation process (Planning, & Permit or Licence) needs to be streamlined and provide for quicker turnaround times to not increase the cost of overall project.
- Need for a centralised waste collection permit system to be introduced to assist operators who are collecting waste across all Regions.

## 3.3.2 Regulation and Enforcement/ Charging Systems

This topic was often split into enforcement for the private sector i.e. commercial/industrial and the public sector namely householders. The submissions strongly believe that the often publicised illegal dumping of construction and demolition wastes must be eliminated and those responsible must absorb the full environmental cost of the clean up of the site(s). The submissions believe that effective enforcement to reduce the number of illegal dumpings of household wastes must be a combination of fines, warnings and incentives. The waste industry still feels far more needs to be done to ensure there is a level playing field and that regulations are properly implemented to ensure consistency across the Region in all areas. Suggestions include:

- Enforcement at permitted facilities is required to ensure only the permitted materials are accepted.
- Enforcement of the collection permits is required to ensure that only permitted collectors are collecting waste. Otherwise 'cowboy' operators will undermine the bona-fide operators.
- Enforcement of illegal dumping in particular around bring banks needs to be increased. The situation has gotten worse since pay-by-use was introduced.
- Enforcement of the Landfill Directive and in general the policies set out in the 1998 Plan need to be enforced e.g. Extended Producer Responsibility for newspaper industry, Packaging Regulations, IPC licensing etc
- For EOLV facilities, the standards are not always upheld and more enforcement needed
- More consistency is desirable in the Local Authorities across the region in terms of charging mechanisms for waste services

#### 3.3.3 Prevention/Awareness

Engagement with the business, community, commercial and industrial sectors is seen as crucial to developing greater rates of waste prevention and minimisation. Several submissions note that the Local Authority Environmental Awareness Officers are a valuable resource and their role should be expanded to assist the enterprise sector particularly the SME's. The main suggestions for the way forward in prevention and public awareness of the waste issues were:

- Promotion of successful projects and systems that have been implemented throughout the Region and Nationally.
- The education focus must change from *awareness raising* to the practicalities of implementing the waste management strategies laid out in the plan.
- The public need to be better informed on how they can be involved in the waste management plan review process, so that they may become stakeholders in the decision making process.

• Targeted community education has been proven to work best if delivered by members of the community.

### 3.3.4 Infrastructure/Facilities

Concern was expressed with the lack of infrastructure in the Region, in particular; bottle banks, civic amenity sites, WEEE facilities, composting centres and/or systems and bulky waste collections. They felt that the number of these facilities/systems needs to be addressed in the Plan. It was also stated that the range of materials accepted at each site needs to be increased and promoted. Other issues raised were:

#### **Biological Treatment Capacity**

Some concerns expressed about household 3-bin system, collection and facilities have some problems in other countries. Mixed collection possible with use of 'product' as landfill cover. A wet bin/ dry bin system could work successfully.

#### Waste To Energy (WTE)

Criticism of WTE proposals, suggesting that alternatives should be provided.

- Potential obstacles/barriers to WTE need to be addressed. There should be no landfill tax on landfilling of bottom ash
- Green Subsidies need to be confirmed/ guaranteed for electricity produced by WTE, since it is preferable to fossil fuels more certainty needed.
- The long life of the contract for waste to be delivered to the site. The submissions believe that this will reduce the incentive to reduce and recycle and potentially Local Authorities will be forced to pay if recycling rates are high and can therefore not deliver the agreed waste tonnages.
- Dioxins the submissions express concern over the robustness of the EIA carried out and do not have faith that the promised low level of dioxin emissions will be monitored accurately and regularly or will even be achievable based on overseas experiences and reports.

#### C&D Waste

- The provision of skips on C&D sites for source separation will not happen until there is an economic advantage in doing so.
- Option to use quarries/ former quarries as C&D recycling locations should be explored.

#### Recycling

- Planning for siting of bring banks is too restrictive (i.e. max of 5) and is hampering recycling opportunities, for the public.
- There needs to be a consistency in the appearance of bring banks to increase awareness.
- Green bin service needs to be improved i.e. frequency, information, number of materials accepted.

• Concern has been expressed about the fate of recyclables sent abroad for recycling, and there is general support for reprocessing more of our waste in Ireland.

### 3.3.5 Commercial/Industrial Waste

- Recognise commercial and industrial waste infrastructural needs
- Recognise changes in waste arisings and update the approach to waste management accordingly

#### 3.3.6 Inter-Regional Movement of Waste

- We need a Regional framework and the waste plans will provide opportunity to lay some guidance.
- The interregional issue is being used as a tool to obstruct planning permission for new facilities
- The new Strategic Planning Guidelines for the Greater Dublin Area must be taken into account these enable use of GDA facilities for Dublin waste
- No problem with a facility serving a Region but should not be used to preclude other Regions
- Careful not to preclude private sector investment the NDP relies on private investment to deliver waste facilities.
- Scale of new centralised facilities should reflect the capacity needs of the Region.
- The Waste Plan should clearly outline the respective roles of public and private sector and no ambiguity or conflicting objectives should exist.

