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3.0 ANTICIPATED DEVELOPMENTS OVER THE PERIOD OF THE PLAN

3.1 The effect of measures to reduce waste arisings or the harmfulness of waste

The effect of measures to prevent or minimise waste production or the harmfulness of waste will be discussed in the following sections 3.3, 3.4, 5.3 (a), 5.3 (b).

3.2 Trends in population distribution and commercial/industrial/agricultural activity

Trends in Population Size and Distribution

With respect to future population numbers in the County reference was made to the projections in the County Development Plan 1999. It is prudent to assume the higher of the two growth rates (Projection B) made in the Plan for the purposes of waste planning.

Using these data the County population in 1999 is estimated at 141,600 while forecast numbers in the period to 2018 are given in Table 3.1 (the Plan's projections have been extended from 2016 to 2018).

Table 3.1: Projected Population for Co. Kildare, 1996-2018

1996	1999	2001	2006	2011	2016	2018
135,000	141,600	146,203	155,817	165,123	172,753	175,903

The average per capita rate of household waste generation in Co. Kildare in 1999 is taken as 330 kg per annum (Waste Management Strategy 1999). The annual rate of growth in household waste quantities nationally has averaged in excess of 2% over the past 10 years (EPA, 1995). For the present purposes a rate of 2.25% per annum is assumed for the period to 2006. Thereafter the growth rate is assumed to slacken to 1.5% per annum between 2007 and 2011 and to 1% per annum from 2012 to 2018. These data are applied to the projected County population in Table 3.2.

Table 3.2: Forecast Arisings of Household Waste 1999-2018

	1999	2001	2006	2011	2016	2018
Per capita arisings, kg/a	330	353	395	426	448	457
Population (est.)	141,600	146,203	155,817	165,123	172,753	175,903
Total arisings, t/a	46,728	52,774	65,175	73,868	77,393	80,388
% increase from 1999	-	13.5	40.1	58.75	66.33	72.76

The gross quantity of household waste forecast to arise in the County in the period 1999-2018 incl. is thus estimated at 1.27 million tonnes or about 63,500 tonnes per annum on average during that period.

Trends in activity in the commercial, industrial and agricultural sectors

The Economic and Social Research Institute (ESRI) provides growth forecasts per annum for specific sectors in its Medium Term Review (1997).

A very vigorous growth in “market services” is predicted with annual rates as high as 6.9% in the period to 2000 and averaging 5.7% per annum overall in the period to 2011. It can be assumed that the generation of commercial waste is linked to the performance of the services sector of the economy. However it is difficult to say exactly how much of the predicted growth in market services will translate into increased quantities of commercial waste. The high growth rate predicted in the period to 2000 is likely to increase volumes rapidly over the same period with a gradual reduction in rates in the medium to long term.

Future quantities of commercial wastes arising have been estimated on the basis that commercial waste arisings are typically 50% of household waste arisings (as found in other counties). These quantities are presented in Table 3.3.

Table 3.3: Forecast Arisings of Commercial Waste 1999-2018, tonnes

1999	2001	2006	2011	2016	2018
23,364	26,387	32,588	36,934	38,697	40,194

The total amount produced up to 2018 is thus estimated at 635,580 tonnes or an average of 31,779 tonnes per annum.

The ESRI also provides forecasts of economic output from the various industrial sectors for the period to 2011. A growth rate of 2.5% pa in industrial waste production is proposed for the period 1999-2006 based on a consideration of the ESRI’s economic projections. A lower rate of growth of 1.5% per annum is proposed for the period to 2011 followed by an average of 1% per annum between 2011 and 2018. The fall-off in the growth rate over time is based on the

assumption that minimisation and clean technologies will progressively impact on waste production by all industrial sectors as the new century progresses. These assumptions allow projections of future arisings of industrial waste in the County to be developed as indicated in Table 3.4.

Table 3.4: Forecast Arisings of Industrial Waste, 1999-2018.

YEAR	1999	2001	2006	2011	2016	2018
Arisings, t	30,000	32,300	36,500	39,300	41,300	42,100
% increase on 1999	-	+7.67	+21.67	+31.0	+37.7	+40.34

3.3 Trends in Waste Management and Private Sector Involvement

Trends in waste management are dictated largely by policy and legislation

The Irish Government published an Environmental Action Programme in 1990 in order to provide a comprehensive and systematic framework for environmental protection in Ireland. The programme is based on the principles of sustainable development, precautionary action and the integration of environmental considerations in all policy areas. It is broadly consistent with the EU Fifth Programme of Policy and Action on the Environment which was adopted in 1992.

National policy on waste management recognises the need to reflect the primacy accorded in EU policy to waste prevention, reduction and reuse. The Government actively promotes waste management programmes which include recycling and reuse. Financial assistance was available under the Operational Programme for Environmental Services 1994-1998 to develop recycling/reuse initiatives and it is anticipated such support will continue to be forthcoming under Agenda 2000.

The Environmental Protection Agency Act 1992 makes important provisions with regard to the waste hierarchy by incorporating waste prevention and elimination programmes into the integrated pollution control licensing system for industry.

In addition to the requirements of the Waste Management Act, Ireland is also required to meet EU targets on recycling and reuse of packaging materials set out in the Packaging Waste Directive. National recycling and recovery targets set out in the government policy statement “Recycling for Ireland” in 1994.

