

# Overview of the Main Infrastructure Issues for Enterprise

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## Foreword

After 15 years of exceptional economic performance, Ireland is heading into a period of slower growth. The recent slowdown in domestic demand highlights the importance of Ireland's exporting sectors as potential drivers of growth. With international competition creating pressure on companies for greater efficiency, quality and productivity, we need to ensure the availability of competitively priced world class infrastructure to foster export led growth.

While significant progress has been made in addressing Ireland's infrastructure deficits, substantial work remains to provide cost competitive world class infrastructure and services in Ireland. The main infrastructure policy priorities for enterprise are:

- **Telecoms:** Ensuring that Ireland gets the best telecommunications infrastructure is essential for Ireland to take advantage of the many opportunities that require advanced services. Continued progress on improving competition and the availability of advanced service offerings, addressing the regional differences in broadband performance and enhancing demand side initiatives for business, e-Government and education are important.
- **Energy:** The full and timely implementation of the Energy White Paper (2007) recommendations is important, in particular:
  - increasing competition in the electricity market through encouraging and facilitating new entrants;
  - implementing full ownership unbundling of the transmission network and the provision of the planned interconnectors to Northern Ireland and to the UK;
  - developing initiatives to encourage more efficient use of energy; and
  - undertaking full economic assessments of incentives for renewable energy in terms of national competitiveness and security of supply.
- **Waste:** Creating policy and regulatory certainty in the waste sector to incentivise private investment in waste infrastructure and ensuring that further increases in the landfill levy are not introduced until adequate alternative waste treatment facilities are operational.
- **Water:** The prioritisation of water infrastructure projects in NSS centres within the Water Services Investment Programme to ensure that future business demands are met.
- **Transport:** In relation to Transport 21, the priority for enterprise development is the completion of the main inter-urban routes, the Atlantic road corridor and improved public transport in the main urban centres. Improved air connectivity to Ireland is also critical for Ireland's continuing attractiveness as a location to do business.

Specific infrastructure projects that will have the greatest impact from an enterprise development perspective on improving the competitiveness of the productive sector and of Ireland's regions are outlined in Appendix 1.

**Martin Cronin**  
Chief Executive

## Preface

Forfás prepares these briefing notes on recent developments and key enterprise issues and policy priorities in each of the main infrastructure areas<sup>1</sup>. They are updated on a six monthly basis.

The most important developments for enterprise competitiveness since the last update in October 2007 are outlined below.

### Energy

- In March 2008, the Department of Communications, Energy and Natural Resources announced that an independent review body is to be set up to undertake an analysis of the costs and benefits of the transfer of ownership of the transmission grid in the context of EU developments and the all island electricity market.
- In February 2008, new price supports for renewable electricity generation were announced. They provide for a guaranteed price of €140 per megawatt hour for electricity produced by new offshore wind plants and €220 per megawatt hour for wave and tidal energy. This compares with a fixed price of €57 per megawatt hour for onshore wind generation. The wholesale price of electricity (latest data available) was €73 per megawatt hour.
- In January, the European Commission published its energy/climate change package which sets an overall binding target for the European Union to reduce greenhouse gas emissions by 20 percent by 2020 and to achieve a 20 percent share of renewable energy sources in energy consumption by 2020.

### Waste

- The levy charged by the State on waste to landfill will be increased from €15 to €20 per tonne from June 2008. Further increases are also planned. The Department of the Environment, Heritage and Local Government has also indicated that any future incineration facility would be subject to a similar levy, in line with the commitment in the Programme for Government.
- In March 2008, the Dublin local authorities published a variation to their waste plan for 2005-2010. Currently a number of private operators, as well as the local authorities, collect waste across the Dublin waste region. Under the variation to the waste plan, collection services for household waste will in future be provided by a single operator. The single operator will either be a Dublin local authority or a successful tenderer under a public tendering process which may be on a geographical basis. In April, a waste collection company was granted leave by the High Court to challenge the local authorities' decision to change rules for private waste collectors.

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<sup>1</sup> The recent developments for each infrastructure area are presented in chronological order.

## Transport

- In February 2008, the Department of Transport published its Sustainable Travel and Transport Action Plan, which proposes a vision of a sustainable transport system by 2020. It aims for a significant shift towards the use of public transport, car sharing, cycling, walking and trip reduction as well as improved access to transport services. Among the proposals to achieve the vision are more flexible working plans; fiscal measures to reduce discretionary travel (e.g. road pricing; carbon taxes) and technology solutions (e.g. biofuels; fuel economy and vehicle standards).

# Energy

## Background

Promoting energy production and consumption patterns that are environmentally sustainable, economically competitive and secure is a challenge that has moved to the top of the political agenda across the globe and is central to any discussion of national competitiveness. Ireland's ability to continue attracting high levels of foreign direct investment and to provide a supportive environment for Irish industry generally will depend on its capacity to deliver a secure and sustainable energy supply at a competitive cost.