The consultation process prior to writing the Plan was comprehensive and effective in ensuring feedback was received from all sectors with the Dublin Region.

## 3.4 DRAFT PLAN CONSULTATION

In accordance with statutory requirements the Proposed Replacement Waste Management Plan was available to the public for comment from April 25th to June 30 2005.

The Plan was available on the Regional Waste Management Site www.DublinWaste.ie and copies were on display and available for purchase from each of the Local Authority offices. A Summary Guide was also produced that outlined the achievements made since the last plan and the proposals for the next five years. The public could either send in written submissions or fill in the feedback form that was attached to the Summary Guide.

A total of 45 Written submissions and 90 feedback forms were received.

Whilst many of the issues raised in the pre draft consultation were raised again in these submissions the focus has moved significantly



such that the majority of submissions requested that the Plan address the following issues in more detail:

- Packaging
- Green waste
- The Brown Bin
- Construction and Demolition Waste
- Polluter Pays Principle
- Role of the Local Authorities
- Role of the private sector
- Contingency for disposal
- Waste to Energy

A comprehensive Draft Plan Consultation Report has been produced which acknowledges the issues raised in the submissions and feedback forms, responds to them and where appropriate makes recommendations for changes to the Plan.

The following provides an overview of the general comments and views expressed:

## 3.4.1 Packaging

The main issues raised in the submissions with respect to packaging were two-fold, the public are becoming frustrated with the volume of packaging they must dispose of due to excessive or unnecessary packing of products and the submissions request that the Local Authorities exert pressure on Repak, the packaging industry, manufacturers and retailers to take more responsibility for the packaging that is placed on the market, through take back schemes, packaging design reuse schemes and penalty and incentive schemes. The public are confused as to what plastics can and cannot be recycled and/or accepted at the recycling centres or bring banks, and would like to see a simpler method of identifying the plastics.

#### 3.4.2 Green Waste

There were a number of submissions from the private sector gardening and landscaping organisations concerned about the imminent closure of Esker Lane and the lack of proposed facilities for drop –off of both household and commercial green waste within the Region.

#### 3.4.3 Brown Bin

The submissions were generally in favour of the proposed Brown Bin for the collection of household kitchen and garden waste, however there were concerns over the frequency of collection, size of the bins and the cost of collection.

#### 3.4.4 Construction and Demolition Waste

The submissions generally requested clarification on details relating to material flows, specific sites or facilities, definitions of recovery and recycling and the impact of several of the objectives. Concern was also raised regarding the use of permitted sites, which may work against the development of material recovery facilities for construction and demolition waste.

## 3.4.5 Polluter Pays Principle

The submissions questioned how the Polluter Pays Principle would be applied particularly with regards to the proposed brown bin and other proposed waste facilities e.g. Recycling Centres and Materials Recovery Facilities. The submissions were also concerned that there is a significant inequality where by the commercial/industrial sector is subsiding the cost of household waste services, therefore contradicting the Polluter Pays Principle.

#### 3.4.6 Role of the Local Authorities

Several submissions raised the issue of the dual role of the Local Authority as both providers of waste services and enforcers of the regulations that govern these facilities and services and clarification of their role was requested.

#### 3.4.7 Role of the Private Sector

The submissions felt that the private sector achievements over the past five years had not been fairly acknowledged, in particular their contribution to provision of waste facilities and services and the current recycling rate at both the household and commercial/industrial level.

#### 3.4.8 Contingency for Disposal

Many submissions expressed concern over the lack of a contingency plan if the proposed facilities e.g. Waste to Energy Facility or the Fingal landfill are delayed and do not come on line within the suggested timeframe.

#### 3.4.9 Waste to Energy

There was a significant shift in the views expressed in the Draft Plan submissions compared to the pre draft submissions. In some cases there is now an acknowledgment or acceptance that Waste to Energy has a role to play in the regions integrated approach to waste management and some submissions were supportive of Waste to Energy but concerned about delays. However others are still concerned with the proposed location and the risk associated with only one large incinerator to service the region (as opposed to two smaller facilities) and also the effects it will have on for example transport. The possibility of alternative treatment methods was also raised.

There were several other issues expressed in the submissions and feedback forms and the Dublin Regional Waste Steering Committee has considered all the issues raised in the submissions and feedback forms and amendments have been made to the Draft Replacement Waste Management Plan as a result of this feedback.

The four Local Authorities wish to express their appreciation to those who made submissions, viewed the displays and purchased or downloaded the Draft Replacement Waste Management Plan.

The Waste Management Plan for the Dublin Region 2005-2010 will be formally adopted by the City/ County Manager of each Local Authority.