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# Waste Management in Ireland

Benchmarking Analysis  
and Policy Priorities:  
Update 2010

**Forfás**



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## Executive Summary

The availability of waste management services and the associated costs continue to be important competitiveness issues for enterprise in Ireland. Given the unprecedented challenges facing the Irish economy, a key challenge for waste policy in Ireland is to balance economic and environmental goals in a way which will minimise business costs and avoid putting jobs at risk. This report presents the findings of an updated waste management benchmarking assessment and sets out the policy actions that need to be prioritised to ensure that Ireland meets the waste management needs of enterprise now and in the future<sup>1</sup>.

### Key messages

The benchmarking analysis confirms that, despite positive developments such as improvements in recycling performance and recent reductions in waste generated, Ireland continues to perform poorly relative to a selection of competitor countries/ regions<sup>2</sup> in the provision and cost of waste management treatment options to enterprise. In particular:

- Ireland has limited waste management infrastructure options compared with international competitors which is leading to an ongoing heavy reliance on landfill. Irish enterprise needs a range of waste treatment options across the waste management hierarchy and delivering this infrastructure is a key priority.
- Waste management costs remain an issue for Irish businesses, particularly when increased regulations such as those requiring separation of waste and increased recycling are impacting on their bottom line. This report shows that although landfill costs in Ireland have moderated, advertised prices and prices which can be negotiated in the market remain comparatively high and that gate fees in Ireland for food waste remain amongst the highest of the benchmarked countries/ regions<sup>3</sup>.
- A number of recent regulatory instruments such as the Commercial Food Waste Regulation, the revised EPA landfill licence review process and the proposed draft Regulation on Food Waste Collections for Households as well as market initiatives such as the Market Development Programme and the National Waste Prevention Programme will assist in continuing to divert waste from landfill and have lessened the need for

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<sup>1</sup> It is important to note that the data on waste generation and waste treatment options contained in this report relates to 2008, which is the most recent data available in line with the EPA's National Waste Report process. Data on waste management costs is from 2010. Details on sources of data are available in Appendix 1.

<sup>2</sup> These countries/regions were approved by the Steering Group of the original Forfás Waste Benchmarking Study in 2006 (comprised of representatives from the enterprise development agencies, the EPA, the Department of the Environment, Heritage & Local Government, the (then) Department of Enterprise Trade & Employment and private industry) in order to represent a variety of market sizes with different waste management policies and practices as well as markets with similar waste generation patterns.

<sup>3</sup> There are currently in the region of 30 MSW landfills open in Ireland. Figures for the advertised price are based on the average of 18 landfills in Ireland. Figures for the negotiated price are based on a survey undertaken by RPS of six landfill sites in July 2010.

landfill levy increases. The proposed significant increases in landfill levies from €30 per tonne in 2010 to €50 per tonne in 2011 and €75 per tonne in 2012 will increase the costs of doing business further, particularly for those in key manufacturing sectors such as food and pharmaceuticals, and runs counter to national policy to improve Ireland's cost competitiveness<sup>4</sup>.

- Applying a waste-to-energy levy before the market is established here will hinder the development of necessary waste-to-energy treatment facilities which are currently available in other countries with which we compete for trade and investment.
- Although waste prevention is an ongoing focus of policy, projected increases in future volumes of waste (circa 3 percent per annum from 2012) will necessitate further investment in waste management infrastructure across the waste hierarchy.
- There has been limited visible progress in addressing waste management competitiveness concerns and policy priorities for enterprise development as highlighted in previous Forfás waste benchmarking reports. Due to the need for further work to clarify a number of details, the Department of Environment, Heritage and Local Government's Draft Statement of Waste Policy does not appear to offer an immediate solution to the uncertainty which is currently impeding investment in necessary waste infrastructure. In addition, it is vital from the perspective of jobs and growth that future policy developments give a stronger consideration to enterprise development and cost competitiveness objectives.

## Key findings

### Waste Generation

- Although still remaining high, Irish municipal waste generation per capita decreased in 2008 (most recent data available) in line with the slowdown in economic activity and increased waste prevention measures. Future volumes of municipal waste are expected to increase within the coming decade, necessitating investment in waste management infrastructure.
- Although the volume of manufacturing waste per employee has risen slightly, total manufacturing waste decreased marginally and Ireland remains mid-table of seven benchmark countries/ regions for this indicator.
- Ireland continues to have low levels of hazardous waste generation reflecting the low levels of heavy industrial activity here.

### Waste Treatment Options

- Ireland continues to remain highly dependent on landfill with 62 percent of municipal waste being landfilled in 2008. 75 percent of industrial waste was landfilled in 2008.
- Although the actual volume of waste recovered has remained almost the same, an increasing proportion of Ireland's municipal waste was recovered in 2008 with 38 percent of municipal waste recovered in 2008 compared to 36 percent in both 2007 and

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<sup>4</sup> Regaining competitiveness and driving down costs are recognised as key principles to achieve economic stabilisation in the revised Programme for Government 2009.

2006. Eurostat data from 2008 divides this recovery figure into material recycling (32 percent), composting (3 percent) and waste-to-energy (3 percent).

- A material recycling rate of 32 percent in 2008 placed Ireland joint fourth of ten benchmarked countries/ regions for recycling performance.
- Composting as a waste treatment option is growing but remains at a very low level in Ireland (3 percent of municipal waste in 2008 was composted).
- Ireland remains the only country of the benchmarked countries/ regions not to have a commercial waste-to-energy (WtE) market. The 3 percent of municipal Irish waste that was treated through WtE in 2008 was collected, transported and treated overseas.

### Waste Management Costs

- Although Irish landfill costs have moderated in recent years due to the economic downturn and collapse of construction related waste, prices remain high relative to those in other countries. Advertised landfill costs are the highest of the benchmarked countries/ regions. While lower rates can be negotiated in the Irish market, they also remain relatively high. It is also noted that prices can be negotiated downwards in markets in other countries/ regions thus eroding some of the competitiveness gains for Ireland. Proposed increases in the landfill levy will further damage the cost competitiveness of Irish businesses.
- Levies do not feature in the cost of thermal treatment in the majority of the benchmarked countries/ regions. Where levies apply, they are applied either at a very low level or in a way that incentivises heat and energy recovery. The proposed waste-to-energy levy stands to inhibit the development of waste-to-energy as a waste management option for Irish enterprise.
- Although gate fees for food waste have decreased in Ireland over recent years, they still remain amongst the highest of the benchmarked countries/ regions.

### Policy Priorities

A number of waste policy documents are currently being developed by the Department of Environment, Heritage and Local Government - most notably, the Draft Statement of Waste Policy. To avoid impacting on the competitiveness of Irish enterprise, these policy documents should have adequate cognisance of the following enterprise priorities:

- **Addressing current regulatory and policy uncertainty in waste management in Ireland:** Policy uncertainty is affecting private investment in necessary waste infrastructure. Key aspects to creating this certainty will be providing a level playing field for private and public service infrastructure providers and addressing the potentially conflicting role of local authorities as service/ infrastructure providers and as regulators. This should include the rationalisation of the waste regulatory functions of local authorities and Forfás welcomes the consideration that is been given to rationalisation in the Draft Statement of Waste Policy.
- **National coordination of regional waste plans:** With a view to promoting competition, increasing efficiencies and realising economies of scale, Forfás supports greater coordination of regional waste plans. In developing a national management framework, local authorities should not be precluded from entering into any contract for treatment

or disposal for quantities of waste which would exceed those that they or their agents might reasonably expect to control as proposed by the Draft Statement.

