

## CHAPTER 15

### WASTE & ENVIRONMENTAL EMISSIONS

#### 15.0 Introduction

The issue of waste disposal and damaging emissions to the environment is recognised by Wicklow County Council as one of the most problematic areas of environmental management. Waste and emission generation is directly linked to trends in consumption and output, reflecting population growth and household formation, the level of manufacturing, industrial and agricultural activity, and overall economic performance. The waste produced from the above activities can be quite diverse requiring consideration of a wide range of environmental, technical, economic and market related issues in order for it to be efficiently managed.

This chapter of the plan will address solid and hazardous waste management, emissions to the air, as well as noise and light pollution, while water pollution / water quality is addressed separately in Chapter 13.

With reference to the **National, Regional and County Objectives** set out in Chapter 2 of this plan, the appropriate management of wastes and emissions will contribute to numerous goals across the three pillars of 'sustainable healthy communities', 'climate action' and 'economic opportunity' by:

- Creating a clean environment for a healthy society;
- Ensuring adequate capacity and systems to manage waste in an environmentally safe and sustainable manner;
- Addressing air quality in urban and rural area through better planning and design;
- Incorporating consistent measures to avoid, mitigate and minimise or promote the pro-active management of noise;
- Promoting environmentally sustainable development in terms of location, layout, design, energy and water usage, reduction and safe disposal of wastes.

#### 15.1 Context

The following directives, national primary and secondary legislation, strategies / plans and guidelines influence the objectives and standards of this plan insofar as they are relevant to a land use plan:

##### 15.1.1 Environmental Protection Agency Acts 1992 & 2003 EU Integrated Pollution Prevention & Control Directive (Directive 96/61/EC)

The 1992 Act addresses the prevention, limitation, elimination, abatement or reduction of environmental pollution, as well as the preservation of the quality of the environment, and for the purposes of the Act, environmental pollution means:

- a) air pollution,
- b) water pollution,
- c) the disposal of waste in a manner which would endanger human health or harm the environment by creating a risk to waters, the atmosphere, land, soil, plants or animals, causing a nuisance through noise or odours or adversely affect the countryside or places of special interest, or noise which is a nuisance,
- d) activities that would endanger human health or damage property or harm the environment.

The IPPC Directive was transposed into Irish law in 2003 with the enactment of the Protection of the Environment Act, 2003. While the 1992 Act anticipated and implemented most of the requirements of the Directive, the PoE Act 2003 made legislative provision for the remaining elements.

The EU Integrated Pollution Prevention and Control (IPPC) Directive (Directive 96/61/EC) provides for a permit system for activities including waste management. It was brought into effect in Ireland by the Protection of the Environment Act 2003 which amends the licensing provisions of the Environmental Protection Agency Act 1992 and the Waste Management Act 1996. The Environmental Protection Agency is responsible for Waste Licensing (formerly Integrated Pollution Control IPC licences) of large or complex industries with significant polluting potential. Local Authorities are responsible for small-scale permitting with authorisation of Waste Permits for small-scale recovery and disposal activities.

Various activities must have a Waste Licence as opposed to a Waste Permit to operate. These are listed in the Environmental Protection Agency Act 1992 as amended by the Protection of the Environment Act 2003. These activities include:

- Energy production
- Intensive agriculture
- Food production
- Activities involving chemicals
- Paper production

The 2003 Act adds further activities to the list which need licences – for example, rearing of poultry and cattle slaughtering.

Licence holders are required to use 'best available techniques' to avoid pollution. An applicant for a Waste Licence has to be a 'fit and proper person'. Among other things, this means that they have not been convicted of an offence involving the pollution control and waste legislation. The EPA has the power to revoke or suspend a Waste Licence where the 'fit and proper person' requirements are no longer met.

The EPA Act 1992 and Part 2 of the PoE Act 2003 are collectively referred to as the Environmental Protection Agency Acts 1992 and 2003.

