Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

End-of-Waste — Guidance Document

Part 1: Introducing End-of-Waste

ENVIRONMENTAL PROTECTION AGENCY

The Environmental Protection Agency (EPA) is responsible for protecting and improving the environment as a valuable asset for the people of Ireland. We are committed to protecting people and the environment from the harmful effects of radiation and pollution.

The work of the EPA can be divided into three main areas:

Regulation: *We implement effective regulation and environmental compliance systems to deliver good environmental outcomes and target those who don't comply.*

Knowledge: *We provide high quality, targeted and timely environmental data, information and assessment to inform decision making at all levels.*

Advocacy: *We work with others to advocate for a clean, productive and well protected environment and for sustainable environmental behaviour.*

Our Responsibilities

Licensing

We regulate the following activities so that they do not endanger human health or harm the environment:

- waste facilities (*e.g. landfills, incinerators, waste transfer stations*);
- large scale industrial activities (*e.g. pharmaceutical, cement manufacturing, power plants*);
- intensive agriculture (*e.g. pigs, poultry*);
- the contained use and controlled release of Genetically Modified Organisms (*GMOs*);
- sources of ionising radiation (*e.g. x-ray and radiotherapy equipment, industrial sources*);
- large petrol storage facilities;
- waste water discharges;
- dumping at sea activities.

National Environmental Enforcement

- Conducting an annual programme of audits and inspections of EPA licensed facilities.
- Overseeing local authorities' environmental protection responsibilities.
- Supervising the supply of drinking water by public water suppliers.
- Working with local authorities and other agencies to tackle environmental crime by coordinating a national enforcement network, targeting offenders and overseeing remediation.
- Enforcing Regulations such as Waste Electrical and Electronic Equipment (WEEE), Restriction of Hazardous Substances (RoHS) and substances that deplete the ozone layer.
- Prosecuting those who flout environmental law and damage the environment.

Water Management

- Monitoring and reporting on the quality of rivers, lakes, transitional and coastal waters of Ireland and groundwaters; measuring water levels and river flows.
- National coordination and oversight of the Water Framework Directive.
- Monitoring and reporting on Bathing Water Quality.

Monitoring, Analysing and Reporting on the Environment

- Monitoring air quality and implementing the EU Clean Air for Europe (CAFÉ) Directive.
- Independent reporting to inform decision making by national and local government (*e.g. periodic reporting on the State of Ireland's Environment and Indicator Reports*).

Regulating Ireland's Greenhouse Gas Emissions

- Preparing Ireland's greenhouse gas inventories and projections.
- Implementing the Emissions Trading Directive, for over 100 of the largest producers of carbon dioxide in Ireland.

Environmental Research and Development

- Funding environmental research to identify pressures, inform policy and provide solutions in the areas of climate, water and sustainability.

Strategic Environmental Assessment

- Assessing the impact of proposed plans and programmes on the Irish environment (*e.g. major development plans*).

Radiological Protection

- Monitoring radiation levels, assessing exposure of people in Ireland to ionising radiation.
- Assisting in developing national plans for emergencies arising from nuclear accidents.
- Monitoring developments abroad relating to nuclear installations and radiological safety.
- Providing, or overseeing the provision of, specialist radiation protection services.

Guidance, Accessible Information and Education

- Providing advice and guidance to industry and the public on environmental and radiological protection topics.
- Providing timely and easily accessible environmental information to encourage public participation in environmental decision-making (*e.g. My Local Environment, Radon Maps*).
- Advising Government on matters relating to radiological safety and emergency response.
- Developing a National Hazardous Waste Management Plan to prevent and manage hazardous waste.

Awareness Raising and Behavioural Change

- Generating greater environmental awareness and influencing positive behavioural change by supporting businesses, communities and householders to become more resource efficient.
- Promoting radon testing in homes and workplaces and encouraging remediation where necessary.

Management and Structure of the EPA

The EPA is managed by a full time Board, consisting of a Director General and five Directors. The work is carried out across five Offices:

- Office of Environmental Sustainability
- Office of Environmental Enforcement
- Office of Evidence and Assessment
- Office of Radiation Protection and Environmental Monitoring
- Office of Communications and Corporate Services

The EPA is assisted by an Advisory Committee of twelve members who meet regularly to discuss issues of concern and provide advice to the Board.

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Guidance Document
Part 1: Introducing End-of-Waste

Environmental Protection Agency

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Disclaimer

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1. Introduction to this Guidance Document

1.1 Structure

Part 1: Introducing End-of-Waste: Describing the context and benefits and introducing the end-of-waste test to potential applicants (this document).

Part 2: Preparing an End-of-Waste Application: Providing guidance for applicants on how to address the requirements of the end-of-waste test (separate document).

Should you need to contact the Agency in relation to end-of-waste, your queries should be directed via email to article28@epa.ie.

1.2 Purpose

Uncertainty over the point at which waste has been 'fully recovered', and ceases to be classified as waste, has inhibited the development and marketing of waste-derived materials that could be used beneficially without damaging human health and the environment. This can in turn inhibit the recovery and recycling of waste and its diversion from landfill and other disposal routes. National legislation (please refer to section 3.2.3) sets out the requirements on how to achieve end-of-waste status, supporting the beneficial use of waste derived materials, consistent with the concept of a circular economy (please refer to section 1.3).

This document provides guidance on the law and what to consider when deciding whether to apply for end-of-waste status (Part 1). If you decide that it is appropriate to apply for end-of-waste status, this guide (along with Part 2) will support you to make a good quality application that will enable the Agency to make a decision on end-of-waste status.

Good quality applications are critical. Your application is the basis of an important regulatory decision that requires detailed scrutiny. Above all, the Agency must ensure that by making a decision to grant end-of-waste status this will not lead to adverse impacts on human health and the environment. To enable this, you must provide the Agency with a comprehensive understanding of your material, its intended use and sufficient evidence that no overall adverse impacts to human health or pollution will occur.

The guidance represents a commitment from the Agency to provide clarity to applicants on the requirements for case-by-case and national end-of-waste decisions in Ireland, to reduce iterations of applications and to speed up the process. This guidance is intended to support:

- Applications by individual companies relating to a waste material that they generate and/or accumulate for subsequent recovery and sale or use as a 'product'. Any resulting end-of-waste decision will be for the benefit of the applicant company only; and
- Applications by industry organisations and/or groups of companies for a national end-of-waste position relating to a waste material that arises from various sources and is subsequently recovered for sale or use as a 'product'. Any resulting end-of-waste decision is for the benefit of the industry as a whole.

Further details on these types of end-of-waste applications are provided in section 3.3.