- **Improving waste management cost competitiveness:** A number of proposed policy measures have the potential to further damage Ireland's cost competitiveness at a time when Irish companies are struggling to maintain exports, market share and employment. In particular:
  - The Draft Statement of Waste Policy commits to very significant increases in the landfill levy<sup>5</sup>. In light of recent policy measures to divert waste from landfill (such as regulations to enforce segregation and separate collection and market initiatives to increase waste prevention and develop the national recycles industry), the need for significant levies is lessened. Applying significantly increased landfill waste levies will increase the costs of doing business further, particularly for those in manufacturing (in key sectors such as food and pharmaceuticals), and runs counter to national policy to improve Ireland's cost competitiveness. Forfás recommends refraining from these increases in the landfill levy in the current economic climate and that any future increase in the landfill levy should reflect the pricing of externalities (environmental and other damage caused by landfill) as proposed by the ESRI<sup>6</sup>.
  - Postponing the waste-to-energy levy until a waste-to-energy market is established here<sup>7</sup> and avoiding any volumetric based levies on waste-to-energy. This is seen as essential to developing the waste-to-energy market as a waste management option for Irish enterprise, ensuring economies of scale are realised and avoiding potential damage to Ireland's reputation as a destination for investment.
  - A proposed cap on incineration levels should not be introduced as it stands to inhibit economies of scale which are key to bringing Irish waste costs more into line with our competitors. This is essential to developing the waste-to-energy market as a waste management option for Irish enterprise and to avoid potential damage to Ireland's reputation as a destination for investment.
  - Recycling targets beyond existing EU commitments or penalties for local authorities which are proposed in the Draft Statement should be avoided as they will add to costs for Irish businesses.
  - For landfill, VAT is currently being applied on the total amount (net entry fee and the landfill levy) thus increasing the overall cost for business and amounting to a form of double taxation. Forfás recommends that the Revenue Commissioners reconsider their VAT Guidance Note for Public Bodies and require Local Authorities to charge VAT on the net fee only.
- **Reducing planning delays:** Lengthy delays in the planning process are having a negative impact on the timely delivery of key waste management infrastructures and

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<sup>5</sup> The recent policy direction on waste levies has proposed that the levy should rise from €30 per tonne in 2010 to €50 per tonne in 2011 and to €75 per tonne in 2012.

<sup>6</sup> The ESRI recommends a €44.50-55.10 levy for landfills with no flaring or gas capture and reduced rates for landfills with appropriate methane management.

<sup>7</sup> When the market is established, Forfás would be in favour of levies that reflect the pricing of externalities as proposed by the ESRI - a €9.80-10.70 levy for urban incinerators (with no transfers to local residents) and a €6.00-6.10 levy for rural incinerators (with no transfers to local residents).

are also impacting negatively on Ireland's reputation as a location for investment. There is a need to prioritise decisions on strategic waste management infrastructure projects. The ongoing use of the Strategic Infrastructure Act 2006 and the provision of further resources to fast track judicial reviews of strategic waste infrastructure could assist in cutting time and costs for infrastructure delivery.

- **Delivering necessary waste infrastructure:** There is an urgent need to accelerate the delivery of waste infrastructure projects along the waste hierarchy to deal with future projected increases in waste. Specific infrastructures that need to be prioritised include:
  - Thermal treatment capacity to recover energy from municipal and industrial waste.
  - Thermal treatment or landfill capacity for hazardous waste.
  - Biological treatment capacity (composting, anaerobic digestion).
  - Reprocessing capacity for recovered materials.
- **Improving waste prevention:** The challenge for businesses is not only to find lower cost alternatives to landfill but also to further reduce costs by reducing waste arising through effective waste prevention and minimisation measures. Continued and enhanced efforts will be required by Government Departments, enterprise development agencies and business representative associations to ensure that businesses are fully aware of waste reduction programmes such as the National Waste Prevention Programme's Green Business Initiative ([www.greenbusiness.ie](http://www.greenbusiness.ie)).

# 1. Introduction

## 1.1 Background

The provision of integrated and cost effective waste management treatment options is both an important competitiveness challenge and a key environmental consideration for Ireland. In the context of the unprecedented challenges facing the Irish economy and the need to ensure that businesses operating in Ireland can compete to support sustainable, export-led growth, it is vital that waste management policy decisions support national competitiveness as well as environmental sustainability policy objectives.

Previous Forfás Waste Benchmarking Studies from 2006 - 2009 have compared Ireland's waste management performance against a number of comparable competitor countries and regions. Drawing on the most up-to-date data collected by RPS Consulting Engineers, this 2010 updated report looks at a range of waste management indicators and presents the findings in an updated waste management benchmarking assessment.

## 1.2 Key Developments in Waste Policy in Ireland

In line with the commitment in the Programme for Government, the Department of Environment, Heritage and Local Government engaged consultants to undertake an international review of waste management plans, practices and procedures in 2008. This international review was submitted to Government for consideration in September 2009. Drawing on the recommendations from the international review, the Department of the Environment, Heritage and Local Government prepared a new Draft Statement of Waste Policy in July 2010. This draft policy - together with a draft regulation on food waste collections for households<sup>8</sup> and a policy direction on a proposed cap to incineration capacity (so incineration would be used to treat no more than 30 per cent of residual waste) - were open for public consultation until October 1<sup>st</sup> 2010. This Draft Statement of Waste Policy is:

- Considering the development of a national waste management planning framework. Waste planning in recent years has taken place on a regional basis.
- Looking at the organisation of the waste market for household waste collection to achieve more uniform service delivery and to be compliant with recent court judgements and the EU Services Directive.
- Considering the possible rationalisation of the waste regulatory functions of local authorities into a single nationally administered arrangement. The setting of targets which would require local authorities to secure reductions in the amount of residual waste generated by households in their areas and charges for excess tonnage generated are also being considered.

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<sup>8</sup> This draft regulation is focused on household food waste. Regulations on commercial food waste applying to businesses producing more than 50kg of food waste per week were enacted last year. These regulations legally require such businesses to segregate waste and have taken effect from the 1st July 2010.

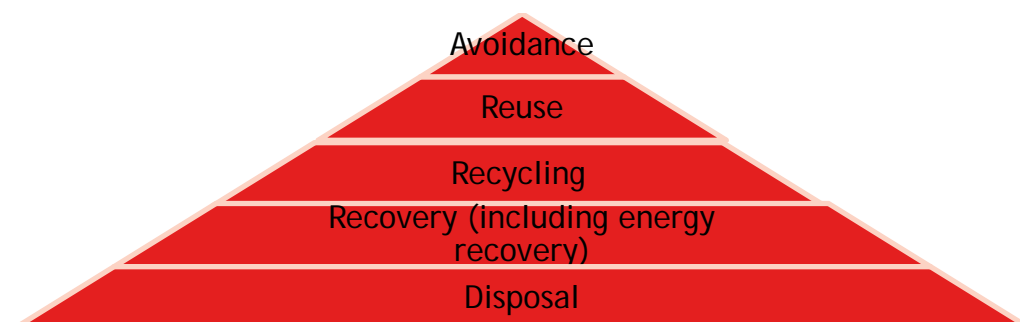


- Seeking to prevent local authorities from entering into contracts for waste treatment/disposal for quantities of waste which would exceed those that they or their agents might reasonably expect to control.
- Committing to increases in the landfill levy from €30 per tonne in 2010 to €50 per tonne in 2011 and to €75 per tonne in 2012 and the introduction of a levy on incineration in the future.
- Setting a range of commercial and construction waste recycling targets and introducing changes to producer responsibility schemes.

### 1.3 EU Framework and Waste Hierarchy

The European Council adopted the new Waste Framework Directive (WsFD) in October 2008. The new Directive must be fully implemented into Irish law by December 2010. The substantive changes in the Directive are aimed at encouraging the greater reuse and recycling of waste, whilst it also sets out to simplify the fragmented legal framework that has regulated the waste sector to date<sup>9</sup>. The Directive also requires Member States to apply the “waste hierarchy” as a priority order in waste prevention and management legislation and policy. The preferred option within the hierarchy for waste management is prevention and in an effort to break the link between waste generation and economic growth, there has been an increased policy focus on prevention in Ireland through the National Waste Prevention Programme<sup>10</sup>. Down the hierarchy, prevention is followed by re-use and recycling (material recovery), other recovery (for example, energy recovery and composting) and, least favoured of all, disposal (Box 1).

#### Box 1: EU Waste Framework Directive Waste Hierarchy



Source: European Commission

<sup>9</sup> The WsFD streamlines EU waste legislation by repealing the current Waste Framework Directive (2006/12/EC), the directive on hazardous waste (91/689/EEC) and part of the directive on waste oils (75/439/EEC).

<sup>10</sup> In line with Ireland’s commitment under the Waste Framework Directive, a National Waste Prevention Programme has been in place since 2004 and was updated in 2009.

## 2. Waste Management Indicators Update

### 2.1 Benchmarking Methodology

This is the fifth in a series of waste management benchmarking reports produced by Forfás. The baseline report was published in 2006 and has been updated each year since 2007. It was not possible within the scope of the study to look at all waste streams. The study therefore focused on the priority waste streams of most relevance from an enterprise perspective - municipal, industrial and hazardous waste.

