



Environmental Protection Agency
Annual Report and Accounts

2023



ENVIRONMENTAL PROTECTION AGENCY

Annual Report and Accounts, 2023

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The layout of this report has been structured and aligned to reflect the EPA Strategic Plan 2022–2026

Highlights

KEY FIGURES EPA Activity

2,332

Environmental queries from the public

1,200+

Inspections of licensed Industrial and Waste facilities



205 urban waste water and 154 drinking water inspections



19

Convictions for environmental offences

Over €1bn

Financial provision set aside for the clean-up of an incident or abandonment at a licensed site

127

Environmental Authorisations issued

300+

Citizen scientists helped measure air quality in Galway City



2,500+

Lakes, rivers, estuaries, and other waterbodies monitored by the EPA

418

EPA datasets on data.gov.ie



€18.9 Million

Awarded for environmental research

113

Ambient air quality stations providing real-time data

Up to
3 Days

New EPA service forecasts air quality up to 3 days in advance

Highlights

KEY FIGURES
EPA Activity

1,200,000

Visits to epa.ie

86,000+

Social media followers

LEAP

New EPA online portal providing transparency and easier public access to environmental enforcement information

New

National **End-of-Waste Criteria** for Recycled Aggregates announced

New

National **By-Product Criteria** for road planings published

KEY FIGURES Reported in 2023

1.9%

Drop in Ireland's greenhouse gas emissions in 2022



29%

Drop in greenhouse gas emissions by 2030 projected by EPA - compared to a target of 51%.

1/3

Households had no access to an organic waste bin collection service*

Less than 28%

of plastic packaging waste recycled†

79%

of bathing waters had excellent water quality*

99.7%

Compliance of public drinking water supplies*



170,000

Homes predicted to have high radon levels



Our Purpose

To protect, improve and restore our environment through regulation, scientific knowledge and working with others



Our Vision

We live sustainably in a healthy environment that is valued and protected by all

Our Values & Behaviours



Professional

We hold ourselves to high standards in our interactions and work

- I take responsibility for my work and am accountable for my decisions
- I listen to others and respect diversity of views



Trustworthy

We act with integrity as an independent leader and advocate for our environment

- I base my decisions on the best available evidence and facts
- I am honest and transparent in my interactions with others



Customer & Stakeholder Focussed

We actively listen to and understand our customers and stakeholders to design and deliver excellent services

- I take account of our customers' and stakeholders' perspectives in everything I do
- I work to deliver public value and our vision



Collaborative

We work together and with others to protect our environment and health

- I work with others to deliver better outcomes
- I share my time, resources and knowledge to support my colleagues



Innovative

We innovate and adapt to deliver our vision and strategy

- I try new ideas to improve how I do my work, knowing that I won't always get it right
- I support and champion innovation to deliver on our vision

List of abbreviations

AIE	Access to Information on the Environment
AMR	Antimicrobial Resistance
API	Application Programming Interfaces
ARC	Audit & Risk Committee
AQIH	Air Quality Index for Health
BAT	Best Available Techniques
B2C	Business to Consumer
CAFE	Clean Air for Europe Directive
CAP	Climate Action Plan
CLRTAP	Convention on Long-Range Transboundary Air Pollution
DAFM	Department of Agriculture, Food and the Marine
DECC	Department of the Environment, Climate and Communications
DHLGH	Department of Housing, Local Government and Heritage
DFHERIS	Department of Further and Higher Education, Research, Innovation and Science
DWWTS	Domestic Waste Water Treatment Systems
EEA	European Environment Agency
EIONET	European Environmental Information and Observation Network
ERC	Executive Risk Committee
ESD	EU Effort Sharing Decision
ESRI	Economic and Social Research Institute
EU ETS	European Union Emissions Trading System
F-gas	Fluorinated gas
FOI	Freedom of Information
GMOs	Genetically Modified Organisms
HERCA	Heads of the European Radiological Protection Competent Authorities
HFC	Hydrofluorocarbons
HSA	Health & Safety Authority
HSE	Health Service Executive
ICCA	Ireland's Climate Change Assessment
ICNIRP	International Commission on Non-Ionising Radiation Protection
ICT	Information & Communications Technology
IED	Industrial Emissions Directive
IEN	Irish Environmental Network
INAB	Irish National Accreditation Board

IPC	Integrated Pollution Control
IPCC	Intergovernmental Panel on Climate Change
IRC	Irish Research Council
JAI	Junior Achievement Ireland
JPI	Joint Programming Initiatives
MoU	Memorandum of Understanding
Mt CO₂eq	Million Tonnes Carbon Dioxide equivalent
MCP	Medium Combustion Plant
NDCA	National Dialogue on Climate Action
NEC	National Emission Ceiling Directive
NERCG	National Environmental Research Coordination Group
NIECE	Network for Ireland's Environmental Compliance and Enforcement
NRCS	National Radon Control Strategy
ODS	Ozone depleting substances
OECD	Organisation for Economic Cooperation and Development
OPW	Office of Public Works
PFAS	Per- and poly-fluoroalkylated substances
POP	Persistent Organic Pollutant
PRTR	Pollutant Release and Transfer Register
RAL	Remedial Action List
RBMP	River Basin Management Plan
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals regulations
RoHS	Restriction of Hazardous Substances
SEA	Strategic Environmental Assessment
SFI	Science Foundation Ireland
SLA	Service Level Agreement
TEG	Temporary Energy Generation
UNECE	United Nations Economic Commission for Europe
UNFCCC	UN Framework Convention on Climate Change
UWWTD	Urban Waste Water Treatment Directive
WEEE	Waste Electrical and Electronic Equipment
WFD	Water Framework Directive
WWTP	Waste Water Treatment Plant



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1. DIRECTOR GENERAL'S STATEMENT



April 2023 marked the thirtieth anniversary of the EPA's establishment. Three decades on, the EPA's role to protect, improve and restore Ireland's environment, through regulation, scientific knowledge and working with others, is more relevant than ever. While our remit has grown, the core of what we do remains the same. We regulate activities that have the potential for significant pollution. We produce timely, reliable, trustworthy data on Ireland's environment. We work with others to protect and preserve our environment. Outlined below, and in detail within this report, is the progress made during 2023 delivering on the EPA's remit.

1.1 Protected and Healthy Environment

Human health and wellbeing are closely linked to the state of our environment. The EPA strives to deliver cleaner water, cleaner air and to reduce exposure to harmful radiation, noise, chemicals and pathogens through regulation, enforcement, monitoring and assessment.

Licensing

A primary function of the EPA is environmental and radiological regulation, including assessment, authorisation and enforcement of activities. The EPA is also the enforcement and implementation authority for the EU Emissions Trading System (EU-ETS).

The security of electricity supply was a key activity for the EPA throughout 2023 with significant engagement with the Department of Environment, Climate and Communications (DECC), the Commission for Regulation of Utilities (CRU), Eirgrid, and the power sector. Three licences for Temporary Emergency Generation (TEG) plants and 13 proposed determinations for power generation at data centres were issued in 2023.

The results from the installations covered by the EU-ETS for 2022 showed that greenhouse gas emissions from Irish companies decreased by 4% (600,000 tonnes) compared to 2021.

Enforcement

Using a risk-based approach to on-site inspections, the EPA targets sites that are not complying with their licence requirements, in addition to responding to significant on-site environmental incidents, emergencies and complaints.

While most licensees operate well and in accordance with their licence, a small number have not and in those cases the EPA has exercised its full range of enforcement powers, with 19 convictions in 2023. In a seminal case in June 2023, following two-decades of investigation involving the EPA and An Garda Síochána, the former Director of Neiphin Trading Limited, operator of a waste facility in Kerdiffstown, Co Kildare, was sentenced to three years in prison with the final twelve months suspended on each of three charges for serious environmental offences.

As part of the EPA's ongoing work to improve public access to the information we hold, LEAP Online (Licensing and Enforcement Access Portal) was launched during the year to give the public access to view information about site inspections, monitoring, incidents, non-compliances, complaint summaries and also compliance investigations into issues detected at EPA licensed sites.

The EPA regulated almost 900 industrial and waste facilities in 2023 with enforcement efforts focused on the key priority issues of management of waste at waste management facilities, unauthorised extraction of peat and where licensed activities were having an impact on water quality.

New Drinking Water legislation came into effect in March 2023, providing enhanced enforcement powers to the EPA. During 2023, the EPA completed 154 drinking water audits.

Waste water site inspections in 2023 focused on areas where waste water is impacting water quality under the Water Framework Directive; on the operational performance of treatment plants; compliance monitoring of discharges and responding to complaints and incidents. While encouraged by Uisce Éireann's continued progress

in stopping the unacceptable practice of discharging raw sewage into our environment, waste water remains a significant pressure on Ireland's waterways and is adversely impacting water quality. The pace at which Uisce Éireann is delivering improvements needs to accelerate to prevent pollution and protect water quality.

The number of domestic waste water treatment system failures ongoing for more than two years has accumulated year-on-year and these need to be brought to resolution by the relevant local authorities.

During 2023, radiation protection inspections were undertaken in several sectors with the focus on implementation of the new Ionising Radiation Regulations and associated EPA guidance, and operational radiation protection in high-risk areas such as interventional radiology, cardiology and industrial site radiography.

In its role as supervisor of local authority environmental activities the EPA acknowledges their vital role in protecting the environment. However, local authorities need to prioritise and resource environmental functions to deliver the national enforcement priorities. These include improving waste segregation and recycling, reducing the agricultural impact on water quality and safeguarding public health from harmful air pollutants.

1.2 Monitoring and Assessment

Air Quality

The EPA's National Ambient Air Quality Monitoring Programme provides real-time localised air quality information based on 115 ambient air monitoring stations run by the EPA across the country.

In 2023, a national air quality forecast – for up to three days – was launched to provide greater information to the public regarding expected air quality in Ireland. The [annual air quality report](#), published in September 2023 concluded that while Ireland met its EU legal requirements in 2022, it did not meet the more stringent health-based World Health Organisation (WHO) Air Quality guidelines. Using less solid fuel and cleaner fuels to heat our homes and reducing our use of cars to go to school, work and play are actions that will contribute towards achieving the WHO guidelines.

Drinking water

The quality of drinking water in public supplies remains very high, which means that the public can be confident that the drinking water supplied to their homes is safe to drink. Uisce Éireann has made good progress in delivering necessary new drinking water infrastructure such as the new plant at Lee Road in Cork.

However, the EPA through our inspection and monitoring programme, continues to identify drinking water plants that are at risk and require improvements and upgrades. Uisce Éireann needs to prioritise investment in those plants to improve the resilience of drinking supplies to provide a safe and secure supply into the future. Greater effort is needed by Uisce Éireann to implement improvements at supplies to minimise exposure to Trihalomethanes (THM).

The European Commission's infringement proceedings against Ireland on THM in drinking water has been submitted to the European Court of Justice. The Commission case states that Ireland failed to take the measures necessary to ensure THM compliance in 31 public water supplies and 13 private group water schemes. The EPA has supported the Department of Housing, Local Government and Heritage (DHLGH) in providing updates on THM compliance as part of its submissions to the Commission. The EPA will continue to target THM compliance as part of its enforcement activities.

In addition, Uisce Éireann must accelerate the rollout of their lead (Pb) mitigation plan.

Water Quality

The [Water Quality in 2022: An Indicators Report](#) published in June 2023, showed that there was no significant change in the biological quality of our rivers or lakes in 2022. The rate of decline largely matched the rate of improvement. It also found that nitrate and phosphate concentrations were too high in 40% and 28% of rivers respectively. The EPA called for action to be taken by the agriculture sector and Uisce Éireann to reduce the losses of both nutrients to the environment.

Bathing Water

The [Bathing Water report](#), published in May 2023, showed that 79% of bathing sites had excellent water quality while 97% meet the minimum standard. This on-going improvement in bathing water quality is attributed to improved management of bathing waters over many years, together with investment in the treatment of urban waste water.

Urban Waste Water

The [Urban Waste Water Treatment in 2022 Report](#), published in October 2023, showed that of the 173 large urban areas subject to the treatment and effluent standards in the Urban Waste Water Treatment Directive (UWWTD), over 158 complied with the treatment standard. The 15 areas that failed represents 55% of all the waste water collected in Ireland's large urban areas, with Dublin (Ringsend) accounting for most of this. Works at Ringsend

(which accounts for over 40% of Ireland's urban waste water) are scheduled to be completed in 2025. These works will significantly improve Ireland's compliance with the UWWTD.

Discharges of raw sewage ceased at ten areas during 2023, leaving 19 areas which must be connected to treatment. The number of priority areas has reduced from 148 in 2017 to 80 at the end of 2023. Investment in waste water treatment infrastructure continues to bring improvements for our environment and Uisce Éireann can make significant improvements in waste water treatment across the country between now and the end of the next investment cycle in 2029 by targeting resources at the priority areas highlighted by the EPA.

Radiation

The EPA made significant progress in upgrading the National Radiation Monitoring Network during 2023 with new instrumentation deployed and additional monitoring sites added. Data from the network is being automatically transferred to the European Commission on an hourly basis and will be made available on the EPA's website in 2024.

The EPA updated [radon risk maps](#) for use with the building regulations technical guidance, as published by DHLGH, which will apply to all new buildings and extensions commencing construction from 1 October 2023. EPA continues to recommend that all homeowners should test their homes for radon.

Non-ionising radiation

During 2023, EPA published results of the monitoring programme on Non-Ionising Radiation (NIR) which focussed on frequencies used for telecommunication. The results found that levels in all urban sites measured were well below international guideline limits.

1.3 Climate Action

The EPA's role in addressing Climate Change challenges include: preparing Ireland's greenhouse gas inventories and projections; regulating emissions from industrial sectors; supporting climate science research; supporting climate adaptation and supporting behavioural change and facilitating the National Dialogue on Climate Action. A new Climate Science & Policy Analysis team was established within the EPA in late 2023, to provide a greater insight into Ireland's greenhouse gas emissions, latest climate science and insights for policy.

Emissions Inventories and Projections

Provisional greenhouse gas inventory data for 2022, published in July 2023, showed a decrease of 1.9% in

emissions between 2021 and 2022. Emission reductions were observed in all key sectors except Transport. However, the report highlights that 47% of Ireland's Carbon Budget for 2021-2025 has been used in the first two years. An extremely challenging annual reduction of 12.4% is now required for each of the remaining years if Ireland is to stay within the Budget. EPA projections indicate that Ireland could meet its original EU Effort Sharing Regulation target of a 30% emission reduction by 2030 (compared to 2005) if all measures and flexibilities, including the LULUCF flexibility, are used. Reaching the new 42% EU emission reduction target will require full and rapid implementation of Climate Action Plan 2023 measures and further measures to be implemented. Consequently, faster progress is needed on the actions set out in national climate action plans to decarbonise and transform all sectors of Ireland's economy to stay within National and EU obligations.

Adaptation and Climate Services

[Climate Opinion Maps](#) were published in January 2023 as the third key-output of the Climate Change in the Irish Mind study – undertaken by the EPA and the Yale University Program on Climate Change Communication in support of the National Dialogue on Climate Action. The maps allow visual exploration of data from the Climate Change in the Irish Mind survey. The maps show a consistent picture across the country of high levels of understanding about climate change and support for climate action with little variation depending on where people live.

The [Climate Ireland](#) National Adaptation Platform was redeveloped and relaunched by the EPA in November 2023. The Climate Ireland Adaptation Network (CIAN) was launched at the first annual CIAN seminar in Dublin in October 2023. The network now has over 250 members and will provide an important information sharing forum to build adaptation expertise at practitioner level across sectors in Ireland. In 2023, the EPA also completed preparatory work to deliver the National Climate Change Risk Assessment (NCCRA) by early 2025.

The EPA supported international climate science development and represented Ireland at key plenary meetings of the UN's Intergovernmental Panel on Climate Change (IPCC) on the completion of the sixth Assessment Cycle with the finalisation of its Synthesis report and the start of its next and seventh Assessment Cycle

The EPA, as members of the national delegation and the EU Team, provided expert support for negotiations of the outcome from the first global stocktake under the Paris Agreement at the COP28 meeting.

The EPA led the development of Ireland's first [Climate Change Assessment \(ICCA\)](#) report which was completed in December 2023. This report provides a comprehensive, Ireland-focused, state-knowledge on climate change, the options to respond and the opportunities that may arise from these responses.

The EPA funds and coordinates climate research in Ireland. In total, the EPA funded €9.4m of climate-related research in 2023 (up from €7.4 million in 2022). Data collection and analysis was completed in 2023 for the 'Climate Research in Ireland 2022' report which is due to be published in February 2024.

Greening the EPA

The EPA is committed to better waste management, increased biodiversity, reduced energy usage and reducing carbon emissions by 30% by 2026. Energy efficiency and decarbonisation projects completed to date include energy efficient LED lighting, solar PV, improving our building fabric and using low carbon heating (e.g., biomass & electric heat pumps). The EPA plans to expand use of solar PV across all buildings in the coming years. A 10% reduction in energy usage, compared to 2021, was delivered in 2023.

Total carbon emissions arising from the EPA's activities in 2022 were 37% lower than the base period 2016-2018 due to a combination of blended working, decarbonisation of the grid and energy efficiency measures.

1.4 Sustainable Production and Consumption

In a circular economy, less raw material is used, products are designed for long-life and recyclability, are shared, used for longer, repaired and reused. Material and products are recycled as much as possible and only the fraction that can't be recycled is disposed.

The EPA has statutory responsibility to monitor, collate and validate data for resources and waste streams generated by households, businesses and industry. The [Circular Economy and Waste Statistics Highlights Report 2021](#), published in November 2023, highlighted that generation of waste continues to rise, recycling rates are not keeping pace and Ireland is off track to meet mandatory EU recycling targets – set to apply from 2025 – for municipal, packaging and plastic packaging waste.

Results of the [Municipal Waste Characterisation](#) study, published in September, showed very little change in Ireland's household and commercial waste management practices since 2018. Over two thirds of waste in the

general waste bins could have been placed in recycling and organic waste bins. The EPA called for urgent action to improve segregation and recycling performance to achieve municipal recycling rate targets and transition to a circular economy.

In its statutory role in leading Ireland's food waste prevention efforts, the EPA urged companies and organisations in the food supply chain to sign up to the [Food Waste Charter](#) and pledge to measure, set targets and take action to reduce food waste. The Food Waste Charter is a key action under Ireland's National Food Waste Prevention Roadmap. The biennial [Food Waste Forum](#) was held in November as an online event.

The regulatory provisions for assessing if materials can be declared as end-of-waste or as a by-product are helping to achieve a circular economy. During the year, the EPA published national criteria that allow for the safe reuse of site-won asphalt (road planings) as a by-product and end-of-waste criteria for recycled aggregates. Both support waste prevention and facilitate the reuse of materials in new construction projects, in line with the circular economy.

Under the government's Climate Action Plans, the EPA is assigned responsibility to measure and report on Green Public Procurement (GPP) activity by government departments on an annual basis. The [second report](#), for reference year 2021, showed a low level of inclusion of green criteria in contracts which missed an opportunity to purchase more resource efficient and less polluting goods, services and works within the marketplace. In November, the EPA hosted the 'GPP in Practice' event for public sector procurers to share case studies and information on tools and resources to support GPP implementation.

1.5 Effective voice

As a trusted, independent and transparent source of environmental evidence and information the EPA strives to improve the environment through working with others and proactively influence policy, legislation and behavioural change.

Partnering and Networking

The EPA made submissions to several consultations and other policy developments including submissions on: statement of Strategies for governmental departments (DECC, DHLGH and Department of Agriculture, Food and the Marine (DAFM)), Bioeconomy Action Plan, Sustainable Tourism policy and the Green Public Procurement Strategy and Action Plan.

During 2023, the EPA attended the Joint Oireachtas Committee on Agriculture, Food and the Marine regarding the Water Quality Monitoring Report on Nitrogen and Phosphorus Concentrations in Irish Waters 2022, and the Joint Oireachtas Committee on Environment and Climate Action regarding Ireland's Citizen's Assembly on Biodiversity Loss Report.

The EPA is actively engaged in several expert working groups or consultative committees led by government departments or facilitated by the EPA, including the Network for Ireland's Environmental Compliance and Enforcement (NIECE).

The European Environment Agency's (EEA) country network, called the European Environment Information and Observation Network (Eionet), which is Europe's leading network for policy-relevant environmental and climate knowledge, underwent an extensive modernisation process with a formal relaunch in early 2023. There has been a substantial broadening of Irish participation with experts representing 22 organisations across government departments, state agencies and third level institutes including eight organisations new to Eionet in 2023.

The EPA has a responsibility to work with Irish and international partners to monitor developments relating to the safety of nuclear installations abroad and to keep relevant stakeholders informed of their implications for Ireland. In this regard during 2023, the EPA monitored the occupation of the Zaporizhzhya Nuclear Power Plant and events in Ukraine.

Research

The EPA delivers a responsive and agile research programme that provides essential scientific support for environmental policy development and broader decision making. Scientific research and innovation are playing an increasingly important role in informing how governments and society can respond to the challenges posed by climate change and environmental degradation.

In 2023, the EPA awarded a total of €18.9 million for new research projects and published 21 research reports. The EPA continues to work in partnership with several organisations nationally and internationally to co-fund environmental research. Significant progress was made in 2023 on strategic knowledge transfer activities, focussed on proactively transferring the scientific evidence generated by EPA-funded research into the policy system.

Communications and Outreach

The EPA's website is the principal communication channel for disseminating information to the public and stakeholders with over 1,200,000 visits during 2023. The EPA continued to build and engage with new audiences through social media to communicate the work of the EPA.

The EPA supported citizen science projects in partnership with other organisations. The Clean Air Together project, with An Taisce's Environmental Education Unit, published results from over 500 residents across Cork City who measured Nitrogen Dioxide (NO₂) levels. The project moved to Galway City in 2023 with EPA working with the City Council to engage citizen scientists to participate in the project. Over 300 citizen scientists took measurements during October and November 2023.

Engaging with new and younger audiences, the EPA sponsored an environmental award at the BT Young Scientist competition and an Environmental Journalism Award for the National Student Media Awards. The EPA also worked in partnership with ECO-UNESCO and Junior Achievement Ireland to increase environmental awareness.

1.6 Culture of Excellence

The EPA fosters a culture of excellence, built on a supportive, inclusive, and flexible workplace. Staff are empowered to embody the EPA's values and behaviours, to deliver public value and achieve a vision of a sustainable and healthy environment for all.

In October 2023, David Flynn joined the EPA Board as Director of the Office of Environmental Sustainability. In line with the EPA's increasing remit, sanction for an additional sixty-six posts was received, bringing the approved staff complement to 520.

In my role as Director General, I wish to acknowledge the hard work and commitment of the staff of the EPA throughout 2023 and to thank my fellow Directors for their dedication and support in delivering on our strategic goals.

I would like to extend my best wishes to our colleagues who retired during 2023 after many years of dedicated service. Finally, I would like to thank the Department of Environment, Climate and Communications and the Department of Housing, Local Government and Heritage for their continuing support.



Laura Burke

Director General, EPA





2

Protected and Healthy Environment



We deliver a protected and healthy environment

We deliver cleaner water, cleaner air and have reduced exposure to harmful radiation, noise, chemicals and pathogens through our regulation, enforcement, monitoring and assessment

2. PROTECTED AND HEALTHY ENVIRONMENT

2.1 Licensing

The EPA's Office of Environmental Sustainability has a wide remit and is responsible for a range of tasks relating to the authorisation of activities that could have an impact on the environment or on human health (Tables 1 and 2). This work includes implementing Ireland's obligations under various EU Directives by carrying out environmental assessments prior to granting or refusing authorisations. It incorporates Environmental Impact Assessment and Appropriate Assessment.

Authorisation of Activities

The Industrial Emissions Directive (IED) brought new and substantial changes to how industrial activities are regulated in Ireland. The IED requires the EPA to reconsider and, if necessary, update the conditions of its industrial licences within four years of new Best Available Techniques (BAT) conclusions being published. These changes will further ensure that licences include all measures necessary to achieve a high level of protection for the environment.

During 2023, there was a focus on transposing Commission Implementing Decisions (CIDs) into the relevant licences. In 2023, all of the waste incineration licences, along with most of the large combustion plant, and approximately 60 intensive agriculture licences were brought into compliance with the relevant CID's.

A provisional overall compromise text on the revised IED Directive was agreed on the 15 December 2023. The main aims of this update are the full and consistent implementation of the IED across Member States, the promotion of cleaner technologies, supporting sustainable growth, broaden the Directive's scope and enhance data transparency. The EPA worked closely with the Department of the Environment, Climate and Communications (DECC) in providing feedback on the updated Directive.

The security of electricity supply was a key activity for the EPA throughout 2023 with significant engagement with the Department of Environment, Climate and Communications (DECC), the Commission for Regulation of Utilities, Eirgrid, and the power sector. Three licences for Temporary

Emergency Generation (TEG) plants and 13 proposed determinations for data centres were issued in 2023.