In general terms, a substance, material or object that is not classified as a waste (or ceases to be classified as a waste) is classified as a 'product'. The term 'product' is used in this document to describe something that has ceased to be classified as a waste. Legislation and guidance may refer to other terms for materials that have ceased to be waste such as 'secondary' products or materials. These terms should be considered to have the same meaning in this document.

The guidance provides advice that is relevant to any applicant and any material. It is not tailored to any specific material types or industry sectors.

The Agency anticipates that applicants will submit end-of-waste applications for individual, distinct waste materials. This will help to facilitate the assessment of applications by the Agency. It is possible that applicants will consider making a single combined end-of-waste application for more than one waste type that it considers are closely related. The Agency would urge caution in this approach, however in any such case the application must clearly establish the similarities and differences between the waste types with clear evidence that sets out the validity of a combined approach. Early engagement with the Agency is recommended in this situation. This guidance document focuses on applications for individual waste types and it will also help applicants to consider the suitability of combined applications for closely related waste types.

1.3 Policy and Strategy Context

The opportunity to define the point at which a waste ceases to be classified as waste, thereby facilitating its recovery and recycling, is consistent with the national waste policy and the European waste and resources strategy. The following summarises the content of relevant policy and strategy documents to establish the context for end-of-waste.

1.3.1 Ireland's Waste Management Policy

Ireland's current policy "*A Resource Opportunity – Waste management policy in Ireland*", was published by the Department of the Environment, Community and Local Government in July 2012[1]. The Agency anticipates that a revised policy will be published in 2020. Please refer to the website of the Department of Communications, Climate Action and Environment[2] for updates and, in due course, for a revised policy.

The 2012 policy sets out a roadmap, predicated on the EU waste hierarchy, on how Ireland will move away from an over dependence on landfill and become a recycling society. This includes maximising the resources that can be recovered from waste. The policy recognises the role of the legal framework for end-of-waste to facilitate recycling and recovery activities in the transition to a recycling society.

https://www.epa.ie/waste/policy/

1 https://www.epa.ie/pubs/reports/waste/plans/Resource_Opportunity2012.pdf

2 www.dccae.gov.ie

1.3.2 European Waste and Resource Strategy

- The European Commission's "*Thematic Strategy on the Prevention and Recycling of Waste*" set a long-term goal for the EU to become a recycling society that seeks to avoid waste and uses waste that is generated as a resource. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52011DC0013&from=EN
- "*Closing the loop - An EU action plan for the Circular Economy*" (2015), seeks to boost the market for secondary raw materials by committing to developing EU-wide secondary raw material standards and clarifying rules on end-of-waste. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52015DC0614
- The European Commission's 2019 report "on the implementation of the Circular Economy Action Plan", sets out actions to support end-of-waste, including a new Fertilising Products regulation with criteria for fertilisers manufactured from bio-waste. https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1551871195772&uri=CELEX:52019DC0190
- The European Commission's 2019 report "A Circular Economy for Plastics", includes a policy recommendation to establish end-of-waste criteria for plastics. https://op.europa.eu/en/publication-detail/-/publication/33251cf9-3b0b-11e9-8d04-01aa75ed71a1/language-en/format-PDF/source-87705298

1.4 Useful References

A number of general reference sources on end-of-waste are provided below. Further reference sources that are relevant to the issues described in more detail within this document are provided within the text.

European Commission website, Directive 2008/98/EC on waste (Waste Framework Directive).

https://ec.europa.eu/environment/waste/framework/

European Commission website, Waste Framework Directive, end-of-waste criteria.

https://ec.europa.eu/environment/waste/framework/end_of_waste.htm

"*Guidance on the interpretation of key provisions of Directive 2008/98/EC on waste*", European Commission Directorate-General Environment, June 2012 (not legally binding).

https://ec.europa.eu/environment/waste/framework/pdf/guidance_doc.pdf

"*End-of-Waste Criteria*", Final Report, European Commission Joint Research Centre Institute for Prospective Technological Studies, 2009 ("JRC report").

https://publications.jrc.ec.europa.eu/repository/bitstream/JRC53238/jrc53238.pdf

"*Guidance on the legal definition of waste and its application*", Department for Environment, Food and Rural Affairs (Defra), August 2012.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69590/pb13813-waste-legal-def-guide.pdf

"*Study on the selection of waste streams for End of Waste assessment*", Final Report, European Commission Joint Research Centre Institute for Prospective Technological Studies, 2009.

https://susproc.jrc.ec.europa.eu/documents/SelectionofwastestreamsforEoW-FinalReport13_02_2009.pdf

2. INTRODUCTION TO END-OF-WASTE

2.1 The Concept of End-of-Waste

The concept of end-of-waste was established in the European Waste Framework Directive 2008/98/EC[3] (Waste Framework Directive). The legal framework is designed to:

- improve the environmental performance of recycled products by encouraging businesses to produce recycled products that conform to defined environmental criteria; and
- reduce unnecessary burdens, including the regulatory burden, for low-risk recycling activities.

End-of-waste gives the opportunity for waste holders to demonstrate, with an appropriate level of rigour, that:

- they can 'fully recover' a waste material so that it no longer needs to be defined as waste because it has been processed to the point that it has intrinsic value and is unlikely to be discarded;
- that the waste can therefore be used as a 'secondary' resource in place of, and fulfilling the same role as, a non-waste derived or virgin 'primary' resource; and
- the fully recovered material can be used without causing overall adverse impacts to the environment or human health.

What does *'fully recovered'* mean?

'Fully recovered' is a term used in this document to emphasise the appropriate level of processing to support an end-of-waste application. 'Fully' recovered helps to define the point at which a waste can potentially be considered to have ceased to be waste, when no further treatment or quality/verification testing is necessary prior to its use.

Recovery is defined in the Waste Framework Directive as (Article 3(15)):

> *"'Recovery' means any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy."*

Annex II of the Waste Framework Directive sets out a non-exhaustive list of recovery ('R') operations. These include, for example, R 12 and R 13, which in general terms relate to the storage and pre-processing of waste before *another* recovery operation takes place. Such 'preliminary' operations support recovery but do not represent an appropriate level of waste treatment in the context of end-of-waste. Separately, R 10 and R 11 refer to the use of waste, which is not relevant to an end-of-waste application, the purpose of which is to bring forward the point at which a material ceases to be waste from its point of use.

Therefore, the separate term 'fully recovered' is used to describe a suitable point at which:

- the waste has been completely recovered, having undergone its 'ultimate' recovery operation and does not need any further treatment before it is ready for use; and,
- the recovery operation has generated a substance that can be placed back on the market for commercial use.

3 https://ec.europa.eu/environment/waste/framework/

The overall intended benefit of end-of-waste is to facilitate the recovery of waste thereby diverting waste from disposal. End-of-waste moves the management of waste up the EU waste hierarchy of options in terms of environmental sustainability and retains the materials in use as a resource, in-line with the concept of a circular economy.