The countries and regions which Ireland is benchmarked against were selected in order to assess a variety of market sizes with different waste management policies and practices as well as markets with similar waste generation patterns. These countries/regions were approved by the Steering Group of the original Forfás Waste Benchmarking Study in 2006 (comprised of representatives from the enterprise development agencies, the Environmental Protection Agency, the Department of the Environment, Heritage & Local Government, the (then) Department of Enterprise, Trade & Employment and private industry) and have remained consistent throughout the Forfás waste management benchmarking report series. Given the difficulties of collecting accurate and timely data, some of the countries/ regions may not be represented for certain indicators in this report.

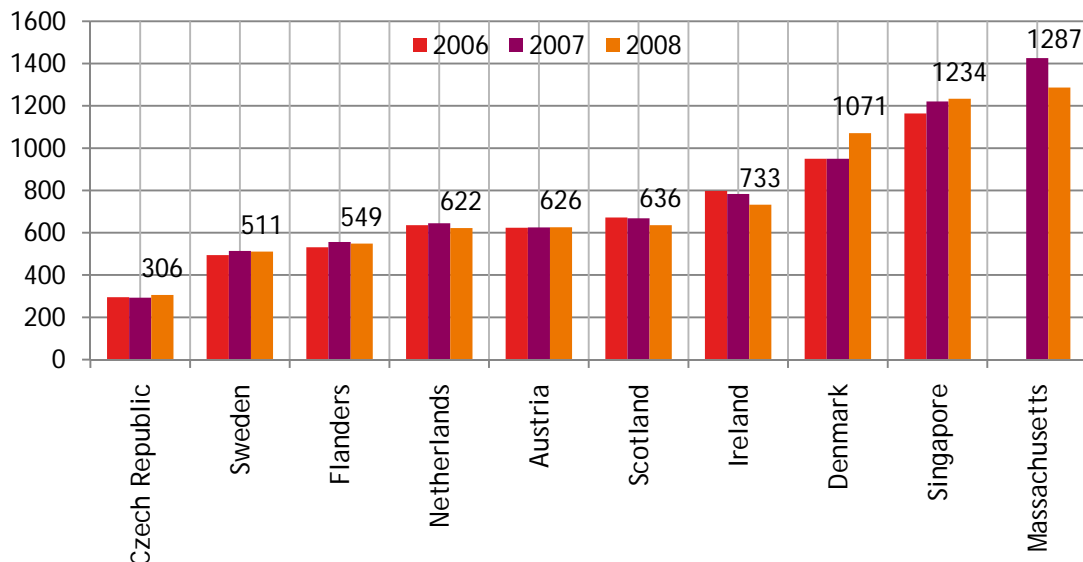
It is important to note that the majority of data on waste generation and waste treatment contained in this report relates to 2008, which is the most recent data available in line with the EPA's National Waste Report process. Data on waste management costs is from 2010 and has been sourced through public and private bodies internationally by RPS. Details on sources of data are available in Appendix 1. Important methodological issues around each indicator are outlined in footnotes.

### 2.2 Waste Generation

#### 2.2.1 Municipal Waste

Although still remaining high, Irish municipal waste generation per capita decreased in line with the slowdown in economic activity and increased focus on waste prevention measures. Future volumes of municipal waste are expected to increase within the coming decade in a recovering economy, necessitating investment in waste management infrastructure.

Figure 1: Municipal Waste Generation (kg per person), 2006 - 2008



Source: RPS

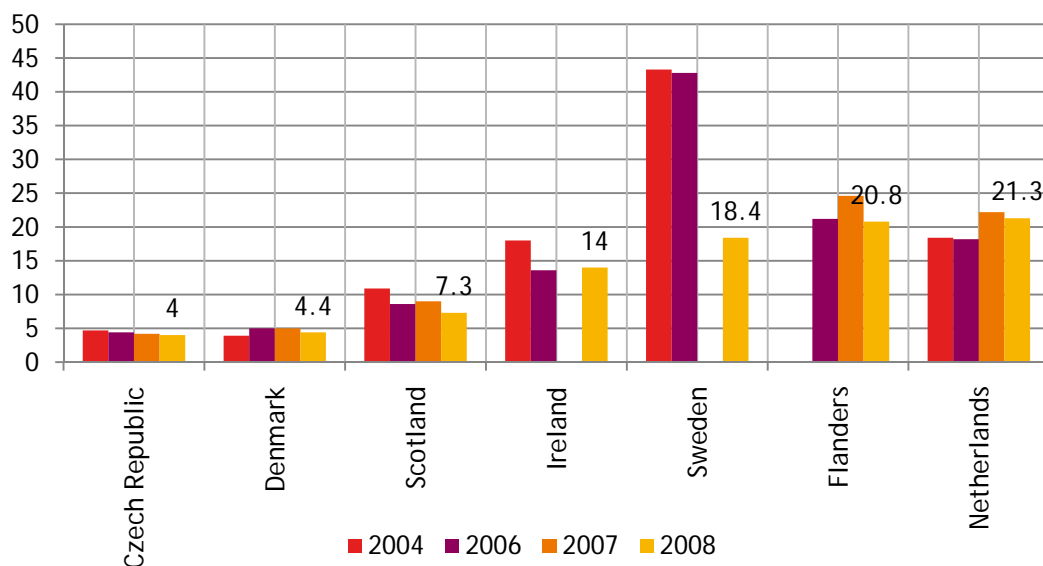
- Municipal waste, which comprises commercial and household waste, decreased by 5.1% between 2007 and 2008. In terms of municipal waste generation per capita, Ireland remains the fourth highest of the benchmark countries/ regions and amongst the highest of the EU countries/ regions benchmarked.
- The volumes of municipal waste are strongly linked to levels of economic activity and as such, the current reductions in waste levels are cyclical. Volumes of municipal waste are likely to have continued to fall in 2009 and 2010 but in an economic upturn are predicted by the EPA's ISus model to increase by circa 3 percent per annum from 2012<sup>11</sup>. The work of the National Waste Prevention Programme and the increased focus on prevention in the Waste Framework Directive are aiming to break the link between waste generation and economic activity and are expected to impact on arisings and feedstock for residual waste facilities. Nonetheless, significant challenges will remain which - according to the EPA's National Waste Report 2008 - will "necessitate future investment in waste management infrastructure."

### 2.2.2 Manufacturing Waste

Although the volume of manufacturing waste per employee has risen slightly, total manufacturing waste decreased marginally and Ireland remains mid-table of seven benchmark countries/ regions for this indicator.

<sup>11</sup> National Waste Report 2008, Environmental Protection Agency, 2009.

Figure 2: Manufacturing Waste (tonnes per employee)



Source: RPS<sup>12</sup>

While total manufacturing waste decreased marginally by circa 1 percent, from 4.07 million tonnes in 2006 to 4.03 million tonnes in 2008, the volume of manufacturing waste generated (including hazardous waste) per manufacturing employee in Ireland increased from 13.6 tonnes per employee in 2006 to 14 tonnes per employee in 2008. From reported EPA data, the top three waste generating manufacturing sectors in Ireland 2008 were basic metals and structural metal products (44%), food products, beverages and tobacco (32%) and wood and paper products (8%)<sup>13</sup>.

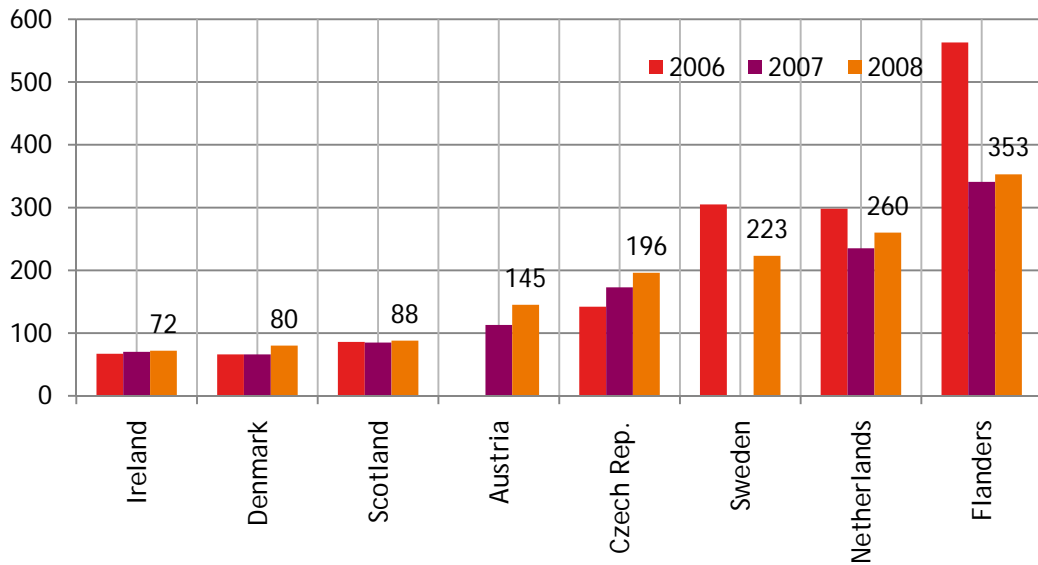
### 2.2.3 Hazardous waste

Ireland continues to have low levels of hazardous generation reflecting the low level of heavy industrial activity here.