## Recent Developments

- One of key energy policy priorities identified in the Energy White Paper to improve energy competitiveness is the transfer of ownership of the transmission network from ESB to Eirgrid by the end of 2008. In March 2008, the Department of Communications, Energy and Natural Resources (DCENR) announced that it is setting up an independent review body to undertake an analysis of the costs and benefits of full ownership unbundling in the context of EU developments and the all island electricity market.
- In March 2008, ESB announced a €22 billion investment programme over the next twelve years. It plans to halve its carbon emissions by 2020 and to deliver one third of its electricity from renewable generation by 2020. €11 billion will be spent on the electricity network infrastructure, including network investment to facilitate the development of up to 6,000 megawatts of wind on the island. A further €6.5 billion has been earmarked for facilitating renewables including smart metering and smart networks and €4 billion will be invested in renewable energy technologies.
- In February 2008, new price supports for renewable electricity generation were announced. They provide for a guaranteed price of €140 per megawatt hour for electricity produced by new offshore wind plants and €220 per megawatt hour for wave and tidal energy. This compares with a fixed price of €57 per megawatt hour for onshore wind generation. The wholesale price of electricity (latest data available) was €73 per megawatt hour.
- In February, DCENR announced it was commissioning a study to assess the comparative merits of overhead electricity transmission lines versus underground cables. This is in response to publicly expressed concerns in respect of current transmission network projects being developed by Eirgrid, particularly in the north east where the north-south interconnector is to be constructed. The study is due to be completed in early June 2008.
- A recent business confidence survey by Ulster Bank found that 48 percent of SMEs had introduced measures to reduce their energy costs, up from 39 percent of SMEs when the first such survey was carried out in April 2007.

- In January 2008, the European Commission published its energy/climate change package which sets an overall binding target for the European Union to reduce greenhouse gas emissions by 20 percent by 2020 and to achieve a 20 percent share of renewable energy sources in energy consumption by 2020. At the Spring Council meeting in March, Europe's leaders pledged to finalise individual member state CO2 reduction and renewable energy targets by the end of 2008.
- On 1st November 2007, the all-island Single Electricity Market (SEM) went live. The gross mandatory pool market serves around 2.5 million customers north and south. The main change under the SEM is that the wholesale price of electricity is market-driven and not administratively determined as was the case previously. This should over time lead to a more efficient and cost effective electricity market. The new market is designed to incentivise new generation investment which is critical for the security and reliability of electricity supply.
- Every four years, the International Energy Agency (IEA) undertakes an in-depth review of energy policies in member countries and the last review of the Irish energy market was launched in July 2007. The IEA broadly endorsed the energy policy direction set out in the Government's Energy White Paper but stressed the need to focus on its implementation to address Ireland's significant energy weaknesses. Among the IEA's main priorities are:
  - reform of the electricity and gas markets;
  - improving security of supply through greater diversity in the fuel-mix and the source of that fuel (particularly gas);
  - improving energy efficiency; and
  - developing renewable energy sources while being mindful of the cost implications of meeting the ambitious renewable targets.
- Following on from the publication of the Energy Green Paper in October 2006, an Energy White Paper was published in March 2007. This sets out the energy policy framework to 2020 to deliver a secure, sustainable and competitive energy future for Ireland. Among the main actions proposed include the full ownership unbundling of the electricity transmission grid network (now under review), the development of a State-owned landbank to facilitate competition, a 33 percent target for renewable electricity generation by 2020 and further potential investment to interconnect the Irish market to Northern Ireland, the UK and potentially continental Europe.

## Key Issues and Policy Priorities

The availability of a reliable, competitively priced and sustainable supply of energy is essential for competitiveness. While there can be trade-offs between these three pillars, it is notable that Ireland currently faces challenges on all three:

- 1 **Cost Competitiveness:** The rate of increase in industrial electricity prices (excluding VAT but including other taxes) in Ireland between January 2001 and January 2007 was almost twice that of the EU-15. Industrial electricity prices in Ireland were the second highest of the EU-25 as of January 2007. Industrial electricity prices were 18.7 percent above the EU-15 average in

January 2007 compared to 16.7 percent in 2006. Irish industrial prices were 15.5 percent more expensive than those in the UK in 2007, 59.3 percent more expensive than Denmark and almost double those in France.

- 2 **Security of Supply:** The margin between electricity generation and peak demand is narrow in Ireland. For the period 2008-2010, significant improvements in the availability performance of generating plant from the current low level of 77 percent is critical to avoid generation capacity deficits. Furthermore, 90 percent of our energy needs are imported. Ireland is heavily dependent on imported fossil fuels for electricity generation, however, renewables' contribution to electricity generation continues to grow strongly, increasing to 8.6 percent in 2006 from 4.8 percent in 2005.
- 3 **Sustainability:** On a per capita basis, Ireland had the second highest carbon emissions of the EU-15 in 2005. Although there has been an improvement in the levels of carbon emissions per capita between 2000 and 2005, which declined by 2.3 percent, total carbon emissions in Ireland actually increased by 5.4 percent. Emissions increased by 3.8 percent across the EU-15 between 2000 and 2005.