In 2023, 36 new Medium Combustion Plants (MCP) have been registered. Two hundred and fifty-four MCPs on the register were incorporated into IED licensed sites. The majority of these were at data centres which were licensed in 2023.

In 2023, the EPA published an updated Application Prioritisation Scoring System which outlines the EPA's licence application prioritisation criteria for IED, IPC and Waste Licensed installations. These prioritisation criteria allow all stakeholders to clearly see the aspects of an activity which are considered during EPA's licensing work programme planning stage.

Environmental licensing and permitting decisions in 2023 are summarised in Table 1 below and included high profile installation expansions, some long-standing historical applications and greenfield investment activities in the waste, pharmachem and power sectors. In 2023, the EPA prioritised issuing of licences in the energy sector.

Progress continued in 2023 in the area of Historic Landfills with three draft certificates of authorisation issuing in 2023; for Whitegate, Co Clare (H0035-01), Brittasroad, Co. Tipperary (H0381-01) and Ahascra, Co Kerry (H0194-01). Additionally, two submitted applications were determined to not meet the definition for a 'closed landfill', as set out in the Waste Management (Certificate of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations 2008, and were subsequently withdrawn by the applicants for sites located at St Marys Park, Limerick (H0005-01) and Southpark, Galway (H0171-01). There was one new application received in 2023 leaving the on hand number of historic landfill applications at 54 at year end.

Consents issued in respect of Genetically Modified Organisms (GMO)/ Genetically Modified Micro-organism (GMM) activities related predominantly to research facilities and presented low or negligible risk. In addition, 1 consent was issued in respect of a Class 3 GMM activity (presenting a moderate risk) to a company offering testing services to the food industry.

In 2023, the EPA issued five dumping at sea permits and has a further four on hand at the end of the year. The Water Environment (Abstractions and Associated Impoundments) Bill was signed into law in December 2022. The Regulations commencing the Act are yet to be published. The EPA carried out preparatory work during 2023 to be in a position to accept applications and carry out assessments.

The EPA continued to support its web service to include electronic submission of licence applications and electronic processing and communication with all stakeholders. This facilitated a more efficient service for our customers and enables more efficient and accurate reporting of data to the European Commission.

Table 1. Environmental Licensing Programme (licensing activities 2023)

Licence type	Total applications received 2023	Total objections received 2023	Total Proposed Decisions issued 2023	Total Final Decisions issued 2023
IED/IPC Licences (includes IE Waste)	34	14	52	54
Waste Licences	1	0	0	0
Waste Water Licences	12	N/A	N/A	5
Waste Water Certificates of Authorisation	2	N/A	N/A	0
GMO Permits (Contained use)	42	N/A	N/A	33
GMO Permits (Deliberate release)	0	N/A	N/A	1
Historic Landfill Certificates	1	2	3	0
Dumping at Sea Permits	6	N/A	N/A	7
Certificates of Registration (Waste)	31	N/A	N/A	2
Volatile Organic Compound (VOC) Permits	6	N/A	7	7
Greenhouse gas permits	50	N/A	N/A	25
Total	185	16	62	134

N/A, not applicable.

Table 2. Office of Environmental Sustainability (other regulatory activities 2023)

Tasks	Total tasks assessed 2023
Article 11 requests	61
IE/IPC Amendments	106
Waste Amendments	3
Waste Water Treatment Plant (WWTP) Amendments	2
Dumping at Sea Amendments	2
By Product Notifications – Single Case	447
End of Waste Applications – Single Case	31
Transfers	7
Air Pollution Appeals	0
Planning correspondences examined	48
Medium Combustion Plants registered	36
Total	743

Emissions Trading

The EPA is the enforcement and implementation authority for the European Union Emissions Trading System (EU ETS) in Ireland and as part of this system implements the EU rules for harmonised free allocation of carbon emission allowances.

In 2023, 107 stationary installations (industries, power stations and other high-energy users) were obliged to report their CO₂ emissions for the previous calendar year. All installations complied with reporting and surrender deadlines. The results from the installations covered by the ETS for 2022 showed that greenhouse gas emissions from Irish companies decreased by 4% (600,000 tonnes) compared to 2021.

Greenhouse gas emissions from aviation increased by approximately 94% compared to 2021, which reflects continued growth in this sector after the impact of Covid-19. These emissions arise from flights anywhere within the

European Economic Area, where the aircraft operator has been assigned to Ireland for administration within the EU ETS.

The EPA acts (along with Department of Transport and the Irish Aviation Authority) as Competent Authority for the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). The CORSIA reporting deadline was 31 August 2023 where each Member State was required to submit total annual CO₂ aggregated for all attributed Aircraft Operators. The EPA performed the necessary checks and collated the aggregated report before passing to the Department of Transport for submission to the International Civil Aviation Organisation (ICAO) via the CORSIA Central Registry.

The list of installations entitled to some free allocation of carbon allowances in the current allocation period (the National Allocation Table 2021-2025) was approved by the Commission on 29 June 2021. Since production levels, and therefore CO₂ emission levels, can vary from year to year the rules for Phase IV (2021-2030) are designed to reduce over-allocation in the event of changes to the activity levels as calculated in the baseline and to increase allocation where there are significant increases in the activity level. Operators are required to submit annually a verified activity level changes report to the EPA. For each year, the EPA needs to assess all verified activity level changes reports for the 67 incumbent operators listed in the National Allocation Table and consider if an adjustment should be made to that year’s allocation. All adjustments are notified to the Commission for approval. Twenty-nine such reports were forwarded for 2023.

The auctioning of ETS allowances takes place on a common auction platform. The European Energy Exchange (EEX) is the current common auction platform to auction allowances on behalf of 25 EU Member States. The EPA tracks auctioning of Ireland’s quota of allowances each week.

The Union Registry is used as the compliance tool for stationary installations and aircraft operators regulated under the EU ETS. These Stationary and Aircraft Operators are legally obliged to open an account on the Union Registry to fulfil their compliance obligations in relation to greenhouse gas emissions. The EPA, as National Administrator exercises a high level of scrutiny in relation

to the eligibility to open registry accounts and to maintain access to them in accordance with the requirements of the Commission Delegated Regulation (EU) 2019/1122. The Irish domain of the Union Registry, managed by the EPA, had 517 users at the end of 2023.

A separate but parallel registry is Ireland’s Effort Sharing Decision (ESD) Registry under the EU Effort Sharing Decision 2013-2020. The ESD set binding greenhouse gas emission targets for all Member States for emissions not included in the EU ETS such as transport, buildings, agriculture and waste management. The EPA, as National Administrator, carried out the necessary transactions on the ESD Registry to demonstrate Ireland’s ESD 2020 compliance which concluded the accounting process under the 2013-2020 EU Effort Sharing Decision. Further information is available on the [European Union Transaction Log](#) (EUTL)

The EPA takes an active role in EU Climate Change Expert Groups and Task Forces which are vital to ensure the uniform application of the ETS Directive and supporting legislation.

As part of the fit for 55 package the EU ETS Directive was substantially [amended in 2023](#) and EPA was appointed National Competent Authority for ETS Maritime, the Carbon Border Adjustment Mechanism and for the extension of ETS to cover fuels supplied to Buildings, Road Transport and Additional Sectors (commonly known as “ETS2”).

Radiation Protection Authorisations

The system in place for radiation protection authorisations allows for two forms of authorisation: registration and licensing. Table 3 outlines the authorisations undertaken in 2023. Registration is a simpler and less administratively onerous form of authorisation, appropriate for practices that are less complex in nature and have been demonstrated to be relatively safe. Licensing applies to higher risk practices. Authorisation fees are reflective of the level of risk associated with the types of practices being carried out and therefore the level of regulatory oversight required.

Table 3. New Radiation Protection Authorisations, 2023

Licences	Registrations	Authorisation Amendments	Closed Authorisations
5	60	598	18

2.2 Enforcement

Industrial and Waste Licence enforcement

The EPA regulated 889 industrial and waste facilities during 2023. The EPA's objective is to ensure that operators carry on their activities in accordance with their licences. These objectives are advanced through a combination of inspections and guidance and taking enforcement actions where necessary. The EPA's enforcement approach is underpinned by the principles published in its [Compliance and Enforcement Policy](#) and set out in Figure 1. Table 4 includes the number of inspections carried out on industrial and waste licensed activities during 2023.



Figure 1. EPA Enforcement Principles

The EPA prioritises enforcement effort on sites which present the highest risk to the environment based on the type of activity that is licensed, the location of the activity (i.e. proximity to people or protected areas) and the enforcement history of the site (i.e. whether the site has a history of non-compliance). During 2023, the EPA focused on key priority issues of management of waste at waste management facilities, unauthorised extraction of peat and where licensed activities were having an impact on water quality.

The National Priority Sites List is used to target EPA's enforcement effort at the poorest performing sites to drive improvements in environmental compliance. The list ranks industrial and waste sites in order of priority for enforcement, based on factors such as: complaints (Table 5), incidents, compliance investigations and non-compliances with the licence. This list was published quarterly with 11 licensed sites included on the list at least once during 2023, the majority of which were in the food and drink or waste sectors. The EPA's enforcement activities are summarised in the infographic in Figure 2.

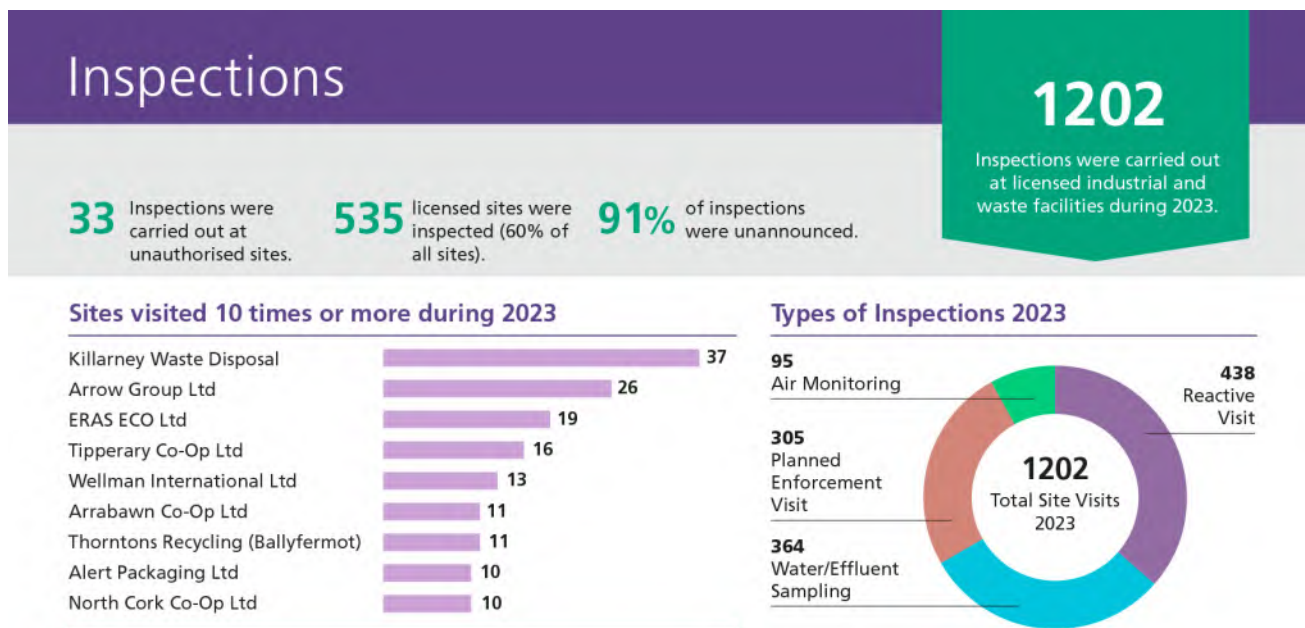


Figure 2. Summary of EPA Industrial and Waste Licence enforcement activities.

Table 4. Number of inspections by sector undertaken in 2023.

Activity	Number of inspections
Industrial and Waste Licences	1,202
Urban Waste Water Discharge Authorisations	205
Drinking water treatment plants	154
Dumping at Sea Permits	8
Genetically Modified Organisms Permits	17
Volatile Organic Compound Permits	8
Market surveillance – chemicals	100
ODS and F-gas	58

Table 5. Number of complaints received in 2023 and number of facilities the subject of those complaints by sector.

Activity	Number of complaints	Number of facilities the subject of those complaints
Industrial and Waste Licences	960	101
Urban Waste Water	156	57
Drinking Water	19	4
ODS and F-gas	3	N/A
Total complaints	1138	

Water & Waste Water Drinking Water

At the end of 2023, the number of people served by public water supplies on the EPA’s Remedial Action List (RAL) was 561,000 (57 supplies) compared to over 481,000 people (58 supplies) at the end of 2022. In 2023, ten supplies were removed from the RAL due to improvement works/rationalisation by Uisce Éireann (UÉ), but nine new supplies were added, mainly due to Trihalomethanes (THM) exceedances or inadequate treatment for Cryptosporidium, continuing the trend seen in 2022.

There were 91 Boil Water Notices (BWN) in effect during 2023 affecting over 254,000 people, up from 79 in 2022 (Table 6). The increased prevalence of notices in recent years is linked to improved awareness of incidents and incident reporting by UÉ on foot of increased EPA enforcement activities. In addition, there was industrial action arising from a trade union dispute in mid-2023, where several drinking water treatment plants in Waterford, Tipperary and Cork had Boil Water Notices (14)

issued as a precautionary measure to their consumers. They were relatively short-lived BWNs between 1-8 days. While the EPA does not want to see BWNs, they are essential to protect public health when drinking water supplies are compromised.

Table 6. Boil Water Notices and Water Restrictions

Advisory Notices issued by Uisce Éireann	2021	2022	2023
Boil Water Notices	70 notices affecting 211,000 people.	79 notices affecting 182,000 people.	91 notices affecting 254,000 people.
Water Restrictions	26 Notices affecting 17,954 people.	10 Notices affecting 8,700 people.	12 Notices affecting 2,500 people.

There were approx. 2,500 people affected by 12 water restrictions during 2023 – compared to 10 in 2022 affecting over 8,700 people, which is a continued improvement on 2022/2021.

The EPA is concerned about the slow progress by UÉ in the removal of lead connections in the public network. In 2023, UÉ replaced over 9,500 lead connections (approx. 10,000 in 2022), bringing the total number of replacements to approx. 61,000 out of approximately 180,000. UÉ is highly unlikely to meet its commitment to remove all public-side lead pipework by 2026.

There were 52 Pesticides exceedances notified across 23 water supplies in 2023, compared with 47 Pesticide exceedances notified across 17 water supplies for 2022. Uisce Éireann in conjunction with other stakeholders are primarily looking at a catchment-based approach to resolve these pesticide breaches.

The European Commission’s infringement proceedings against Ireland on Trihalomethanes (THM) in drinking water has been submitted to the European Court of Justice. The Commission case states that Ireland failed to take the measures necessary to ensure THM compliance in 31 public water supplies and 13 private group water schemes. The EPA has supported the Department of Housing, Local Government and Heritage (DHLGH) in providing updates on THM compliance as part of its submissions to the Commission.

There are now 25 supplies serving over 297,000 consumers on the RAL for elevated levels of THMs above the standard in the Drinking Water Regulations. This represents an

increase of over 60,000 consumers at risk from THMs from end 2022 (23 supplies). The EPA will continue to target THM compliance as part of their enforcement activities.

Urban Waste Water Discharges

During 2023, the EPA completed 205 waste water site inspections focusing on areas where waste water is a Water Framework Directive pressure, on operational performance of treatment plants, compliance monitoring of discharges and responding to complaints and incidents.

The EPA published the [Urban Waste Water Treatment in 2022 Report](#) identifying the priority issues that must be addressed to protect our environment and set out key recommended actions for Uisce Éireann. The Report highlighted 158 of the 173 areas subject to the standards in 2022 were compliant with the Urban Waste Water Treatment Directive's treatment and effluent quality standards.

However, one area that failed the Directive is Ringsend which treats over 40% of Ireland's waste water. The improvement works at this plant are scheduled for completion in 2025. These works will significantly improve Ireland's compliance with the Urban Waste Water Treatment Directive.

The EPA's Priority Urban Area List is a list of areas where action is needed to protect the environment and public health from the harmful effects of waste water discharges. The number of priority areas has reduced from 148 in 2017 to 80 in 2023 (Figure 3). In particular, the number of areas discharging raw sewage reduced from 29 to 19 in 2023. Information on the EPA's Priority Urban Area List is available on the EPA's website at the following link: [List of Priority Urban Areas](#).

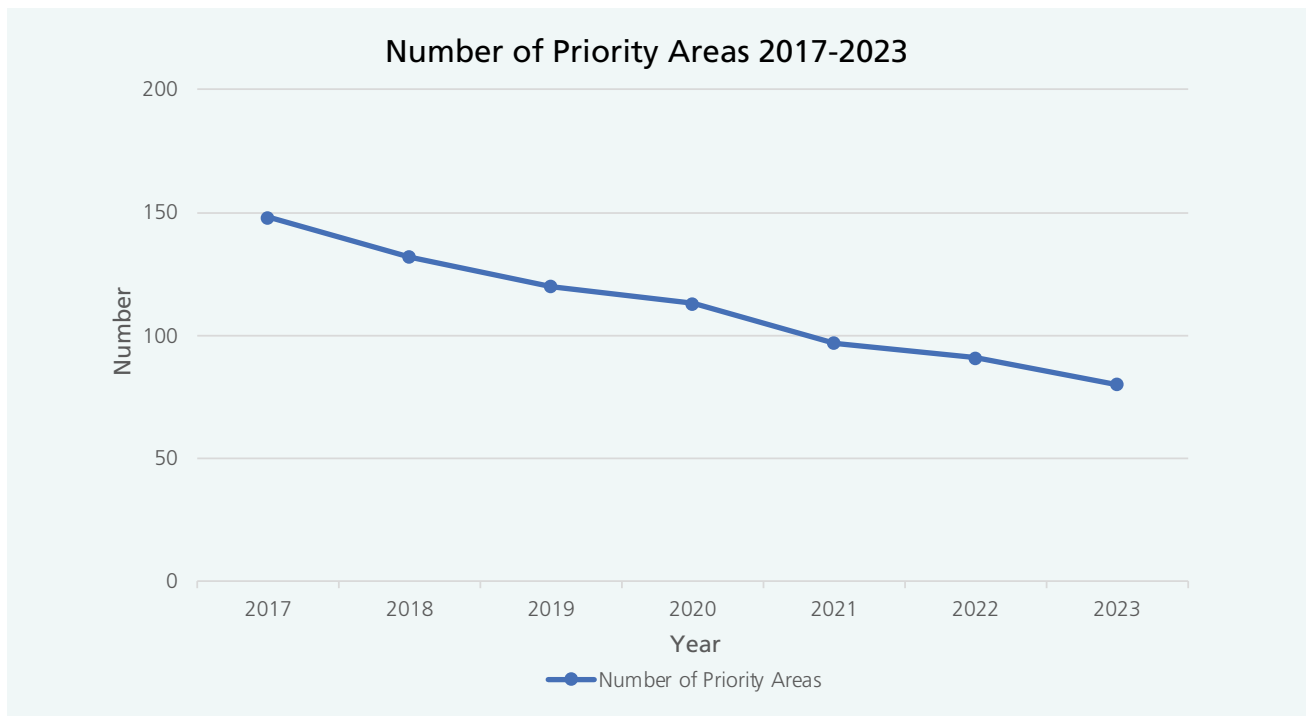


Figure 3. Reduction in the number of priority areas since 2017.

Despite the improvements noted above, Uisce Éireann must expedite actions to eliminate waste water impacts at priority areas and speed up the delivery of these improvements. The resources and funding to implement these improvements should be given priority in Uisce Éireann's upcoming investment plan (2025 to 2029).

Domestic Waste Water Treatment Systems (septic tanks)

The EPA published the [Domestic Waste Water Treatment System \(DWWTS\) Inspections 2022](#) report in 2023. The report highlights the following:

- ▲ 49% of systems failed inspection.
- ▲ 78% of systems that failed during 2013- 2022 were fixed by the end of 2022 which is an improvement from 75% in 2021.

The failure to resolve older advisory notices is a continuing concern. Figure 4 illustrates that the number of DWWTS failures open more than two years has accumulated year-on-year to 550 at the end of 2022 and these need to be brought to resolution by the relevant local authorities.

Focused enforcement effort is needed by local authorities to close out these advisory notices and resolve faulty septic tanks. Increased grant funding and amendments to the registration requirements will support the resolution of these advisory notices.

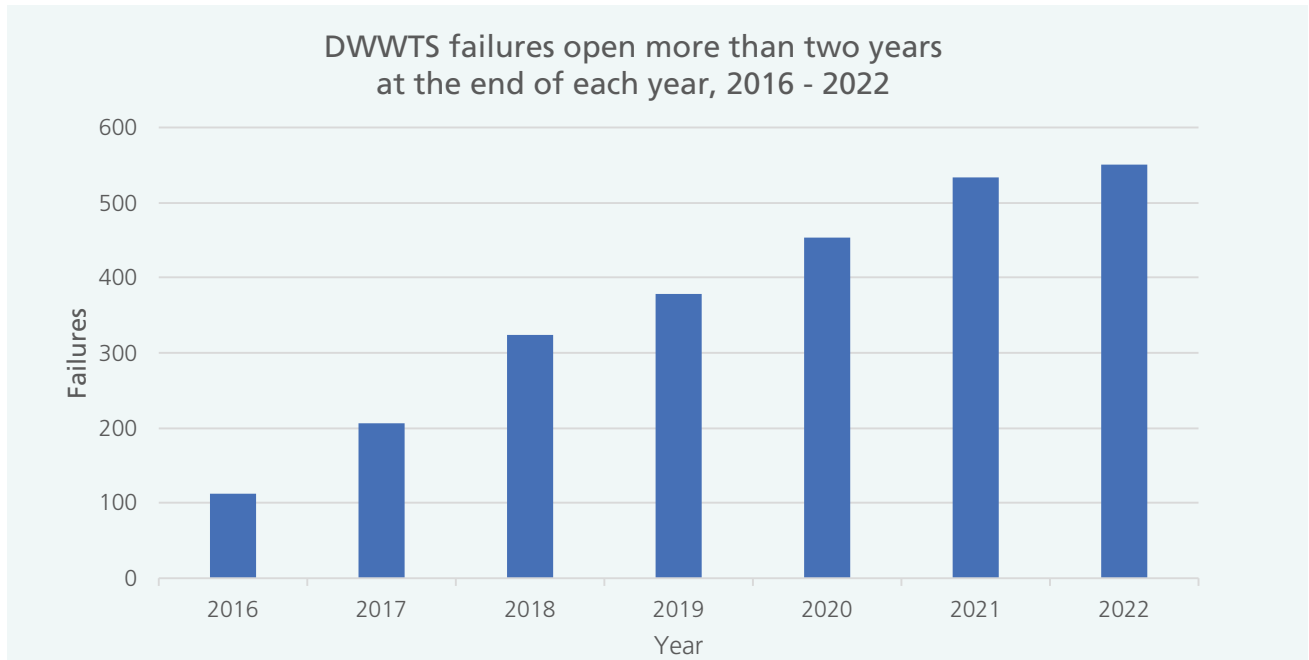


Figure 4. Domestic Waste Water Treatment System failures open more than two years at the end of each year, 2016 to 2022.

Preventing Environmental Damage Financial Provision for Environmental Liabilities

The EPA has identified priority industrial and waste activities that are obliged to maintain sufficient financial provision to pay for remediation or aftercare of licensed

sites and for any clean-up that may be required following an accident or incident. At the end of 2023, the amount of Financial Provision secured by the EPA exceeded €1.06 billion (Figure 5).