<sup>12</sup> Sweden's significant drop is attributed to large decreases in a number of key manufacturing sectors such as furniture, chemical products and metal production.

<sup>13</sup> Ibid note 6.

Figure 3: Hazardous Waste Generation (kg per capita)



Source: RPS<sup>14</sup>

At 72 kg per capita, Ireland had the lowest hazardous waste generation per capita of the benchmarked countries/ regions in 2008. The amount of hazardous waste generated per capita is a slight increase from 2007 and 2006 levels (70 kg per capita and 67 kg per capita respectively), but is lower than the 2004 level of 75 kg per capita. Industrial structure plays an important role in determining this indicator and as such Ireland’s relatively light industrial enterprise base is a key factor.

<sup>14</sup> Note: The 2006 and 2007 figures for Flanders were revised upwards from previous Forfás Benchmarking reports as they did not represent all hazardous waste collected in Flanders.

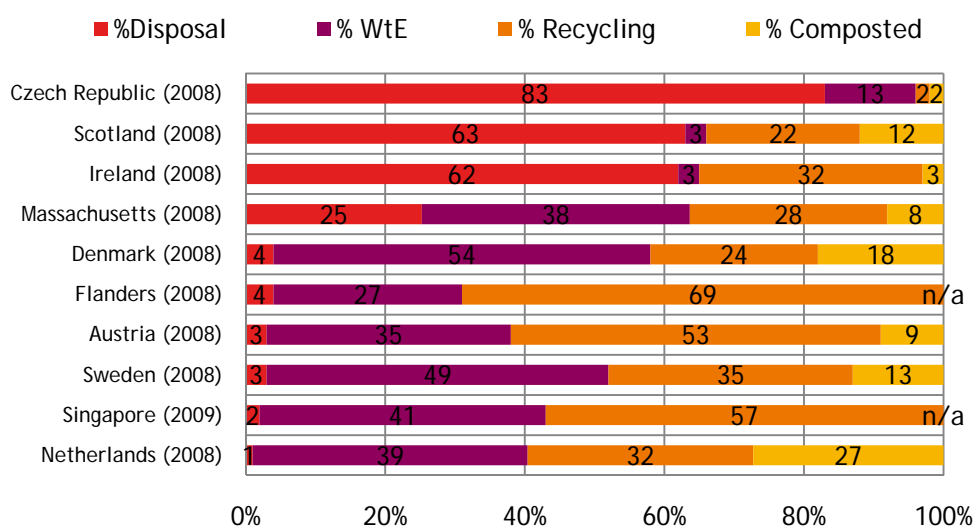
## 2.3 Waste Treatment Options

A competitive economy needs a choice of secure waste management options along the waste hierarchy (Box 1), from prevention and minimisation of waste through to reuse, recovery (which includes material recovery (recycling), energy recovery (waste-to-energy) and biological recovery (e.g. composting)) and disposal (landfill).

### 2.3.1 Municipal Waste Treatment Options

Although recovery rates have proportionately increased, Ireland remains highly dependent on landfill. Composting in Ireland is growing from a low base. Ireland remains the only country not to have a commercial waste-to-energy (WtE) market of the benchmarked countries/ regions.

Figure 4: Municipal Waste Treatment Options 2008



Source: RPS<sup>15</sup>

- Ireland remains amongst the most dependent on landfill disposal of the benchmark countries/ regions, landfilling 62 percent of municipal waste in 2008 (a drop from 64 percent in 2007). This is considerably above the EU average of 42% in 2007 (most recent data available)<sup>16</sup>.
- Although the actual volume of waste recovered has remained almost the same, an increasing proportion of Ireland's municipal waste was recovered in 2008 with 38 percent of municipal waste recovered compared to 36 percent in both 2007 and 2006. Eurostat data from 2008 divides this recovery figure into material recycling (32 percent), composting (3 percent) and waste-to-energy (3 percent). In greater detail:

<sup>15</sup> Note: Composting figures for Flanders and Singapore were unavailable and are thus marked as n/a.

<sup>16</sup> European Environment Agency (2009), Diverting Waste from Landfill: Effectiveness of Waste Management Policies in the European Union. EEA, Copenhagen.

- A material recycling rate of 32 percent in 2008 placed Ireland joint fifth of ten benchmarked countries/ regions for recycling performance. In the leading countries, strong recycling performances have tended to displace landfill rather than waste-to-energy.
- In line with efforts to reduce biodegradable municipal waste, composting in Ireland is growing but as a municipal waste treatment option it was amongst the lowest of the benchmarked countries/ regions in 2008. The recent introduction of brown bins for businesses and the draft regulation on food waste collections for households should lead to a significant improvement in this area.
- Many of the benchmarked countries/ regions with higher waste-to-energy usage also have higher recycling and composting rates. Ireland remains the only country benchmarked not to have commercial waste-to-energy treatment options. The 3 percent of municipal Irish waste that was treated through WtE in 2008 was collected, transported and treated overseas. After a lengthy planning procedure, two commercial incinerators have been granted licences by the EPA. Work has commenced on one of these in Carranstown, Co. Meath, which is due to be operational by the end of 2011. Developers for the second incinerator in Ringaskiddy, Co. Cork were requested by An Bord Pleanála to provide further information in January 2010 and they have recently done so in August 2010 with a response which also proposes to reduce the original scale of the development. In November 2008, the EPA granted a licence for a third municipal waste incinerator at Ringsend, Co. Dublin. Pre-construction activity commenced earlier this year at the Ringsend site but has since been postponed due to a lack of a foreshore license.
- Ireland continues to rely substantially on foreign infrastructure for recycling and disposal. Although showing a slight increase from 2007 in the amount of waste recovery taking place in Ireland, the National Waste Report 2008 showed that 78.5 percent of municipal waste that was recovered was recovered abroad in 2008<sup>17</sup>. The Market Development Programme ([www.rx3.ie](http://www.rx3.ie)) is working to address this situation and to promote more indigenous recycling of recovered materials in Ireland.
- Biodegradable municipal waste (BMW) means the biodegradable component of municipal waste<sup>18</sup>. Almost 1.2 million tonnes of BMW were landfilled in 2008. In line with the EU Landfill Directive requirements, this needs to reduce to 0.916 million tonnes in 2010, 0.610 million tonnes in 2013 and 0.427 million tonnes in 2016. Although a number of important policy measures are focusing on reducing the quantity of BMW landfilled (such as the roll-out of brown bins), Ireland will remain under significant pressure to adhere to the ongoing requirements of the Directive - particularly when the volume of municipal waste is expected to increase in an economic upturn.

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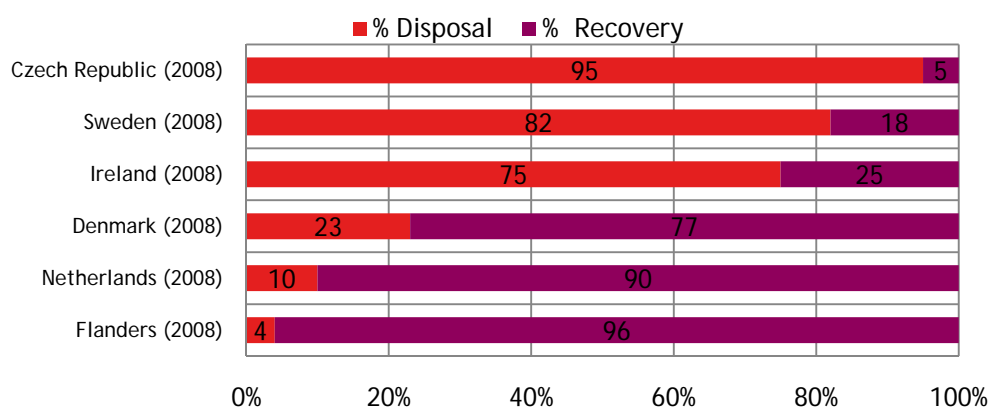
<sup>17</sup> Ibid note 6.