From an enterprise competitiveness perspective, the energy policy priorities include:

- implementing the Energy White Paper;
- restoring energy cost competitiveness;
- improving generation adequacy;
- ensuring diverse sources of electricity supply;
- providing adequate regional capacity;
- improving energy efficiency; and
- energy policy planning for the longer term.



# Telecommunications

## Background

Ireland's geographic location and emphasis on high-technology industries means that an efficient and advanced telecoms sector is strategically important for both domestic and overseas manufacturing and services enterprises. Broadband is of strategic importance because of its ability to accelerate the contribution of ICT to economic growth in all sectors, enhance social and cultural development, and facilitate innovation. Widespread and affordable access at a competitive cost can contribute to productivity and growth through applications that promote efficiency, with benefits for business, the public sector, and consumers.

## Recent Developments

- In March 2008, the European Commission (EC) published its annual review of regulatory developments in telecom markets across member states. The review points to some significant reforms in the Irish market during 2007, including enhanced enforcement powers for ComReg and substantial progress in local loop unbundling which, along with the introduction of mobile broadband services, has led to increased competition in the Irish broadband market. Among the new regulatory challenges identified by the EC are how to regulate the incumbent's next generation network and its proposal to separate its network infrastructure from its retail operations.
- The Department of Communications, Energy and Natural Resources (DCENR) recently convened a forum, including international telecoms experts, to advise it on the optimum role of Government in the development of a Next Generation Network (NGN) in Ireland. DCENR will shortly publish a policy paper on NGNs for public consultation.
- In March, the Telecommunications and Internet Federation (TIF) published a set of eight principles that the telecommunications industry believes should inform the rollout of NGNs in Ireland.
- The National Broadband Scheme (NBS), which aims to provide broadband services to areas where the private sector is unable to justify the commercial provision of broadband connectivity, was announced in May 2007. It replaces the Group Broadband Scheme. In September 2007, the Department of Communications selected four candidates, namely BT; eircom; Hutchinson 3G, and an IFA/Motorola consortium, to enter the next phase of the procurement process of the NBS. DCENR expects to conclude the process in Q2 2008.
- As part of the NDP (2007-2013) programme, total indicative investment under the Communications and Broadband programme over the period 2007-2013 is expected to be €435 million. Over the period of the NDP it is intended to build an additional 90 Metropolitan Area

Networks (MANs), in association with local and regional authorities, bringing the total to 120 towns and cities covered nationwide.

- The European Commission is examining the need to regulate prices for roaming data downloads and SMS after the introduction of the EU Roaming Regulation for mobile calls, which came into force across the EU-27 on 30th June 2007. The EU regulation enables consumers to benefit from a 'Eurotariff' that sets a maximum limit for calls made (€0.49 excl. VAT) and received (€0.24 excl. VAT) when abroad. Operators are expected to compete below this consumer cap. The price caps will be further reduced in 2008 and 2009.

## Key Issues and Policy Priorities

### Broadband

- Broadband take-up continues to grow strongly in Ireland. At the end of December 2007, there were 886,300 broadband subscribers (including 127,500 mobile broadband subscribers), an annual increase of 71 percent on 2006 figures. Mobile broadband subscribers comprised 14.4 percent of overall broadband take-up at the end of Q4 2007, making it the second most popular platform after DSL, little over a year after mobile operators began the rollout of the service.
- ComReg estimates that at the end of December 2007, Irish broadband penetration (including mobile broadband) was 20.5 percent. If mobile broadband is excluded, the broadband penetration rate was 17.6 percent. The EU average in January 2008 was 20 percent.
- Ireland's broadband growth rate was among the highest in the OECD at 6.6 percent for the year to June 2007, but slowed to 5.2 percent for the full year 2007 (4th highest growth in the EU).
- With regard to broadband services for business, Ireland compares well on prices for 34 Mbit/s leased lines but is more expensive for lower broadband speeds, such as 6 Mbit/s ADSL and 2 Mbit/s SDSL.
- The key issue from an enterprise development perspective is the limited range and speed of broadband services available and their comparatively higher cost. Based on October 2007 data, the fastest speed that is widely available in Ireland (6 Mbit/s) costs four to five times more than considerably higher speed (ADSL) services in countries such as France, Germany and Hungary. An Irish business would pay over €2,000 per annum for a 6 Mbit/s ADSL service, while its counterpart in Germany would pay up to €534 for 16 Mbit/s (depending on usage). In France, the annual cost is €530 for 18 Mbit/s, and in Sweden, 24 Mbit/s costs just under €1,200 per annum.