It is important to recognise that waste regulation plays an important role to protect people and the environment from harm and to safeguard natural resources. End-of-waste is consistent with the principles of good regulation and it is predicated on achieving the same safeguards. End-of-waste criteria specify all of the requirements that have to be fulfilled by a material derived from waste to ensure that its use will not be detrimental to human health or the environment and that it is of sufficient quality to realise an economic benefit, supporting a sustainable market.

2.1.1 Definition of Waste

Relevant to defining the point at which material ceases to be waste is understanding the point at which materials are first defined as becoming a waste. Waste has been defined by legislation for over 30 years and is embedded in the Waste Framework Directive as (Article 3(1)):

> *"'Waste' means any substance or object which the holder discards or intends or is required to discard".*

Once a substance or object becomes waste, something usually needs to be done to it in order for it to cease to be waste. This may occur if the waste has been 'fully recovered' by undertaking treatment to remove waste-related risks.

2.2 Potential Benefits of Achieving End-of-Waste Status

Significant benefits may be realised by industry, society and the regulator from achieving end-of-waste status. On the other hand, if waste material is used inappropriately, it can potentially cause an adverse effect on the environment or human health. Robust end-of-waste decisions help Ireland to deliver on its waste management policy commitments and support environmental sustainability objectives by encouraging greater recovery and recycling of waste for beneficial use, thereby benefitting the environment and society as a whole.

The use of waste-derived materials reduces the need to exploit primary resources. This can reduce local environmental impacts, such as amenity impacts arising from quarrying and refining, and global environmental impacts, including greenhouse gas emissions.

Industry can equally benefit through reduced administrative burdens of managing waste and can benefit commercially whilst helping to remove quality waste materials from the scope of waste legislation:

- End-of-waste status creates positive perceptions of recovered materials by removing the waste 'stigma' that can deter potential customers. This in turn creates the environment to develop and market materials produced from waste that can be used beneficially without damaging human health and the environment.
- Positive perceptions support the development of sustainable secondary markets for, and confidence in, recovered secondary materials. This supports their economic value, allowing industry to further innovate in new products derived from waste and therefore further increasing the beneficial use of waste.

Importantly, demonstrating that a material has been fully recovered and meets the specified end-of-waste criteria allows it to be marketed for use as a product on an equal footing to non-waste derived products.

2.3 The Agency's Decision-Making Process and Scrutiny

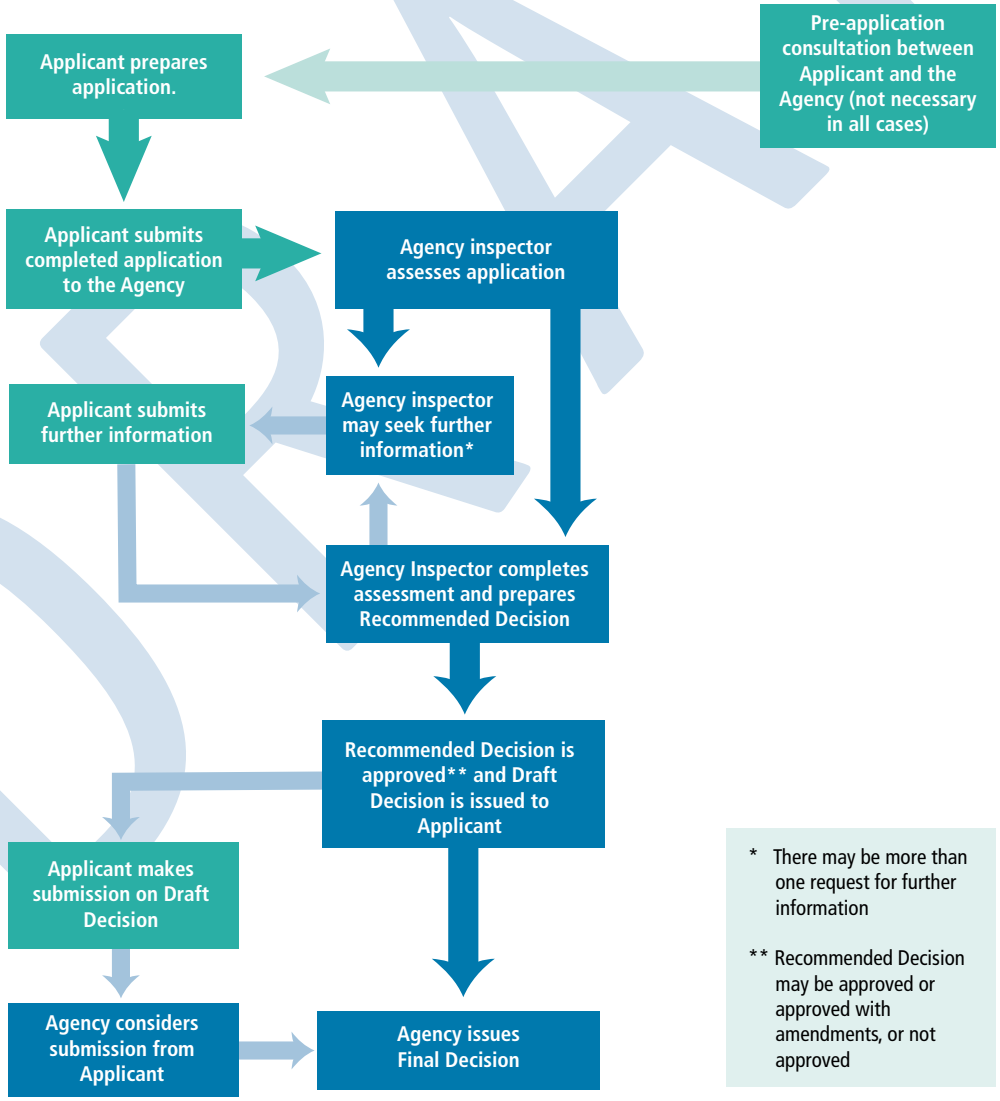
2.3.1 The Importance of Scrutiny

It is important to note that the end-of-waste test represents a high bar. This is necessary as an end-of-waste decision, by definition, results in a waste falling outside of waste regulatory control. It is therefore essential that the Agency is presented with a robust case that allows it to fully understand the risks and mitigations and gives it confidence to make a decision.

The Agency's decision-making process ensures that human health and the environment are protected, as well as ensuring a level playing field for operators. A wrong decision that results in the use of material as a product, but which causes an overall adverse impact on human health and the environment, can damage the reputation of the wider industry and the Agency, and can severely impact confidence in secondary materials. Building market confidence in secondary markets takes time, destroying that confidence can happen rapidly and have long-lasting consequences.