<sup>18</sup> Biodegradable municipal waste is typically composed of food and garden waste, wood, paper, cardboard and textiles.

### 2.3.2 Industrial Waste Treatment Options

Although the amount of industrial waste generated has fallen (in particular, driven by a decrease in waste generated by the mining sector), Ireland continues to landfill a high proportion (75 percent) of its industrial waste.

Figure 5: Industrial Waste Treatment Options 2008



Source: RPS<sup>19</sup>

Industrial waste includes waste from manufacturing as well as mining and quarrying waste and waste from power stations, etc. Ireland remains towards the higher end of the scale for the amount of industrial waste landfilled (75 percent in 2008). This was an increase from 62 percent in 2006 and 65 percent in 2004. The EPA's National Waste Report 2008 attributes this to the exclusion from the 2008 dataset of large quantities of mining materials which were used as backfill or in other construction activities which had previously been reported as recovered.

### 2.4 Waste Management Costs

Cost competitiveness in waste management remains an issue for Ireland's enterprise base. While vital to reducing Ireland's dependence on landfill, increased regulations (such as those requiring waste separation and recycling) are impacting on the direct cost of businesses. A key challenge for waste policy in Ireland is to balance economic and environmental goals in a way which will minimise business costs and avoid putting jobs at risk.

<sup>19</sup> Note: Figures for the Czech Republic are based on best interpretation as different treatment codes were reported and used. Industrial waste generated in Sweden has reduced significantly in 2008 - the change may be explained by the reduction in the quantity of waste from the furniture sector, which otherwise might have been recycled.

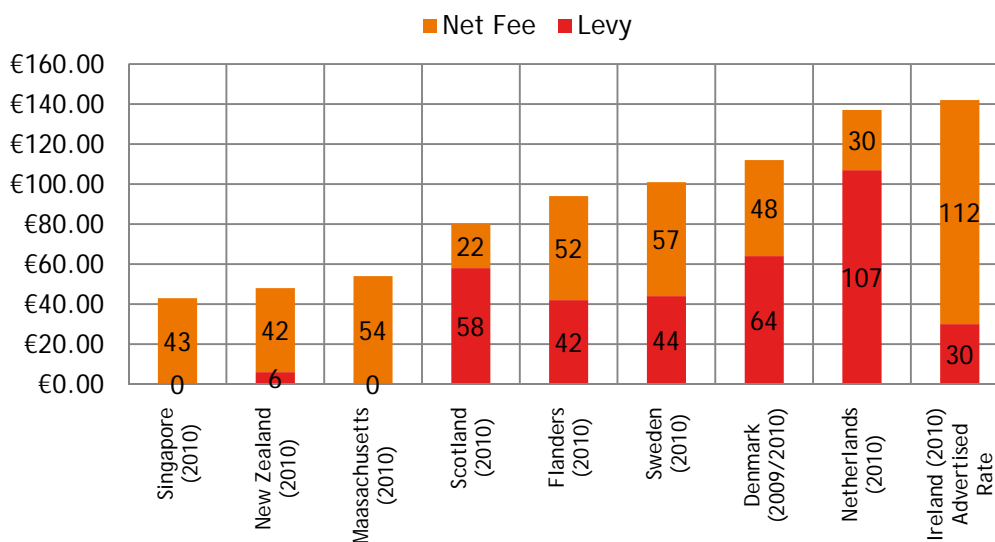


### 2.4.1 Landfill Gate Fees

Landfill costs comprise a net fee from the waste service providers and a Government levy. Although Irish landfill costs have fallen due to the recession, they remain high relative to those in other countries. Planned increases in the landfill levy will further damage the cost competitiveness of Irish businesses.

#### 2.4.1.1 Advertised Landfill Gate Fees

Figure 6a: Advertised Landfill Gate Fees (including levy), 2010 (€ per tonne)



Source: RPS<sup>20</sup>

- RPS assessed the advertised price across 18 landfills in Ireland (in 2009, there were 30 municipal solid waste landfills open here<sup>21</sup>). From this, the average price for advertised landfill gate fees was found to be €142 including the landfill levy. This advertised standard price for landfill in Ireland remains the highest of the benchmarked countries/regions. Within the overall advertised price, the advertised net fee charged by landfill service providers in Ireland is significantly higher than that charged in other countries / regions. As outlined in section 2.4.1.2 below, it is recognised that landfill advertised net fees can be negotiated downwards in the Irish and other markets based on volumes provided, commercial pressures, etc.
- The landfill levy was increased in 2009 from €20 to €30. The Department of Environment, Heritage and Local Government's Draft Statement of Waste Policy

<sup>20</sup> Notes: The Danish net gate fee refers to that for 2009 (the 2010 net gate fee is currently unavailable). The landfill tax is the tax charged in 2010. The Flemish figure refers to the landfill levy for non-combustible municipal waste.

<sup>21</sup> Focus on Landfilling in Ireland, The Environmental Protection Agency, September 2010.

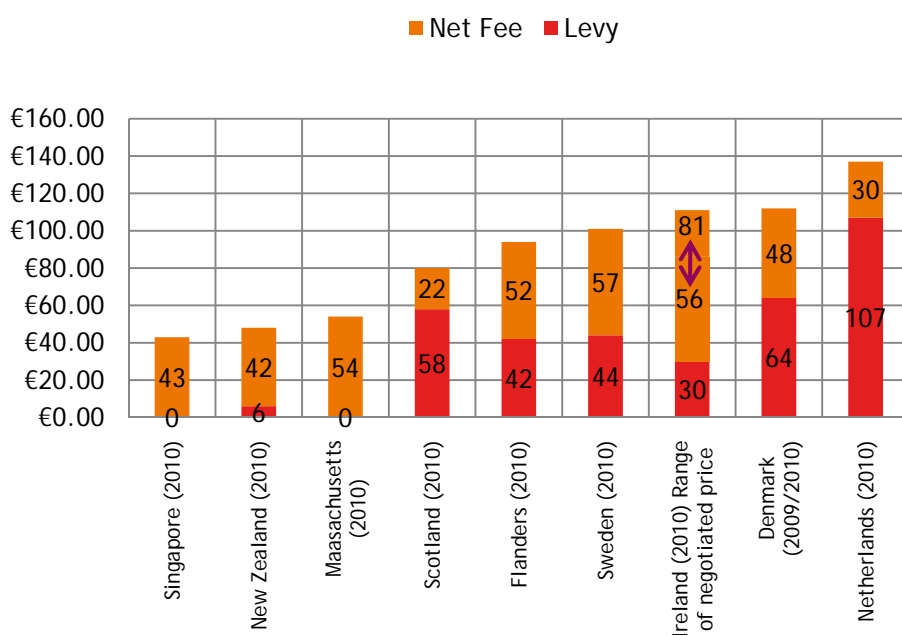
proposes that the landfill levy be increased further to €50 per tonne in 2011 and to €75 per tonne in 2012. Such significant increases would cement Ireland's position in the most expensive countries/ regions for landfill disposal costs and would be a poor signal of national commitment to improving cost competitiveness<sup>22</sup>.

- Following a European Court of Justice finding, provisions were introduced in the Finance Act 2010 to apply VAT of 13.5% to waste services (net fee but not the levy) provided by local authorities. The market survey undertaken by RPS indicated that VAT was being charged on the total figure (i.e. net fee and landfill levy figure) thus increasing the overall cost and amounting to a form of double taxation.

#### 2.4.1.2 Negotiable Landfill Gate Fee in the Market

It is recognised that the Irish landfill gate fee in the market is often lower as the gate charge can be negotiated based on a number of factors such as the volumes of waste offered, the source of the waste, commercial pressures on the landfill owner, credit rating of the supplier offering the waste, etc. Similar offers are likely to be available in other countries but it was not possible to gain an understanding of the negotiable price in other countries/ regions.