### **15.1.2 Seveso III Directive Prevention of Major Accidents (Control of Major Accident Hazards Involving Dangerous Substances) Regulations**

The catastrophic accident in the Italian town of Seveso in 1976 prompted the adoption of legislation on the prevention and control of such accidents. The so-called Seveso Directive (Directive 82/501/EEC) was later amended in view of the lessons learned from later accidents such as Bhopal, Toulouse or Enschede resulting into Seveso-II (Directive 96/82/EC). In 2012 Seveso-III (Directive 2012/18/EU) was adopted taking into account, amongst others, the changes in the Union legislation on the classification of chemicals and increased rights for citizens to access information and justice.

The Directive applies to more than 12 000 industrial establishments in the EU where dangerous substances are used or stored in large quantities, mainly in the chemical and petrochemical industry, as well as in fuel wholesale and storage (incl. LPG and LNG) sectors.

The Chemicals Act (Control of Major Accident Hazards involving Dangerous Substances) Regulations 2015 (S.I. No. 209 of 2015) (the "COMAH Regulations"), implement the Seveso III Directive (2012/18/EU). The purpose of the COMAH Regulations is to lay down rules for the prevention of major accidents involving dangerous substances, and to seek to limit as far as possible the consequences for human health and the environment of such accidents, with the overall objective of providing a high level of protection in a consistent and effective manner.

The intention is to achieve this through tiered controls on the operators of the establishments subject to the regulations - the larger the quantities of dangerous substances present at an establishment, the more onerous the duties on the operator.

The European Communities (Control of Major Accident Hazards Involving Dangerous Substances) Regulations 2006 and the European Union (Control of Major Accident Hazards Involving Dangerous Substances) (Amendment) Regulations 2013, which implemented the Seveso II Directive (96/82/EC), have been revoked by the European Union (Control of Major Accident Hazards Involving Dangerous Substances)(Revocation) Regulations 2015 (S.I. No. 208 of 2015) and replaced by the COMAH Regulations.

### **15.1.3 EU Waste Directives (various)**

#### **Waste Management Acts (1996-2011)**

#### **Eastern–Midlands Region Waste Management Plan (WMP) 2015-2021**

The Waste Framework Directive (Directive 2008/98/EC on waste) sets down basic requirements for handling waste and defines what is meant by "waste". It provides that EU member states must:

- Ensure that the disposal and recovery of waste does not present a risk to water, air, soil, plants and animals;
- Not allow waste disposal to constitute a public nuisance through excessive noise levels or unpleasant odours, or to degrade places of special natural interest;
- Prohibit the dumping or uncontrolled disposal of waste;
- Establish an integrated and effective network of waste disposal plants, prepare waste management plans, ensure that those who store waste, handle it properly, and ensure that waste treatment operations are licensed;
- Require waste collectors to have special authorisation and to keep records;
- Undergo periodic inspections of companies involved in waste collection or disposal.

**Hazardous waste:** The PCB/PCT Directive (Directive 96/59/EC on the disposal of polychlorinated biphenyls and polychlorinated terphenyls) deals with the disposal of certain hazardous chemicals that represent a particular threat to the environment and to human health.

**Sewage Sludge Directive:** The Sewage Sludge Directive (Directive 86/278/EEC on the protection of the environment, and in particular of the soil, when sewage sludge is used in agriculture) sets controls on the use of sewage sludge in agriculture.

**Landfill Directive:** The Landfill Directive (Directive 1999/31/EC on the landfill of waste) sets out detailed rules on waste landfills. It provides that the operators of existing landfill sites must have an approved conditioning plan which indicates how the requirements of the Directive are to be met within the required timeframe. These plans must help prevent the negative effects of landfill on surface water, groundwater, soil and air. The Directive also bans certain types of waste from landfill sites, for example used tyres, and requires member states to reduce the amount of biodegradable waste that they landfill to 35% of 1995 levels.

**Incineration of Waste Directive:** The Directive on the incineration of waste (Directive 2000/76/EC of 4 December 2000) aims to prevent or limit the negative effects of the incineration of waste. It imposes operational and technical requirements and sets emission limit values for waste incineration and co-incineration plants within the EU.

**Packaging Waste Directive:** The Packaging Waste Directive (Directive 94/62/EC on packaging and packaging waste) sets targets for the recovery and recycling of packaging waste and requires member states to set up collection, recycling and recovery schemes for such waste.