### International Connectivity

- Ireland has significant international capacity (e.g., eircom, EsatBT, NTL, Global Crossing, Cable & Wireless, Hibernia Atlantic etc.) and has the lowest international leased line costs in the OECD. In terms of regional connectivity, Ireland also has an extensive national fibre network with a range of players (e.g., eircom, EsatBT, ESB, Aurora, Cable and Wireless, etc).

- Anecdotal evidence suggests that traffic on core networks has grown significantly in the last 18 months.

### Mobile

- Ireland has the joint-sixth highest mobile penetration rate of the EU-15 countries. There were 4.9 million mobile subscriptions, equivalent to a mobile penetration rate of 116 percent, in the Irish market in December 2007.
- Average monthly spend on mobile services in the residential sector is around €45, the highest in the EU.

Ireland's telecommunications policy needs to focus on:

- future-proofing Ireland's telecommunications infrastructure;
- improving competition and the availability of advanced service offerings;
- addressing the regional differences in broadband performance; and
- enhancing demand side initiatives for business, e-Government and education.

# Waste Management

## Background

Maintaining economic progress in Ireland is contingent on a good environment and the availability of modern waste management facilities and services at a competitive cost. Waste management and the associated costs continue to be a key issue for enterprise in Ireland.

## Recent Developments

- The levy on waste to landfill will be increased from €15 to €20 per tonne from June 2008. Further increases are also planned. The Department of the Environment, Heritage and Local Government (DEHLG) has also indicated that any future incineration facility would be subject to a similar levy, in line with the commitment in the Programme for Government.
- In March 2008, the Dublin local authorities published a variation to their waste plan for 2005-2010. Currently a number of private operators, as well as the local authorities, collect waste across the Dublin waste region. Under the variation to the waste plan, collection services for household waste will in future be provided by a single operator. The single operator will either be a Dublin local authority or a successful tenderer under a public tendering process which may be on a geographical basis. In April, a waste collection company was granted leave by the High Court to challenge the local authorities' decision to change rules for private waste collectors.
- A recent business confidence survey by Ulster Bank found that 62 percent of SMEs had introduced measures to reduce their waste costs, up from 45 percent of SMEs when the first such survey was carried out in April 2007.
- In early 2008, DEHLG invited tenders for a review of waste policy which will focus on two waste streams, municipal waste and construction and demolition waste. Among the aims of the study is to evaluate Ireland's performance to date and its prospects for achieving the EU landfill directive targets as well as assessing the legal, institutional, organisational and infrastructural arrangements required to meet EU and other international obligations. The study is expected to be completed by summer 2009.
- The Programme for Government 2007 indicated a change in waste policy with regard to incineration. It commits to introducing Mechanical Biological Treatment (MBT) facilities as one of a range of technologies to meet the targets to divert biodegradable waste from landfill required under the 1999 EU Landfill Directive. It also stated that it will not alter the landfill levy in such a way as to give a competitive advantage to incineration.
- During the second half of 2006, the Department of the Environment, Heritage and Local Government consulted on the most appropriate model of regulation for the waste sector as well

as the remit and functions of a potential waste regulator. No decision has yet been made on the way forward.

## Key Issues and Policy Priorities

**Waste Costs:** In terms of waste treatment costs, while average landfill gate fees in Ireland are declining, Ireland is the third most expensive country for non-hazardous landfill costs among the countries benchmarked by Forfás. Ireland remains the most expensive of the benchmark countries for biological waste treatment; gate fees in 2007 still stood at €90 per tonne.

**Waste Treatment:** The rate of municipal recycling in Ireland has improved significantly, from 13 percent in 2001 to over 36 percent in 2006. Ireland continues to be heavily reliant on landfill to treat its municipal waste and currently has no commercial thermal treatment facilities.

**Waste Generation:** Ireland has the fourth highest municipal waste generation per capita of the ten benchmarked countries. Manufacturing waste per employee, while still comparatively high in Ireland, has fallen considerably between 2004 and 2006.

From an enterprise competitiveness perspective, the energy policy priorities include:

- accelerating the delivery of waste infrastructure projects along the waste hierarchy;
- creating policy and regulatory certainty in the waste sector to incentivise private investment in waste infrastructure;
- assessing the effectiveness of the Strategic Infrastructure Act in terms of reducing the lead time to get waste projects approved. The provision of resources to fast track judicial reviews of strategic infrastructure projects also needs to be prioritised;
- sending the appropriate price signals to investors to support national competitiveness objectives in the short and medium term, while also ensuring that Ireland meets its environmental obligations; and
- promoting waste minimisation and prevention initiatives to ensure that businesses are fully aware of the how best to exploit waste management reduction processes and technologies.

# Regional Development

## Background

The National Spatial Strategy (NSS), which was published in 2002, is a 20 year planning framework designed to achieve a better balance in regional development. The gateways identified in the NSS are Sligo, Dundalk, Letterkenny-Derry and Athlone/Mullingar/Tullamore, complementing the existing established gateways of Dublin, Cork, Galway, Limerick and Waterford.