Figure 6b: Negotiable Landfill Gate Fees in Ireland versus Advertised Gate Fees in Benchmarked Countries/ Regions (including levy), 2010 (€ per tonne)



Source: RPS

- In order to gain an understanding of how much the gate fees in Ireland can vary, Forfás asked RPS to seek quotes from a number of landfill sites in Ireland for negotiable landfill gate fees. Six landfill sites were surveyed by RPS (there were 30 open

<sup>22</sup> Regaining competitiveness and driving down costs are recognised as key principles to achieve economic stabilisation in the revised Programme for Government 2009.

municipal solid waste landfills in Ireland in 2009 according to the EPA) and they quoted a range of prices rather than one fixed price<sup>23</sup>. Taking all the ranges of prices quoted, the average price that was possible to negotiate in the Irish market ranged from €56 to €81 per tonne excluding the landfill levy. The same survey for last year's Forfás Waste Benchmarking report found that the market range for 2009 was between €70 to €90 excluding the levy.

- The average of the minimum negotiated price for 2010 (€56) would place Ireland fifth most expensive of nine benchmark countries/ regions when compared to the advertised fees of these countries/ regions. The average of the maximum negotiated price (€81) would place Ireland at the third most expensive of nine benchmark/ countries regions when compared to their advertised fees of these countries/ regions.
- It is important to note that this range is indicative only and that very large volumes of waste could secure even greater discounts, while smaller quantities could be charged higher rates. These costs are temporary, dependent on supply and demand as well as the specific economic needs of the private landfill operators and there is no guarantee they will continue (particularly when the EPA expects the number of open landfills to decline in the short-term<sup>24</sup>). It is also probable that in a time of lower economic activity, market gate fees in other benchmark countries/ regions can also be negotiated downwards. Thus, while the cost environment in Ireland is improving, it is also improving in other countries, limiting the competitiveness gain for Irish businesses.

#### 2.4.2 Thermal Treatment (Waste-to-Energy/ Incineration) Costs

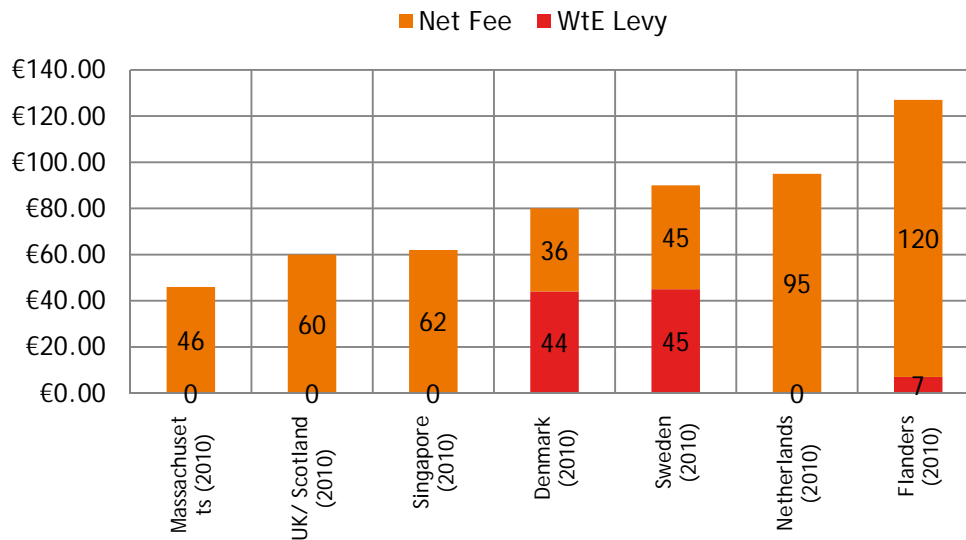
Thermal treatment levies do not feature in the cost of thermal treatment in the majority of the benchmarked countries/ regions. Where levies apply, they are applied either at a low level or in a way that incentivises heat and energy recovery. Ireland is not included in the chart as commercial facilities are not available here.

<sup>23</sup> Range of negotiated prices from RPS survey 2010 (excluding levy):

	Minimum	Maximum
Highest	70	120
Lowest	43	63
Average	56	81

<sup>24</sup> Ibid note 17.

Figure 7: Thermal Treatment Gate Fees (including levy) 2010 (€ per tonne)



Source: RPS<sup>25</sup>

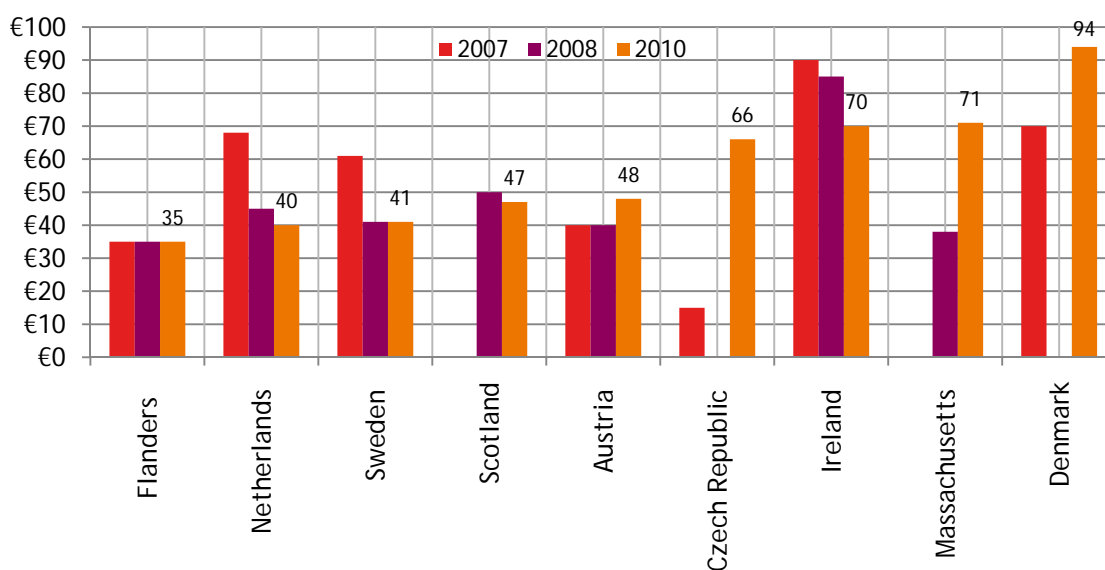
- Data on thermal treatment costs for 2010 were available for seven countries/ regions. Ireland is not included as there are currently no commercial waste-to-energy treatment options available in Ireland.
- Massachusetts had the lowest thermal treatment gate fee at €46 per tonne while Flanders had the highest at €127 per tonne.
- Thermal treatment levies do not feature in the cost of thermal treatment in the majority of the benchmarked countries/ regions. Sweden is due to abolish its incineration levy in October 2010. Where they do feature, they are lower than landfill levies reflecting the waste management hierarchy or applied in a way that incentivises heat and energy recovery.

<sup>25</sup> Note: Sweden is due to abolish its incineration levy in October 2010.

### 2.4.3 Biological Gate Fees

Although gate fees for food waste have decreased in Ireland over the last years, they still remain amongst the highest of the benchmarked countries/ regions.

Figure 8: Biological Gate Fees for Food Waste 2007, 2008 and 2010 (€ per tonne)



Source: RPS<sup>26</sup>

Mechanical-biological treatment (MBT) is the treatment of residual municipal waste through a combination of manual and mechanical processing and biological stabilisation. As an intermediate treatment option, some recyclable materials are recovered from the MBT process (such as solid recovered fuel (SRF)), but the majority of the residuals are usually sent to energy recovery, or to landfill. MBT can thus provide an important outlet across a suite of waste management treatment options to reduce the quantity of biodegradable municipal waste which ultimately needs to be sent to landfill and also in assisting Ireland achieve its recycling and emissions reduction targets.

Biological treatment facilities can treat both food waste and green waste. For this benchmarking report, fees for food waste only were considered as these are seen as the most relevant from the point of view of internationally trading businesses. Although gate fees for food waste have decreased in Ireland over the last years, at €70 per tonne they remain amongst the highest of the benchmark countries/ regions. At the same time, it is important to note that fees for food wastes are becoming more competitive when compared to landfill

<sup>26</sup> Notes: The gate fee for biological treatment relates to the treatment of food waste as this figure is seen as the most relevant from the point of view of internationally trading businesses. The gate fees for Ireland are based on a survey carried out by RPS.

fees and that although the proportion of Ireland's municipal waste which is treated through biological treatment remains low (3 percent in 2008), new facilities are opening which will develop MBT capacity here.