**End-of-Life Vehicles Directive:** The End-of-Life Vehicles Directive (Directive 2000/53/EC on end-of-life vehicles) sets out measures which aim to prevent waste from motor vehicles and vehicle components that have reached the end of their life-cycle and to promote vehicle reuse, recycling and other forms of recovery. It requires that collection systems be set up to ensure that end-of-life vehicles are effectively and safely disposed of without damaging the environment.

**Electrical & Electronic Waste (WEEE):** The Directive on waste electrical and electronic equipment (the WEEE Directive 2012/19/EU) became effective on 14 February 2014. It aims to prevent the generation of electrical and electronic waste and to promote reuse, recycling and other forms of recovery in order to reduce the quantity of such waste to be eliminated through landfilling or incineration. It requires the collection of WEEE, recovery and reuse or recycling.

These Directives are implemented in Ireland by the Environmental Protection Agency Act 1992, the Waste Management Act 1996, the Waste Management (Amendment) Act 2001 and the Protection of the Environment Act 2003. Several statutory instruments deal with specific aspects of EU Directives.

Waste policy and legislation are implemented largely by the Environmental Protection Agency and the local authorities. The current waste management policy is set out in the September 2020 publication by the Department of Environment, Climate and Communications of '*A Waste Action Plan for a Circular Economy*'. This plan goes beyond the management of waste and addresses how we look at resources more broadly, capturing and maximising the value of materials that may in the past have been discarded. A key objective of this Action Plan is therefore to shift the focus away from waste disposal and moves it back up the product life cycle, to remove or design out harmful waste, to extend the life of the products and goods we use and prevent waste arising in the first place – consistent with the concept of a zero-waste future.

The Waste Management Acts provide for a general duty on everyone not to hold, transport, recover or dispose of waste in a manner that causes or is likely to cause environmental pollution.

The EPA's main activities in the waste management area are:

- Drawing up and reviewing the National Hazardous Waste Management Plan;
- The waste licensing system, which deals with the generation, recovery and disposal of waste of large and complex industries;
- Development of guidelines for the selection, management, operation and ending of use of landfill sites;
- Authorisation of waste imports;
- Maintenance of a national waste database.

Local Authorities are responsible for:

- Authorisation and control of commercial waste collection activities;
- Authorisation of waste exports and monitoring of internal movements of hazardous wastes;
- Waste permits for small-scale recovery and disposal activities;
- Ensuring adequate waste collection, recovery and disposal arrangements in their areas;
- Monitoring and inspection of waste activities generally.

## Waste Management Plans

There are 3 regions for the purposes of waste management planning: Southern, Eastern-Midlands and Connacht-Ulster. The regional waste management plans deal with non-hazardous waste and must include measures to:

- Prevent or minimise the production or harmful nature of waste;
- Encourage and support the recovery of waste;
- Ensure that the waste which cannot be prevented or recovered is disposed of without causing environmental pollution; and
- Ensure that the 'polluter pays' principle is effectively applied.

County Wicklow is part of the Eastern–Midlands Waste Region. The Eastern–Midlands Region Waste Management Plan (WMP) 2015-2021 provides the framework for solid waste management in the region and sets out a range of policies and actions to meet specified mandatory and performance based targets. The WMP seeks to assist and support resource efficiency and waste prevention initiatives. A key WMP target is to achieve a 1% reduction per annum in the quantity of household waste generated per capita over the period of the WMP. In tandem, the WMP identifies measures to develop a circular economy whereby waste management initiatives are no longer confined to treating and disposing of waste, instead supporting initiatives that value waste as a resource or potential raw material. This Plan supports the move to a more circular economy as this will save resources, increase resource efficiency, and help to reduce carbon emissions. The successful implementation of circular economy principles will help to reduce the volume of waste that the County produces.

### 15.1.4 Air Quality Framework Directive 1996

#### **Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive 2008**

#### **Ambient Air Regulations 2009**

#### **Air Quality Standards Regulations 2011**

EU directives set down the standards for monitoring, assessing and managing ambient air quality in Ireland and the other Member States. The principles to this approach were set down by the European Commission in 1996 through the Air Quality Framework Directive. Following this, four 'daughter' directives established limits to specific pollutants. This Framework Directive and the first three 'daughter' directives were replaced by the Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive in 2008.