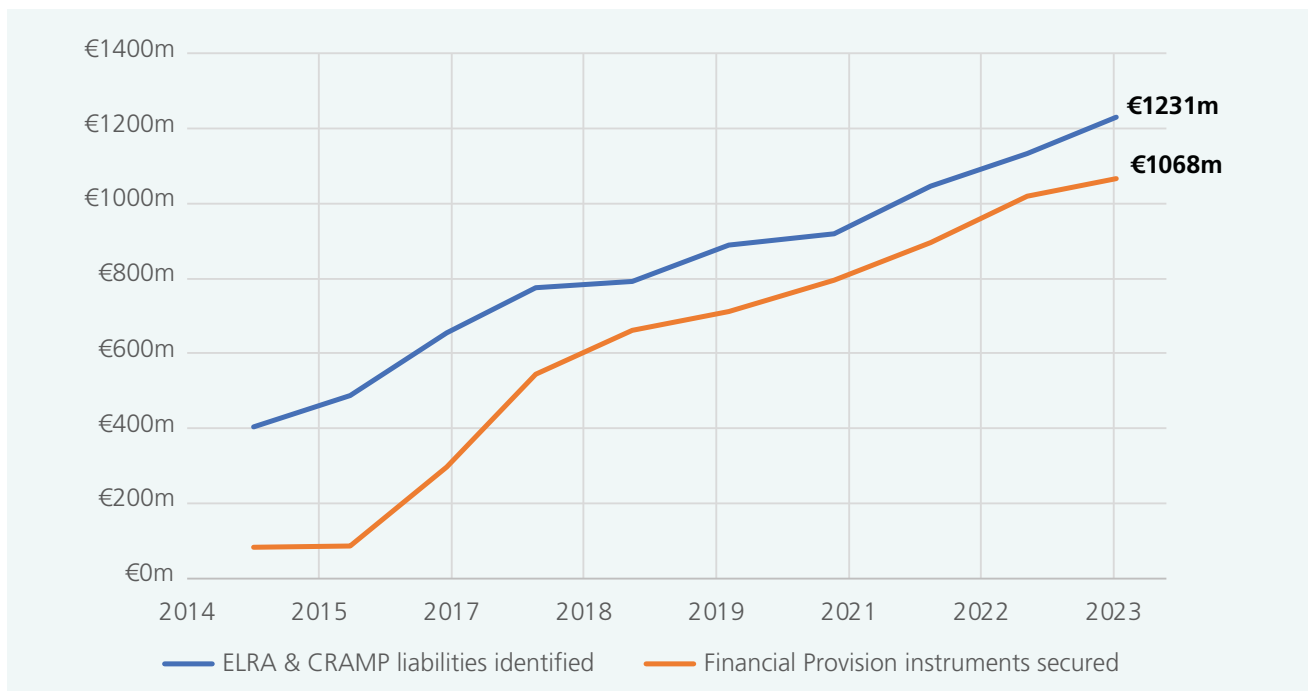


Figure 5. Financial Provision for Priority Sites

Market Surveillance and Chemicals in the Environment

Solid Fuel Regulations

The revised Solid Fuel Regulations came into effect in October 2022. The EPA's role is to maintain a fuel register of producers who produce, treat or import solid fuel. A total of 79 solid fuel participants (importers, wholesale and retail suppliers) successfully registered in 2023, and a further 113 made initial responses but did not achieve full registration.

Chemicals in the Environment

The EPA has a regulatory remit for several areas covering hazardous substances in the environment and products. This includes chemicals such as Persistent Organic Pollutants (POPs) and some substances evaluated under the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) regime.

Per- and poly-fluoroalkylated substances (PFAS) is a large group of man-made chemicals of which thousands have been identified to date. The EPA's roles in relation to PFAS come from a variety of sources and are addressed in several programmes across the EPA. During 2023 there was engagement across the EPA about PFAS, environmental regulation (e.g., new drinking water limits for PFAS and proposed surface water and groundwater standards), and various proposals at EU level for further restrictions under REACH of more PFAS substances. Three specific PFAS substances are now regulated as POPs under the UN Stockholm Convention. Work continued in 2023 to address the phase-out of PFOA which is one of these POPs restricted PFAS chemicals. The focus of this work has been around the phase-out of their use in firefighting foams and to ensure that they are reported to the EPA and used, managed and disposed of appropriately. Monitoring studies continued for hazardous substances in 2023 with a project underway to study PFAS levels in the environment.

The EPA prepared reports for submission to international conventions covering persistent organic pollutants (UN Stockholm Convention) and mercury (UN Minamata Convention). These reports collate information from across the EPA and from other organisations including The Food Safety Authority Ireland, Marine Institute, Customs and HSA.

Two meetings of the National Persistent Organic Pollutants (POPs) Forum were held in 2023. This Forum was established in late 2022 bringing together stakeholders that work on the POPs regulations, with the objective of supporting implementation of Ireland's obligations under the Stockholm Convention and EU POPs Regulation. The

meetings in 2023 were focussed on strengthening and building this network and facilitating enhanced information exchange between members. The membership was expanded in 2023 to include Uisce Éireann and the Local Authority Water Programme (LAWPRO). Work commenced in the latter half of 2023 on updating the POPs National Implementation Plan (NIP) which will be completed with input and support from the POPs Forum members.

In 2023, one of the important projects on market surveillance of chemicals in products centred around follow up on EU Safety Gate Alerts. The EU Safety Gate rapid alert system notifies where products that do not comply with limits on certain hazardous substances have been identified in the EU. During this project campaign, 100 distributors/retailers were inspected and 135 products that were alerted via Safety Gate were looked for to determine whether these products were available to consumers in Ireland. These products had been notified for non-compliances under RoHS Directive, Persistent Organic Pollutants Regulation and REACH Regulation.

The EPA closed-out reporting for an EU-wide market surveillance project called the REACH REF-10 Project, in collaboration with the Health and Safety Authority (HSA) and the Competition and Consumer Protection Commission. This project involved national enforcement authorities checking products sold to consumers for breaches of chemical laws. The EPA in 2022 tested a range of sports equipment like yoga blocks and weights. Arising from this project, in 2023 the EPA submitted three REF-10 cases files to the HSA for follow up as the substances detected related to their REACH remit. The final project is now published on the European Chemicals Agency website.

In October, the EPA and the HSA co-hosted the EU Chemicals Strategy for Sustainability Conference focusing on the future of EU chemicals legislation. The conference was hosted in response to the European Commission Chemicals Strategy for Sustainability. This work with the HSA also links in with ongoing wider engagement and input on developments around chemicals and REACH.

Producer Responsibility

The EPA has enforcement responsibilities under the Waste Electrical and Electronic Equipment (WEEE), Batteries, Tyres and Single Use Plastics Regulations. A summary of activities undertaken in 2023 is outlined in Table 7. Enforcement efforts are focussed on non-compliant producers. Producers are companies that either manufacture or import electronic products, batteries, tyres or Single Use Plastics

(SUP) and make them available for sale for the first time in Ireland.

Audits of Business to Business (B2B) producers focussed on producers who are reporting zero take back of WEEE. Business to Customer (B2C) enforcement focussed on distance seller websites and retail sectors with low WEEE take-back. There was also engagement with the power

tool/DIY sector, small appliance sector and the e-cigarette/vape sector.

The EPA introduced an online payment system for B2B producers, and a €100 fee will be due when submitting their annual WEEE Waste Management Report in 2024. The EPA engaged with 55 second-hand car importers to enforce their obligations under the tyres and batteries regulations.

Table 7. Summary statistics on the 2020 producer responsibility enforcement campaigns

Task	Total number of activities
Business to Business Producer WEEE Waste Management Plans reviewed	245
Business to Business Producer WEEE Waste Management Reports reviewed	629
Business to Business Electrical and Electronic Equipment (EEE) Producer Audits	61
Business to Consumer EEE/Battery Distance-seller website inspections	73
Retail inspections in sectors with historical low take back of WEEE	47
Advisory letters issued to representative bodies of the e-cigarette/vape unit sector	60
Guidance/Communication emails issued to B2B producers	9
Self-complying Battery Producer Audits	1
Tyre Producer Inspections	22
Non-compliances under tyres regulations issued to car importers	36
Non-compliances under batteries regulations issued to car importers	54



Ozone-Depleting Substances and Fluorinated Greenhouse Gases

The EPA issued 99 Prior Annual Notifications authorising ODS & F-Gas service technicians to carry waste ODS & F-Gases.

The EPA and the European Commission conducted a joint investigation into the illegal trade of f-gases into Europe via Ireland. This investigation led to site visits to two “Only Representative” companies based in Dublin. Investigations are on-going and have resulted in many clients being suspended from the European hydrofluorocarbon (HFC) Registry. This work aims to achieve improved practices in reporting and management of HFC import in Europe.

Radiation Protection Inspections

The EPA carries out an annual programme of radiation protection inspections to assess compliance with legislation and authorisation conditions. These inspections allow the EPA to assess the standard of radiation protection at sites, to identify common or emerging issues across sites and to promote a strong radiation protection culture.

During 2023, radiation protection inspections were undertaken in several sectors (Table 8) including 6 security inspections carried out with the assistance of An Garda Síochána National Crime Prevention Unit.

Table 8. Radiation protection licensee categories and inspections undertaken during 2023

Licensed sector	Number of completed inspections
Hospital and medical facilities	36
Industrial and commercial (including 5 security inspections)	36
Other licensees (Education & research, transport & distribution, vets, dentists, service companies; including 1 security inspection)	20
Other inspections to unlicensed facilities	6
Total	98

The focus of inspections for 2023 included the implementation of the new Ionising Radiation Regulations and associated EPA guidance (particularly the requirements on: risk assessment, including workers categorisation; training; and Radiation Protection Officer (RPO)), and operational radiation protection in high risk areas such

Consultants, on behalf of the EPA, carried out 54 site visits at ‘end-users’ of ODS and F-gas systems, concentrating on air conditioning and refrigeration maintenance contractors and garages.

The EPA conducted a survey on the use and maintenance of equipment containing ODS and F-gas on licensed sites and developed guidance for licensees on the identification and correction of leaks.

In 2023, the EPA processed 135 Customs clearance queries in relation to ozone depleting substances; 107 of these were for aircraft and aircraft parts. F-gases will also require EPA clearance in 2024 when they are brought into the EU CERTEX Single Window customs data exchange system.

as interventional radiology, cardiology and industrial site radiography.

The findings of the 2023 inspection programme identified the following:

- ▲ Improvements in risk assessments were noted, but issues remain around dose estimations and workers categorisation.
- ▲ Radiation safety training remains an issue, in particular a lack of mechanisms to monitor and record training, especially in the medical sector.
- ▲ Challenges in relation to the implementation of RPO arrangements.

A focused enforcement campaign in the veterinary sector was completed in 2023. Two webinars were delivered, based on results from an online compliance survey in 2022, and followed-up with several targeted site inspections. A significant drop in the number of non-compliances was observed after the two webinars, showing the positive impact of an active engagement with the regulated vet community.

During 2023, 31 reportable incidents and 8 reportable doses were notified to the EPA. The most significant incident was where a hospital staff member received a high dose in a nuclear medicine department. While statutory annual dose limits were not exceeded, the follow-up EPA investigation identified deficiencies in training and implementation of incident procedure which were promptly addressed by the licensee.

Local Authority Statutory Performance

Local Authorities play a vital role in protecting our environment and carried out over 197,000 environmental inspections in 2022. The EPA published its assessment of [local authority environmental enforcement performance for 2022](#) in November 2023. While the scale of environmental enforcement work carried out by local authorities is significant, in many areas it is not delivering the necessary environmental outcomes such as better segregation of household and commercial waste, cleaner air through controls on solid fuel sales and minimising risks to water quality from farming activities. The EPA carried out 11 audits of local authorities and provided guidance and training support through the NIECE network to drive environmental protection improvements. The report highlights areas where further action is required by local authorities include:

- ▲ Prioritise and resource environmental functions to deliver the national enforcement priorities.
- ▲ Target enforcement to improve the segregation and recycling of household and commercial waste and to increase material reuse and recovery.
- ▲ Ensure that only approved solid fuels are available for sale, to reduce air pollution from the combustion of solid fuels for home heating.

- ▲ Increase the number of risk-based farm inspections and follow up enforcement to reduce the impact of agricultural activities on water quality. The National Agricultural Inspection Programme, which commenced in 2022, sets out a risk-based approach to the targeting of inspections using the EPA's Targeting Agricultural Measures Map.

Prosecutions

Twenty-two cases were concluded in the district court in 2023 (compared to 10 in 2022) which resulted in:

- ▲ 19 convictions,
- ▲ 1 defendant was given the benefit of the Probation Act,
- ▲ 1 case was struck out by agreement, and
- ▲ 1 case was dismissed.

A long standing Director of Public Prosecutions (DPP) case concluded in 2023 at the Dublin Circuit Court, resulting in a director of a waste company being sentenced to three years imprisonment with the final twelve months suspended for illegal waste management activities and for causing environmental pollution.

In total, during 2023 fines of €137,750 and total costs of €245,047 were awarded to the EPA. Environmental outcomes from cases ranged from improved compliance with Emission Limit Values to installation of required infrastructure.



2.3 Monitoring and Assessment

Air Quality

The EPA manages and operates the National Ambient Air Quality Monitoring Network (Figure 6), in collaboration with local authorities and other bodies. In 2023, the network was further expanded to 115 stations with the addition of eight new monitoring stations – compared to 29 stations in 2017.

Data from the network was made available to the public during 2022 through the EPA website and reported in compliance with the requirements of the EU Clean Air for Europe Directive (CAFE) and 4th Daughter Directive. Data is assessed against European legal limit values and the revised (2021) World Health Organization (WHO) guideline values.

The EPA published [Air Quality in Ireland 2022](#) in a readily accessible online format in September. The report concluded that, while air quality in Ireland is generally good and compares favourably with many of our European neighbours, there are concerning localised issues which lead to poor air quality. While there were no exceedances of any EU legal air quality limits, across the network pollutants were above the World Health Organisation (WHO) guideline values including: particulate matter (PM_{2.5} and PM₁₀), nitrogen dioxide (NO₂), sulphur dioxide (SO₂) and ozone (O₃) mainly due to the burning of solid fuel in our towns and villages and traffic in our cities. The reports key messages included that people’s health and the health of our environment is at risk due to the levels of pollutants in our air with fine particulate matter (PM_{2.5}) from solid fuel combustion and nitrogen dioxide (NO₂) from vehicle emissions remaining as our main pollutants. The report also noted that Ireland’s ambition in the Clean Air Strategy is to move towards the World Health Organisation (WHO) air quality guidelines will be challenging but will have a significantly positive impact on health.

Poor air quality impacts people’s health and the European Environment Agency (EEA) estimate that there are approximately 1,600 premature deaths in Ireland due to air pollution. There is an ever-growing body of research showing the clear links between poor air quality and premature deaths and also to life limiting impacts such as dementia and diabetes. Levels of particulate matter (fine particles) in air is of growing concern. Levels of this pollutant are particularly high during the winter months as shown in Figure 7, when people’s use of solid fuels such as coal, peat and wet wood negatively impacts air quality – especially in small towns and villages. Any movement along the spectrum of home heating choices and solid fuel choices towards cleaner modes (Figure 8) will have a subsequent improvement on air quality. Similarly, the health impact from transport emissions can be mitigated by making the right transport choices.

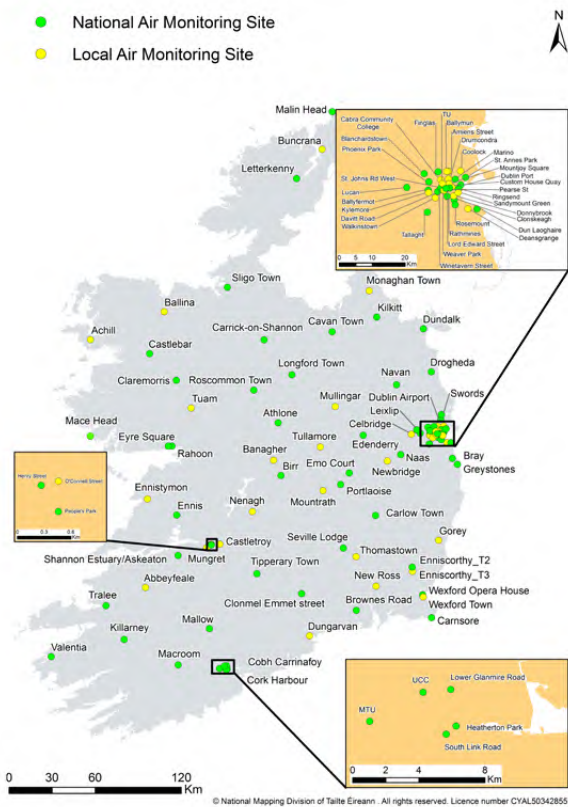


Figure 6. National Ambient Air Quality Monitoring Network

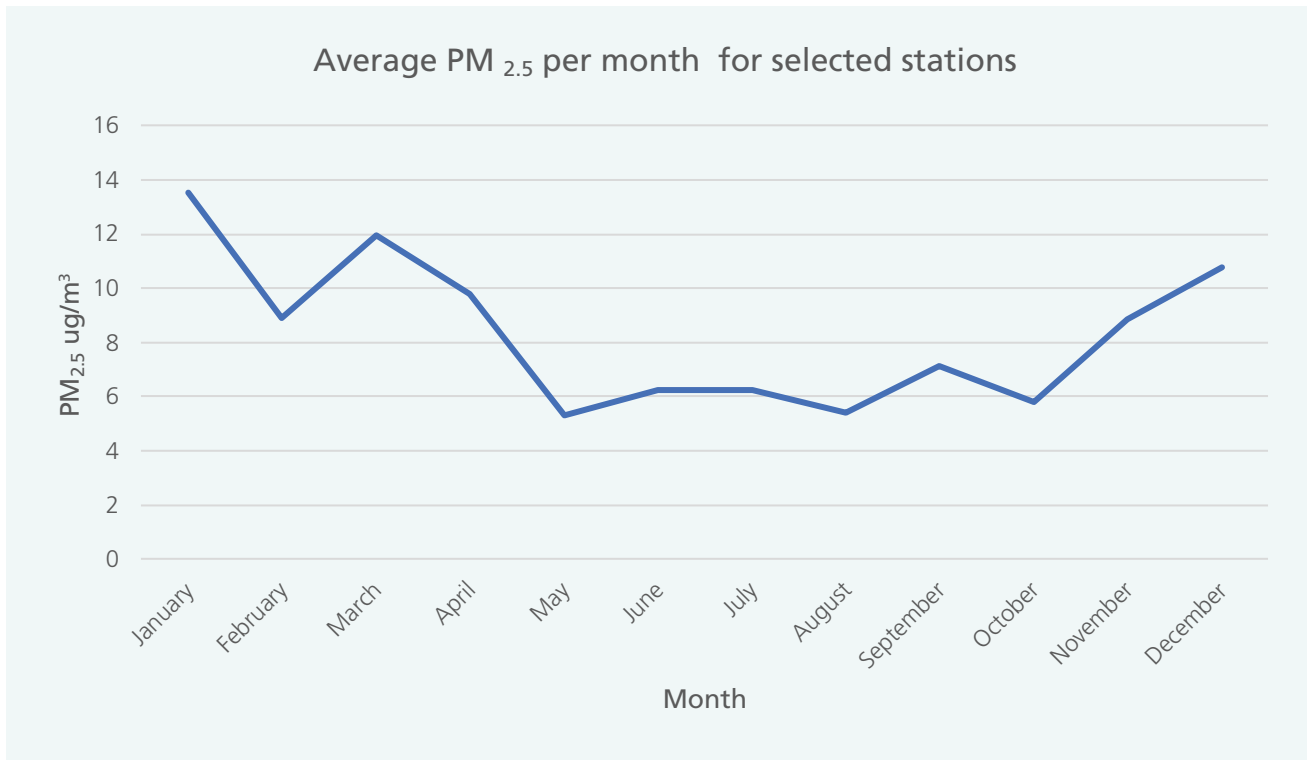


Figure 7. Average PM_{2.5} per month for selected stations

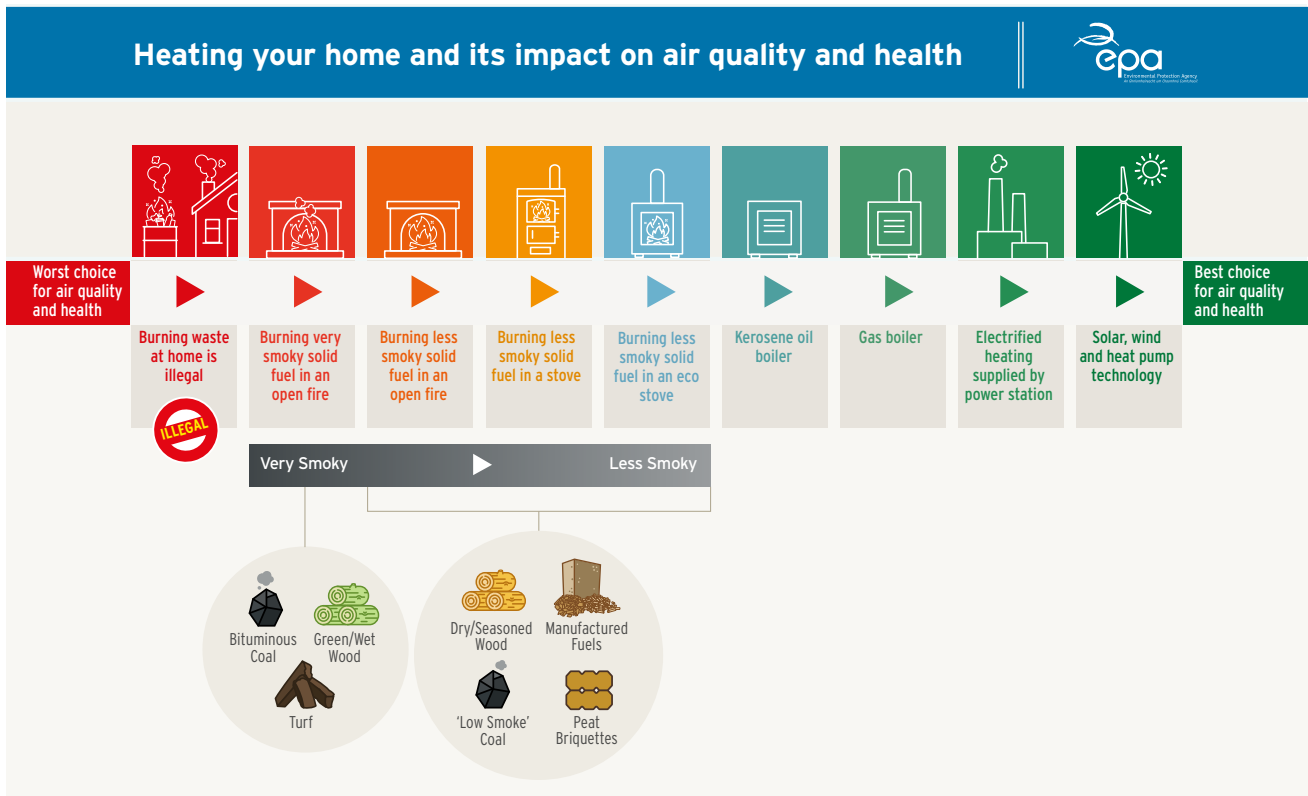
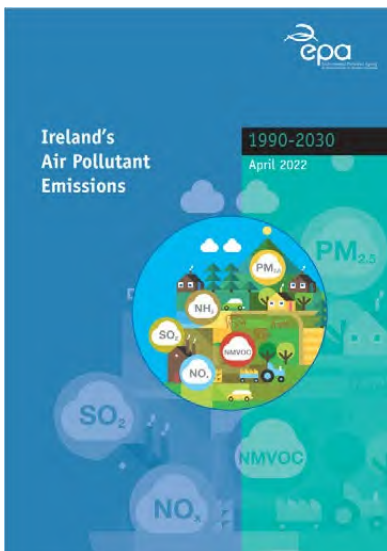


Figure 8. Infographic on the air quality and health aspects of home heating choices

Air Pollutant Emission Inventories and Projections

In 2023, EPA published its [assessment of 2021 emissions of five key air pollutants](#): ammonia, non-methane volatile organic compounds, sulphur dioxide, nitrogen oxides and fine particulate matter. These pollutants impact air quality, health and the environment and are subject to reduction commitments under the EU National Emission Reduction Commitments (NEC) Directive. In addition, emissions projections for these air pollutants to 2030 were prepared and submitted to the United Nations Economic Commission for Europe (UNECE), under the Convention on Long-range Transboundary Air Pollution (CLRTAP).

The report shows that Ireland complied with the non-methane volatile organic compounds, sulphur dioxide, nitrogen oxides and particulate matter emission reduction commitments for 2021 and did not comply with its emission reduction commitments for ammonia.



Ammonia emissions increased in 2021 by nearly 1%. Growth in livestock numbers, including a 3% increase in dairy cow numbers, led to an increase in total national ammonia emissions. Increased use of low emission slurry spreading to 48% was not sufficient to counteract the impact of the overall growth in livestock numbers. Ireland has not complied with EU National Emission Reduction

Commitments for nine of the past ten years for ammonia emissions, which cause significant environmental damage to valuable ecosystems and can also impact local air quality and human health. As a result of Ireland's non-compliance with the 2020 emission reduction commitment for ammonia emissions the European Commission served Ireland with a reasoned opinion for non-compliance with the National Emission Ceilings Directive (2016/2284) in November 2023. Compliance with the 2030 Reduction Commitment is only possible with full implementation of all identified measures such as low emissions slurry spreading and widespread use of inhibited urea fertiliser products.