In today's global environment, trade and mobile investment decisions are influenced by competition from international cities and city-regions. It is therefore crucial that the nine gateways identified in the NSS are successfully developed so that they can make each region in Ireland competitive for the growth of the indigenous sector and the attraction of foreign direct investment.

## Recent Developments

- In April, the Department of the Environment, Heritage and Local Government published the Green Paper on local government reform, Stronger Local Democracy - Options for Change. Among its main proposals are:
  - a directly elected mayor for Dublin, with strategic functions including planning, housing, waste and water services;
  - directly elected mayors in other cities and counties;
  - new political structures in the gateways (e.g. unitary authorities, cross-boundary metropolitan mayors);
  - greater devolution of decision making to town councils;
  - consideration of the financing of local government; and
  - improved customer service by local authorities.
- In April, the Dublin Transport Authority Bill 2008, which will facilitate the establishment of a new transport authority with overall responsibility for coordinating transport in the Greater Dublin Area (GDA), was published. The proposed authority will be responsible for strategic transport planning in the GDA, it will allocate capital and current funding for public transport and traffic management as well as procuring public transport services and regulating public transport fares. However, it will not have a direct land use planning function.
- A key goal of NDP (2007-2013) is to support regional development in line with the NSS, with a particular focus on the accelerated development of gateways. The Department of the Environment, Heritage and Local Government (DEHLG) is developing a detailed framework to monitor the implementation of the NDP. The framework will consist of a broad range of development metrics across a range of areas collected by a variety of stakeholders. It is expected that an initial core set of available metrics will be decided and compiled shortly.
- In addition to general expenditure under the NDP, a Gateway Innovation Fund (GIF) was launched in May 2007 by DEHLG. The fund will operate initially on a pilot basis from 2008-2010

with a fund of €300 million and will be allocated on a competitive basis. The fund aims to stimulate collective action across relevant local authorities and stakeholders and innovative approaches to stimulating accelerated development within the gateways. Final deliberations on the GIF applicants are concluding and successful applicants will be announced shortly.

### Key Issues and Policy Priorities

- The need for local authorities, county councils and relevant stakeholders to take a regional view, rather than a county level view, to developing the potential of the regions.
- The emphasis needs to be on the accelerated development of the gateways as the drivers of growth within each region. With many of the gateways crossing a number of local authorities there is a need to ensure that collaborative structures are put in place at gateway level that can effectively plan and facilitate their development.
- The need to ensure that key infrastructure projects of importance to enterprise development as outlined in Appendix 1 are delivered.
- Continued commitment is needed to ensure the implementation of the NSS and the effective rollout of the GIF.

# Roads

## Background

There is a strong recognition by Government of the importance of upgrading the national road transport network as a key underpinning of enterprise competitiveness and the mobility of people.

## Recent Developments

- In February 2008, the Department of Transport published a public consultation document on sustainable travel and transport. The Sustainable Travel and Transport Action Plan proposes a vision of a sustainable transport system by 2020 which aims for a significant shift towards the use of public transport, car sharing, cycling, walking and trip reduction as well as improved access to transport services. Among the proposals to achieve the vision are flexible working and workplace travel plans; fiscal measures to reduce discretionary travel (e.g. road pricing; carbon taxes) and technology solutions (e.g. biofuels; fuel economy and vehicle standards).
- The NRA will invest €1.68 billion in the National Roads Programme during 2008, funding 434 projects throughout the country.
- Under the Roads Sub-Programme outlined in NDP (2007-2013), some €13.3 billion will be invested in national roads and €4.3 billion in non-national roads. Most of this investment will be used to implement Transport 21 which was announced in November 2005. Some of the principal objectives of the Roads Sub-Programme include:
  - Completion by 2010 of the major inter-urban routes linking Dublin with Belfast, Cork, Galway, Limerick and Waterford; and
  - Improvements in road links between the NSS gateways.
- The first of the five Major Inter-Urban (MIU) routes was completed in August 2007 with the opening of the 14km Newry to Dundalk A1/N1 dual carriageway. A further significant reduction in the journey time from Dublin to Belfast will arise from the construction of the new Newry bypass, due for completion in late 2010.
- Significant progress has been made on a number of key routes:
  - The Dromod-Roosky bypass on the N4 was opened in December 2007 while the Charlestown bypass on the N5 and the Castleblaney bypass on the N2 opened in November 2007;
  - The final section of the Ennis bypass on the N18 between Limerick and Galway was opened in December 2007; and
  - In February 2008, work began on the N7 Castletown to Nenagh road, the N9 Kilcullen to Carlow road and the Tullamore bypass on the N25.



- The Strategic Infrastructure Act 2006, which came into effect on 31st January 2007, has put in place a streamlined planning process for certain strategic infrastructural projects, including roads, while ensuring that all statutory requirements are observed.