The fourth 'daughter' directive specifies target values and monitoring requirements for arsenic, cadmium, mercury, nickel and polycyclic hydrocarbons. This was transposed into Irish legislation in the Ambient Air Regulations 2009.

The CAFE Directive was transposed into Irish legislation by the Air Quality Standards Regulations 2011. It replaced three earlier statutory instruments: the Air Quality Standards Regulations 2002, the Ozone in Ambient Air Regulations 2004 and S.I. No. 33 of 1999.

These regulations set down the limit or target values for the following pollutants:

- Sulphur Dioxide
- Nitrogen Dioxide and Oxides of Nitrogen
- Particulate Matter (PM10 and PM2.5)
- Lead
- Benzene
- Carbon Monoxide
- Ozone

While the CAFE Directive did not change existing air quality standards, it did introduce new obligations relating to fine particulate matter (PM2.5). Fine particulate matter is considered to be particularly harmful to human health.

### **15.1.5 EU Noise Directive 2002/49/EC Noise Regulations S.I.140 / 2006 & S.I. 549/2018**

The aim of EU Noise Directive 2002/49/EC is to define a common approach intended to avoid, prevent or reduce, on a prioritised basis, the harmful effects, including annoyance, due to exposure to environmental noise.

Environmental noise means unwanted or harmful outdoor sound created by human activities, including noise from transport, road traffic, rail traffic, air traffic, and from sites of industrial activity. The Directive applies to noise to which humans are exposed, particularly in built-up areas, public parks or other quiet areas within built-up areas, and in quiet areas in open country, near schools, hospitals and other noise-sensitive buildings and areas.

Under the Directive, local authorities are required to make action plans to reduce ambient noise. The EPA exercises general supervision over the functions and actions of the local authorities in this aspect of their work.

When granting planning permission, the local authority has the power to provide that conditions in relation to noise prevention or reduction be included in the permission.

This Directive aims at providing a basis for developing Community measures to reduce noise emitted by the major sources, in particular road and rail vehicles and infrastructure, aircraft, outdoor and industrial equipment and mobile machinery.

The Environmental Noise Directive was transposed into Irish Law as Statutory Instrument, S.I. No. 140/2006 - Environmental Noise Regulations 2006. However, the European Communities (Environmental Noise) Regulations 2018 (S.I. No. 549) both revise and revoke the Environmental Noise Regulations 2006.

The Environmental Noise Directive (END) requires Member States to prepare and publish, every 5 years, strategic noise maps and noise management action plans. The aim of the END is to provide a common framework to avoid, prevent or reduce, on a prioritised basis, the harmful effects of exposure to environmental noise through the preparation of strategic noise maps and the development and implementation of action plans.

The EPA is the national authority for overseeing the implementation of the Regulations. This role includes supervisory, advisory and coordination functions in relation to both noise mapping and action planning, as well as various reporting requirements for the purpose of the Directive.

Responsibility for the preparation of the relevant noise maps lies with the Noise Mapping Bodies (NMBs) which include Transport Infrastructure Ireland (TII) responsible for National Roads & the Luas, Local Authorities (LAs) responsible for non-national roads, Irish Rail (heavy rail), Dublin Airport Authority (DAA), as well as Dublin City Council, Fingal, Dún Laoghaire-Rathdown, & South Dublin County Councils (Dublin agglomeration) as well as Cork City and Cork County Councils (Cork agglomeration). The preparation and implementation of the resulting noise action plans occurs at local level and is the responsibility of the Local Authorities.

Following the preparation of the noise maps, the relevant Action Planning Authorities (APAs) i.e. the local authorities, are required to prepare noise action plans where the  $L_{den}$  (55 dB) and  $L_{night}$  (50 dB) thresholds have been exceeded. These action plans are designed to manage noise issues and effects, and it involves the prevention and reduction of environmental noise. Each LA should identify their noise sensitive locations which may include drawing up a short list of potential areas for action, both above the recommended onset values for noise mitigation measures, and below the recommended level for preservation (to help identify Quiet Areas). Wicklow's current Noise Action Plan was adopted in 2019.