2.3.2 The Decision-Making Process

The Agency will assess an application for an end-of-waste decision taking a risk-based approach, which is an iterative process.



3. THE END-OF-WASTE TEST IN LAW

3.1 The Overall End-of-Waste Test

The holder of a waste must satisfy the Agency that it has converted the waste material into a distinct, marketable product, which can be used in the same way as the non-waste material that it replaces, and with no overall adverse environmental or human health effects.

The waste holder must make a comprehensive, evidence-based application to the Agency to enable it to fully understand:

- what the waste is;
- how it arises;
- how it is treated;
- how it can be defined as 'fully recovered', including stating what standards4, technical specifications5 and non-waste regulations are applicable to the end product;
- how it is used; and
- how it is proven that such use can occur without any overall adverse environmental or human health effects.

3.2 Summary of Relevant Law

3.2.1 Introduction

The starting point for an end-of-waste test must be a material that is defined as a waste. If a material is defined as a waste, it cannot cease to be classified as a waste until it is fully recovered and meets the requirements of the end-of-waste test.

On the other hand, a by-product is not classified as waste in the first place and has a different legal definition. Therefore, an end-of-waste test is neither appropriate nor required. Article 27 of the European Communities (Waste Directive) Regulations 2011, S.I. No. 126 of 2011 (implementing Article 5 of the Waste Framework Directive) sets out the main conditions which must be met for a substance or object to be classified as a by-product. The Agency has published separate guidance on by-products that you should refer to if you think that your material could be a by-product[6].

3.2.2 European Article 6 of the Waste Framework Directive – End-of-Waste Status

Article 6 of the Waste Framework Directive specifies a provision by which certain specified waste shall cease to be waste, that is, that it can be given non-waste status and fall outside the scope of waste legislation, when it:

4 *"A technical specification approved by a recognised [international, European or national] standardisation body for repeated or continuous application, with which compliance is not compulsory"*. (Reference Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998). https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1998L0034:20070101:EN:PDF.

5 *A specification contained in a document which lays down the characteristics required of a product such as levels of quality, performance, safety or dimensions, including the requirements applicable to the product as regards the name under which the product is sold, terminology, symbols, testing and test methods, packaging, marking or labelling and conformity assessment procedures."* (Reference Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998). https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1998L0034:20070101:EN:PDF.

6 https://www.epa.ie/waste/wastereg/byprod/

- *"has undergone a recovery, including recycling, operation and"*
- *"complies with specific [end-of-waste] criteria to be developed in accordance with the following conditions:*
  - *"the substance or object is commonly used for specific purposes"; and*
  - *"a market or demand exists for such a substance or object"*; and
  - *"the substance or object fulfils the technical requirements for the specific purposes and meets the existing legislation and standards applicable to products"; and*
  - *"the use of the substance or object will not lead to overall adverse environmental or human health impacts."*[7]

The completion of a recovery operation (reaching the point at which waste has been 'fully recovered') may therefore be considered as the moment that a useful input for further processing or direct use, which does not pose any waste-specific risks to human health and the environment, is available. This is the end-of-waste point. The concept of end-of-waste is therefore closely linked to the point at which a recovery process is completed (please also refer to section 2.1) and the two occur simultaneously.

Article 3(15) of the Waste Framework Directive defines a recovery operation or process as one where "*the principal result*" is: a material is serving a useful purpose by substituting another material(s) (paraphrased); and may be considered to be a situation where a waste material is being prepared in such a way that it no longer involves waste-related risks and is ready to be used as a raw material in other processes.

Annex II of the Waste Framework Directive provides a non-exhaustive list of recovery operations. For the avoidance of doubt, recovery includes the sub-categories preparing for re-use and recycling (refer also to the explanation of 'fully recovered' in section 2.1).

3.2.3 The Law on End-of-Waste in Ireland

European Communities (Waste Directive) Regulations 2011, S.I. No. 126 of 2011[8] Article 28 End-of-waste status ("Article 28") (refer to Appendix 1) adopts Article 6 of the Waste Framework Directive into national legislation. From this point forward, this document focuses solely on Article 28.

Article 28(1)(a) sets out four conditions, all of which must be met to achieve end-of-waste status. These are the 'pillars' of the end-of-waste test. These directly transpose the conditions set out in Article 6 of the Waste Framework Directive (explained above) and are described in more detail later in this document (section 4).

3.2.4 Amendments to the Waste Framework Directive

Directive (EU) 2018/851[9] amends the Waste Framework Directive, which is due to be transposed into Irish Law in mid-2020. Although the principles and concepts of end-of-waste are not altered in the amending Directive, applicants should be aware of potential future changes to the law on end-of-waste in Ireland once the amending Directive has been transposed into Irish law.

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7 Quoted as per Article 6 of *Directive 2008/98/EC*. Note Article 6 has been amended under *Directive (EU) 2018/851* and shall be transposed into Irish law in due course.

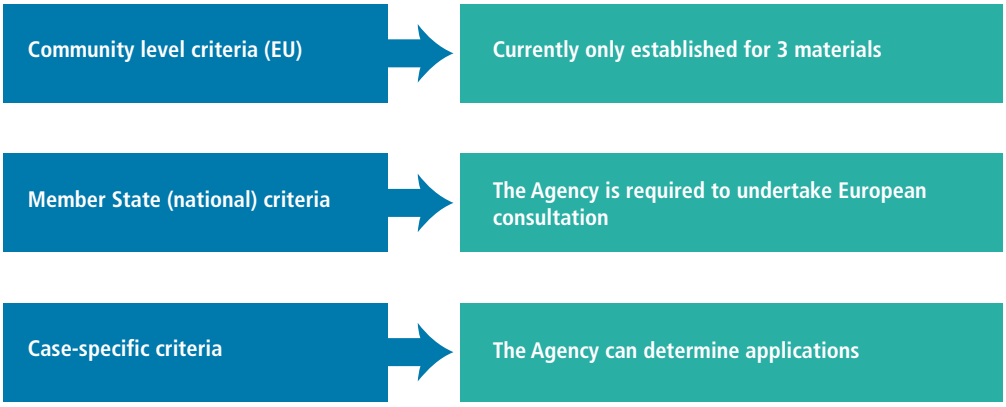
8 https://www.epa.ie/pubs/legislation/waste/licpermit/europeancommunitieswastedirectiveregulations2011.html

9 http://www.legislation.gov.uk/eudr/2018/851

3.3 Approaches to Establishing End-of-Waste Criteria

End-of-waste criteria are material specific, as each material will have different characteristics, risks and intended uses. Criteria also need to be defined for each intended use as the risks may be different.

