



Appendix 6: Waste

A 6.1 Legislation / Regulation

Waste Licensing

Landfills, transfer stations, hazardous waste disposal and other significant waste disposal and recovery activities in Ireland require a waste license from the Environmental Protection Agency (EPA).

A waste license is a single integrated license, which deals with emissions to all environmental media (air, water etc), in addition to the environmental management of the facility. All related waste operations carried on by the applicant in, on or adjacent to the facility are taken into consideration in determining an application for a waste license. The EPA must be satisfied that the activity will not cause significant environmental pollution when it is carried on in accordance with the conditions of a waste license.

The detailed procedures in respect of the processing of a waste license application are set out in the Waste Management Act, 1996.

A 6.2 Waste Management Plan for the Limerick / Clare / Kerry Region 2005-2010

The local authorities, Limerick Corporation, Limerick County Council, Clare County Council and Kerry County Council have agreed to jointly prepare a Waste Management Plan for the Region in accordance with the Waste Management Act, 1996 and the Waste Management (Planning) Regulations, 1997. This represents a step towards regional planning and policy making in relation to Waste Management as proposed in the new National Policy Statement issued in October 1998 by the Department of the Environment & Local Government.

This Plan has regard for all non-hazardous wastes generated within each of the functional areas of each of the above local authorities. Whilst the management of hazardous waste is the responsibility of the Environmental Protection Agency, this Plan will also have regard for the content of the EPA National Hazardous Waste Plan. This Waste Management Plan sets out the proposed policy for integrated waste management in the Region for the next 25 years including the planning, regulation, collection, recycling, recovery and disposal of wastes in accordance with current national and EU waste legislation and policy.

This plan details the amount of waste being generated in the Region, the progress made since the 2001 Plan was introduced and how it is proposed to minimize and treat the waste that is produced in the Region going forward.

The Waste Management Policy Statement by the Department of the Environment and Local Government entitled 'Changing our Ways' (October 1998) encourages local authorities to adopt a regional approach to Waste Management Planning. The Waste Management Policy Statement highlights the following benefits from adopting a regional approach:

- A viable framework in planning and volume terms for the development of integrated and innovative waste management solutions, facilitating segregating collection and incorporating organic waste composting, other treatment technologies and residual landfill.
- A favorable climate for the creation of beneficial partnership arrangements between local authorities and the private sector.

Document: Waste Management Plan for the Limerick / Clare / Kerry Region 2005-2010



Links: - <http://www.managewaste.ie/publications.asp>
- www.clare.ie/publications/publications.html

A 6.3 Landfill Gas



At landfill sites, the anaerobic digestion of the organic component of waste occurs naturally, but more slowly than in specially designed digesters.

Landfill gas is released into the atmosphere if no controls are put in place. To avoid the environmentally harmful effects of this, landfill gas can be collected and used as an energy source for heat and/or power.

Wells are inserted into the waste to collect the gas through a series of perforated pipes. A suction pump collects the gas, which is then cleaned and used as a source of energy. Currently, there are five landfill gas recovery facilities in operation in Ireland.

Municipal solid waste contains significant portions of organic materials that produce a variety of gaseous products when dumped, compacted, and covered in landfills. Anaerobic bacteria thrive in the oxygen-free environment, resulting in the decomposition of the organic materials and the production of primarily carbon dioxide and methane. Carbon dioxide is likely to leach out of the landfill because it is soluble in water. Methane, on the other hand, which is less soluble in water and lighter than air, is likely to migrate out of the landfill. Landfill gas energy facilities capture the methane (the principal component of natural gas) and combust it for energy.

A 6.4 Sewage Waste Treatment

In a town the sewerage system will collect the sewage from domestic, commercial, and industrial premises and carry it to the nearest river or to the sea. The dilution available in the receiving water has traditionally determined the extent of treatment necessary.

Many industrial wastes are also organic in composition and can be treated by microorganisms in the same way as domestic sewage. This type of treatment is called biological treatment and the strength of the sewage is measured in terms of B.O.D. or biochemical oxygen demand. This is a measure of the amount of oxygen used by the microorganisms in breaking down the sewage into stable compounds.

Anaerobic digestion is now well established as a method for the treatment of sewage sludge in Ireland, with digesters installed at several locations. The biogas produced can be burned in CHP plant to produce heat and electricity.

Example: In Clonmel, a CHP is part of a large sewage treatment plant, and is supplied by gas from an anaerobic digester. The electrical installed capacity is 75 kW; and the thermal installed capacity is 120 kW. It was installed in 1998.