As this document pre-dated the Packaging Directive it has been amended in the light of the requirements of the latter instrument. Further amendments are likely as a result of the implementation of the EU Landfill Directive in relation to the removal of organics from landfill.

In 1997, the Irish Government published “*Sustainable Development – A Strategy for Ireland*”. Under the section on waste management, the Government reiterated its commitment to the EU hierarchy of waste management and cited the acceptance of appropriate responsibility on a shared basis of all sectors of society for more sustainable practices in waste management to be a major general objective. Particular objectives of the strategy were cited as:-

- A stabilisation and reversal of the growth in waste production;
- An intensification of reuse and recycling activity;
- Implementation of improved planning and organisational arrangements provided for in the Waste Management Act 1996;
- The use of economic instruments to reduce waste, promote reuse/recycling, and increase management efficiency.

The Minister of the Environment and Local Government issued a policy statement on waste in September 1998 entitled “Waste Management – Changing Our Ways”. The statement sets out national objectives in relation to the future management of waste. A key objective of the policy is to stabilise, and in the longer term reverse, the growth in waste generation. Specific targets to be achieved over a fifteen year time-scale were established (see Section 4.1(c)).

In areas served by private collectors considerable scope will be provided to Kildare County Council by the forthcoming Waste Management (Collection Permits) Regulations to ensure that public policy decisions in this matter are carried out by contractors.

Private sector involvement in the operation of waste disposal facilities in the County is increasing greatly. A number of private sites as discussed earlier are briefly described below:

- (i) Nephin Trading were granted planning permission (on appeal to an Bord Pleanála) for a disposal site at Kerdiffstown Road, Johnstown. This site receives large quantities of construction and commercial waste from the Dublin region. An EPA Licence is currently being sought for this site.
- (ii) KTK Sand and Gravel Ltd were granted planning permission for a disposal facility at Brownstown, Kilcullen by Kildare County Council in August 1998. The site is permitted to accept “imported dry waste materials arising from construction and demolition sites, road and pipeline projects, and commercial/industrial premises”. A full Licence was issued in April 1999.

3.4 Pending Community Acts

The introduction of the EU Landfill Directive will have a great impact on waste management in County Kildare. The EU Landfill Directive contains stringent controls regarding acceptance at landfill under the following headings:

(i) Biodegradable waste

- Reduction of 25% by 2006 of the quantity being disposed of in 1995
- Reduction of 50% by 2009 of the quantity being disposed of in 1995
- Reduction of 75% by 2016 of the quantity being disposed of in 1995

(ii) Prohibited Waste

Disposal of the following waste to landfill will not be permitted;

- Liquid wastes;
- Explosive, corrosive, oxidising or flammable wastes;
- Infectious Hospital or other clinical waste;
- Old tyres (two years after the date of entry into force of the Directive);
- Shredded used tyres (five years after entry into force of the Directive);
- C&D Wastes unless agreed;
- Glass;
- Recyclable corrugated cardboard;
- Recyclable paper fibres, wood;
- Dead Animals;
- Ferrous/ non-ferrous metals; and
- Hazardous or toxic wastes.

(iii) Treatment of Waste

If the Directive is adopted it will be imperative that all waste being landfilled has been subject to treatment. It is presumed that treatment may include diversion of a portion of the original waste stream to recovery or recycling.

3.5 Relevant Developments in Other Local Authorities

The current status of waste-related infrastructure (existing/proposed) in adjoining local authorities is explored in Table 3.4.

Table 3.4: Summary Details of Developments in Neighbouring Local Authorities.

AUTHORITY/ DEVELOPER	STATUS	POTENTIAL FOR KILDARE
Dublin Region	Severe restriction on landfill capacity – except Arthurstown (see below) Proposals advanced to develop major waste-to-energy facility by 2004.	None – except Arthurstown (see below). Possible outlet for all or part of County’s waste if and when waste-to-energy proposals advance.
South Dublin	Operators of Arthurstown Landfill site. Would probably welcome inputs to site. However, all inputs must be baled. Baling capacity extremely limited at present. Planning permission for landfill site runs out in July 2004.	Good if access to baling facility can be achieved.
Wicklow	Currently involved in long-running attempt to develop a new landfill site.	None. (West Wicklow may require medium term outlet in Co. Kildare).
Laois	Operates own landfill. Part of Midland Region for waste planning purposes.	Poor at present. Awaiting regional waste strategy proposals.
Carlow	Landfill capacity restricted. Part of South-East Region for waste planning purposes.	Poor at present. Waste strategy for SE Region envisages integrated treatment plant (incl. waste-to-energy). Possible medium term outlet for south County. Awaiting formal adoption of strategy.
Meath	Currently involved in developing new landfill site at Knockharley. Part of the North-East Region for waste management purposes.	Poor at present
Offaly	Operates own landfill. Part of Midland Region for waste planning purposes.	Poor at present. Awaiting regional waste strategy proposals.
Bord na Mona (Midlands)	Previous proposals for a large-scale landfill in midland bogs in abeyance.	Poor at present – Uncertain in the medium term.
Waste Management Ireland Limited (WMIL) (Silvermines)	Company advancing proposals for major landfill on site of Magcobar mine. (Estimated capacity 7-8Mm ³). Planning application to be lodged. Rail connection.	Possible long term outlet for residual waste from Co. Kildare if approved. Short-term potential depends on progress of planning/licensing.