Emissions of non-methane volatile organic compounds (NMVOCs) increased by 2% in 2021, driven largely by increased activity in spirit production for beverages. While compliance with the NMVOC emission reduction commitment has been achieved, effective abatement measures for this source are needed if future emissions reduction targets are to be met.

The use of coal and fuel oil in power generation trebled in 2021 which led to increases in emissions of sulphur dioxide, nitrogen oxides and fine particulate matter illustrating the direct link between fossil fuel use and air pollutant emissions. Emissions of nitrogen oxides increased by 3% overall driven by increased fossil fuel use in power generation. These increases masked a decrease in NOx emissions from transport of almost 4% in 2021 reflecting reduced car use due to Covid-19 lockdown in combination with continued improvement in vehicle NOx abatement technologies.

Despite an increase of 9.7% in 2021 total national emissions of sulphur dioxide they continue to be well below the required EU emission reduction commitments. Similarly, fine particulate matter (PM_{2.5}) emissions were 0.1% below those in 2020 and continue to meet the emission reduction commitment. Reduced residential sector emissions were offset by increased emissions from electricity generation.

Water Quality

The EPA is responsible for co-ordinating and implementing the national water quality monitoring programme, undertaking technical and scientific assessments to understand the pressures impacting on water, and helping to inform the measures which need to be taken to protect and improve water quality. This information is also required for reporting to the EU on the Water Framework Directive (WFD) and other water related activities.

The national surface water and groundwater monitoring programme was substantially completed during 2023 and included the following:

- ▲ Chemical analysis of 13,229 water samples from rivers, lakes and estuaries
- ▲ Ecological surveys and chemical sampling from over 2,500 waterbodies including rivers, lakes, groundwater, estuaries and coastal water bodies

In June 2023 the EPA published the [Water Quality in 2022 Indicators Report](#). The key findings of the report were that there has been no significant change in the biological quality of our rivers or lakes in 2022. The rate of decline largely matched the rate of improvement. Nitrate concentrations were found to be too high in 40% of rivers and 20% of estuaries nationally (Figure 9). Elevated nitrate levels are found mainly in the south and southeast and are too high to support good water quality in our estuaries. This is primarily attributable to intensive agricultural activities on freely draining soils in these areas. Phosphate concentrations are too high in 28% of rivers and 36% of lakes which impacts on their biological quality. Phosphate primarily comes from wastewater discharges and from agricultural run-off in areas with poorly draining soils.

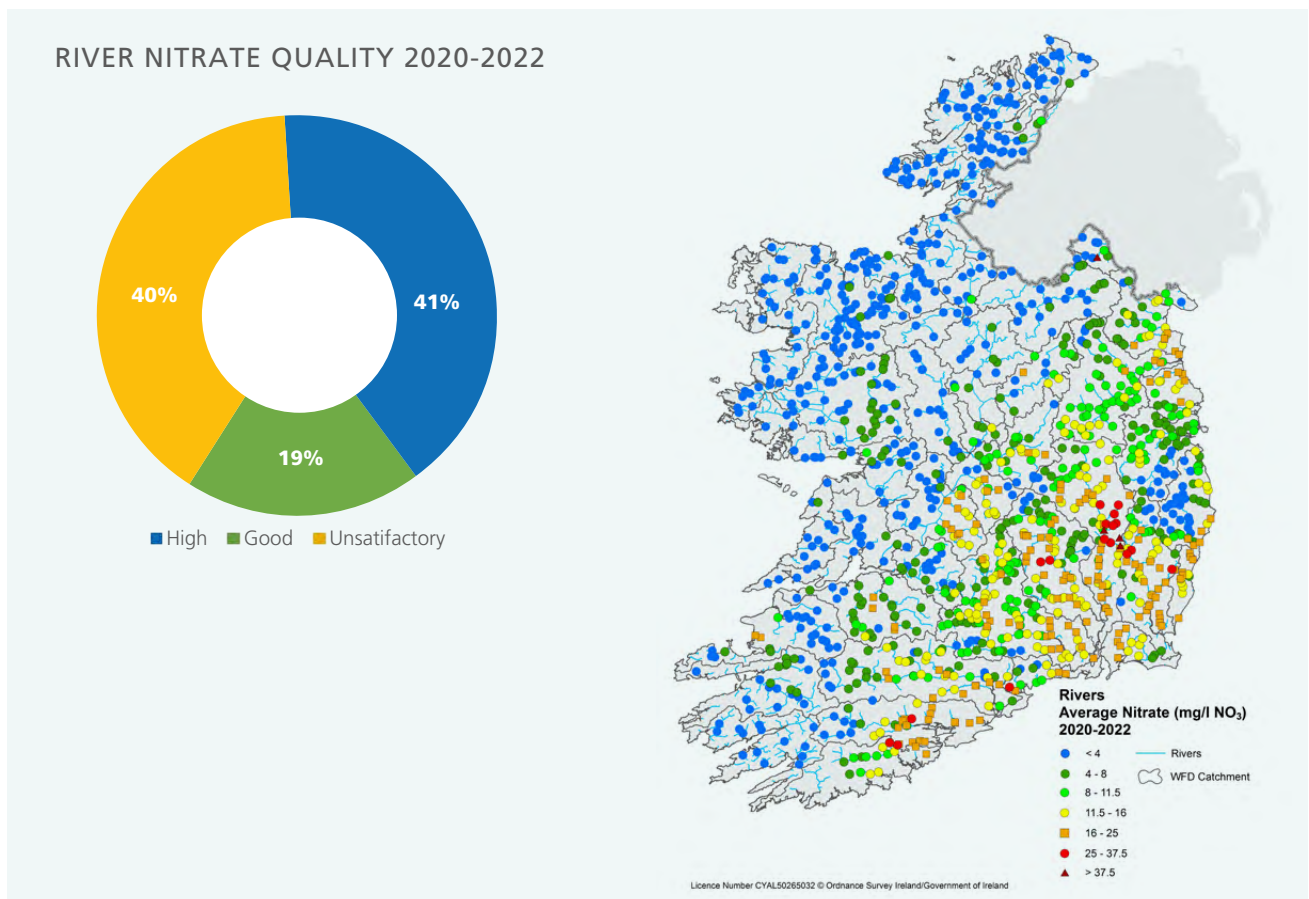


Figure 9. River Nitrate quality 2020-2022

Evidence and Assessment Tools

During 2023, the EPA published the annual report on [Nitrate and Phosphorus Concentrations in Irish Waters](#). The report included an annex with an interim water quality assessment, as required by the European Commission as a condition of Ireland’s derogation under the Nitrate Directive. The assessment identified areas which had not met the water quality criteria set down by the Commission (the ‘red map’) and to which additional measures would apply. The report generated significant public interest.

The EPA also provided the updated evidence base on the pressures impacting on waters, and an assessment of the distance to achieving our water quality objectives, to support the development of the next River Basin Management Plan being developed by DHLGH. This work will be published in early 2024.

Hydrometric Programme

The EPA continues to provide hydrometric data to support national and international reporting obligations, water resource planning and management, flood risk management, infrastructure design and a variety of other activities.

During 2023, the EPA carried out 1,178 assessments of groundwater levels and surface water levels and/or flow at sites throughout the country. These assessments primarily focused on the EPA/local authority network of sites, but also included targeted flow measurements where data was needed for specific purposes. The data are available for download via the [EPA’s HydroNet web tool](#).

The EPA continues to maintain the National Abstraction Registration portal. In December 2023, there were 2,978 individual abstraction points registered with the EPA. The abstraction register is now publicly available for download on the EPA website.

Bathing Water Quality

In May 2023, the EPA published the annual bathing water report which assessed results for the 2022 bathing season. Details of the 2022 assessments are summarised in Figure 10. The report found that 97% of bathing waters (144 of 148) in 2022 met or exceeded the minimum required standard.



Figure 10. Infographic on bathing water quality in 2022

European Pollutant Release and Transfer Register

The EPA collected the Pollutant Release and Transfer Register (PRTR) data for 2022 and submitted it to the European Commission in advance of the annual 30 November deadline. The data can be viewed online on the national PRTR register at [EPA Maps](#).

Environment Laboratory

The EPA laboratories in Castlebar, Dublin, Kilkenny and Monaghan undertake analysis to support the implementation of monitoring programmes, licensing, enforcement, and the Water Framework Directive.

These laboratories carry out monitoring, analysis and reporting of samples taken for enforcement at licensed facilities, as well as auditing at wastewater treatment sites. In 2023, the laboratories carried out a range of analyses on 1,227 enforcement samples (1,165 from IPC, IED, Waste

& Landfill sites as well as 62 from Urban Wastewater and Certs of Authorisation sites). Following a pilot in 2022, auditing at drinking water treatment sites and at licensees' laboratories continued in 2023.

The laboratories also analyse samples from rivers, lakes, groundwaters and transitional and coastal waters under the National Water Framework Directive Monitoring Programmes. During 2023, the laboratories carried out a range of analyses on 13,978 WFD samples (13,229 from rivers, lakes and estuaries and 749 from groundwaters). This is a reduction on the 15,626 samples analysed in 2022 and is largely due to the efficiencies gained as a result of the WFD lean project on Frequency of Monitoring for rivers & lakes which was completed in 2022. A breakdown of the sample numbers analysed in 2023 is provided in Figure 11.

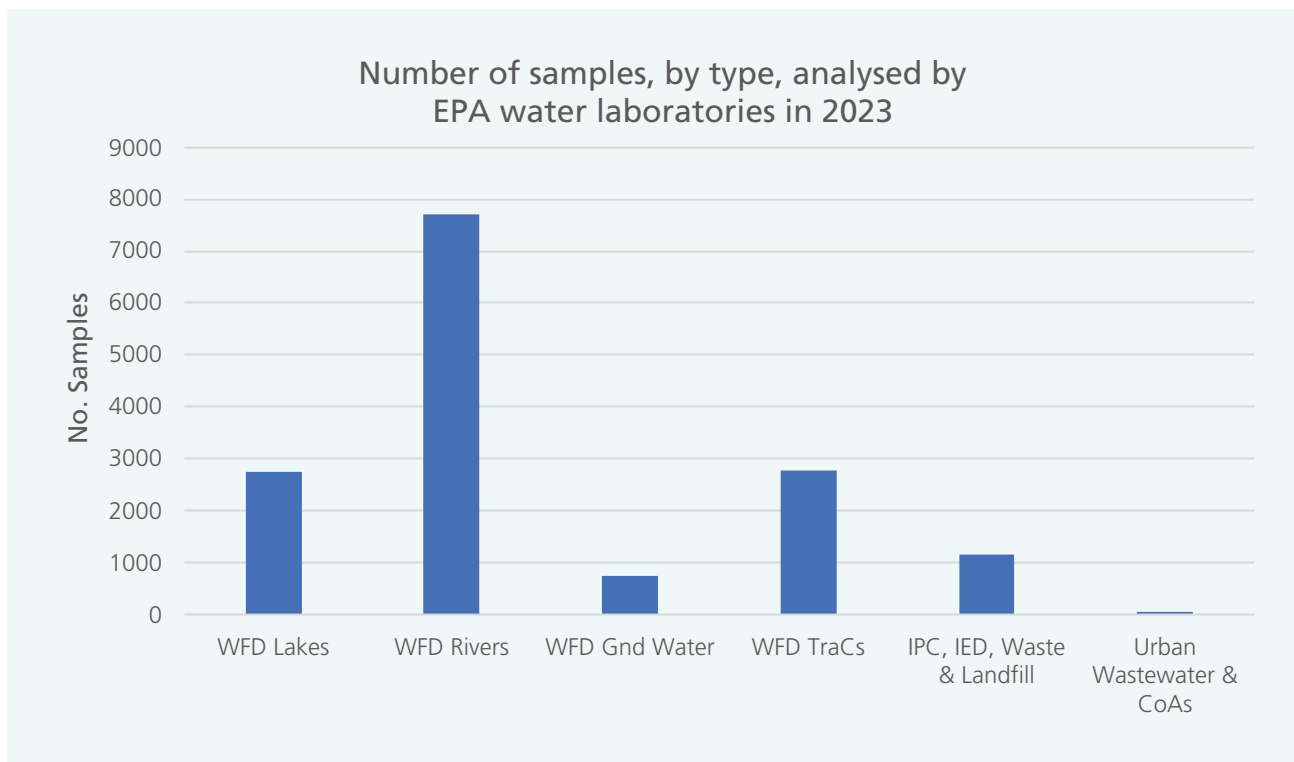


Figure 11. Number of samples, by type, analysed by EPA water laboratories in 2023.

Following an audit by the Irish National Accreditation Board (INAB) in October 2023, ISO 17025:2017 accreditation was maintained in the air, radiation, and water laboratories. The successful audit recognised the work of the EPA in continuous development, maintenance, and support of the quality system across several sites.

The Lean Change Programme continued to deliver benefits for the EPA's laboratories in 2023. In addition to the project on Frequency of Monitoring, projects on turnaround times for analyses, identification of priority substances and river basin specific pollutants, report preparation and publication were completed. Further WFD lean projects commenced at the end of 2023 and will continue into 2024.



Remediated landfill Kerdiffstown

Radiation Monitoring Instrument Calibration

The EPA provides an ISO 17025:2017 accredited instrument calibration service for a range of radiation protection instruments including survey meters, contamination monitors and electronic personal dosimeters. This service supports radiation safety and the monitoring of radiation levels in the workplace for licensees and stakeholders in industry, medicine, defence, research, regulation, and emergency response. In 2023, 318 instruments were calibrated by the service.

Radioanalytical

The EPA measures radioactivity in a wide range of foodstuffs, drinking water and environmental samples. This work is undertaken both in support of the EPA's environmental radioactivity monitoring programmes and on a contract basis for external clients.

The contract radioanalytical services provided during 2023 included:

- ▲ Testing Irish produce for compliance with the requirements of importing countries as well as imported animal-feed grains from third countries.
- ▲ Testing drinking water for compliance with the requirements of the European Communities Regulations.
- ▲ Analysis of wipe-tests to check the integrity of sealed radioactive sources.
- ▲ Testing dredged samples for compliance with the requirements of the Dumping at Sea Act 1996, as amended.

The EPA provides an assessment of radioactivity in Irish foodstuffs. This assessment provides the basis for certifying

radioactivity in produce for export following the 1986 Chernobyl accident. The number of product certificates issued in 2023 was 2,533.

The 2023 radiation monitoring programme involved sampling and testing for radioactivity in air, drinking water, seawater, seaweed, sediments, fish, shellfish, mixed diet and other foodstuffs as well as the continuous measurement of the ambient gamma dose rate at fixed monitoring stations around the country. The report of an assessment by the European Commission which showed that Ireland's arrangements for monitoring radioactivity in air, water, soil and foodstuffs complied with Article 35 of the EURATOM Treaty was finalised and published on the [European Commission's website](#).

The national surveillance programme for testing compliance of drinking water with levels of radioactivity set out in legislation was completed in 2023. The data from this programme and previous monitoring indicates that the radiological risk to consumers of Irish drinking water is extremely low.

A total of 587 environmental samples were analysed for various monitoring programmes during the year. The findings of this monitoring showed that, although the levels of artificial radioactivity in the Irish environment remain detectable, they are low and do not pose a significant risk to human health.

The Radiation Monitoring Laboratory, together with the EPA's four regional water chemistry labs and South East Technological University (SETU) in Waterford held a radiation emergency exercise in 2023 using soil and grass samples collected by the Civil Defence to test arrangements for screening and analysing samples in the event of a nuclear emergency.

National Radiation Monitoring Network

The EPA maintains the National Radiation Monitoring Network to constantly monitor radiation levels in the environment and to fulfil the EPA's responsibilities under the EURATOM Treaty and the National Plan for Nuclear

and Radiological Emergency Exposures. In the event of an overseas nuclear or radiological accident, the Network would detect if there were any enhanced levels of ambient radiation in Ireland.



Figure 12. Analysing samples in the Radiation Monitoring Laboratory

An upgrade of this Network to add additional monitoring stations and to replace all equipment at existing sites (Figure 13) continued in 2023. The total number of monitoring stations in the Network has been increased from 15 to 26. Ambient gamma radiation data from the new instruments is now being automatically transferred to the European Commission on an hourly basis. This data will be made available on the EPA's website in 2024.

As well as monitoring ambient gamma radiation levels, the Network also includes instruments to measure radioactivity concentrations in air. Some of these provide live data to the EPA while others contain aerosol filters that are collected by EPA and Met Éireann staff and sent to the EPA's Radiation Monitoring Laboratory for analysis. In addition, the Network has precipitation samplers which continuously gather precipitation samples for analysis in the EPA.



Figure 13. Equipment installed as part of the Network upgrade

National Radon Control Strategy

The National Radon Control Strategy (NRCS) is a cross-government strategy that aims to reduce the number of radon related lung cancers in Ireland. In 2023, the EPA delivered four remediation training courses under the NRCS and they addressed a potential deficiency in radon remediation capacity in Ireland. The rollout of the updated radon maps continued with the EPA producing a radon map for use with Technical Guidance Document C (TGD-C) of the Building Regulations. The updated map has been published by the Department of Housing, Local Government and Heritage and this update will apply to all new buildings and extensions commencing construction from 1 October 2023.

In collaboration with Cork County Council Library and Arts services, the EPA expanded the library loan scheme of digital radon monitors across Cork County Council's 25 branches and four mobile libraries. European Radon Day 2023 was marked on the 7 November with a week-long radon awareness campaign that highlighted the importance of testing and remediation through a series of radio advertisements and a social media campaign. EPA continues to recommend that all homeowners should test their homes for radon.

Non-ionising Radiation

During 2023, EPA published results of the monitoring programme on Non-Ionising Radiation (NIR) which focussed on frequencies used for telecommunication. A report and a brochure were made available on the EPA's website summarising the results of measurements carried out in 55 urban sites. The results found that levels in all urban sites measured were well below international guideline limits.

In April 2023, the European Commission's Scientific Committee on Health, Environmental and Emerging Risks (SCHEER) published its Final Opinion on the need of a revision of Council Recommendation 1999/519/EC on the limitation of exposure of the general public to electromagnetic fields (EMF) from radiofrequency EMF. The Committee recommended a technical revision of the annexes of Council Recommendation 1999/519/EC to take account of updated advice from International Commission on Non-Ionising Radiation Protection on radiofrequency EMF. The Commission is considering a review of the Council Recommendation and EPA is monitoring this work closely.

In November 2023, SCHEER opened a public consultation on its Preliminary Opinion on potential health effects of exposure to electromagnetic fields associated with electricity infrastructure. EPA has developed plans

and capacity for monitoring of EMF from electricity infrastructure in 2023 and monitoring will commence in 2024. This will support any future EPA advice on EMF associated with electricity infrastructure in the future.

Ecosystems Monitoring and Reporting

Under the revised National Emissions Reduction Commitments (NEC) Directive (2016/2284) a network has been set up in Ireland to monitor impacts of air pollution on sensitive ecosystems. The network, called the National Ecosystems Monitoring Network, consists of a collection of sites that are representative of different habitats across the country. The network is particularly focussed on providing evidence of the impacts of nitrogen deposition including ammonia, on these habitats. The monitoring on the network sites is being delivered by the EPA and other organisations including the National Parks and Wildlife Service. During 2023, EPA established eight atmospheric monitoring sites, bringing the total atmospheric monitoring sites to ten. Ecological surveys of a number of forest sites were completed and data from all previous ecological surveys of raised bogs, calcareous grasslands and Molinia meadows was collated. The EPA also successfully submitted all required National Ecosystems Monitoring Network monitoring data to European Environment Agency before the deadline in July 2023. This data related to monitoring sites previously reported to the EEA in 2022.

Noise

EPA continued to coordinate the national strategic mapping of environmental noise from major transport sources under the Environmental Noise Directive. These maps are designed to highlight areas that could then be addressed by local authorities through their noise action plans to avoid, prevent or reduce the harmful effects of environmental noise. The EPA, during 2023, developed a comprehensive update of the noise mapping guidance. This was done in collaboration with the Noise Mapping Bodies (Local Authorities, Transport Infrastructure Ireland, Irish Rail and Dublin Airport Authority) and Action Planning Authorities. All Round-4 noise mapping was successfully completed and the EPA finalised the report to the European Environment Agency under the Directive. The updated noise maps are now available on the EPA website.

The Strategic Noise maps support the development of noise action plans and these plans are key to reducing the impacts from environmental noise and protecting quiet areas. Local authorities are required to report progress to the EPA annually on their action plans. The latest progress for Round 3, were submitted in 2023 covering the year 2022. These progress reports were assessed by EPA and



Peat extraction

a summary progress report for 2022 made available on the EPA website: [Summary Review of Noise Action Plan Annual Reports for 2022](#). The EPA also drafted Round 4 Noise Action Planning guidance. This guidance will support by Local Authorities in developing their revised noise action plans during 2024.

Land use

The Programme for Government and the 2021 Climate Action Plan committed to a Land Use Review to ensure that optimal land use options inform all relevant Government decisions. The EPA was tasked with leading Phase-I of the Land Use Review, which focused on developing an evidence base to determine the environmental, ecological and economic characteristics of land types across Ireland. It gathered evidence about key land use stakeholders; national land ownership profile; existing policy commitments; land use policies in other countries; fiscal instruments and environmental indicators. The [outputs of Phase-1](#), including an overall synthesis report, were published in March 2023. This evidence base will inform [Phase-II of the Land Use Review](#), which commenced in 2023 and is being co-led by the DECC, the Department of Agriculture, Food and the Marine (DAFM), and DHLGH.

Phase-II will build on the evidence gathered in Phase-I and consider policy responses, measures and actions in the context of the Government's wider economic, social and climate objectives and in consultation with all stakeholders and land users.

[Provisional greenhouse gas inventory data for 2022](#), published in July 2023, showed the Land Use, Land Use Change and Forestry (LULUCF) sector, made up of six land use categories (Forest Land, Cropland, Grassland, Wetlands, Settlements, and Other Land) and Harvested Wood Products, accounts for 10.7% of national total emissions in 2022, down just 0.5% on 2021 levels compared to the overall 1.9% decrease in emissions across other sectors.

The LULUCF sector has been a net source of CO₂ eq emissions in all years 1990-2022 and, as identified by EPA [Greenhouse Gas Emissions Projections 2022-2040](#) published in June 2023, emissions in this sector are projected to increase up to 2030 as our forestry reaches harvesting age and changes from a carbon sink to a carbon source. Planned policies and measures for the sector, such as increased afforestation, water table management on agricultural organic soils and peatland rehabilitation, are projected to reduce the extent of the emissions increase.



3

Climate Action



We use our knowledge to drive climate action.
 We drive the transition to climate neutrality and resilience through our evidence and engagement work.
 We lead by example by reducing our greenhouse gas emissions.

3. CLIMATE ACTION

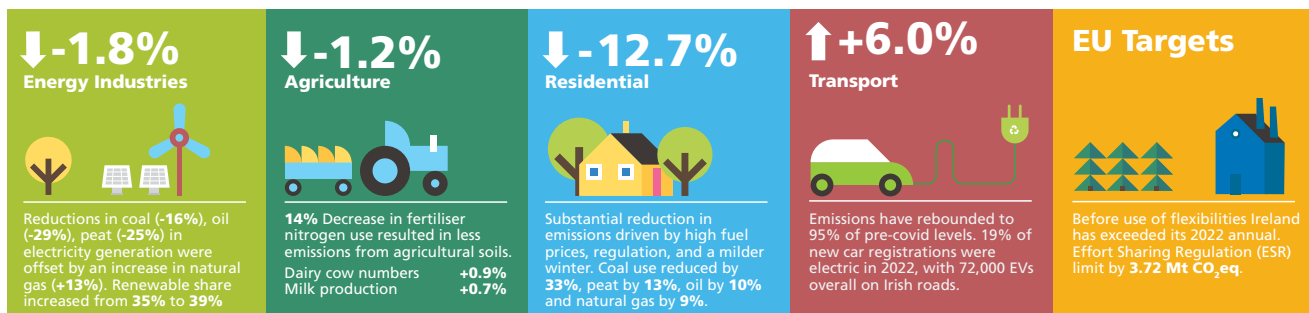
The EPA's role in addressing Ireland's Climate Change challenges includes: preparing greenhouse gas inventories and projections; incentivising decarbonisation through implementation of the EU Emissions Trading System; supporting climate science research; supporting climate adaptation action and behavioural change and facilitating the National Dialogue on Climate Action.

3.1 Inventories and Projections

Emission Inventories

The EPA [Provisional Greenhouse Gas Inventory for 1990-2022](#) was published in July 2023. This will be followed up with an updated, final publication in April 2024. Key findings were that overall greenhouse gas (GHG) emissions decreased by 1.9% compared to 2021, driven by substantial decreases in Residential sector emissions, combined with emissions decreases from Industry, Agriculture and Electricity generation outweighing increased emissions from the Transport sector.