### 3. Waste Management Priorities from an Enterprise Perspective

A number of waste policy documents from the Department of Environment, Heritage and Local Government are currently open for consultation - the Draft Statement of Waste Policy, together with a draft regulation on food waste collections for households and a policy direction on a proposed cap to incineration capacity. Previous Forfás waste benchmarking reports have highlighted the need for policy measures to accelerate the delivery of waste infrastructure along the waste management hierarchy. As it currently stands, the Draft Statement of Waste Policy lacks detail on a range of areas and doesn't appear to offer an immediate solution to the uncertainty which is currently impeding investment in necessary waste infrastructure. In addition, it is vital from the perspective of jobs and growth that the final policy will give a stronger consideration to enterprise development and competitiveness objectives.

The following are the main policy priorities from an enterprise perspective:

#### 3.1 Policy should recognise the importance of a competitive waste sector which supports enterprise development

In the context of the unprecedented challenges facing the Irish economy and the need to ensure that businesses operating in Ireland are competitive enough to support sustainable, export-led growth, it is vital that these waste management policy decisions support national competitiveness as well as environmental sustainability policy objectives. The proposed objectives of waste management outlined in the Draft Statement of Waste Policy do not address the need to minimise the cost implications for business nor to improve the competitiveness of business in Ireland. References to costs in the Draft Statement are vague and it is unclear if the suggested actions will result in improvements in international cost competitiveness. Protecting competitiveness should be a stated priority objective of the final waste policy and measures to achieve this could be clearly set out and explained.

#### 3.2 Creating regulatory and policy certainty

Regulatory uncertainty is one of the biggest barriers to addressing the core issues of high costs and reliance on landfill. Providing a certain, level playing field for private and public service infrastructure providers is essential to facilitating competition between and within waste management treatment options and to give Irish businesses a choice of competitively priced waste management solutions. In particular, Forfás proposes that this requires immediate policy decisions which:

- Address the potentially conflicting role of the local authorities as service or infrastructure provider and as regulator for the sector is of key importance. The Draft Statement of Waste Policy is opening the way to consider the rationalisation of waste regulatory functions of local authorities into a single national administered arrangement. While further detail is required on how this will actually be done, Forfás supports the rationalisation of the waste regulatory functions of local authorities in principle and would call for the final policy statement to clarify the relative roles and

responsibilities in the regulation and management of the waste sector at national, regional and local levels.

- Promotes competition for, rather than competition in, the market<sup>27</sup>. Proposed changes in the Draft Statement of Waste Policy which aim to do so are supported by Forfás. International experience suggests that competition for the market delivers increases efficiencies with businesses and households benefitting through lower collection prices.
- Provide an overall policy which is unambiguous and which can be easily understood. Ongoing delays in policy direction and increasing complexity of waste policy are adding to uncertainties which are inhibiting the development of necessary waste infrastructure. Certain aspects of the Draft Statement of Waste Policy lack detail or are unclear. The final waste policy statement will require clear, carefully explained, credible and soundly justified policy recommendations.

### 3.3 Implementing national coordination of regional waste plans

While not offering any specific details, the Draft Statement of Waste Policy proposes the development of a national framework to plan for waste management requirements. Previous Forfás reports have highlighted that the lack of coordination of regional waste plans is acting as an impediment to the delivery of cost effective, commercially viable, sophisticated waste treatment options along the waste hierarchy, as it tends to result in smaller scale facilities than would be the case if infrastructure planning was done at a national level.

As future waste levels are expected to rise as the economy recovers, Ireland will require significant additional waste management treatment capacity across a range of waste treatment solutions. To facilitate competition within and between waste treatment options and to coordinate infrastructure planning at national level, Forfás is in principle in favour of greater national coordination of regional waste plans as proposed by the Draft Statement of Waste Policy, providing such coordination is done with a focus on increasing efficiencies. In developing a national management framework, local authorities should not be precluded from entering into any contract for treatment or disposal for quantities of waste which would exceed those that they or their agents might reasonably expect to control.

### 3.4 Improving waste management cost competitiveness

The Draft Statement on Waste Policy commits to very significant increases in the landfill levy<sup>28</sup> and the introduction of a levy on waste-to-energy. As shown by this report, Ireland remains among the most expensive of the benchmarked countries/ regions for waste costs (landfill and biological) and Irish enterprises have more limited waste management infrastructure options than international competitors. A number of the proposed measures

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<sup>27</sup> Competition for the market would allow the tenderer (the local authority) to auction off to bidders the exclusive right to collect waste over a defined time period for a defined geographic collection area. Part of the bid is a schedule of collection charges, with the lower the level, the greater the probability that the bidding firm will win the tender. Competition in the market occurs when two or more waste management entities serve the same geographical areas.

<sup>28</sup> The recent policy direction on waste levies has proposed that the levy should rise from €30 per tonne in 2010 to €50 per tonne in 2011 and to €75 per tonne in 2012.



will further damage Ireland's cost competitiveness at a time when Irish companies are struggling to maintain exports, market share and employment.

- The Draft Statement of Waste Policy commits to very significant increases in the landfill levy<sup>29</sup>. In light of recent policy measures to divert waste from landfill (such as regulations to enforce segregation and separate collection and market initiatives to increase waste prevention and develop the national recyclates industry), the need to significantly increase levies is lessened. Applying much higher - or new - waste levies will increase the costs of doing business further, particularly for those in manufacturing (in key sectors such as food and pharmaceuticals), and runs counter to national policy to improve Ireland's competitiveness. Forfás recommends refraining from these increases in the landfill levy in the current economic climate and that any future increase in the landfill levy should reflect the pricing of externalities (i.e. putting a price on environmental and other damage caused by landfill) as proposed by the ESRI rather than the pricing of emissions<sup>30</sup>.
- The Draft Statement of Waste Policy and a previous consultation process on waste levies propose a waste-to-energy levy but detail remains lacking on the level and timing of such a levy. Due to the need to develop the waste-to-energy market in Ireland as a waste management option for Irish enterprise and to avoid potential damage to Ireland's reputation as a destination for foreign direct investment, Forfás recommends that a waste-to-energy levy should not be considered until a waste-to-energy market is established here<sup>31</sup>. In addition, proposed volumetric based levies on waste-to-energy should be avoided as they stand to inhibit economies of scale.
- The proposed cap on incineration levels stands to inhibit economies of scale which are key to bringing Irish waste costs more into line with our competitors. They would also run counter to the internationally accepted waste management hierarchy and would be an Ireland-specific cap without an EU policy context (the only EU caps are on specific materials going to landfill). Such a cap is a command and control measure (as opposed to an economic instrument such as a levy) which is likely to impose needless costs on the economy, particularly where, as in the present case of incineration, there is no underlying rationale presented for the 30 percent target selected. This policy will considerably increase perceived regulatory risk which will raise the capital costs of projects, delaying the building of essential infrastructure and the realisation of environmental benefits.
- A number of targets are set out in the Draft Statement on Waste Policy which could impact significantly on business costs and are not favoured by Forfás. The Draft Statement proposes very challenging targets for residual waste recycling for local authorities. In addition, targets are set for commercial waste and demolition and

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<sup>29</sup> The recent policy direction on waste levies has proposed that the levy should rise from €30 per tonne in 2010 to €50 per tonne in 2011 and to €75 per tonne in 2012.

<sup>30</sup> The ESRI recommends a €44.50-55.10 levy for landfills with no flaring or gas capture and reduced rates for landfills with appropriate methane management.

<sup>31</sup> If and when introduced, Forfás would be in favour of levels for the incineration levy which reflect the pricing of externalities as proposed by the ESRI rather than the pricing of emissions as proposed by the International Review. The ESRI recommends a €9.80-10.70 levy for urban incinerators (with no transfers to local residents) and a €6.00-6.10 levy for rural incinerators (with no transfers to local residents).

construction waste even though there are currently no specific targets for commercial and industrial wastes in EU legislation. These targets appear very challenging when compared with existing levels of recycling and achieving them could impact on cost competitiveness of Irish businesses<sup>32</sup>. In addition, the proposed setting of targets which would require local authorities to secure reductions in the amount of residual waste generated by households in their areas and charges for local authorities with excess tonnage generated could have potential knock-on impacts which could increase business rates. Little information is provided on how the targets will be achieved and their coherence with proposed increases with landfill levies.

- As found in the market survey undertaken by RPS and confirmed by the Revenue Commissioners VAT Guidance Note for Public Bodies, VAT is being charged on the total figure (i.e. net fee and landfill levy figure) rather than just the net fee, thus increasing the overall cost and amounting to a form of double taxation. Forfás recommends that the Revenue Commissioners reconsider their VAT Guidance Note for Public Bodies and require Local Authorities to charge VAT on the net fee only.