If you intend to market your fully recovered material (product) outside Ireland, you need to understand the rules that apply in the countries that represent your market. If you are meeting the requirements of Community Level Criteria, this provides certainty that you can market your fully recovered material as a non-waste product in other Member States and that waste regulations do not apply in any Member State.



However, if you are meeting the requirements of Member State level criteria or case-specific criteria agreed by the Agency, although your material may have ceased to be waste in Ireland, the country of destination may take a different view. If the competent authority in the country of destination considers the material to be waste, the shipment will be subject to the controls set out in the Waste Shipments Regulation (EC No. 1013/2006). Before exporting such material, it is therefore prudent to check with the competent authority for the country of destination. A list of the competent authorities in the European Union is available[10].

3.3.1 Community Level Criteria

For certain specified waste streams (for example, glass and metal), end-of-waste criteria can be set at EU level. Once set, the criteria apply throughout the European Community and are binding for Member States. Member States cannot apply different end-of-waste provisions for the same scope of the criteria, unless they are more stringent. In this context, 'more stringent' should be interpreted as offering a greater level of protection to human health or the environment.

European Commission end-of-waste criteria have currently been established for the following three materials, for which EU Regulations setting out the criteria have been established.

- glass cullet[11]

10 "*List of Competent Authorities*", 4 December 2017, European Commission Directorate-General for Environment. https://ec.europa.eu/environment/waste/shipments/pdf/list_competent_authorities.pdf

11 "*Commission Regulation (EU) No 1179/2012 of 10 December 2012 establishing criteria determining when glass cullet ceases to be waste under Directive 2008/98/EC of the European Parliament and of the Council*". https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:337:0031:0036:EN:PDF

- copper scrap[12]; and
- iron, steel and aluminium scrap[13].

Community level end-of-waste criteria for biodegradable waste subjected to biological treatment (compost & anaerobic digestate) have been proposed for some time. At the present time, applicants seeking end-of-waste classification for fertilisers in Ireland must submit an application to the Agency. Consideration of the Fertilising Product Regulation[14] may be useful to inform any such applications. The Regulation sets out criteria covering safety, quality and labelling that all fertiliser products must meet so that they can be freely traded throughout the EU. The Regulation sets out criteria for fertilising products (compost and digestate) derived from bio- waste. The Regulation also defines quality requirements for specific materials for the production of fertilisers, soil improvers and growing media.

3.3.2 Member State Level Criteria

Where no Community level end-of-waste criteria have been set, Member States may decide at a national level whether certain waste has ceased to be waste when used in designated markets, taking into account applicable case law. Such 'generic' end-of-waste criteria apply within one Member State only. This type of approach may arise in Ireland in either of the following circumstances:

- An industry organisation and/or a group of companies, potentially working with relevant stakeholders, applies for an end-of-waste decision for specific uses of a waste material, or more than one closely related waste-derived materials, for an entire sector and for the benefit of all parties operating within it. The Agency encourages this approach, which it considers can efficiently deliver the objectives of a circular economy (please refer to section 1.3). The guidance provided in this document is relevant for this type of end-of-waste application as well as applications for case-specific criteria.
- The Agency leads on establishing end-of-waste criteria for specific uses of a waste material, or more than one closely related waste-derived materials, for an entire sector and for the benefit of all parties operating within that sector. The Agency would collaborate with the industry and other relevant stakeholders. The Agency does not currently have plans to lead on establishing any 'generic' end-of-waste criteria.

Please refer to section 3.3.3 for a description of case-specific end-of-waste criteria that are developed by individual companies exclusively for their own benefit.

In either of the above circumstances, the Agency is required to notify the Minister and relevant standardisation bodies in Ireland (National Standards Authority of Ireland, NSAI) and Europe (European Committee for Standardisation, CEN) and undergo a consultation process.

12 "*Commission Regulation (EU) No 715/2013 of 25 July 2013 establishing criteria determining when copper scrap ceases to be waste under Directive 2008/98/EC of the European Parliament and of the Council*". https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:201:0014:0020:EN:PDF

13 "*Council Regulation (EU) No 333/2011 of 31 March 2011 establishing criteria determining when certain types of scrap metal cease to be waste under Directive 2008/98/EC of the European Parliament and of the Council*". https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32011R0333&from=EN

14 "*Regulation (EU) 2019/1009 of the European Parliament and of the Council of 5 June 2019 laying down rules on the making available on the market of EU fertilising products and amending Regulations (EC) No 1069/2009 and (EC) No 1107/2009 and repealing Regulation (EC) No 2003/2003*". https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L:2019:170:FULL&from=EN

European law also requires Member States to notify the Commission so that it can check that the proposed end-of-waste criteria do not impact on the functioning of the European Internal Market. It is important to note that the consultation process can be lengthy.

3.3.2.1 Member State Level Criteria in the United Kingdom

In Northern Ireland, England and Wales, a number of end-of-waste Quality Protocols ("QPs") apply, setting out generic end-of-waste criteria for a range of wastes in specific end uses[15]. QPs are 'frameworks' that set out industry-wide end-of-waste criteria for specific materials in designated (risk assessed) markets and end uses.

The QPs do not apply in Ireland and applicants cannot claim to have met the requirements of the end-of-waste test by stating that they meet the requirements of a QP. This includes, for example, that the underpinning risk and market assessments would not account for the specific circumstances in Ireland. However, companies in Ireland may find the QPs informative as 'case studies' where they have been published for materials and end uses of interest (for example to refer to the end uses and applied product standards). Applicants choosing to refer to QPs should note they are subject to periodic review and may be amended or potentially withdrawn.

3.3.3 Case-specific Criteria

Where no Community or Member State level end-of-waste criteria have been set, case-specific criteria can be defined that apply to the applicant's position only. Applications can be submitted to the Agency, which will then decide on whether end-of-waste status has been demonstrated.

Such end-of-waste decisions are for the benefit of the applicant company only and applicants can be assured that the Agency will not 'adopt' such end-of-waste criteria into national decisions for the benefit of others. Applicants can decide to develop a case-specific application with another company, however in view of the level of detail required in an application, the Agency does not foresee that combined applications will be frequent.

Individual applicants must make a case-specific end-of-waste assessment and propose their own end-of-waste criteria relating to a specific waste type of defined origin, undergoing a specific recovery process and achieving the requirements of target material specifications, technical standards and legislation, for a specified end use(s) that has been risk assessed.

The Agency is not required to notify Irish or European standardisation bodies, nor is it required to undergo a consultation process in relation to case-by-case end-of-waste decisions. Further, European law does not require single-case decisions to be notified to the Commission to check any impact on the functioning of the European Internal Market, even if they have been based on general administrative provisions at a Member State level.