### 15.1.6 Planning & Development Act 2000 (as amended) with respect to Waste & Environmental Emissions

The Planning & Development Act requires that a development plan includes objectives for:

*“The provision or facilitation of the provision of infrastructure including—waste recovery and disposal facilities (regard having been had to the waste management plan for the area made in accordance with the Waste Management Act 1996)”*

*“The control, having regard to the provisions of the Major Accidents Directive and any regulations, under any enactment, giving effect to that Directive, of-*

*(i) siting of new establishments,*

*(ii) modification of existing establishments, and*

*(iii) development in the vicinity of such establishments,*

*for the purposes of reducing the risk, or limiting the consequences, of a major accident”.*

## 15.2 Climate Action

As set out in the **Climate Action Plan**, gas emissions arising from the material management of waste account for more than 50% of national emissions; Ireland’s material consumption is well above the EU average, and continues to rise as the economy recovers and grows. While Ireland has made significant progress in managing waste streams, particularly in improving recycling rates and diversion from landfill, there is scope for savings in greenhouse gas emissions through better prevention strategies, improved capture rates, reduced contamination and reducing the amount of non-recyclable materials.

**Ireland’s National Waste Policy 2020 – 2025** sets out new targets to tackle waste and move towards a circular economy. The plan includes halving our food waste by 2030, the introduction of a deposit and return scheme for plastic bottles and cans, a ban on certain single use plastics from July 2021, and a levy on disposable cups. Other measures include applying green criteria and circular economy principles in all public procurement, a waste recovery levy to encourage recycling, and ensuring all packaging is reusable or recyclable by 2030.

**The Waste Action Plan for a Circular Economy** fulfils the commitment in the Programme for Government to publish and start implementing a new National Waste Action Plan. The policy document shifts focus away from waste disposal and moves it back up the production chain. To support the policy, regulation is already being used (Circular Economy Legislative Package) or in the pipeline (Single Use Plastics Directive). The policy document contains over 200 measures across various waste areas including Circular Economy, Municipal Waste, Consumer Protection and Citizen Engagement, Plastics and Packaging, Construction and Demolition, Textiles, Green Public Procurement and Waste Enforcement.

In addition to the contribution of the proposals contained in **Climate Action Plan** to reduce Ireland’s greenhouse gas emissions, many of the changes that are required will have positive economic and societal co-benefits, including cleaner air, warmer homes and a more sustainable economy for the long term. In line with the UN Sustainable Development Goals, climate action must be seen as complementary to other important policy objectives, such as promoting sustainable economic development pathways, improving energy security, and addressing air pollution impacts on human health. For example, a significant shift away from internal combustion engine vehicles in the transport sector, and the retrofitting of existing buildings with electricity-powered heat pump systems, are expected to result in significant improvements in local air quality metrics and health outcomes.

**Climate Change Sectoral Adaption Plan for Health** addresses the impact of climate change on human health, including among other areas the impact of air pollution. Older adults, individuals with chronic disease, children and those in deprived communities living near busy roads are particularly vulnerable to the health impacts of poor air quality. Climate change is expected to aggravate existing health risks through weather-driven increases in air



pollutants such as ozone and particulate matter. The current magnitude of premature mortality from air pollution and the potential of climate change to exacerbate this makes this scenario a very serious risk. In Ireland, it is estimated that 1,050 premature deaths occurred in 2014 secondary to PM2.5 and 20 premature deaths occurred secondary to ozone (European Environment Agency [EEA], 2017). Climate change impacts on aeroallergens such as the earlier onset in the pollen season in the northern hemisphere - by about 15 days over the last three decades - which is likely to have had an impact on the patterns of allergenic disease caused by pollen.