### Key Issues and Policy Priorities

- The delivery of the road infrastructure priorities for enterprise development, as set out in Appendix 1, needs to be maintained.
- Ireland's transport policy needs to remain aligned with the objectives of the National Spatial Strategy with a particular emphasis on the prioritisation of the gateways to develop and connect key centres and regions that have the critical mass to compete internationally (e.g. Atlantic corridor).
- Ensuring value for money is essential. All transport projects under the NDP should come through a rigorous pre-commitment evaluation process.

# Rail

## Background

A good rail infrastructure can improve the mobility of labour, reduce commuting times and improve access to the regions. Good rail services can increase productivity and reduce costs. This not only supports existing firms, but also a country's attractiveness as an investment location and general quality of life.

## Recent Developments

- Under the NDP (2007-2013), just under €13 billion will be invested in public transport, including rail. Most of the future investment in rail has already been captured under Transport 21 which was announced in November 2005. Examples include:
  - New commuter rail services in Cork and Galway; and
  - Development of the Metro North line from the city centre to Swords via Dublin Airport and Metro West which will be a 25km orbital route connecting Tallaght, Clondalkin and Blanchardstown. The preferred route corridors for Metro West and Metro North were announced in July 2007. These lines are expected to be completed by 2014.
  
- Iarnród Eireann continues to upgrade the existing rail stock and 183 new railcars are to be phased into service by the end of 2008. New railcars were introduced on the Sligo to Dublin rail line in December and on the Limerick to Dublin service in January 2008.
  
- In 2007, approximately 29 million passengers used the Luas service, an increase of nearly three million passengers on the 2006 figures.
  
- The Railway Procurement Agency applied for planning permission for a spur from the red Luas Line between Belgard and Saggart, Co. Dublin in December 2007. This will add five million extra passenger trips to the existing Luas network, and is expected to be completed by 2010.
  
- In October 2007, the European Commission adopted a series of initiatives to promote freight transport logistics, including measures to make rail freight more competitive, in particular by ensuring lower transit times and increasing rail's reliability and responsiveness to customer needs. One approach being proposed to achieve a freight-oriented European rail network is the development of transnational corridors, which includes Belfast - Dublin - Cork.

## Key Issues and Policy Priorities

- An integrated approach to spatial and transport planning that can optimise the use of rail and commuter services is required.
- Upgrading of intercity rolling stock and implementation of enhanced business-friendly services on the following routes: Dublin - Galway; Dublin - Waterford; and Dublin - Sligo.
- The majority of the national rail network is single-track.
- There is currently only limited rail freight connectivity to the seaports and none to the airports.

# Aviation

## Background

International connectivity is of particular importance in an Irish context. Over 23 million passengers travelled through Dublin Airport during 2007, an increase of over 1.6 million on passenger numbers recorded in 2006, while numbers travelling through Cork Airport were up six percent in 2007 to 3.2 million passengers.

## Recent Developments

- In April, the Cork Airport Authority (CAA) accepted the recommendations of the Government appointed mediator Peter Cassells' report regarding the sharing of assets and debts. Net assets of €220 million will be transferred from the Dublin Airport Authority to the CAA on separation and the CAA will assume responsibility for the airport's outstanding debts of €113 million. The Department of Transport will now proceed to effect the full separation of the three State airports (Dublin, Cork and Shannon) as set out in the State Airports Act 2004.
- Pier D at Dublin Airport was opened in November 2007 and cost €120 million. It has the capacity to handle an average of over 27,000 arriving and departing passengers in total per day. Construction on Dublin Airport's Terminal 2 began in October 2007. The expected completion date for the €609 million project is the end of 2009, with the terminal set to open in April 2010.
- The bilateral Open Skies agreement between the EU and the US came into effect on the 30th March 2008. Aer Lingus had already taken advantage of the new agreement with the launch of new routes from Dublin to Washington DC, San Francisco and Orlando in the second half of 2007. The agreement means the end of the mandatory Shannon stopover.
- Under the Air Transport Sub-Programme, some €1.9 billion will be invested over the period of the NDP (2007-2013). As the DAA operates under a commercial mandate, its investment will be funded from its own internal resources. Six regional airports (excluding Cork and Shannon), all in private ownership, are eligible to apply for State assistance under the Transport Programme.

## Key Issues and Policy Priorities

- Access to markets is regarded as the single most important factor for companies in deciding where to locate. In light of Ireland's geographic location and our dependence on export markets, the relatively poor quality of Ireland's and Dublin's air transport infrastructure is of concern from an enterprise development and national competitiveness perspective. According to the NCC's Annual Competitiveness Report 2007, the perceived quality of Ireland's air transport infrastructure was the third lowest of the 18 countries benchmarked.
- International connectivity is also important. Dublin has lower connectivity than other international locations such as Copenhagen.