15 https://www.gov.uk/government/collections/quality-protocols-end-of-waste-frameworks-for-waste-derived-products

4. INTRODUCING THE 'PILLARS' OF THE END-OF-WASTE TEST

4.1 Introduction

In order to achieve end-of-waste status, all four 'pillars' of the end-of-waste test (representing the conditions in Article 28 para (1)(a)) must be met:

- the substance or object is commonly **used for specific purposes**; and
- a **market or demand exists** for such a substance or object; and
- the substance or object **fulfils the technical requirements for the specific purposes** and meets the existing legislation and standards applicable to products; and
- the use of the substance or object **will not lead to overall adverse environmental or human health impacts**.

An overriding requirement is that the material must have undergone a recovery operation. Evidence referring to the recovery process must therefore be provided, as well as evidence of meeting the 'pillars' of the test.

Underpinning all four 'pillars' are the following criteria that applicants need to refer to when providing evidence of meeting each 'pillar' (reference Article 28 (1) (b)):

- include limit values for pollutants where necessary; and
- take into account any possible adverse environmental effects of the substance or object.

The following briefly summarises what is required by each pillar of the end-of-waste test. If you chose to proceed with an end-of-waste application, detailed guidance to help you demonstrate how you meet the requirements of each pillar of the test is provided in Part 2.

4.2 The Material is Commonly Used for a Specific Purpose

Article 28 (1) (a) (i). Refer to Part 2, section 3 for detailed guidance.

This pillar relates to a precondition that the fully recovered material is already used for a specific purpose. To address this, you need to outline what the product is, its intended use(s) and specification(s). This pillar specifically seeks to ascertain the actual use(s) of the recovered material and establish its potential to substitute alternative primary materials in such applications.

Details of the quality of the material and assessment of the market is addressed in other pillars of the test. Analysis of potential uses is required to help assess the market or demand (section 4.3), identify the relevant technical specifications (section 4.4) and consider potential risks to human health and the environment from the specific use (exposure) scenarios (section 4.5). Therefore, it is important to explain the use(s) in some detail to set the context of the overall end-of-waste application.

In terms of potential human health and environmental risks, details of the use(s) are crucial. For example, if the material is returned to a manufacturing process (e.g. glass cullet) or applied directly in the environment (e.g. as a fertiliser) its use is likely to be regulated by other legislation, including non-waste legislation. This legislation may already provide human health and environmental protection, which may help the end-of-waste case.

It would be helpful at this stage to quantify the amounts of the alternative primary materials that are used for the same purpose (e.g. kg per year) to clearly evidence 'common use'.

If the recovered material is not yet used for a specific purpose, you may still be able to prepare an end-of-waste application. In this case you should instead set out the potential (intended) use(s) of the recovered material. You should still identify what primary material(s) is in common use in the intended application(s) and will be replaced, as well as relevant product specification(s) to support its use.

4.3 A Market or Demand Exists for the Material

Article 28 (1) (a) (ii). Refer to Part 2, section 4 for detailed guidance.

You need to provide evidence to address the legal test that a market or demand exists for the substance or object, i.e. there are firmly established market conditions. To do this you must demonstrate that the material has been **converted into a distinct and marketable product(s)** (linked to section 4.4) that **has a sustainable market(s)**. This pillar of the test is made up of these two distinct but closely related elements. The pillar allows you to demonstrate that you have processed the waste to the point that it is 'fully recovered' and no longer needs to be defined as waste because:

- it has intrinsic value and is unlikely to be discarded; and
- is distinctly different to the waste such that the waste-related risks have been removed.

Demonstrating conversion into a distinct and marketable product(s) requires a full understanding of:

- the waste before the recovery process;
- the recovery process itself, including any emissions and process waste streams; and
- the fully recovered material.

Demonstrating that a sustainable market exists requires an analysis of the market for the identified uses over a relevant timeframe (including future demand and supply projections and market risks) and consideration of why the market is secure and sustainable.

4.4 The Material Fulfils the Technical Requirements for the Specific Purpose

Article 28 (1) (a) (iii). Refer to Part 2, section 5 for detailed guidance.

This pillar represents part of the end-of-waste test relating to product quality. The other part is set out in section 4.5 and the relationship between them is shown in Figure 1.

You need to provide evidence to address the legal test that the fully recovered substance or object:

- fulfils the technical requirements for the specified use(s), which should relate to existing, published standards that are applicable to products; and
- meets the existing legislation and standard(s) applicable to products.

If you have more than one intended use for the recovered material, you need to provide details of them all, including the technical requirements (hereafter the term is used to convey all relevant standards, specifications and legislation) that relate to each use. You can also present relevant customer specifications that your material is required to meet.

This should allow you to demonstrate that the material meets some form of quality standard meaning that it can be **used in the same way as the non-waste material it replaces**. This links closely to demonstrating the size of the market (section 4.3), that is, evidence that a sustainable market exists is also a good indicator that the material is fulfilling the technical requirements and meeting customer expectations.

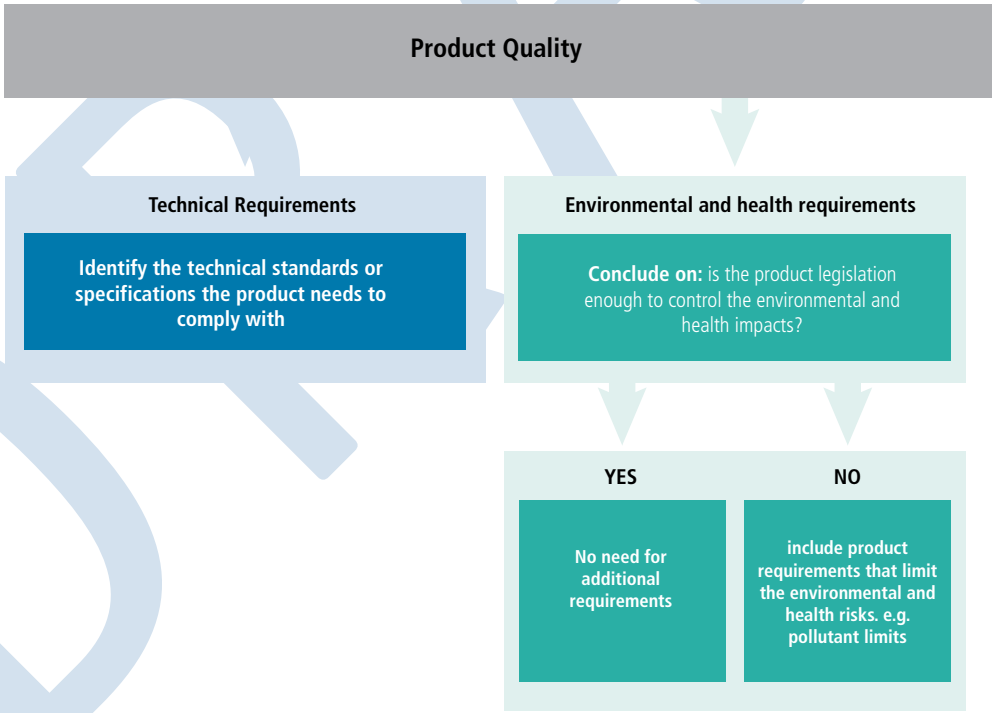
4.5 The Material can be Used Without Causing Overall Adverse Environmental or Human Health Impacts

Article 28 (1) (a) (iv). Refer to Part 2, section 6 for detailed guidance.