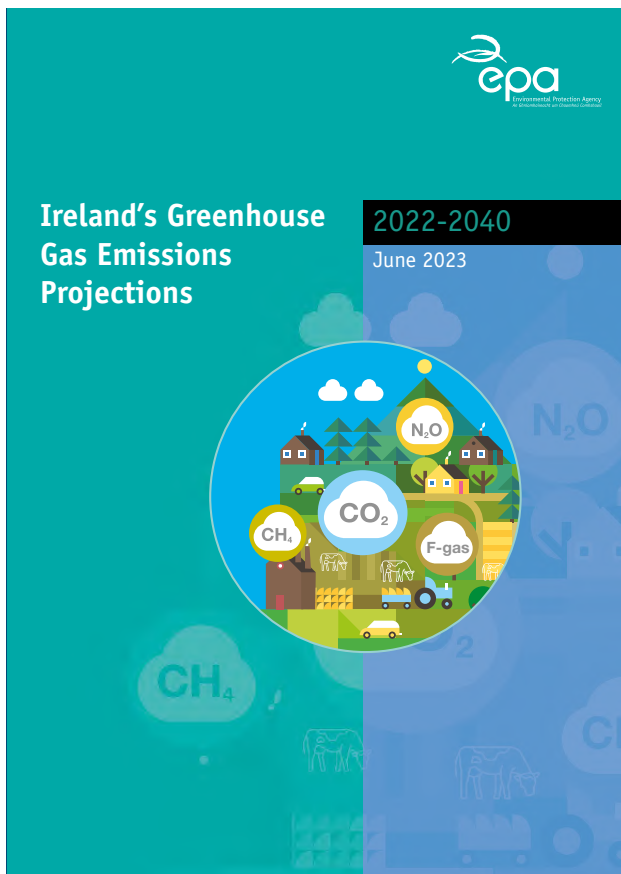
Excluding emissions from Land Use, Land Use Change and Forestry (LULUCF), 60.8 million tonnes of carbon dioxide equivalent (Mt CO₂eq) was emitted in 2022. Despite the decrease in emissions compared to 2021, the report highlights that 47% of Ireland's Carbon Budget for 2021-2025 has been used in the first two years. An extremely challenging annual reduction of 12.4% is now required for each of the remaining years if Ireland is to stay within the Budget.



The provisional estimates of greenhouse gas emissions indicate that Ireland will exceed its 2022 annual limit, without the use of flexibilities, set under the EU's Effort Sharing Regulation (ESR - EU 2018/842) by 3.72 Mt CO₂eq. Ireland's target was to reduce ESR emissions by 30% by 2030 compared with 2005 levels with a number of flexibilities available to assist in achieving this. In 2022 the limit will be exceeded by 1 Mt CO₂eq using both available flexibilities. Meeting these targets will be increasingly challenging as, from 2023 onwards, these annual limits have been reduced further to a 42% reduction by 2030.

Emissions Projections

EPA Greenhouse [Gas Emissions Projections 2022-2040](#) published in early June 2023 indicated that already implemented ('existing') measures would achieve an 11% reduction on emissions in 2030 compared to 2018, while additional measures in the 2023 Climate Action Plan would achieve a 29% reduction. The report highlighted that Ireland is not on track to meet the national 51% emissions reduction target (by 2030 compared to 2018) based on these projections which include most 2023 Climate Action Plan measures.



The report highlighted the need for faster implementation of known measures as well as greater clarity on how planned measures are expected to operate if a 51% reduction in overall greenhouse gas emissions by 2030 is to be achieved. It was also projected that Ireland will not meet the new 42% European Union emission reduction target by 2030 (compared to 2005) and that achieving this target will require full and rapid implementation of Climate Action Plan 2023 measures plus further measures to be implemented.

National Carbon Budgets officially took effect on 5 April 2022 having been adopted by both Houses of the Oireachtas, and legally binding sectoral ceilings which aim to support achievement of the 51% emissions reduction goal were also announced in 2022. Three Carbon budgets were adopted, for the periods 2021-2025, 2026-2030 and 2031-2035 with the budgets set at 295 Mt CO₂ eq, 200 Mt CO₂ eq and 151 Mt CO₂ eq respectively. The first two carbon budgets (2021-2030), which aim to support achievement of the 51% emissions reduction goal, are projected to be exceeded by a significant margin of between 24% and 34%. Sectoral emissions ceilings for 2025 and 2030 are projected to be exceeded in almost all cases, including Agriculture, Electricity, Industry, and Transport.

3.2 Adaptation and Climate Services

The EPA Climate Adaptation Strategy sets out how the EPA will work to progress adaptation at a national level through the provision of risk assessment, climate services, evidence and knowledge, and internally across relevant programmes.

The integration of the [Climate Ireland](#) National Adaptation Platform into the EPA web site was completed by November 2023. This included the integration of the outputs from the National Climate Projection Project 'Translate'.

The Climate Ireland Adaptation Network (CIAN) was launched at the first annual CIAN seminar in October 2023. The CIAN now has over 250 members and will provide an important information sharing forum to build adaptation expertise at practitioner level across sectors in Ireland.

Behavioural Change

The survey and analysis for Wave 2 of Climate Change in the Irish Mind was completed between September and December 2023 with associated publications expected in early 2024.

Two Insight reports on support for climate policies and climate risk perceptions based on Climate Change in the Irish Mind Wave 1 were published in October 2023.

Work commenced on the Climate Attitudes and Literacy in the Civil Service (CALCS), based largely on the Climate Change in the Irish Mind study, this work involves a survey of climate change behaviours and attitudes in the civil service.

Climate Science

The EPA represented Ireland at the IPCC Plenary meetings in March 2023 at which the Synthesis Report of its 6th Assessment Report was completed following approval by governments and in July 2023 where the elections for the IPCC Chair and Bureau members for its 7th Assessment Cycle was held.

The EPA had important roles at the UNFCCC 28th Conference of Parties (COP28) meetings in Dubai which completed the first Global Stock Take (GST) under the Paris Agreement. These included supporting the national delegation led by DECC, as members of EU negotiations on the GST negotiations. EPA attendees supported DECC colleagues in Ireland's Multilateral Assessment (MA), a part of an international review process for developed countries on their progress in meeting their climate targets.

During 2023, the EPA continued to work with the pan-European intergovernmental Joint Programming Initiative (JPI Climate). This included organising two major European events. Firstly, the Equinox Summit in March 2023 which was hosted by the Belgian Government. The Summit Statement outlined the objective of realising the potential of the European Research Area and to accelerate the development and transfer of knowledge from science to policy in Europe. Then in managing and hosting the European Climate Change Adaptation (ECCA) conference in Dublin Castle, in June. ECCA brought together leading scientist, policy makers and practitioners to consider adaptation issues.

Ireland became a full member of the Integrated Carbon Observation System (ICOS) in January with the EPA as the National Focal Point. ICOS is a pan-European infrastructure which provides high quality observational data on greenhouse gases. These enable scientific analysis of emissions and removals which complement information provided in National GHG Inventories. The ICOS network in Ireland consists of four atmospheric sites at Mace Head, Co Galway, Carnsore Point, Malin Head and Valentia Island, Co Kerry, five ecosystem sites – two on grasslands, two on peatlands and one forest. The Marine Institute carries out ship based measurements which are included in the ICOS network. The EPA represented Ireland at two virtual and two in-person ICOS General Assembly meetings in 2023.

Ireland's Climate Change Assessment

The EPA led the delivery of Ireland's first Climate Change Assessment Report (ICCA) report which was published in early 2024. This is the first comprehensive and authoritative assessment of the state of knowledge of climate change in Ireland. The report provides an assessment of our understanding of climate change, tying together all available lines of evidence to provide actionable information. This is based on scientific research and systematic observations in Ireland, linked to EU and global analysis. ICCA provides summary information that can inform decision-making on climate actions. The assessment is comprised of four thematic volumes on (1) fundamental science "Ireland in a changing world", (2) Mitigation "Achievement of Climate Neutrality", (3) Adaptation "Being prepared for Ireland's future climate" and (4) on Realising the benefits of transition and transformation together with a Synthesis Report.

EPA's Environmental Management System

The EPA is committed to leading by example and incorporating good environmental management and practice in everyday activities. The EPA operates and maintains an Environmental Management System (EMS) certified to the international standard ISO 14001:2015. This EMS has been essential in the delivery of the EPA's achievements to date in minimising the environmental impact of activities and drives continual environmental improvement to prevent pollution; measure and reduce greenhouse gas (GHG) emissions; adapt to climate change and encourage environmental awareness within the organisation. In compliance with Circular 1/2020 the EPA made the required payment to offset our 2023 emissions of 44 Tonnes of CO₂ associated with business air travel. In addition, we report our GHG emissions under the Greenhouse Gas Protocol Corporate Standard. Relevant data on energy consumption, heating, transport, water usage, and waste management is collected across the organisation and converted to carbon metrics.

Greenhouse Gas Emissions

The Climate Action Mandate sets an energy related GHG emission reduction target of 51% by 2030 for public bodies. The EPA's Strategic Plan 2022–2026 includes an interim GHG emission reduction target of at least 30% by 2026. In 2023, the EPA prepared a second report on our carbon emissions resulting from our activities as part of our commitment to achieve reductions in GHG emissions. The total carbon emissions arising from the EPA's activities in 2022 were 1,141 tonnes of CO₂ equivalent (tCO₂eq), which is 37% lower than the base period 2016–2018 (1,826 tCO₂eq) and 20% higher than 2021 (962 tCO₂eq).

The largest carbon emissions were generated from Scope 3 activities (primarily commuting and business travel) accounting for 34% of total carbon emissions. Scope 1 activities (fixed and mobile combustion) accounted for 23% of emissions (388 tCO₂eq). Staffing levels have increased to 450 Full-Time-Equivalent (FTE) staff (an increase of 32% since 2010) by the end of December 2022. This reflects a reduction in emissions by over 50% from the base period average (2016–2018), when comparing the total emissions generated in 2022 per FTE EPA staff member.

Energy usage

The EPA’s energy demand is mainly heating, lighting, electrical power, hot water and transport. In 2023, the EPA’s total energy consumption (Figure 14) amounted to 2,702 megawatt hours (MWh). There was an overall decrease of 2.1% from 2022 to 2023.

The EPA is committed to reducing energy demand by implementing sustainable solutions such as LED lighting upgrades, heating system upgrades and installation of solar PV and moving to fully-electric fleet vehicles.

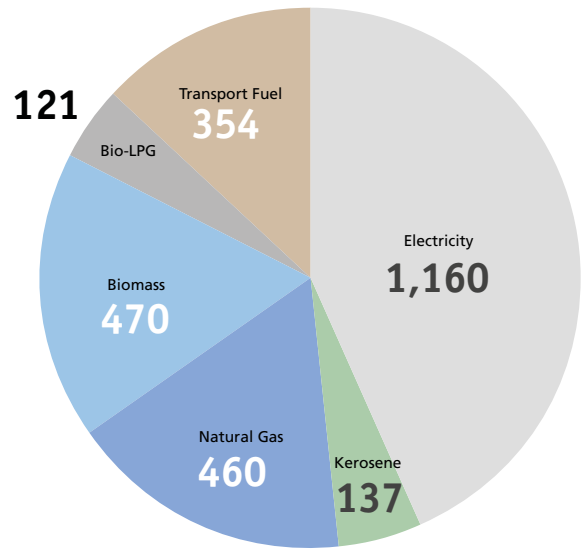


Figure 14. EPA energy usage in megawatt hours (MWh), 2023



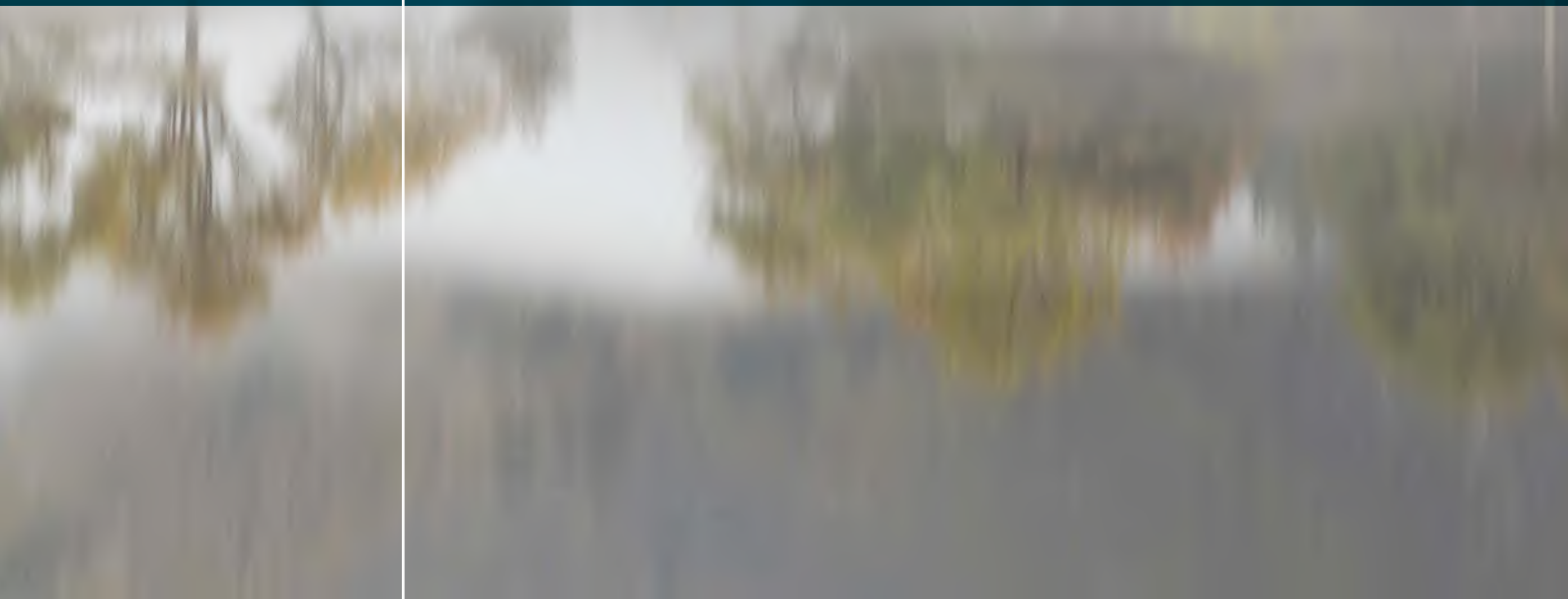
Water treatment plant





4

Sustainable Production and Consumption



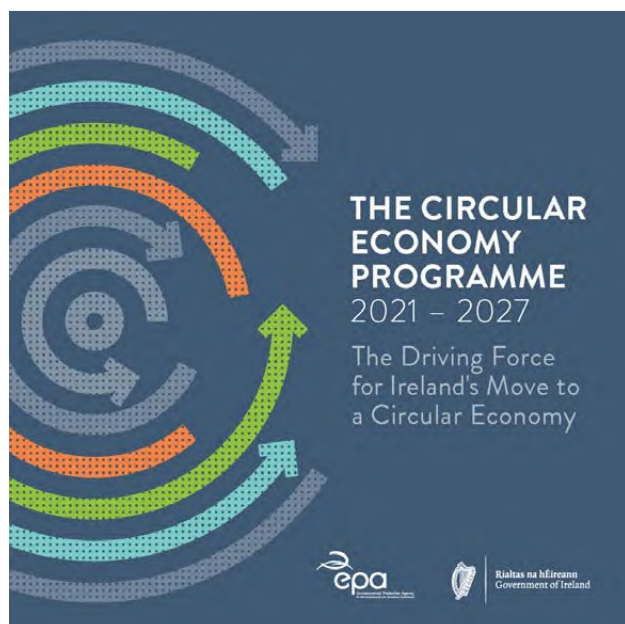
We promote the transition to sustainable production and consumption

Our evidence, engagement and regulatory activities foster and support the public and businesses to use less resources and make better choices for the environment

4. SUSTAINABLE PRODUCTION AND CONSUMPTION

In a circular economy, less raw material is used, products are designed for long-life, recyclability, shared, used for longer, repaired and reused. Material and products are recycled as much as possible and only the fraction that can't be recycled is disposed.

4.1 Circular Economy Programme



In 2023, the Circular Economy Programme delivered a diverse range of activities including producing national statistics, implementing a national food waste prevention programme, regulation for circularity (as competent authority for end-of-waste and by-products and waste sector licensing), supporting Green Public Procurement implementation, providing innovation & demonstration funding and delivering a behavioural insights and evidence programme. The EPA's annual circular economy conference was held in September.

4.2 Circular Economy Regulation

The regulatory provisions for assessing if materials can be declared as end-of-waste or as a by-product support the move to a circular economy by allowing for the use of secondary materials as a resource or product, ensuring that materials are kept in circulation for longer. This minimises the extraction of additional natural resources and avoids unnecessary waste generation. It also supports ambition for more green procurement as the purchase of secondary materials aligns with lower carbon impact.

The EPA regulates for a circular economy through End-of-Waste and By-Product decision-making. In 2023, national end-of-waste criteria for recycled aggregates and national by-product criteria for site-won asphalt were published and registration of activity under these criteria was brisk by year end. In addition, the development of national by-product criteria for greenfield soil and stone was substantially progressed by year end. Extensive stakeholder engagement was conducted through the process in developing each set of criteria, along with detailed technical assessment and market analysis.

The By-product Register was further developed to accommodate activity under the national criteria and a new End-of-waste Register has also been developed.

In addition to working on the national decisions, the EPA continued to assess individual files relating to by-product notifications and end-of-waste applications as illustrated by the following examples:

- ▲ 447 by-product notifications were determined (414 determined as by-product, 15 determined as waste and 18 withdrawn), a significant proportion of which related to work undertaken to tackle the backlog of notifications on hand.

Following the publication of the national end-of-waste criteria for recycled aggregates, 29 recycled aggregates end-of-waste applications on hand were closed as they are largely accommodated by the published national criteria.

During 2023, the current By-product Register was further developed, and a new End-of-waste Register was developed, to accommodate registration of activity under the national criteria. The public availability of these registers will provide access to information that will support green procurement for relevant sectors.

4.3 Circular Economy & Waste Statistics

The EPA has statutory responsibility to collate, validate and report on national circular economy and waste statistics data. The EPA publish data across several waste streams including household, municipal, construction & demolition, hazardous and food waste. In addition, the EPA now has responsibility to report on Reuse activity in the economy and Single-use plastics which will help track Ireland’s transition to a circular economy. Annual waste and circular economy data is published on the EPA website and in an annual data highlights report which brings together key data from our reporting, overall generation and treatment rates and reports on Ireland’s progress towards meeting EU recycling and recovery targets (Figure 15).

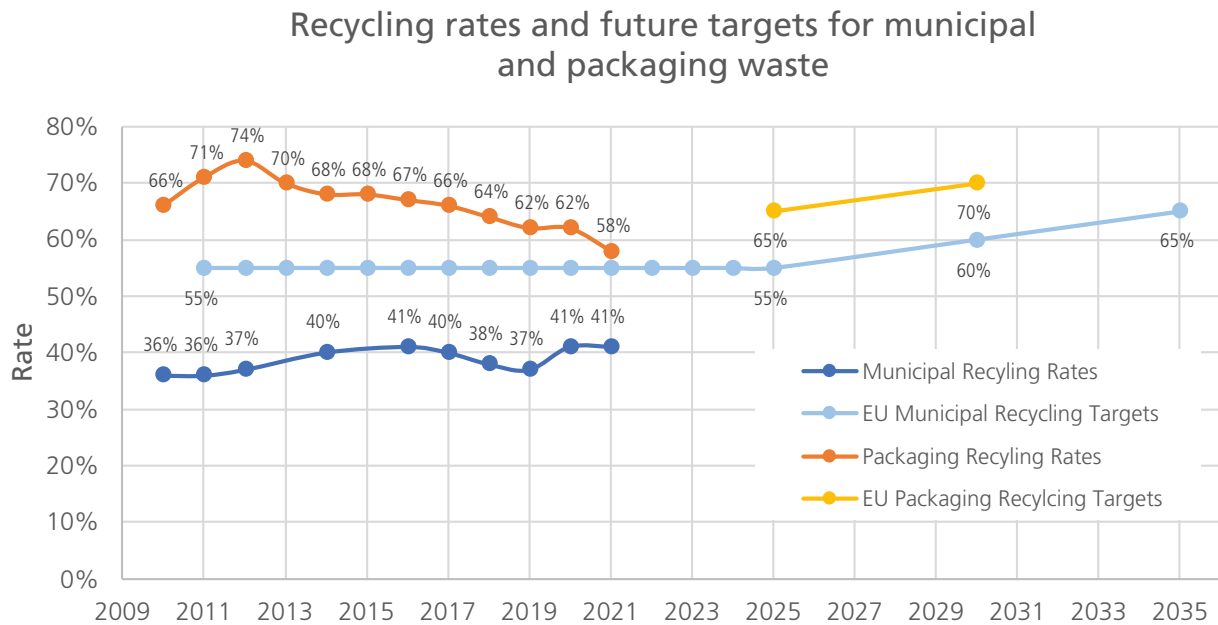


Figure 15. Recycling rates and future targets for municipal and packaging waste

The EPA [Circular Economy and Waste Statistics Highlights report](#), published in November, was produced in a new condensed format with interactive charts and infographics. The report highlighted worrying trends. Ireland is generating too much waste, with overall waste generation increased to 17.6 million tonnes in 2021, up from 16.2 million tonnes in 2020. Recycling rates for municipal waste remain unchanged since 2021 at 41%. With increasing waste generation and stagnating recycling levels, we are not on track to meet upcoming EU recycling targets from 2025.

The report also highlighted Ireland’s reliance on exporting waste for treatment. 1.2 million tonnes or 38% of all Municipal waste was exported for treatment in 2021. This includes 800,000 tonnes of municipal waste exported for recycling and 382,000 tonnes exported for energy recovery through incineration. 69% of all Packaging waste recycled was sent abroad for recycling.

The EPA also published the 2022 Municipal Waste characterisation report. The results from this study (Figure 16 & 17) show that overall, there has been little change in the composition of Ireland’s municipal waste since 2018.

Findings include:

Incorrect segregation of waste is still common across all households and business sectors with 65% of all collected municipal waste still collected in the residual (general) waste bin.

- Organic waste (food and garden waste) is the most prominent material accounting for 30% of all household waste and 33% of commercial waste.

- Plastics (16%), paper (10%), and cardboard (6%) accounted for over 30% of household waste with the majority of these materials found in general rather than recycling bins.
- Contamination of packaging in the recycling bin caused by food residues, cross-contamination or rain-ingress, is a significant issue and accounted for approximately 7% (80,000 tonnes) of household waste.
- 24% of items found in commercial recycling bins should have been in the residual or organic waste bin.