- From an enterprise development perspective, Ireland requires efficiently functioning and competitively priced airports that benchmarks well with competitor cities in terms of international connectivity, airport charges, quality of service and access to and from the airport. The range of destinations available, the frequency of flights and the ability to return on the same day for short haul flights are also important.
- New infrastructure, in the form of a new terminal, runways etc., is needed for Dublin airport. The current situation of congestion and over-crowding at Dublin airport is damaging our international competitiveness and reputation.
- Improved business oriented services from the regional airports are required to support regional development in line with the NSS, particularly the accelerated development of the gateways.
- Ease of access to and from the airports is critical. Proposals to improve access (e.g. rail links, inter-urban road networks, etc.) can reduce travel times, extend the hinterland of key airports and promote greater competition between airports and airlines.

# Seaports

## Background

National and international connectivity is critically important in an increasingly globalised economy. In light of Ireland's geographic location and our dependence on export markets, Ireland's commercial ports are vital to the country's prosperity. In volume terms, 99 percent of Ireland's international trade is handled by the seaports. It is therefore essential that Ireland has sufficient ports capacity to meet future needs and that the ports operate efficiently and are well connected to the internal road/rail network.

## Recent Developments

- In April 2008, the Irish Maritime Development Office (IMDO) published its latest information on shipping trade and port traffic performance on the island of Ireland. Three million containers and an estimated €135 billion worth of merchandise trade were handled at Irish ports during 2007. While Lo-Lo traffic grew by six percent and the Ro-Ro market increased by three per cent during 2007, the latest figures indicate a slowdown in container traffic towards the end of the year.
- In October 2007, the European Commission adopted a series of initiatives to promote freight transport logistics, including measures to create a framework which will allow European ports to attract investment for their modernisation and put maritime freight transport on an equal footing with other transport modes.
- In September 2007, Dublin City Council published a study entitled, Dublin Bay - An Integrated Economic Cultural and Social Vision for Sustainable Development, which is seen as the initial step in preparing a strategic framework plan for the Dublin Bay area, including Dublin Port. It identified seven options for Dublin Port.
- The Government's Ports Policy Statement (2005) highlights that the State-owned commercial port companies should fund their own operations and infrastructural requirements without assistance from the Exchequer. It is estimated that the commercial port companies will invest approximately €450 million in a range of proposed projects over the period 2007-2013.
- In January 2007, the Institute of International Trade of Ireland (IITI) published a study that reviewed trade and services on the North Atlantic to determine whether a direct shipping service between the island of Ireland and North America might be viable. The study recommended that there is sufficient LoLo cargo generated by the island of Ireland to justify a direct shipping service between Ireland and North America.

## Key Issues and Policy Priorities

- All of Ireland's unitised trade (Ro-Ro and Lo-Lo) is handled by ports on Ireland's eastern and southern coastlines (Drogheda, Dublin, Rosslare, Waterford and Cork) reflecting demand from high value/low volume product industries for frequent and reliable shipping services to ports in the UK and continental Europe. In 2005, Dublin dominated Ireland's unitised trade, handling 63 percent of Lo-Lo traffic and 79 percent of Ro-Ro traffic. After Dublin, Waterford handles the largest percentage of Lo-Lo traffic (18 percent) while Rosslare handles 17 percent of Ro-Ro traffic.
  
- From an enterprise development perspective, the main ports related issues that need to be addressed include:
  - The changing needs of the enterprise base;
  - The adequacy of internal road/rail access to ports; and
  - The levels of efficiency and competition between Irish ports.

# Water/Wastewater

## Background

Water and wastewater infrastructure are a vital component of national infrastructure. Water is required for many industrial and service activities and is a prerequisite to the efficient functioning of the economy. Wastewater treatment is essential for environmental sustainability and to protect public health.

## Recent Developments

- The Water Services Investment Programme for the period 2007-2009 was published in September 2007. It comprises 955 projects with an overall capital value of €5.8 billion.
  
- The EU Water Framework Directive, which aims to promote sustainable water use based on long-term protection of available water resources, was adopted by member states in December 2000. The Irish Water Services Act, which transposed this directive, was enacted in May 2007. Among the main objectives of the EU Water Framework Directive are to:
  - Achieve a good level of water quality by 2015;
  - Establish a water management system based on river basins instead of administrative boundaries - plans to be adopted by the end of 2009; and
  - Introduce pricing policies based on the polluter pays principle - the Commission estimates that 40 percent of water is wasted across the EU.
  
- The first implementation report was published by the European Commission earlier this year and among the main findings are that significant progress has been made but a number of shortcomings exist including the inappropriate transposition of the Directive into national law; and the considerable lag by a number of countries in incorporating economic instruments (e.g. water pricing) into water management systems. This applied to most Member States including Ireland.

## Key Issues and Policy Priorities

- The timely delivery of the Water Services Investment Programme is essential to ensure that the future needs of Ireland's growing population and the increasing business demands are met.
  