This pillar represents part of the end-of-waste test relating to product quality. The other part is set out in section 4.4 and the relationship between them is shown in Figure 1.

You need to provide evidence to address the legal test that the use of the substance or object will not lead to overall adverse environmental or human health impacts. You should consider this pillar as 'the acid test'; a key element of the whole methodology is to avoid proposals for end-of-waste criteria with overall adverse human health and environmental impacts and preferably to reduce the impacts compared to using alternative primary materials.

Figure 1: The product quality pillars of the end-of-waste test (source: JRC report, 2009)



Your assessment should consider impacts that are both:

- **Direct** – caused by the direct interaction of a substance with the environment, e.g. leaching of a pollutant from a substance (e.g. aggregate or fertiliser) into soil, groundwater or surface water within which it is in contact; and

- **Indirect** – 'secondary' or 'tertiary' impacts that may arise via a complex pathway or chain of events, e.g. a human health impact caused the by ingestion of milk that is contaminated by a substance that leached into the soil and was taken up by plants and subsequently ingested by grazing animals.

Direct and indirect human health and environmental impacts arising from the use of a substance in a certain application can be influenced, for example, by introducing pollutant (concentration) limits for components in the material composition (referred to in Figure 1). Concentration limits may change, for example, as a result of a change in the regulatory controls that apply to a material after it achieves end-of-waste status, by switching from waste to non-waste ('product') related controls. If such limits are not available, or are assessed as being inadequate, a risk assessment can also be used to define appropriate concentration limits for components in a material in a defined application. These limits can be translated into end-of-waste criteria (please refer to Part 2, section 7). Risk assessments are described in more detail in Part 2, section 6.2.

A good approach is to risk assess all impacts and compare an 'end-of-waste scenario' with a 'do nothing' scenario. Detailed guidance is provided in Part 2, section 6, but in general terms you can gather evidence that the use of the fully recovered waste-derived material will not cause overall adverse impacts by:

- Providing evidence that the product legislation (applicable if end-of-waste is achieved) provides at least equivalent human health and environmental protection to the waste legislation that otherwise applies;
- Providing evidence that using the waste-derived material will not lead to greater environmental or human health impacts compared to the non-waste derived material it replaces (the 'comparator'); and
- Undertaking a human health and environmental risk assessment. A good practice approach is to apply a source-pathway-receptor approach based on a conceptual model of each use scenario.

If the material will be stored before use to facilitate such use (e.g. temporary stockpiling prior to a large construction project or awaiting a suitable time for land spreading) provide evidence that the material will not cause overall adverse environmental or human health impacts during such storage.

Appendix 1: Article 28 (S.I. No. 126 of 2011)

End-of-waste status

28. (1) (*a*) Certain specified waste shall cease to be waste when it has undergone a recovery, including recycling, operation and complies with specific criteria to be developed in accordance with the following conditions:

(i) the substance or object is commonly used for specific purposes;
(ii) a market or demand exists for such a substance or object;
(iii) the substance or object fulfils the technical requirements for the specific purposes and meets the existing legislation and standards applicable to products; and
(iv) the use of the substance or object will not lead to overall adverse environmental or human health impacts.

(*b*) The criteria referred to in subparagraph (a) shall—

(i) include limit values for pollutants where necessary, and
(ii) take into account any possible adverse environmental effects of the substance or object.

(2) Waste which ceases to be waste in accordance with subparagraph (1) shall by virtue of that cesser also cease to be waste for the purpose of the recovery and recycling targets set out in—

(*a*) Directive 94/62/EC, Directive 2000/53/EC of the European Parliament and of the Council of 18 September 200012 on end-of-life vehicles, Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003[13] on waste electrical and electronic equipment (WEEE) and Directive 2006/66/EC of the European Parliament and of the Council of 6 September 2006[14] on batteries and accumulators and waste batteries and accumulators and repealing Directive 91/157/EEC, and

(*b*) other relevant Community acts when the recycling or recovery requirements of those acts are satisfied.

(3) (*a*) Where criteria have not been set at Community level as referred to in paragraphs 1 and 2 of Article 6 of the Waste Directive, the Agency may decide case by case whether certain waste has ceased to be waste in accordance with the criteria set out in paragraph (1) taking into account the applicable case law.

(*b*) The Agency shall notify the Minister and the standardisation bodies referred to in Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998[15] laying down a procedure for the provision of information in the field of technical standards and regulations and of rules on Information Society services, of any such decision where so required by that Directive, who shall notify the Commission.

AN GHNÍOMHAIREACHT UM CHAOMHNÚ COMHSHAOIL

Tá an Ghníomhaireacht um Chaomhnú Comhshaoil (GCC) freagrach as an gcomhshaol a chaomhnú agus a fheabhsú mar shócmhainn luachmhar do mhuintir na hÉireann. Táimid tiomanta do dhaoine agus don chomhshaol a chosaint ar thionchar díobhálach na radaíochta agus an truaillithe.

Is féidir obair na Gníomhaireachta a roinnt ina trí phríomhréimse:

Rialáil: *Déanaimid córais éifeachtacha rialaithe agus comhlíonta comhshaoil a chur i bhfeidhm chun torthaí maithe comhshaoil a sholáthar agus chun déileáil leo siúd nach gcloíonn leis na córais sin.*

Eolas: *Soláthraímid sonraí, faisnéis agus measúnú comhshaoil atá ar ardchaighdeán, spriocdhírithe agus tráthúil chun bonn eolais a chur faoin gcinnteoireacht ar gach leibhéal.*

Abhcóideacht: *Bímid ag saothrú i gcomhar le grúpaí eile chun tacú le comhshaol atá glan, táirgiúil agus cosanta go maith, agus le hiompar a chuirfidh le comhshaol inbhuanaithe.*

Ár bhFreagrachtaí

Ceadúnú

Déanaimid na gníomhaíochtaí seo a leanas a rialú ionas nach ndéanann siad dochar do shláinte an phobail ná don chomhshaol:

- saoráidí dramhaíola (*m.sh. láithreáin líonta talún, loisceoirí, stáisiúin aistrithe dramhaíola*);
- gníomhaíochtaí tionsclaíocha ar scála mór (*m.sh. déantúsaíocht cógaisíochta, déantúsaíocht stroighne, stáisiúin chumhachta*);
- an diantalmhaíocht (*m.sh. muca, éanlaith*);
- úsáid ghlanscartha agus scaoileadh rialaithe Orgánach Géinmhodhnaithe (*OGManna*);
- foinsí radaíochta ianúcháin (*m.sh. trealamh x-gha agus radaiteiripe, foinsí tionsclaíocha*);
- áiseanna móra stórála peitril;
- doirtí fuíolluisce;
- gníomhaíochtaí dumpála ar farraige.