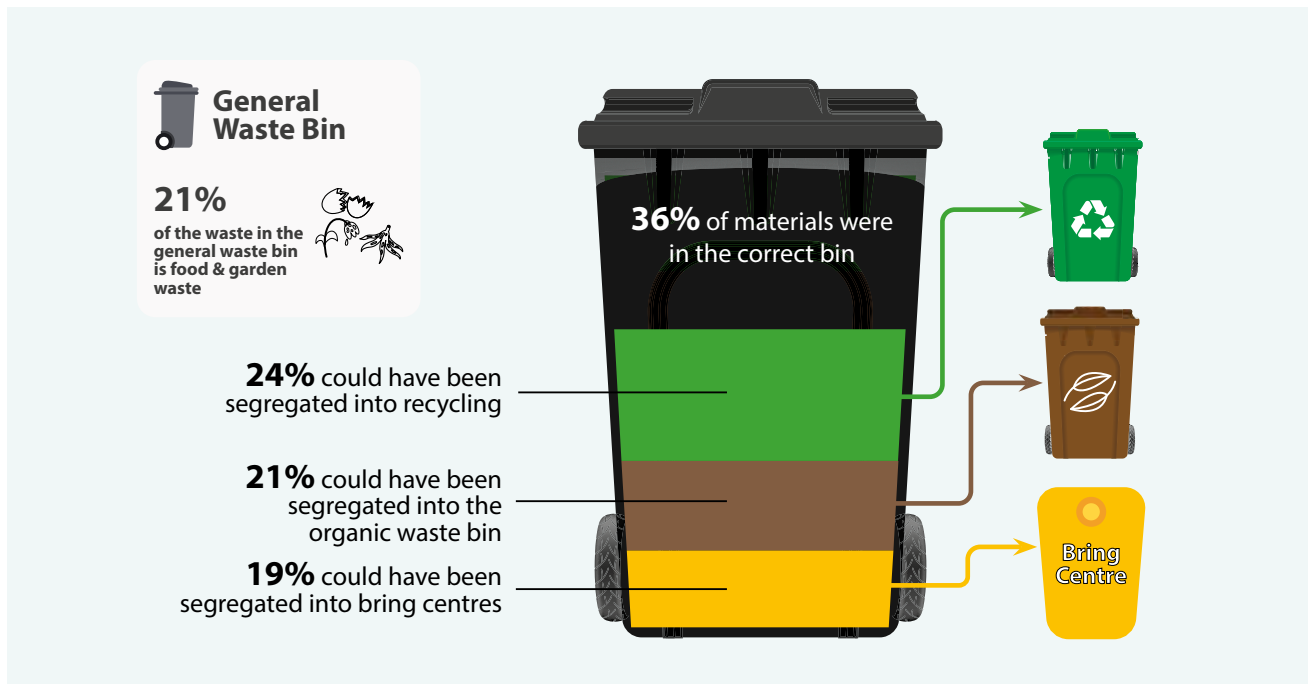


Figure 16. Composition of Household general waste bins as found in the 2022 Municipal waste characterisation study

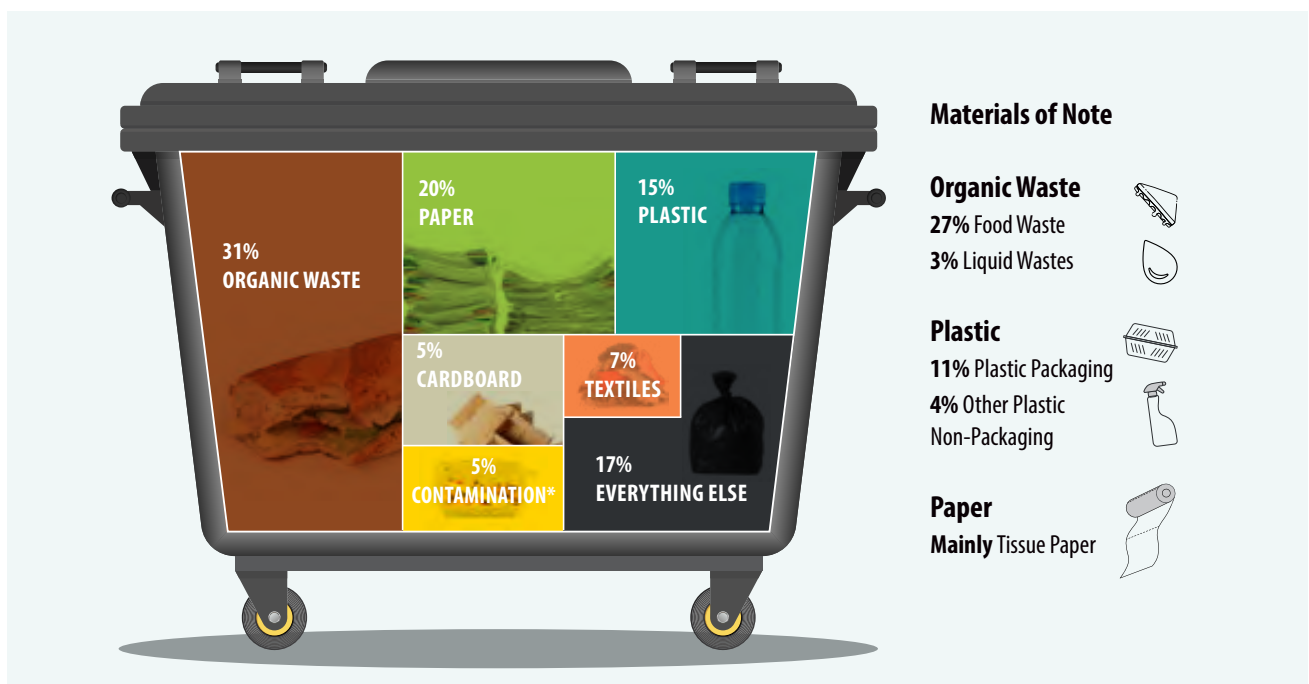


Figure 17. Composition of Commercial general waste bins as found in the 2022 Municipal waste characterisation study

4.4 Circular Economy Implementation

A broad range of circular economy implementation activities took place during 2023 including those outlined below.

Green Public Procurement



Under the government's Climate Action Plans the EPA is assigned lead responsibility to measure and report annually on Green Public Procurement (GPP) activity by government departments. In April, the [second report for reference year 2021](#) was published showing that of the total reported spend of over €528 million on

contracts over €25,000, only 10% included green criteria (lower than reported in 2020). This is a missed opportunity to purchase more resource efficient and less polluting goods, services and works within the marketplace.



The EPA's inaugural 'GPP in Practice' event was held in November. An audience of 141 of public sector procurers & specifiers across 72 public sector organisations heard nine practical case studies and about tools and resources for GPP implementation.

Food Waste Prevention

The EPA has a statutory role in leading Ireland's food waste prevention efforts which is focussed on Ireland's commitment to halve food waste by 2030 (UN Sustainable Development Goal 12.3) and linked to climate action (up to 10% of global GHG emissions are linked to food waste).



The relaunch of the [Food Waste Charter](#) is a key action for the EPA under Ireland's National Food Waste Prevention Roadmap 2023 – 2025. The Charter is a voluntary agreement where food sector businesses across the supply chain pledge their commitment to reducing food waste. In June, two government departments (DECC and DAFM), five state agencies (Bord Bia, Bord Iascaigh Mhara, Enterprise Ireland, Fáilte Ireland and Teagasc) pledged to support implementation of the Food Waste Charter. By year end there were 24 confirmed business members.

Guidance on food waste prevention in [seafood](#), [bakery](#) and [prepared foods](#) sectors was published to support food waste measurement according to a standardised methodology.



The biennial [Food Waste Forum](#) was held in November as an online event with over 90 registered attendees. Presentations included practical food waste prevention case studies from the retail, bakery and prepared food sectors.



The [Stop Food Waste](#) programme is the consumer-facing national food waste prevention programme. In 2023 the theme for communications was “the foods we waste the most” (bread, fruit & veg and leftovers), as informed by behavioural insights research. On National Stop Food Waste Day on 1 March the call to action was to “Take the Stop Food Waste Challenge” asking consumers to record food waste for a week and then take simple actions to reduce food waste and save money. Other national campaigns during the year highlighted the meaning of Best Before Dates (October) and Festive Food Leftovers (December).

Understanding Our Attitudes and Behaviours

The Circular Economy Programme’s [behavioural insights](#) work is informing policy and supporting evidence-based national communication campaigns. In 2023, reports on behaviours and attitudes to repair, reuse, food, and textiles were published. In April, the EPA ran a five-day social media campaign focussing on textiles and the circular economy, informed by the behavioural insights textiles survey findings.

Delivering through Partnerships

The Campus Living Labs partnership programme with the Irish Universities Association concluded in October with a webinar on the role of universities in driving a circular economy. Resources developed over the two-year project included findings from a reusable coffee cup trial, roll out of ‘The Waste Game’, a step-by-step guide to design and trial behavioural interventions and recommendations for universities on bulky item reuse. Assets and outputs are available on the [Irish Universities Association website](#).

Following a review, the partnership with the Irish Farmers’ Association on the Smart Farming programme concluded in 2023. Smart Farming was one of the first agri-sustainability programmes and widely recognised for its innovation. Many of its activities are now being undertaken by public and industry funded agri-sustainability programmes which are significantly resourced, with greater potential for impact and reach.

The Circular Economy Programme provided grant-aid funding to the Rediscovery Centre, to Community Resources Network Ireland and Monaghan Co Co (in support of [www.repairmystuff.ie](#), a national online directory of repairers) to support and scale re-use and repair activities which are central to delivering a circular economy.

The EPA continued its role on the [CIRCULEIRE](#) steering committee, together with DECC, Irish Manufacturing Research and industry members.

Innovation Funding

A decision was made to pause the [Green Enterprise: Innovation for a Circular Economy](#) funding call while an analysis of circular economy-related funding opportunities in the market takes place. Projects funded in previous years continued to be supported, with six projects closed out in 2023 and eleven ongoing at year end.

To trial implementation of the [Best Practice Guidelines for the preparation of Resource & Waste Management Plans for Construction & Demolition Projects](#) a competitive funding call for local authorities issued and Waterford City & County Council (protected structures on 37 Merchant’s Quay) and Donegal County Council (remediation of 43 social housing units) were awarded funding.

Circular Economy & Waste Authorisations

Following an EPA internal reorganisation, a new team, Circular Economy and Waste Authorisations, was formed with responsibilities for

- ▲ Waste licensing (IE and Waste Licences under the Waste Management Act).
- ▲ Certificates of registration issued to local authorities.
- ▲ Article 11 waste authorisation determinations.
- ▲ Historic landfills.
- ▲ National waste capacity register.

In addition to authorisations/determinations issued, as outlined above, work was carried out to increase the

quality of applications received in relation to historic landfills. A key aspect of this work related to the assessment of landfill gas which to date has been varied. A technical workshop on landfill gas and the use of a decision tree guide to assess landfill gas emissions was carried out for local authorities and their associated consultants in March 2023. Work was also completed on the revision of the application form to optimise the quality of information and provision of monitoring results submitted in applications, and this was made available to applicants in 2023. The location and summary details of historic landfills was also made available to the public on EPA GIS Maps for sites issued a final certificate of authorisation.







5

Effective Voice

We are an effective voice for Ireland's environment.

We are trusted as an independent and transparent source of environmental evidence and information.

We improve the environment through working with others and proactively influencing policy, legislation and behavioural change.

5. EFFECTIVE VOICE

5.1 Partnering and Networking

Oireachtas Committees

The EPA welcomes the opportunity to engage with and inform Joint and Select Committees of the Oireachtas in their legislative and administrative oversight functions. During 2023, the EPA attended the Joint Oireachtas Committee on Agriculture, Food and the Marine regarding the Water Quality Monitoring Report on Nitrogen and Phosphorus Concentrations in Irish Waters 2022, and the Joint Oireachtas Committee on Environment and Climate Action regarding Ireland's Citizen's Assembly on Biodiversity Loss Report.

Oversight Agreement

In line with requirements of the Code of Practice for the Governance of State Bodies, a written Oversight Agreement that defines the relationship between the parent Department and the EPA is in place with the Department of Environment, Climate and Communications (DECC). The Oversight Agreement recognises that the Department of Housing, Local Government and Heritage (DHLGH) has responsibility for several areas of direct relevance to the EPA's remit and defines the EPA's relationship with DHLGH.

A Performance Delivery Agreement forms part of the Oversight Agreement and focuses on the key priorities and objectives of the EPA. The agreement defines service ownership and accountability in relation to the roles and responsibilities of each party with a view to ensuring that the statutory functions of the EPA are discharged in an efficient and effective manner.

Memoranda of Understanding/Service Level Agreements

The EPA has adopted fourteen Memoranda of Understanding (MoU) in addition to Service Level Agreements (SLA) with various organisations that involve or contribute to matters relating to the environment. Memoranda of Understanding are published on the EPA website when agreed with the other party.

European Environment Agency

The European Environment Agency (EEA) provides timely, targeted, relevant and reliable information to policy-making agents and the public across a wide range of environmental topics. Its country network, called the European Environment Information and Observation Network (Eionet), is Europe's leading network for policy-relevant environmental and climate knowledge. The EPA is responsible for co-ordinating Ireland's participation in the Network.

The network underwent extensive modernisation process with a formal relaunch in early 2023. Since then, there has been very positive engagement by Irish participants with 117 experts currently participating in the network - 60 of whom were not involved previously. There has been a substantial broadening of participation with experts representing 22 organisations across government departments, state agencies and third level institutes with eight organisations new to Eionet in 2023.

Laura Burke, Director General of the EPA, served as the Chairperson of the EEA Management Board until September 2023 having completed two full terms.

Citizen Science

The EPA continued to work with partner organisations on several citizen science projects. The GLOBE Programme – in partnership with the Environmental Education Unit of An Taisce continued with its nitrogen dioxide (NO₂) air monitoring campaigns at schools nationwide. In 2023, 209 schools nationwide registered to take part in the October air quality campaign, with 172 schools receiving nitrogen dioxide results. During the year, GLOBE also piloted four projects on newly developed themes of climate resilience, flooding and rainfall measurements, spring tree observations, and rivers as ecosystems. Overall, a total of 337 schools registered for GLOBE Ireland campaigns/pilot campaigns during 2023.

2023 saw the continuation of the large-scale citizen-based nitrogen dioxide monitoring project 'Clean Air Together'. Over 2000 citizen scientists participated in the first three phases of the project in Dublin, Cork and Galway Cities with over 3,300 expressions of interest received from both campaigns. These citizen-based projects provide data in many areas that currently cannot be monitored and the data collected will be used to develop models to better forecast air quality in the three cities. The measurements were completed in Galway in late 2023 following the publication of the Cork City phase in early 2023.



The EPA continued to work in partnership with the National Biodiversity Data Centre (NBDC) on the Dragonfly Ireland (2019–2024) project with an 8% increase in dragonfly and damselfly records in 2023. Almost 4,000 records of dragonflies and damselflies had been submitted by December 2023 and records have now been received from 84% of Ireland's spatial area with the remaining spatial area being a priority for 2024.

The EPA also worked with the NBDC on the Explore Your Shore survey, with the objective of empowering and supporting volunteer citizen scientists to survey and record intertidal and coastal marine species. By end of 2023, 6,546 records of 638 marine species had been submitted to the NBDC.

The successful partnership with Wexford Libraries continued in 2023 with digital radon monitors being made available to borrow by Wexford library members. In 2023, the scheme was broadened to Cork County with 50 monitors being deployed to all county libraries.

Strategic Environmental Assessment

The EPA promotes sectoral engagement in Strategic Environmental Assessment (SEA) and the application of good SEA practice across all public authorities. A total of 205 SEA submissions were made in 2023 (including 55 at Draft Plan stage). Significant plans included the Arterial Drainage Maintenance Activities, Offshore Renewable Energy Development Plan, National Waste Management Plan for a Circular Economy, All-Island Rail Review and the Guidelines for Planning Authorities for Sustainable and Compact Settlements. These are published on the [submissions section of the EPA website](#).

SEA Guidance Documents Published in 2023 included Good practice guidance on SEA and landscape and Good practice guidance on SEA for the tourism sector adding to the EPA's existing suite of SEA sectoral guidance notes.

The EPA continued to coordinate and provide secretariat support to the National SEA Forum, which facilitates information sharing and collaboration between national SEA authorities.

Environmental Policy Assessment Consultations

The EPA's Environmental Policy Assessment and Coordination (EPAC) work area manages the preparation of EPA submissions to consultations. Key submissions made in 2023 included *inter alia* submissions on: statement of Strategies for governmental departments (DECC, DAFM and DHLGH), Bioeconomy Action Plan, Sustainable Tourism policy and the Green Public Procurement Strategy and Action Plan. These submissions are available on the [submissions section of the EPA website](#).

NIECE

The Network for Ireland's Environmental Compliance and Enforcement (NIECE) provides a forum which encourages and supports organisations and individuals to work together to deliver improvements in priority environmental areas. Network membership, for the most part, includes local authorities, state agencies and government departments involved in the enforcement of environmental legislation, engagement and promotion.

The NIECE network remained very active throughout 2023 with activities across 13 networks and four working groups. There were six national enforcement events

covering waste, solid fuel, solvents, agriculture, noise and inspection planning. Local authority staff also participated in the National Air, the Circular Economy and the National Water conferences.

Ireland's National Action Plan for Antimicrobial Resistance 2021-2025

EPA continued to monitor for specific antibiotics in surface waters under the WFD watchlist monitoring and joined an EEA Eionet Working Group on Antimicrobial Resistance (AMR) in European surface waters. The Group intend to conduct a pilot survey of AMR in surface waters during 2024. EPA continued its participation in the Interdepartmental Consultative Committee on AMR as well as the iNAP2 Animal Health implementation Committee subgroup in 2023 attending meetings and providing progress updates on EPA actions and activities. Two large-scale AMR research projects commenced in 2023, funded through the EPA 2022 Research Call. These related to using Integrated constructed wetlands to Reduce Antimicrobial resistance and increase Carbon sequestration in the Environment (i-RACE) and Nationwide analysis of Antimicrobial Resistance in soil environments to bridge the current data knowledge gaps (AMR SOIL) (co-funded by DAFM).

Water Quality

The EPA is actively engaged in several expert working groups led by DHLGH. The EPA participates in the Bathing Water Expert Group on implementation of the Bathing Water Regulations; the Drinking Water Expert Group which is supporting DHLGH to implement the recast Drinking Water Directive and develop guidance for the protection of drinking water catchments; and the Nitrates Expert Group which is assisting DHLGH and DAFM in the scientific aspects of the development of the Nitrates Action Programme.

The EPA chairs the National Technical Implementation Group which is a multi-stakeholder group focussing on the technical implementation of water quality measures and participates fully in the water governance structures established under the River Basin Management Plan.

Air Quality

In 2023, the Air Quality Health Information working group, chaired and facilitated by the EPA, provided a forum, to support: enhanced communication of accessible real-time information on air quality and health – linked to expansion of the monitoring network – modelling, including LIFE Emerald; and citizen science activities including Clean Air Together. This group includes stakeholders in environment

and health such as the Health Service Executive (HSE) and enables discussion on air quality-related health topics.

Nuclear Safety

The EPA monitors developments relating to nuclear safety abroad and to keep relevant state organisations informed of any implications for Ireland. The EPA also takes an active role in national and international committees on nuclear safety. Representatives from the EPA and DECC visited the Sellafield Nuclear facility in July 2023 and regularly meet with representatives from the UK Department of Energy Security and Net Zero, UK's Office for Nuclear Regulation and the UK Environment Agency to keep up to date on the status of the waste storage and management facilities at Sellafield.

Heads of the European Radiological Protection Competent Authorities

The Heads of the European Radiological Protection Competent Authorities (HERCA) is an association of the radiation safety authorities in Europe and aims to facilitate practical and harmonised solutions on important regulatory issues in radiation protection. HERCA provides an important forum for national authorities to share information and experience on the implementation of European legislation and international standards. In 2023, the EPA played an active role in this work with representatives on the HERCA Board of Heads as well as the Working Groups on natural radioactivity, emergencies, medical applications, veterinary applications, non-medical sources & practices, and education & training.

European Nuclear Safety Regulators Group

The EPA is actively involved in the European Nuclear Safety Regulators Group (ENSREG) and its working groups on Nuclear Safety & International Cooperation and Transparency & Communications. During 2023, in addition to the ENSREG plenary meetings scheduled, the EPA attended working group meetings to develop plans for a review of fire protection at nuclear installations within Europe and to ensure stakeholders and members of the public are kept up to date on the work of ENSREG.

Bilateral meetings with the UK Regulators on radiological and nuclear matters

During 2023, the EPA attended UK-Ireland Contact Group on Radiological Matters in London and hosted this meeting in Wexford in November. Discussions included UK energy policy, updates on new nuclear build at Hinkley Point C in the UK, nuclear decommissioning of UK nuclear facilities, geological disposal of nuclear waste and an in-depth review of the status and future plans of all facilities on the Sellafield site in Cumbria.



The EPA also met with the UK Environment Agency and the UK's Office for Nuclear Regulation, to discuss radiological and nuclear issues. These discussions centred on the new nuclear power plant under construction at Hinkley Point C, activities at Sellafield, and the development of other new nuclear power plants (both large scale nuclear power plants and small modular reactors).

International Obligations on Nuclear Safety and Radioactive Waste Management

The Joint Convention on the Safety of Spent Nuclear Fuel and on the Safety of Radioactive Waste Management is aimed at achieving and maintaining a high level of safety in spent fuel and radioactive waste management through a peer review process, which takes place every three years. The Joint Convention is relevant to countries with nuclear power programmes and countries, like Ireland, that do not have nuclear power but use radiation sources in medicine, industry, third level sector, etc. Ireland must demonstrate compliance with the Convention and undergo a peer review by the other contracting parties.

Representatives from the EPA and DECC attended the seventh review meeting of contracting parties at International Atomic Energy Agency (IAEA) buildings in Vienna. The EPA and DECC presented Ireland's national report at the meeting which included updates since the submission of the national report and the impact of the Covid-19 pandemic.

The Convention on Nuclear Safety is another international convention the related to the safety of civil nuclear power plants at an international level. The Convention aims to

achieve this through establishing fundamental safety principles for nuclear safety and undertaking a peer review process. All contracting parties to the Convention, including Ireland, must demonstrate compliance with the Convention and undergo a peer review by the other contracting parties. EPA in conjunction with representatives from DECC attended the joint eighth and ninth review meeting in March 2023 and presented Ireland's National Report.

Emergency Planning

In 2023, the EPA worked on addressing the recommendations from Ireland's National Nuclear exercise that took place in 2022. The EPA established a subgroup on nuclear and radiological emergencies in conjunction with DECC, the Department of Health and the Health Services Executive to develop public health messages in the early stages of a nuclear or radiological emergency. This work will inform the future revision of the national plan by DECC.

The EPA also participated in several international emergency exercises organised by the European Commission and the IAEA and tested the notification arrangements to the UK-Ireland bilateral agreement on early notification of a nuclear accident or incident of radiological significance.

The EPA continued to be active participants in the Government Task Force on Emergency Planning and its subgroups. The EPA continued to support the Nuclear Energy Agency and the IAEA by participating in technical working groups, consultancy meetings and contributing to conferences.

5.2 Timely, Targeted Data and Information

The EPA provides independent, evidence-based information, in an open and transparent manner to inform decision making by a broad range of stakeholders including government, non-governmental organisations, state agencies, industry and the public. Data and information are provided in a timely and accessible manner, principally through online resources.

Licensing and Permitting

As part of the EPA's policy of openness and transparency and in accordance with the Access to Information on the Environmental Regulations and various licensing/permit regulations, licensing files are available for public inspection. To provide greater access to all stakeholders, the EPA displays application files, and related documents for public viewing purposes.

[Information on Industrial Emissions \(IE\) and Integrated Pollution Control \(IPC\) applications](#), received since December 2004, and all Inspectors' reports and licences issued to-date are available. Since December 2017, all applications are received online and interactions with the applicants and the public are electronic and published on the EPA website, including the receipt of submissions and objections.

During 2023, there was over 500,000 views of the IE/IPC licence search web pages. By the end of 2023 there were 5,570 submissions received from the public using the user-interface.

Enforcement information



The EPA's LEAP (Licence & Enforcement Access Portal) was launched in two phases in May and November 2023. LEAP provides public access to the formal enforcement-related correspondence between the EPA and its regulated operators. This new service allows the public to view, on the EPA website, site visits and monitoring reports,

details of incidents and non-compliances at regulated sites, operator updates and requests plus Compliance Investigations. LEAP Online has ended the need for people to visit an EPA office to view this information.

EPA continued to update the National Priority Sites (NPS) list of industrial and waste licensed sites with the poorest environmental performance and compliance. The NPS identifies sites that are failing in their licensed obligations and need to make substantial efforts to achieve improvements in their environmental compliance.

Ireland's Environment

The [Ireland's Environment web resource](#) was updated regularly during 2023 with new data across a range of environmental themes including climate, air, water, waste, land and soil, environment and wellbeing.

My Local Environment

The EPA's [My Local Environment](#) webtool gives members of the public access to environmental information from a local context: users can search using an Eircode or address and the information returned is centred on that location. Enhancements to the My Local Environment webtool were made in 2023 in response to user feedback. The webtool is now fully integrated with the EPA's LEAP Online system, enabling users to access online enforcement records for EPA-authorised facilities within a search area.



Air Quality

In 2023 the EPA’s air quality webpages were a valuable resource for the public, allowing easy access to real-time air quality information from the substantially expanded national monitoring network. This web resource provides a station-based Air Quality Index for Health (AQIH) that

translates measured data into a colour-coded scale from green (Good) to purple (Very Poor) indicating how good, poor or very poor the air quality is. The scale is linked to health advice for the public (Figure 18) and those vulnerable to poor air quality.

		Accompanying health messages for at-risk groups and the general population	
Band	Index	At-Risk Individuals	General Population
Good	1	Enjoy your usual outdoor activities.	Enjoy your usual outdoor activities.
	2		
	3		
Fair	4	Adults and children with lung problems, and adults with heart problems, who experience symptoms, should consider reducing strenuous physical activity, particularly outdoors.	Enjoy your usual outdoor activities.
	5		
	6		
Poor	7	Adults and children with lung problems, and adults with heart problems, should reduce strenuous physical activity, particularly outdoors, and particularly if they experience symptoms. People with asthma may find they need to use their reliever inhaler more often. Older people should also reduce physical exertion.	Anyone experiencing discomfort such as sore eyes, cough or sore throat should consider reducing activity, particularly outdoors.
	8		
	9		
Very Poor	10	Adults and children with lung problems, adults with heart problems, and older people, should avoid strenuous physical activity. People with asthma may find they need to use their reliever inhaler more often.	Reduce physical exertion, particularly outdoors, especially if you experience symptoms such as cough or sore throat.