### 3.5 Reducing planning delays

Lengthy delays in the planning process continue to have a negative impact on the timely delivery of key waste management infrastructures. Planning delays can also impact negatively on Ireland’s reputation as a location for investment, particularly in the Green Technology sector which is currently being targeted by IDA Ireland and Enterprise Ireland. In line with recommendations from previous benchmark reports, there is a need to prioritise decisions on strategic waste management infrastructure projects. The ongoing use of the Strategic Infrastructure Act 2006 and the provision of further resources to fast track judicial reviews of strategic waste infrastructure could assist in cutting time and costs for infrastructure delivery.

### 3.6 Addressing infrastructure deficits

A key reason for the high use of landfill in Ireland relates to the lack of suitable alternative waste solutions. While Ireland has made strong progress in improving its recycling performance, we have failed to progress the building of required waste infrastructure (e.g. as evidenced by the absence of waste-to-energy facilities and limited biological treatment facilities). A range of infrastructures are required along the waste hierarchy to meet Ireland’s waste management requirements. A number of factors, most notably regulatory uncertainty, are hindering the development of these infrastructures. Specific infrastructures that need to be prioritised include:

<sup>32</sup> In 2008, 49 percent of commercial waste was recovered. For construction waste, 79 percent of soil and stones and 62 percent of other construction and demolition waste was recovered in 2008. The Draft Statement of Waste Policy sets the following targets:

Draft Statement of Waste Policy Target	2010	2012	2014	2016
Commercial Waste Recycling Target	55%	60%	65%	70%
	2011	2012	2014	2016
Construction and Demolition Waste Recycling Target	75%	80%	85%	90%

- Thermal treatment capacity to recover energy from municipal and industrial waste.
- Thermal treatment or landfill capacity for hazardous waste in light of increasingly strict rules on the export of waste.
- Biological treatment capacity (composting, anaerobic digestion).
- Reprocessing capacity for recovered materials.

### 3.7 Improving waste prevention

The challenge for businesses is not only to find lower cost alternatives to landfill but also to further reduce costs by reducing waste arising through effective waste prevention and minimisation measures. Continued and enhanced efforts will be required by Government Departments, agencies and business representative associations to ensure that businesses are fully aware of how best to exploit waste management reduction processes and technologies. The work of programmes such as the National Waste Prevention Programme's Green Business Initiative has brought a number of important schemes to an advanced stage but ensuring that companies, particularly small and medium enterprises, actively work to prevent waste is the important next step. Given that many organisations are already working with companies on a range of energy efficiency, pollution prevention or resource conservation initiatives, continued efforts should be made to develop a more integrated approach across a range of related issues. In addition, such resource efficiency programmes should continue to be targeted at the internationally trading manufacturing and services sectors to improve their ability to compete in global markets.

## 4. Conclusions

The enterprise sector requires the availability of a choice of competitively priced and secure waste treatment options along the waste hierarchy. This benchmarking analysis has highlighted a number of issues that need to be addressed to improve Ireland's comparative performance in meeting the waste management needs of the enterprise base. In particular, Ireland is currently falling short with comparatively higher costs, an ongoing reliance on landfill and more limited waste management infrastructure options than international competitors.

In light of projected increases in future levels of waste generated, there is a need for waste policy to continue to focus on waste prevention and minimisation and also to accelerate the development of necessary waste infrastructures. The Draft Statement of Waste Policy which has been developed by the Department of Environment, Heritage and Local Government is a key step towards providing the certainty which is central to furthering these aims. In particular, Forfás welcomes the consideration that is being given to:

- Increased coordination of regional waste plans.
- The development of competition for the market rather than competition in the market.
- The rationalisation of the waste regulatory functions of local authorities.
- The continued resourcing of the National Waste Prevention Programme.
- Revenue recycling measures which would contribute to meeting Ireland's landfill diversion targets.
- Measures to promote the green economy in Ireland, in particular the development of a green public procurement action plan.

At the same time, the resulting policy will need to give due consideration to enterprise development and cost competitiveness objectives to ensure that businesses operating here are competitive enough to retain jobs and engage in export-led growth. In particular, Forfás would recommend that the resulting policy:

- Includes competitiveness as a priority objective alongside environmental sustainability and sets out and explains measures to achieve this objective.
- Does not introduce current significant increases in the landfill levy which will add to already high business costs here and impact on the ability of businesses to retain jobs.
- Does not introduce a cap on incineration as such a cap would add to the risk and cost of developing necessary waste-to-energy treatment infrastructure.
- Does not introduce a waste-to-energy levy before a market is established here or volumetric based levies on waste-to-energy which will impact on the development of waste-to-energy treatment infrastructure.
- Does not impose limits on local authorities from entering into contracts for treatment or disposal for quantities of waste which would exceed those that they or their agents might reasonably expect to control as this could hinder the development of a national market for waste.

- Avoids overly onerous requirements relating to minimum standards of collection services which could increase costs for business and lower recycle quality.
- Avoids challenging new targets and subsequent penalties for local authorities for residual waste which could have potential cost implications for businesses.
- Avoids any recycling targets or additional product levies beyond our EU commitments or the abolition of legally-allowable de minimis exemptions would unnecessarily disadvantage Irish companies at a time when they are facing unprecedented challenges.

Given the unprecedented challenges facing the Irish economy, a key challenge for waste policy in Ireland is to balance economic and environmental goals in a way which will minimise business costs and avoid putting jobs at risk. To do so, Forfás would call for the final waste policy to address the enterprise concerns raised in this report.

## Appendix 1: Sources of Data

Municipal Waste Generation	
Czech Republic	EUROSTAT/CZSO
Sweden	COWI
Flanders	OVAM
Netherlands	CBS/ Eurostat
Austria	Umweltbundesamt
Scotland	SEPA
Ireland	EPA
Denmark	COWI
Singapore	Ministry of the Environment & Water Resources, Singapore
Massachusetts	Department of Environmental Protection, MA

Manufacturing Waste per Employee	
Czech Republic	Czech Statistical Office
Denmark	COWI
Scotland	SEPA
Ireland	EPA
Sweden	COWI
Flanders	OVAM <sup>33</sup>
Netherlands	CBS

Hazardous Waste Generation	
Ireland	EPA
Denmark	COWI
Scotland	SEPA
Austria	Umweltbundesamt

<sup>33</sup> Ovam revised their 2006 and 2007 figures based on manufacturing waste classifications.

Czech Rep.	Czech Statistical Office
Sweden	COWI
Netherlands	No new data
Flanders	OVAM <sup>34</sup>

#### Municipal Waste Treatment options

Austria (2008)	Umweltbundesamt
Ireland (2008)	EPA/EUROSTAT
Scotland (2008)	SEPA
Czech Republic (2008)	Czco
Denmark (2008)	COWI
Sweden (2008)	COWI
Singapore (2009)	Zero Waste Singapore
Netherlands (2008)	Eurostat
Flanders (2008)	OVAM
Massachusetts (2008)	Department of Environmental Protection, MA

#### Industrial Waste Treatment options

Flanders (2008)	OVAM
Netherlands (2008)	CBS
Denmark (2008)	COWI
Ireland (2008)	EPA
Sweden (2008)	COWI
Czech Republic (2008)	Czech Statistical Office

#### Landfill gate fees

Singapore (2010)	Ministry of the Environment & Water Resources, Singapore
Massachusetts (2010)	Massachusetts Master Plan

<sup>34</sup> Ovam have revised their 2006 and 2007 figures as this did not represent all hazardous waste collected in Flanders.

Scotland (2010)	WRAP Report
New Zealand (2010)	RPS
Denmark (2009/2010)	COWI
Sweden (2010)	COWI
Ireland (2010) advertised	RPS
Ireland (2010) negotiated	RPS survey
Netherlands (2010)	Senternovem
Flanders (2010)	OVAM

Thermal Treatment Gate Fees	
Singapore (2010)	Singapore NEI
Massachusetts(2010)	COVANTA Energy
Denmark (2009)	COWI
Sweden (2010)	COWI
Flanders (2010)	OVAM
Netherlands(2010)	Senternovem
UK/Scotland (2010)	WRAP

Biological Gate Fees for Food Waste	
Massachusetts	COVANTA
Ireland	RPS Survey
Flanders	OVAM
Netherlands	Senternovem
Scotland	Lets Recycle
Austria	KABSI
Czech Republic	RPS
Denmark	COWI
Sweden	COWI



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