Forfheidhmiú Náisiúnta i leith Cúrsaí Comhshaoil

- Clár náisiúnta iniúchtaí agus cigireachtaí a dhéanamh gach bliain ar shaoráidí a bhfuil ceadúnas ón nGníomhaireacht acu.
- Maoirseacht a dhéanamh ar fhreagrachtaí cosanta comhshaoil na n-údarás áitiúil.
- Caighdeán an uisce óil, arna sholáthar ag soláthraithe uisce phoiblí, a mhaoirsiú.
- Obair le húdaráis áitiúla agus gníomhaireachtaí eile chun dul i ngleic le coireacht chomhshaoil trí chomhordú a dhéanamh ar líonra forfheidhmiúcháin náisiúnta, díriú ar chiontóirí, agus maoirsiú a dhéanamh ar fheabhsúchán.
- Rialacháin maidir le Dramhthrealamh Leictreach agus Leictreonach (WEEE), le Srian ar Shubstaintí Guaiseacha (RoHS) agus ar shubstaintí ídíonn an ciseal ózóin.
- An dlí a chur orthu siúd a bhriseann dlí an chomhshaoil agus a dhéanann dochar don chomhshaol.

Bainistíocht Uisce

- Monatóireacht agus tuairisciú a dhéanamh ar cháilíocht aibhneacha, lochanna, uiscí idirchreasa agus cósta na hÉireann, agus screamhuiscí; leibhéil uisce agus sruthanna aibhneacha a thomhas.
- Comhordú náisiúnta agus maoirsiú a dhéanamh ar an gCreat-Treoir Uisce.
- Monatóireacht agus tuairisciú a dhéanamh ar Cháilíocht an Uisce Snámha.

Monatóireacht, Anailís agus Tuairisciú ar an gComhshaol

- Monatóireacht a dhéanamh ar cháilíocht an aeir agus Treoir an AE maidir le hAer Glan don Eoraip (CAFÉ) a chur chun feidhme.
- Tuairisciú neamhspleách le cabhrú le cinnteoireacht an rialtais náisiúnta agus áitiúil (*m.sh. tuairisciú tréimhsiúil ar Staid Chomhshaol na hÉireann agus Tuarascálacha ar Thascairí*).

Rialú Astaíochtaí na nGás Ceaptha Teasa in Éirinn

- Fardail agus réamh-mheastacháin na hÉireann maidir le gás ceaptha teasa a ullmhú.
- An Treoir maidir le Trádáil Astaíochtaí a chur chun feidhme i gcomhair breis agus 100 de na táirgeoirí dé-ocsaíde carbóin is mó in Éirinn.

Taighde agus Forbairt Comhshaoil

- Taighde comhshaoil a chistiú chun brúnna a shainaithint, bonn eolais a chur faoi bheartais, agus réitigh a sholáthar i réimsí na haeráide, an uisce agus na hinbhuanaitheachta.

Measúntachtaí Straitéisí Comhshaoil

- Measúnacht a dhéanamh ar thionchar pleananna agus clár beartaithe ar an gcomhshaol in Éirinn (*m.sh. mórphleananna forbartha*).

Cosaint Raideolaíoch

- Monatóireacht a dhéanamh ar leibhéil radaíochta, agus measúnacht a dhéanamh ar a oiread is atá muintir na hÉireann gan chosaint ar an radaíocht ianúcháin.
- Cabhrú le pleananna náisiúnta a fhorbairt le haghaidh éigeandálaí ag eascairt as taismí núicléacha.
- Monatóireacht a dhéanamh ar fhorbairtí thar lear a bhaineann le saoráidí núicléacha agus leis an tsábháilteacht raideolaíochta.
- Sainseirbhísí cosanta ar an radaíocht a sholáthar, nó maoirsiú a dhéanamh ar sholáthar na seirbhísí sin.

Treoir, Faisnéis Inrochtana agus Oideachas

- Comhairle agus treoir a chur ar fáil d'earnáil na tionsclaíochta agus don phobal maidir le hábhair a bhaineann le caomhnú an chomhshaoil agus leis an gcosaint raideolaíoch.
- Eolas tráthúil agus inrochtana faoin gcomhshaol a chur ar fáil chun an pobal a spreagadh páirt a ghlacadh i gcinnteoireacht chomhshaoil (*m.sh. Mo Thimpeallacht Áitiúil, Léarscáileanna Radóin*).
- Comhairle a chur ar fáil don Rialtas maidir le hábhair a bhaineann leis an tsábháilteacht raideolaíoch agus le cúrsaí práinnfhreagartha.
- Plean Náisiúnta Bainistíochta Dramhaíola Guaisí a fhorbairt chun dramhaíl ghuaiseach a chosc agus a bhainistiú.

Múscailt Feasachta agus Athrú Iompraíochta

- Feasacht chomhshaoil níos fearr a ghiniúint agus dul i bhfeidhm ar athrú iompraíochta dearfach trí thacú le gnóthais, le pobail agus le teaghlaigh a bheith níos éifeachtúla ar acmhainní.
- Tástáil le haghaidh radóin a chur chun cinn i dtithe agus in ionaid oibre, agus gníomhartha leasúcháin a spreagadh nuair is gá.

Bainistíocht agus Struchtúr GCC

Tá an gníomhaireacht á bainistiú ag Bord lánaimseartha, ar a bhfuil Ard-Stiúrthóir agus cúigear Stiúrthóirí. Déantar an obair ar fud cúig cinn d'Oifigí:

- An Oifig um Inbhuanaitheacht Comhshaoil
- An Oifig Forfheidhmithe i leith Cúrsaí Comhshaoil
- An Oifig um Fhianaise agus Measúnú
- An Oifig um Chosaint Radaíochta agus Monatóireacht Chomhshaoil
- An Oifig Cumarsáide agus Seirbhísí Corparáideacha

Tá Coiste Comhairleach ag an nGníomhaireacht le cabhrú léi. Tá dáréag comhaltaí air agus tagann siad le chéile go rialta le plé a dhéanamh ar ábhair imní agus le comhairle a chur ar an mBord.

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