Figure 18. The AQIH and its linked health advice

As well as the website, the twitter feed, @EPAAirQuality, also kept the public up to date with air quality in their AQIH region. Real-time data for selected air pollutants continued to be provided hourly to the European Environment Agency (EEA) for display on European air quality maps.

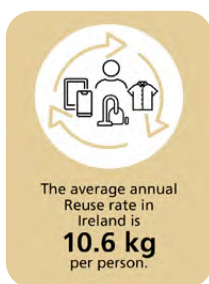
Emissions Inventories and Projections



[Greenhouse gas and air pollutant emissions data](#) is made available on the EPA website. Along with detailed reports, graphs and tables there are short animations providing key highlights and messages together with infographics to communicate clear messages about the country’s performance on climate action.

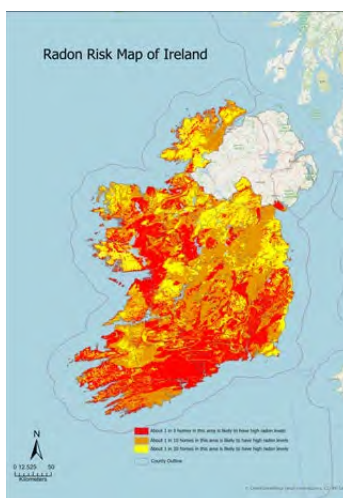
National Waste Statistics

The EPA's [National Waste Statistics web resource](#) continues to provide the most recent available waste data to view and download. During 2023, online data releases were published for a range of waste streams including municipal, household, packaging, hazardous, composting, waste electrical and electronic equipment (WEEE), end-of-life vehicles, tyres and construction & demolition waste. National statistics on reuse were published for the first year, showing that Ireland has an average reuse rate of 10.6 kg per person per year.



Radon

The EPA is the main provider of information and guidance to stakeholders in relation to radon gas. In 2022, EPA published a new radon risk map on the [radon web resource](#). This is the first update of this map since 2002. In 2023, EPA produced an additional version of the updated radon map for use with Technical Guidance Document C (TGD-C) of the Building Regulations. The updated map has been published by DHLGH in an update to TGD-C and will apply to all new buildings and extensions commencing construction from 1 October 2023. The radon webpages provide advice on radon testing and remediation for householders, businesses and building professionals. In total, radon pages were viewed more than 142,000 times during 2023. EPA continues to provide a freephone radon advice number 24 hours a day, seven days a week.



Water Quality

The EPA manages, assesses and reports on the data generated from the Water Quality monitoring programme. The data are reported to the European Environment Agency (Water Information System for Europe) and data on transitional and coastal waters are reported under the OSPAR convention that deals with dumping and land-based sources of marine pollution and offshore industries.

The shared public-facing website for the Water Framework Directive (www.catchments.ie) continues to



provide a single source of water quality data and catchment management information in Ireland. Maps, dashboards, trends and charts are publicly available for almost 5,000 water bodies, as well as reports, assessments and stories of actions carried out by local community groups. The EPA continues to provide the most recent available water quality data, including groundwater quality for Ireland. The data can be download via the [EPA Geoportal](#).

Water Levels and Flow

The EPA provides hydrometric data on river flows and lake and groundwater levels to support water resource and flood risk management and a variety of other activities. Data are available to view and download via the EPA's [HydroNet web pages](#).



The EPA continues the publication of monthly [National Hydrometric Bulletins](#). The bulletin provides a factual summary of river flows, lake levels and groundwater levels for a sample of surface water and groundwater hydrometric stations across Ireland. The bulletin also contains maps which show how flows and levels at stations across the country compare to the average for the month.

Drinking Water

The EPA's [Remedial Action List](#) (RAL) is a list of the public water supplies with the most serious problems. Action must be taken at these supplies to reduce the risk to the water quality. The RAL is updated twice per year and gives the location of each supply, the reason the supply is on the RAL and the planned completion date for the remedial works.

Waste Water

The EPA's Priority Urban Area List is a list of areas where action is needed to protect the environment and public health from the harmful effects of waste water discharges. Information on the EPA's Priority Urban Area List is available on the EPA [Sewage Treatment Maps](#).

Beaches

The Beaches.ie website (www.beaches.ie) provides information about bathing water quality at Ireland's beaches and lakes, including the recent bathing water quality at each beach, any swim restrictions that are in place, weather and tide information. There is also a bathing water profile available for every beach that sets out the facilities, the known pressures and any management plans that are in place. The website also publishes out-of-season monitoring data where available. These data are collected voluntarily by some local authorities. The site is regularly updated during the summer as results of monitoring become available from local authorities. Details of pollution incidents and remedial actions are also made available on a dedicated X (formerly Twitter) feed (@EPABeaches).



National Radiation Monitoring Network

The EPA operates a National Radiation Monitoring Network consisting of equipment, located throughout the country, which continuously monitors ambient radiation levels and can detect radioactivity in Ireland, if any, following a major incident at an overseas nuclear facility. No increased levels of the ambient gamma dose rate above the normal fluctuations in background levels were observed during the year. [Live data](#) (Figure 19) is publicly available on the EPA, European and the International Atomic Energy Agency websites.

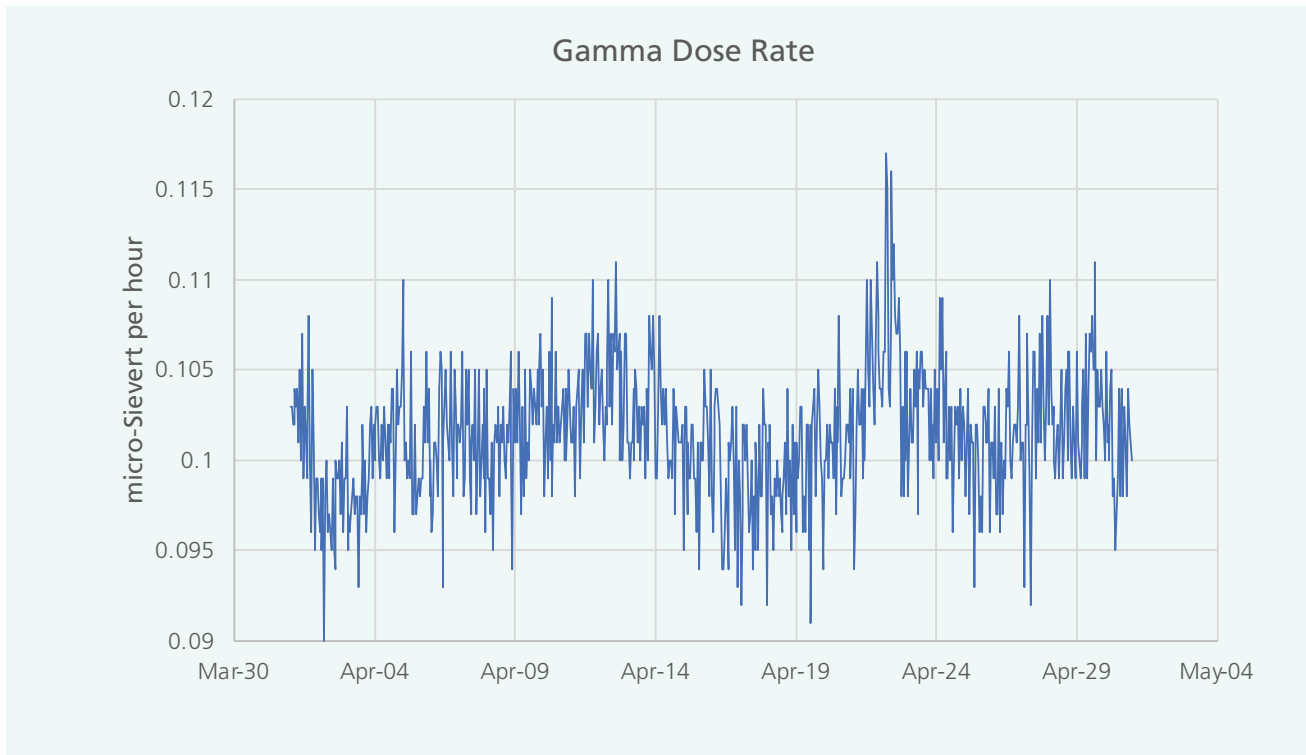


Figure 19. Ambient Gamma Dose Rate Monitoring at Dundalk, Co. Louth

Non-ionising radiation

In 2023, the EPA published a report on Radiofrequency Electromagnetic Fields (EMF) in Public Spaces in Ireland based on monitoring completed in 2022. This monitoring was undertaken to determine the exposure of citizens to this non-ionising radiation. In all cases the levels of EMF measured were significantly below international guidelines. The WHO has stated that below these guideline values EMF

will not impact on health. EPA also maintained its [EMF web content](#) in response to public enquiries on 5G technology and mobile phone handsets. The EPA continued to respond to queries from the public in relation to EMF during 2023. In addition, EPA procured equipment and trained staff to undertake monitoring of EMF from electrical infrastructure during 2023 and developed a monitoring programme that will commence in 2024.



Open Data

The Open Data Directive is an EU Directive that encourages EU member states to make as much public sector information available for re-use as possible in an Open Data format. Open data format is data that can be freely used, re-used and redistributed by anyone – subject only, at most, to the requirement to attribute and share alike. The Directive introduces the concept of high-value datasets, defined as documents the re-use of which is associated with essential benefits for society and the economy. Under the Directive, the EPA reports datasets to Europe under three of the six high-value dataset thematic categories of geospatial, earth observation and environmental.

To comply with the Directive, the EPA initiated a Data Audit in 2023 to systematically assess and report data holdings

and identify high-value datasets. The results from the audit will allow the creation of an Open Data Publication Plan which will identify additional datasets to be published as open data on Ireland's Environmental Data Portals (data.gov.ie)

Currently the EPA has 418 datasets publicly available on this portal under several thematic categories, with 10 of these being published in 2023. Collectively these have had over 99,613 views to date. The growing number of views over the years demonstrates the increase in demand for publicly available datasets.

In addition, under this Directive any individual or entity can request EPA data to be provided in an Open Data format. The EPA received two such requests in 2023 – a total of four requests since 2022.

INSPIRE

The INSPIRE Directive establishes an infrastructure for spatial information across Europe to support community environmental policies, and policies or activities which may have an impact on the environment. The EPA is fully compliant with the current requirements of the INSPIRE Directive and its data is now accessible through the Irish Spatial Data Infrastructure and made available on the larger European INSPIRE network. The EPA participated in two data harvests during 2023 where our datasets were uploaded to the European INSPIRE portal.

Environmental Data Analytics

The EPA uses data science and earth observation techniques to generate new insights from environmental data. In 2023, data analytics and statistical techniques were used to support EPA work in a variety of areas including greenhouse gas indicators, developing enhanced data visualisations for waste statistics data and identifying locations for PFAS sources (“forever chemicals”).



5.3 Communications and Outreach

Communicating key messages

Digital media

The EPA's website is the principal communication channel for disseminating information to the public with over 1,200,000 visits during 2023. Peaks in activity during the year corresponded with publication of reports and media coverage of environmental issues. High volumes of traffic to the website related to the retrieval of information on EPA-licensed sites; downloading publications; accessing information on licensing and enforcement; careers in the EPA and accessing information on environmental thematic areas including radon, climate change, air, water, waste, etc.

2023 saw continued growth and innovation in how the work of the EPA engages with our audience across social media platforms. We continued to build new audiences by delivering content in varied formats.

Media relations

The EPA provides a 24-hour service to the media and during 2023 handled 620 media queries and issued 39 press releases. Environmental news stories relating to the EPA featured in over 3,343 newspaper articles throughout the year.

Environmental queries

The EPA provides an Environmental Queries Service to its stakeholders including the public, students, local authorities and government departments. The service operates in accordance with the commitments set out in the EPA Customer Charter. The service handled 2,332 queries during 2023. The main areas of interest to the public were: waste, wastewater, air quality, climate change and drinking water quality.

Outreach activities

The EPA has continued to play an important role in raising levels of awareness and supporting initiatives that increase public engagement with environmental issues and those that particularly target younger audiences.

Science Week encourages people of all ages and from all walks of life to be informed, inspired and involved in STEM events and the EPA participated in a variety of events in 2023, once again delivering the EPA's climate change lesson as part of its partnership with Junior Achievement Ireland.

In 2023, the EPA again supported the "10 Things to Know About..." TV Series that aired on RTE. The ninth season with six episodes highlighting the outstanding work of Irish scientific researchers across a range of disciplines including

Mental Health and Ageing, Immunology, the Environment, Ocean and Climate Science, Food Sustainability and Agricultural research.

As part of the EPA's corporate sponsorship commitments, many local initiatives were supported to raise awareness about environmental issues or the work of the EPA. The EPA also partnered with and supported several other diverse outreach initiatives including:

- ▲ Partnering with Engineers Ireland's on its STEPS programme which aims to foster STEM skills development in Ireland.
- ▲ Partnering with ECO UNESCO, supporting the Young Environmentalist Awards and other initiatives.
- ▲ Sponsoring the environmental award at the BT Young Scientist competition.
- ▲ Sponsoring the Environmental Journalism Award at the National Student Media Awards.

Junior Achievement Ireland programme

For the seventh year the EPA continued its partnership with Junior Achievement Ireland (JAI) in 2023, with 35 staff delivering a selection of JAI programmes to 1,179 students in 35 schools across 10 counties. One of these programmes was the EPA Climate Change and You lesson, which was delivered by EPA staff during Science Week. The EPA's climate change lesson was also delivered by volunteers from other organisations, with 34 business volunteers, from 19 different organisations, delivering to 786 students. Support provided by the EPA positively impacted 1,965 students across Ireland as part of this partnership, delivering key environmental messages and knowledge along with reinforcing messages about the value of education.

Conferences and exhibitions

The EPA supported several public engagement events during 2023. National and local events included the BT Young Scientist & Technology Exhibition (where the EPA also presented a Special Environmental Award), the 92nd National Ploughing Championships and regional Science Festivals. These events provided an ideal opportunity to raise awareness of, and engage the public's support in, environmental issues.

Outlined below are key conferences and events held during 2023.

EPA National Climate Conference

The EPA National Climate Conference was held in Dublin Castle on 25 May 2023 and livestreamed as a hybrid event. The conference was entitled “Climate Change on the Ground: Land Use, Land Use Change and Forestry”. The conference set out the data, evidence and emerging research in the land use area in Ireland from a scientific, policy and practical perspective. Speakers brought diverse perspectives and insights on land use and climate policies including food systems and agriculture, farming, the co-dependencies and benefits across climate, water quality, biodiversity, and society. The event was opened by Mr. Eamon Ryan TD, Minister for the Environment, Climate and Communications and Professor Jim Skea, Co-Chair of IPCC Working Group III as keynote speaker. A recording of the [Climate Conference can be viewed online](#).

Climate Change Lecture Series

The Climate Change Lecture was held on 19 April 2023 in the Mansion House, Dublin, in partnership with Dublin City Council. It was delivered by Professor Stefan Rahmstorf, Co-Head of the Research Department of Earth System Analysis of the Potsdam Institute for Climate Impact Research and Professor of Physics of the Oceans at the University of Potsdam. The lecture was entitled ‘Ocean Circulation, Tipping Points and the Public Climate Debate’. Professor Rahmstorf spoke on the topic of climate change impacts on the Gulf Stream and how information on climate change is shaped. The event was moderated by Ella McSweeney. A [recording of the climate change lecture can be viewed online](#).

Circular Economy Conference

The annual Circular Economy Programme Conference was held as a hybrid event on 27 September 2023. The event had four sessions: policy focus; reuse, repair and circularity; consumption and behaviour change; implementation (local circular solutions). [Presentations from the 2023 conference are available on the EPA’s YouTube channel](#).

EPA Water Conference

The EPA held its Annual National Water Conference in June as a hybrid event in Galway. Speakers shared their knowledge on how to protect & improve water quality and highlighted case studies from around Ireland. Topics included the latest on policy, agriculture, health, emerging issues and the future of water. [Presentations from the conference](#) are available on the EPA’s YouTube channel.

National Air Event

The theme for this year’s annual National Air Event held in Kilkenny on the 15 November was “Clean Air – Vital for our Health”. The event was opened by Mr. Eamon Ryan TD, Minister for the Environment, Climate and Communications. Speakers included Ms. Emma Balmain, the CEO of the Irish Heart Foundation, as well as officials from DECC and representatives from the EPA, and university researchers amongst others. [Presentations from the National Air Event](#) are available on the EPA’s YouTube channel.

Environment Health and Wellbeing Conference

The EPA, in partnership with the Health Service Executive (HSE) and the Economic and Social Research Institute (ESRI) held the annual Environment, Health and Wellbeing conference in the Royal College of Physicians on the 17 May. This year’s theme was “Creating A Healthy Environment for All”. The aim of the conference was to explore key issues relating to managing a broad range of environment and health risks and challenges that we face in creating a fair and healthy environment for all. The conference included sessions examining current environment and health issues, how we are working together to address environmental inequalities and close the equity gap in Ireland and how we will create a better tomorrow. [Presentations from the conference](#) can be viewed on the EPA’s YouTube channel.

Environment and Law Conference 2023

Convened by the Irish Centre for Environmental Law and the EPA, the joint conference was held on 16 November 2023 in Dublin Castle. Ms. Laura Burke, Director General EPA and Mr. Eoin Delap BL (ICEL) provided opening remarks. This was followed by the Honourable Mr Justice Donal O’Donnell, the Chief Justice of Ireland who gave a presentation on the Supreme Court and how it has dealt with environmental law in the past and a perspective for the future. Legal experts also considered several contemporary themes relating to Water, Waste and Maritime regulation and Access to Environmental Information Regulation including access to justice. There was also a panel of PhD researchers who explored current environmental threats and pressures.

EPA/IIEA Lecture Series

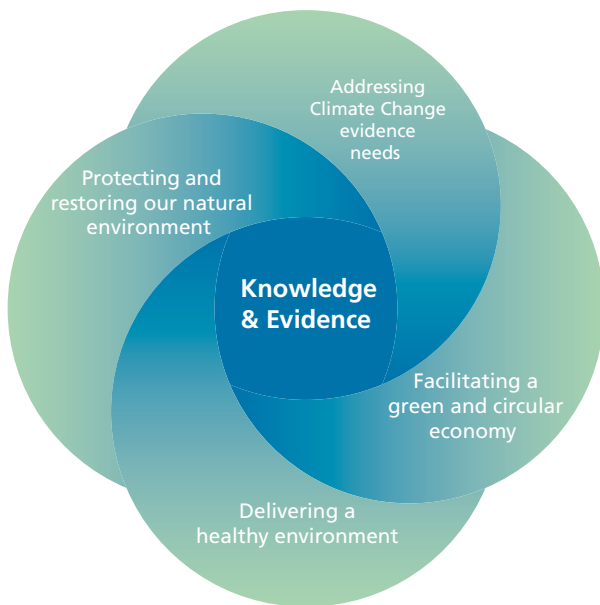
The EPA continued its partnership with the Institute of International and European Affairs (IIEA) on the ‘Environmental Resilience’ lecture series. In 2023 this series hosted lectures by international experts, to address the most critical environmental issues of our time including climate policies, the ecological economy and the circular economy model.

5.4 Research

The EPA manages a responsive and agile research programme that delivers scientific evidence to support policy development and broader decision making. This reflects the vision of [EPA Research 2030](#) of ‘putting science and innovation at the centre of environmental protection in Ireland through the development and proactive transfer of knowledge’.

EPA Research is delivered with a thematic structure comprising four interconnected hubs:

- ▲ Addressing climate change evidence needs,
- ▲ Facilitating a green and circular economy,
- ▲ Delivering a healthy environment, and
- ▲ Protecting and restoring our natural environment.



At the end of 2023, the EPA was managing a portfolio of more than 230 projects. The [EPA Research 2030 Action Plan for 2023](#) was published in March 2023 and included updates on progress towards Key Performance Targets.

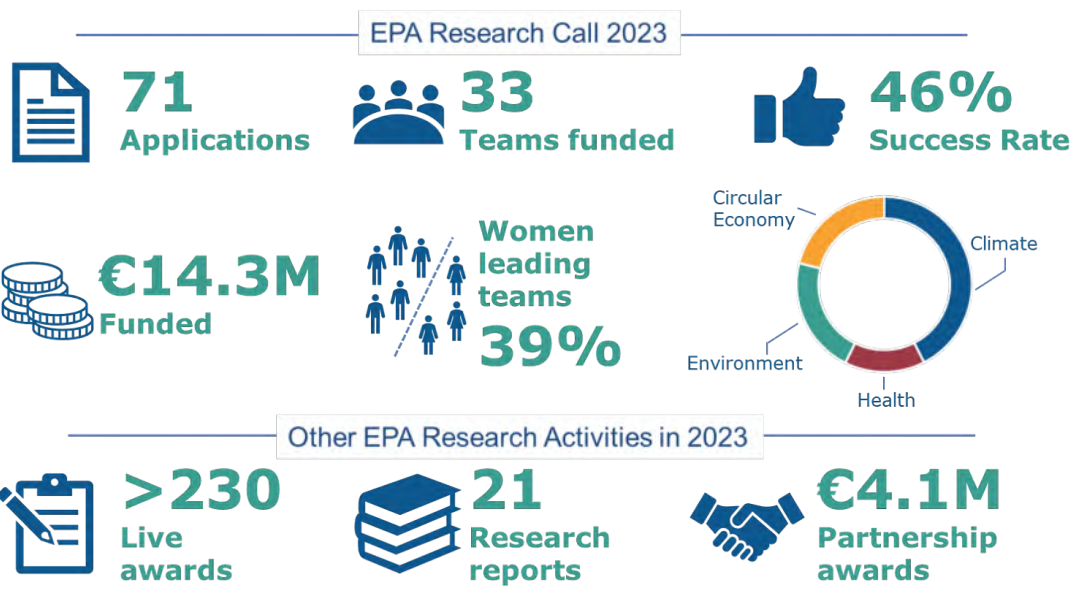
New Research Awards in 2023

The EPA made 67 new research awards in 2023, representing a total commitment of €18.9 million. This included:

- ▲ 32 awards to the value of €13.9 million¹ under the EPA Research Call 2023.
- ▲ 25 awards to the value of €4.1 million under national and international strategic partnership.
- ▲ 1 award supporting the Waters of Life Project (€840k).
- ▲ 8 awards under the EPA Event Support scheme (€24k).
- ▲ 1 award from the 2022 EPA Research Call issued in 2023 (€88k).

¹ An additional award from the 2023 EPA Research Call issued in early 2024 and is reflected in the call statistics below (representing an additional commitment of €436k).

The awarding of €14.3 million in funding under the 2023 EPA Research Call represented a 34% increase in investment from the 2022 call. Notably, over 40% of lead researcher applicants in 2023 were new to the EPA Research Programme, demonstrating that EPA funding is building essential research capacity in Ireland. Further details on the [2023 EPA research awards](#) are available on the EPA website.



National strategic partnerships

Two awards were made as part of the 2022/2023 Fulbright-EPA awards, and six scholarships were awarded under the 2023/2024 EPA- Irish Research Council (IRC) Postgraduate Scheme.

The tri-agency [DOROTHY](#) Research Fellowship programme (involving the IRC, Health Research Board and EPA, and co-funded by the European Commission) appointed the first eight Fellows under the programme to conduct research on the multifaceted causes and impacts of public health crises. A second call for Fellows was launched in 2023 with appointments to be made in 2024.

Three EPA co-funded awards were issued under the Science Foundation Ireland (SFI)-IRC [Pathway Programme](#) designed to support early career researchers.

Other ongoing strategic partnerships included the [EPA-ESRI Research Framework on Environmental Socio-Economics](#) and the [EPA-IPA Research Framework](#). The final report on Phase III of the EPA-ESRI Research Programme (2020–2022) was published in 2023 ([Research 439: Research on the Environment, Health, Consumer Behaviour and the Economy](#)).

International strategic partnerships

Under Horizon Europe Cluster-6 (Food, Bioeconomy, Natural Resources, Agriculture and Environment), the EPA is the National Contact Point for environmental opportunities, working closely with the other Cluster-6 national contact points (Enterprise Ireland, Marine Institute and Department of Agriculture, Food and the Marine), as well as participating in the National Horizon Europe High-Level Group, led by Department of Further and Higher Education, Research, Innovation and Science (DFHERIS). By the end of 2023, the Irish research community had signed a total of 109 grants to a value of €69.5 million under all Horizon Europe Cluster-6 calls to date.

The first Joint Transnational Call under the [European Partnership Water4All](#) closed in 2023, with a focus on the management of water resources for increased resilience, adaptation and mitigation to hydroclimatic extreme events. Three proposals with Irish partners were recommended for funding under this call to a value of €449k. The second Joint Transnational Call under Water4All launched in September 2023 on the theme of aquatic ecosystem services. EPA co-funding permits the Irish research community to participate in the call and facilitates international collaboration.