- Charges for water services differ between local authorities, from €2.71 per cubic metre in Wexford to €0.99 per cubic metre in Galway city. Water services metering for non-domestic users was scheduled to be fully introduced by all local authorities by the end of 2006, however, a number of installation schemes have yet to be completed. It is envisaged that water service charges will increase significantly across the country in the coming years as the full cost of providing water services to business is passed on to them.





## APPENDIX I: INFRASTRUCTURE PRIORITIES FOR ENTERPRISE DEVELOPMENT

Priority Projects for the Enterprise Development Agencies	Status/Progress
ROADS	
N1/A1 - Dundalk - Newry dual carriageway	Completed August 2007 (A1 Newry bypass upgrade due for completion by late 2010)
N2/A5 - Dublin - Derry route	Ongoing - Castleblaney bypass opened in Q4 2007
M3 - Dublin - Navan Motorway	Due for completion in 2010
N6 - Dublin - Galway route	Due for completion late 2009
N6 - Galway outer by-pass	At the preliminary design phase
N7 - Dublin - Limerick route	Due for completion in 2010
N7/N18 - Limerick Southern Ring Road - Phase 2 (Fourth Shannon river crossing)	Under construction - to be completed 2010
N8 - Dublin - Cork route	Due for completion in 2010
N9 - Dublin - Waterford route	Due for completion in 2010
N14 - Lifford - Letterkenny route	At the preliminary design phase
N15 - Sligo - Letterkenny route	Ongoing - Bundoran/Ballyshannon bypass open
N16/A4 - Sligo - Dungannon	At the preliminary design phase
N17 - Galway - Sligo	At the preliminary design phase

N18 - Limerick - Galway route	Ennis bypass completed in Q4 2007. Crusheen to Oranmore is at preliminary design phase
N22 - Cork - Killarney/Tralee route	Cork Northern Ring Road - at route selection phase, remainder is at preliminary design phase
N28 - Cork - Ringaskiddy route	At route selection phase
M50 Upgrade	Due for completion in 2010 - Phase 1 (N4 to N7) has been completed. Phase 2 construction began in January 2008
N52/N80 - Connecting linked gateway of Athlone, Mullingar and Tullamore	N52 upgrade is complete N80 upgrade is preliminary design phase
N59 - Belmullet - Ballina route	At route selection phase
N60 - Castlebar-Roscommon route	At route selection phase
N69 - Limerick - Tralee route	At constraints study phase
<b>RAIL</b>	
Kildare Rail Project (Heuston-Hazelhatch)	Engineering Works underway; completion due in 2010
Re-opening of Navan rail line	Phase 1 to Dunboyne due for completion in 2009; Phase 2 to Navan due in 2015.
Luas extensions and new line to Lucan	Consultations ongoing - all to be completed by 2015
Metro North (Stephens Green via Airport to Swords)	Due to be completed by 2013

Metro West (linking Tallaght, Clondalkin and Blanchardstown)	Due to be completed by 2014
Examination of the feasibility of re-opening of the Athlone-Mullingar line	Not in T21
Improve frequency on the Belfast - Dublin route	Ongoing
Increase speed and frequency of services to Sligo, and introduce rail carriages	Ongoing
Time of travel on Waterford to Dublin line to be reduced to two hours	Ongoing
Progress implementation of CASP	Due to be completed in 2009
Reopening of the Western Rail Corridor	Athenry to Ennis due for completion by 2009; Athenry to Tuam due by 2011; Tuam to Claremorris due by 2014
<b>PORTS</b>	
Developments at the Ringaskiddy deep water port	Consultation process underway
Regeneration of Galway docks	Ongoing
<b>AIR</b>	
New terminal at Dublin Airport	Construction underway; due for completion in 2009
Improved frequency of flights between Shannon and Dublin	Ryanair began operation of twice-daily service in November 2007
Expand business oriented services to Belfast International Airport	Aer Lingus phased in nine new routes between December and February

Expand business oriented services from Waterford Airport	Ongoing
Expand business oriented services from Knock and Galway, especially on London routes	Aer Arann increased Galway to London Luton flights to three times daily from October 2007
<b>WATER/WASTEWATER</b>	
Increased water and wastewater capacity in the North East region, sufficient to meet the needs of a large scale project at Mullagharlin (Dundalk)	Dundalk water supply strategic study to commence 2009
Completion of water and wastewater capacity infrastructure in Sligo and Letterkenny	Sligo water supply under construction and its wastewater scheme improvement to commence in 2008. Letterkenny upgrade under construction
Improvement in water and wastewater provision and planning in West region	Ongoing
<b>WASTE</b>	
Development and implementation of the regional waste management plans	Ongoing
<b>ELECTRICITY</b>	
Improve resilience in the electricity transmission and distribution network through the TSO Development Plan 2006-2010	Ongoing
Construction of a second 110kV line from Arva to Shankill, and a 400kV line from Woodland to mid-Cavan	Due for completion by December 2012

Installation of a 110kv loop in the West of Donegal

Due for completion by December 2010

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