### 15.3 Waste & Emissions Objectives

#### Solid Waste Management Objectives

- CPO 15.1** To require all developments likely to give rise to significant quantities of waste, either by virtue of the scale of the development or the nature of the development (e.g. one that involves demolition) to submit a construction management plan, which will outline, amongst other things, the plan to minimise waste generation and the plan to protect the environment with the safe and efficient disposal of waste from the site.
- CPO 15.2** To require all new developments, whether residential, community, agricultural or commercial to make provision for storage and recycling facilities (in accordance with the standards set out in Development & Design Standards of this plan).
- CPO 15.3** To facilitate the development of existing and new waste prevention and recovery facilities and in particular, to facilitate the development of 'green waste' recovery sites.
- CPO 15.4** To facilitate the development of waste-to-energy facilities, particularly the use of landfill gas and biological waste.
- CPO 15.5** To have regard to the Council's duty under the 1996 Waste Management Act (as amended), to provide and operate, or arrange for the provision and operation of, such facilities as may be necessary to promote reuse or for the recovery and disposal of household waste arising within its functional area.
- CPO 15.6** To facilitate the development of sites, services and facilities necessary to achieve implementation of the objectives of the Regional Waste Management Plan.

#### Hazardous Waste Objectives

- CPO 15.7** To facilitate the development of sites, services and facilities for the disposal of hazardous household wastes in accordance with the objectives of the Regional Waste Management Plan.
- CPO 15.8** In relation to the Prevention of Major Accidents (Control of Major Accident Hazards Involving Dangerous Substances) legislation, it is an objective to:
- comply with the Seveso III Directive in reducing the risk and limiting the potential consequences of major industrial accidents;
  - where proposals are being considered for the following: (i) new establishments at risk of causing major accidents, (ii) the expansion of existing establishments designated under the Directive, and (iii) other developments proposed near to existing establishments; the Council will require that applicants must demonstrate that the following considerations are taken into account: (i) prevention of major accidents involving dangerous substances, (ii) public health and safeguarding of public health, and (iii) protection of the environment;



- ensure that land use objectives must take account of the need to maintain appropriate distances between future major accident hazard establishments and residential areas, areas of substantial public use and areas of particular natural sensitivity or interest; and
- have regard to the advice of the Health and Safety Authority when dealing with proposals relating to Seveso sites and land use plans in the vicinity of such sites.

### Air Pollution Objectives

- CPO 15.9** To regulate and control activities likely to give rise to emissions to air (other than those activities which are regulated by the EPA).
- CPO 15.10** To require proposals for new developments with the potential for the accidental release of chemicals or dust generation, to submit and have approved by the Local Authority construction and/or operation management plans to control such emissions.
- CPO 15.11** To require activities likely to give rise to air emissions to implement measures to control such emissions, to undertake air quality monitoring and to provide an annual air quality audit.

### Noise Pollution Objectives

- CPO 15.12** To implement the Wicklow County Council Noise Action Plan 2018-2023 (and any subsequent Plan) in order to avoid, prevent and reduce the harmful effects, including annoyance, due to environmental noise exposure
- CPO 15.13** To enforce, where applicable, the provisions of the Environmental Protection Agency (EPA) Acts 1992 and 2003, and EPA Noise Regulations 2006.
- CPO 15.14** To regulate and control activities likely to give rise to excessive noise (other than those activities which are regulated by the EPA).
- CPO 15.15** To require proposals for new developments with the potential to create excessive noise to prepare a construction and/or operation management plans to control such emissions.
- CPO 15.16** To require activities likely to give rise to excessive noise to install noise mitigation measures to undertake noise monitoring and to provide an annual monitoring audit.

### Light Pollution Objectives

- CPO 15.17** To ensure that all external lighting whether free standing or attached to a building shall be designed and constructed so as not to cause excessive light spillage, glare, or dazzle motorists, and thereby limiting light pollution into the surrounding environment and protecting the amenities of nearby properties, traffic and wildlife.
- CPO 15.18** To require proposals for new developments with the potential to create light pollution or light impacts on adjacent residences to mitigate impacts, in accordance with the Development & Design Standards set out in this plan.
- CPO 15.19** To promote the use of low energy LED (or equivalent) lighting.
- CPO 15.20** To require the design and implementation of a hierarchy of light intensity zones in development schemes to ensure that environmental impact is minimised as far as possible particularly in areas proximate to ecological corridors.