The second Joint Transnational Call under the [European Partnership Biodiversa+](#) closed in 2023 with a focus on

biodiversity monitoring. Five projects with Irish partners were recommended for funding to the amount of €813k with co-funding provided by DAFM and the Marine Institute. The third Biodiversa+ Joint Transnational Call launched in September 2023, focusing on nature-based solutions. EPA co-funding will permit the Irish research community to participate in the call.

The EPA participated in a joint call in June 2023 on [Climate Change and Cultural Heritage](#), jointly coordinated by JPI Climate, the JPI on Cultural Heritage and Global Change, and the Belmont Forum. Three projects with Irish partners have been recommended for funding, with 50% to be co-funded by DHLGH.

In 2023, the EPA joined the [European Partnership PARC](#) (Partnership for the Assessment of Risks from Chemicals). The EPA is also a partner in the [European Partnership PianoForte](#), which is a partnership for radiation protection research.

The EPA continued to have a chairing role in Climate Joint Programming Initiative as Vice chair for the Equinox process which aims to accelerate the development and transfer of knowledge from science to policy and action in Europe. This is supported by the Horizon Europe MAGICA project in which the EPA is a partner.

Research Coordination

The EPA-led [National Environmental Research Coordination Group](#) (NERCG) met twice in 2023. A strategic review of the NERCG was undertaken in 2023, resulting in updates to its objectives, membership and activities.

A sub-group of the NERCG developed classifications for climate and climate-related research in an Irish context, which contributed to [Research Classification Ireland](#). The new classification system will enable reliable comparison of research statistics and data nationally, as well as help with the development of standardised reporting and benchmarking.

Data collection and analysis for the 'Climate Research in Ireland 2022' report was completed in 2023, with the report due to be published in early 2024.

National Cooperation

The EPA participates in the National Implementation Forum for [Impact 2030](#) (the national Research and Innovation Strategy). The EPA also continued its participation in the national Research Integrity Forum, the National Open Research Forum, and in the Gender-related and Engaged research fora. The EPA is involved in national initiatives to build national capacity and infrastructure for open research.

Research Communication & Knowledge Transfer

The EPA published 18 new research reports and accompanying highlights videos in 2023, along with three Evidence Synthesis Reports from the EPA's Fast-Track to Policy Funding Scheme. All reports are available on the [Research Publications](#) section of the EPA website.

New approaches to communicating and publicising EPA research were piloted in 2023, including the use of short videos from researchers, targeted engagement with key stakeholders and more engaging promotion of research reports when published. In addition, a new [searchable database](#) of all EPA-funded research projects has been launched, allowing users to search, filter and export data on EPA-funded projects.

The EPA's focus on knowledge transfer continued in 2023, with the support of ERINN Innovation Ltd. Effective knowledge transfer is crucial to ensuring that the valuable scientific evidence generated by EPA-funded research informs policy development and implementation. Some 78 projects were included in the first phase of the project, resulting in the identification of 88 knowledge outputs which are being analysed to identify potential pathways to impact. This innovative project will shape how knowledge transfer is embedded throughout the EPA Research Programme going forward to maximise the impact of EPA-funded research.





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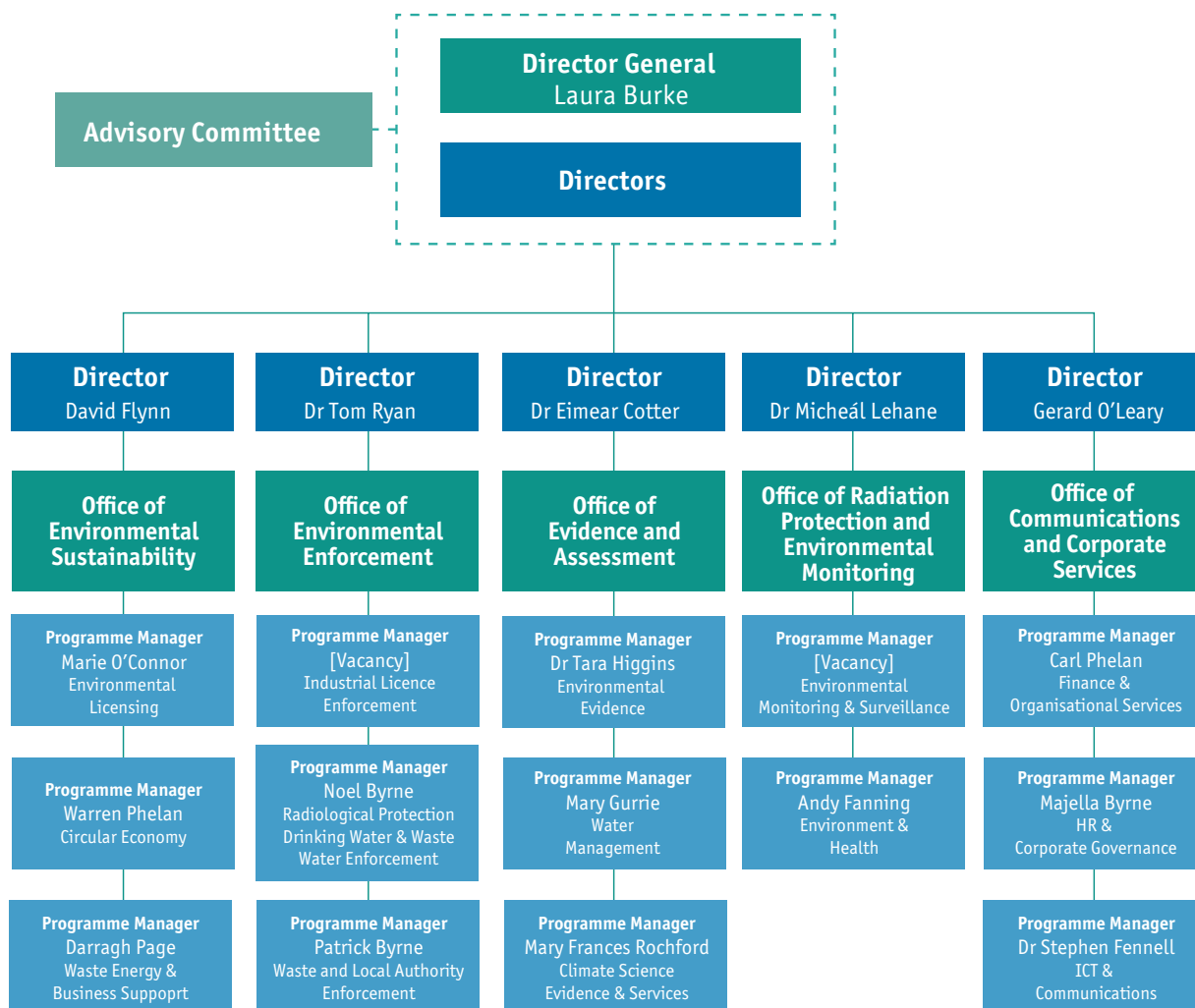
Culture of Excellence

We create a culture of excellence where people are supported and can give their best.

We live our values and behaviours in a supportive, inclusive and flexible workplace, to deliver public value and our vision.

6. CULTURE OF EXCELLENCE

6.1 Organisation Structure



Board of Directors



Pictured (left to right): Dr Eimear Cotter (Director, Office of Evidence and Assessment), Mr Gerard O' Leary (Director, Office of Communications and Corporate Services), Dr Micheál Lehane (Director, Office of Radiation Protection and Environmental Monitoring), Ms Laura Burke (Director General), Dr Tom Ryan (Director, Office of Environmental Enforcement) and Mr David Flynn (Director, Office of Environmental Sustainability).

Board meetings

The EPA Board comprises six full-time Executive Directors. A total of 48 Board meetings were held in 2023: 12 general meetings, at which corporate policy, governance, strategy, finance and planning issues were dealt with, and 36 technical meetings, at which licence applications, prosecutions and operational issues were dealt with.

EPA Advisory Committee

The EPA is assisted by an Advisory Committee with a term of office of three years. The 12 members are nominated by prescribed organisations and appointed by the Minister for the Environment, Climate and Communications. The Advisory Committee has a wide range of advisory functions including making recommendations to the EPA and/or the Minister. The Director General of the EPA is, ex officio, a member and Chairperson of the Committee. Ms Aebhín Cawley was re-appointed on 1 July 2022 for a further three-year period.

Appointees from prescribed bodies

Ms Sadhbh O'Neill (nominated by the Irish Environmental Network)
 Professor John Wenger (nominated by the Institute of Chemistry of Ireland)
 Professor Frances Lucy (nominated by the Environmental Sciences Association of Ireland)
 Ms Elaine Mahon (nominated by the The Wheel)
 Dr Brendan Dunford (nominated by Heritage Ireland)
 Mr Thomas Cooney (nominated by the Irish Farmers Association)
 Dr Niamh Lynam Lennon (nominated by the Irish Radiation Research Society)

Ministerial appointees

Professor Aoife Foley
 Ms Aebhín Cawley
 Ms Yvonne Mullooly
 Ms Elaine Nevin

Chairperson

Ms Laura Burke, Director General, EPA

6.2 Human Resources

Recruitment

During 2023, the EPA received sanction for an additional sixty-six posts, bringing the EPA's approved staff complement at the end of the year to 520. The EPA has 205 staff located at its headquarters in Wexford, with the remainder strategically located in the five Regional Inspectorates and Hydrometric Offices throughout the country.



EPA Staff at Agency Day, 2023

Internships & Placements

The EPA continued to engage with a wide range of third-level educational institutions under the Internship Programme to ensure that the student intake is of the highest calibre and that students are afforded an opportunity to work in a highly effective and complex public service organisation. A total of 26 paid internship were offered and filled during 2023. In addition, the summer student placement programme continued in 2023 with 27 third-level students provided with an opportunity to put into practice and enhance the theory and skills they have learned during their coursework in a relevant workplace setting, while adding value to the organisation.

Learning and Development

Maintaining our expertise, knowledge and technical skills is an ongoing investment. During 2023 the EPA continued investment in technical specialist training and in external training and attending conferences.

Strong leadership

The Senior Management Network (SMN) comprising Directors, Programme Managers and Regional Managers has been in place since 2014 and meets at least five times each year. The SMN provides an oversight role in relation to the delivery of the EPA Strategic Outcomes and leads by example by actively demonstrating how it lives the EPA's

cultural values and behaviours of Professional, Trustworthy, Customer & Stakeholder Focussed, Collaborative and Innovative.

During the first half of 2023, the focus of the SMN's work was on peer reviewing the EPA 2023 Annual Work Plan against the Strategic Priorities set out in the Corporate Strategy, as well as looking at team performance and behaviours across the Agency. In the second half of the year the SMN focussed on leadership training and the identification of risks to delivering the Outcomes identified in the Corporate Strategy.

Following the successful development of the SMN since 2014, the creation of a Management and Leadership Network (MLN) in 2019 was seen as the next step in the development and growth of the EPA. The middle management grades in EPA form the members of the MLN. The aim here is for the MLN to, over time, develop the future leaders of the organisation. In November, the network held its annual conference with a focus on Workplace Culture.

Board sub-committees

The Board has established two Sub Committees on Information and Communications Technology and People and Culture. The former oversees the governance and strategic direction of ICT-enabled change, and the latter

supports the HRD function and advises the Board on initiatives to maintain a culture of excellence where people give their best. This Sub-Committee steered the development of a Mentoring Programme that was launched in November.

Partnership

During 2023 the EPA's Partnership Committee, Meitheal, continued to build an inclusive, productive and innovative workplace. A key focus was Agency Day, which celebrated 30 years since the establishment of the EPA with presentations highlighting the progress that had been achieved in key sectors.

6.3 Information and Communications Technology

The EPA uses its Information and Communications Technology (ICT) services to support reform and innovation across the organisation. These services are key to delivering timely and targeted data and information to meet its stakeholder needs, as set out in its corporate strategy. The key priorities for ICT investment are in areas such as information provision, data management, online and shared services, security, leading-edge technologies and building internal ICT capabilities.

Information security

Information is a key asset of the EPA and the protection of the EPA's information, technologies and applications, is critical to ensuring the EPA can continue to carry out its functions. Within the EPA, information security practices encompass three main elements: confidentiality, integrity and availability. Accordingly, the EPA has introduced policies and technologies in the last few years to assist in the protection of its assets, and to meet the growing demands in the information security space which are periodically reviewed.

Throughout the year, particular focus was given to raising awareness around cyber security, for staff and anyone who uses EPA systems, with regular phishing exercises and

Safety, health and welfare at work

The EPA recognises that safety, health and welfare are essential requirements of its operations. In this regard, it is EPA policy to conduct its business in a manner that protects the safety, health and welfare of staff, visitors, contractors, and members of the public who may be involved in EPA activities. The EPA provides, in so far as is reasonably practicable, a safe place of work and a safe system of work for its staff in accordance with the Safety, Health and Welfare at Work Act, 2005 and associated regulations.

security training carried out as well as other awareness raising initiatives.

In 2023, the EPA completed an assessment against the National Cyber Security Centre Baseline Standards, which are a set of standards that aim to improve the resilience and security of public sector ICT systems. The assessment identified several areas that require attention, and this will be addressed in the 2024 work programme.

New ICT systems and technologies

Information and communications technologies are constantly changing and improving. The EPA endeavours to keep up to date with best practice in ICT to maximise use of new technology, and to deliver value for money in ICT investments.

Foundational work continued for the EPA's new Cloud environment to enable the use of new Cloud tools for developing new applications in the future. As the EPA moves more of its applications to the Cloud in the coming years, it will be able to offer improved, more secure and resilient services to teams across the organisation.

6.4 Governance

Corporate governance

Corporate governance is vitally important for the EPA in effectively discharging its statutory remit. It provides a framework of structures and processes to allow Board members to assess management and corporate performance while ensuring members also meet their own governance responsibilities objectively and effectively. It is the policy of the EPA to comply fully with governance and accountability obligations and to follow best practice in so doing.

The Code of Practice for the Governance of State Bodies 2016 (the Code) is mandatory for all State Bodies and came into effect on 1 September 2016. During 2023, the EPA continued to implement governance requirements and maintained compliance with the Code. A Corporate Governance Unit is in place with responsibility for overseeing and reporting on the implementation of and compliance with the Code.

Requirements arising from the Annex to the Code, on Gender Balance, Diversity and Inclusion recommends that State Boards achieve 40% representation of women and of men on State Boards. On 31 December 2023, the EPA Board included a gender balance of 33% female and 67% male.

Risk management

The EPA is committed to managing its risks and has a risk management framework in place that complies with the provisions of the Code of Practice for the Governance of State Bodies.

An Executive Risk Committee (ERC) (chaired by the Chief Risk Officer) is in place, comprised of two Directors and five Programme Managers. In addition, an Audit and Risk Committee (ARC) is also in place with the membership comprising six external members and one EPA senior manager. The ERC and the ARC together have a responsibility and provide assurance to the EPA Board and advise on risk management (see Figure 20). The ERC meets on a regular basis, holding four meetings in 2023, while the ARC met five times. Risk Management is a standing item at the ARC meetings.

The Corporate Risk Register is dynamic and identifies the key risks facing the EPA. The Register details the controls and actions needed to mitigate risks and assigns responsibility for the operation of such controls to specific staff. The Corporate Risk Register is monitored, maintained, reported on by the ERC, and reviewed by the ARC prior to submission to the EPA Board for consideration. In 2023, the ERC commenced a comprehensive risk assessment of the EPA's Strategic Plan 2022–2026, with the aim of identifying any significant risks to achieving the Strategy.

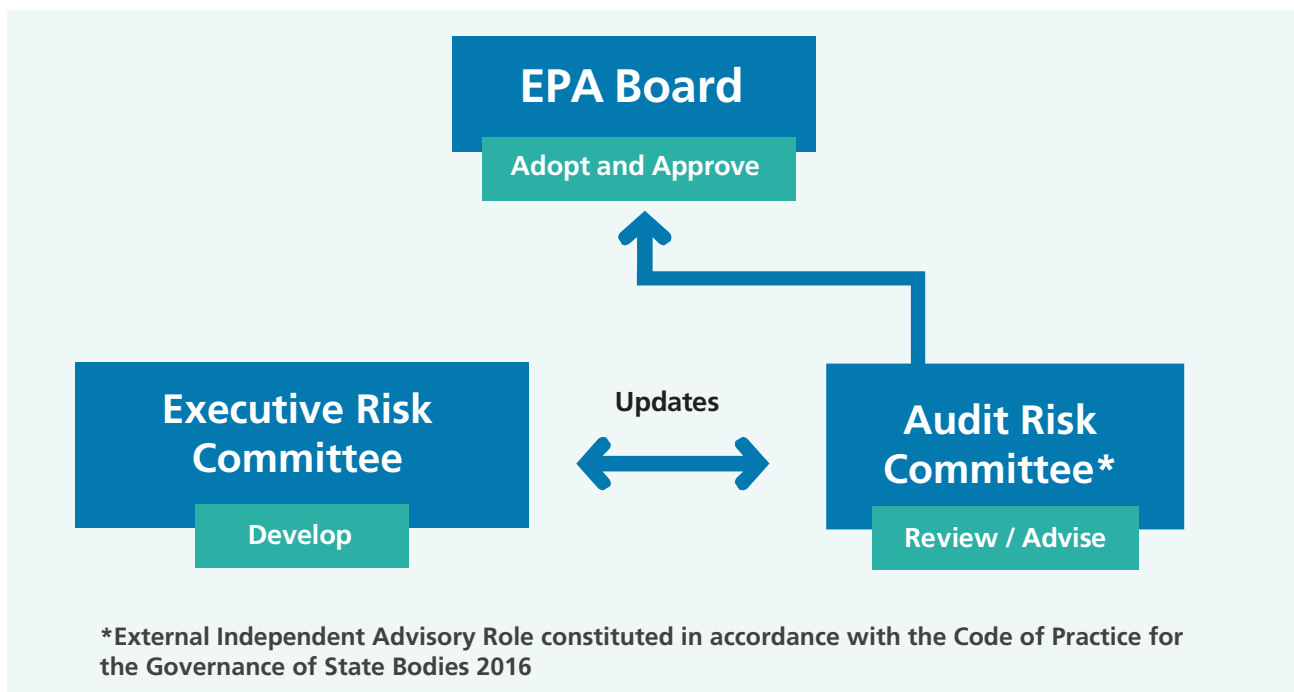


Figure 20. Relationship between the Executive Risk Committee, the Audit & Risk Committee and the EPA Board.

The EPA carried out an assessment of the EPA's risks using the processes outlined in its Risk Management Policy. The key risks managed by EPA in 2023 are summarised in the table below:

No.	Risks Managed	Response
1	Risk of loss of ICT systems or critical data due to cyber security related incident (including human error).	Following a self-assessment against the National Cyber Security Centre's Baseline Standards, all ICT Security Policies were reviewed and updated during 2023. Security culture among staff and contractors was significantly increased through regular awareness training and phishing simulations. Security arrangements were routinely tested through vulnerability assessments and penetration testing. Particular focus was placed on the area of Cloud governance to assist with the correct and safe use of cloud technologies.
2	Risk of serious injury to staff member(s) due to working in high risk environments.	The EPA continued to embed the Health and Safety Management System, including the rollout of the IT Solution. The Annual Safety, Health & Welfare Management Review Report for 2023 was compiled by the People and Culture Board Sub Committee and was presented to both the EPA's Audit & Risk Committee and the Board of the EPA. Two Internal Reviews were completed as part of the Plan-Do-Check-Act cycle that is at the heart of the EPA's Safety Management System. These reviews examined driving for work and the management of contractors involved in the installation of solar panels at each of the EPA's premises.
3.	The risk of a failure to respond appropriately to an international Nuclear Incident.	The EPA organises periodic National Nuclear Exercises in association with DECC and participates in international exercises each year. The Agency is embedding the actions related to the EPA identified in the National Exercise under the Government's National Plan for Nuclear and Radiological Emergency Exposures conducted in September 2022. During 2023, the EPA also worked with public bodies and government departments to address other recommendations from that exercise. The EPA is exploring opportunities to increase radiological analysis capabilities nationally by engaging with other state laboratories.

Internal audit

During 2023, the internal audit programme was actively progressed and recommendations from previous audits were implemented. In accordance with the Code, a review of the effectiveness of the Audit and Risk Committee was carried out in 2023.

Strategic Plan

The EPA's five-year Strategic Plan 2022–2026 sets out what it intends to achieve over the coming five years in delivering its mandate and its purpose to protect, improve and restore Ireland's environment through regulation, scientific knowledge and working with others. The Plan identifies five Strategic Outcomes which inform the EPA's work programmes:

- ▲ We are an effective voice for Ireland's environment.
- ▲ We use our knowledge to drive climate action.
- ▲ We deliver a protected and healthy environment.
- ▲ We promote the transition to sustainable production and consumption.
- ▲ We create a culture of excellence where people are supported and can give their best.

The Senior Management Network provides oversight of the implementation of the Plan on an ongoing basis.

Access to information

The EPA is committed to be an open and accessible organisation. The Freedom of Information (FOI) Act, 2014, as amended, and the Access to Information on the Environment (AIE) Regulations are two methods of accessing information for those members of the public who have not been able to access the information they require under alternative routes. The EPA publishes as much information as possible in an open and accessible manner on a routine basis outside FOI, having regard to the principles of openness, transparency and accountability. This allows for the publication or giving of records outside of FOI, provided that such publication or giving of access is not prohibited by law.

During 2023, the EPA received 49 FOI requests and a further five were carried over from 2022. Under the AIE Regulations, the EPA received 94 requests and eleven were carried over from 2022. Figure 21 illustrates the Decisions issued on the requests processed during 2023. Where requests were refused, the information refused was either: personal; confidential, could prejudice functions; was formulated in too general a manner; was not held by the EPA; could prejudice a prosecution; was legally privileged, was material in the course of completion, was financially or commercially sensitive; did not exist; or the requests were voluminous or manifestly unreasonable.

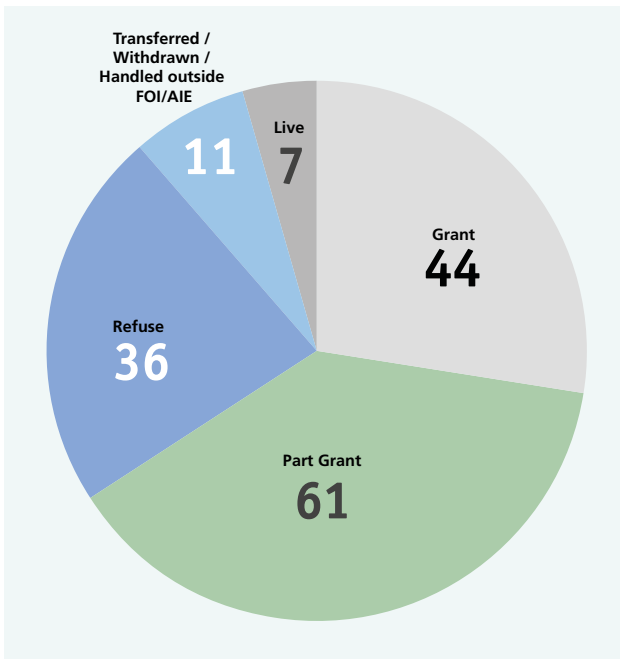


Figure 21. FOI and AIE Decisions, January to December 2023

Protected disclosures

Section 22 of the Protected Disclosures Act 2014, as amended, requires the publication of an Annual Report each year relating to the number of protected disclosures made in the preceding year and any actions taken in response to such disclosures. A copy of this report is available to view or download in the Protected Disclosures section of the EPA's website.

The EPA confirms that no disclosures were made to it as an employer, under Section 6 of the Act in 2023.

Pursuant to Statutory Instrument No. 339 of 2014, the Director General of the EPA is prescribed to be the recipient of disclosures of relevant wrongdoings in relation to all matters relating to the protection of the environment in the State. In the context of her role as a Prescribed Person, the Director General received thirteen disclosures from parties external to the EPA during 2023.





7

Appendices



7. APPENDICES

7.1 Prompt Payment of Accounts Act, 1997

The Environmental Protection Agency comes under the remit of the Prompt Payment of Accounts Act, 1997 and the European Communities (Late Payment in Commercial Transactions) Regulations 2002.

It is the policy of the EPA to ensure that all invoices are paid promptly. Specific systems and procedures have been put in place to enable invoices to be tracked and to ensure that payments are made before their due date.

These controls are designed to provide reasonable, but not absolute, assurance against material non-compliance with the Act and Regulations.

There were no late payments with a value in excess of €317 during 2023.



Laura Burke

Director General, EPA

31 May 2024

7.2 Consultants and Advisers Engaged

Acustica Ltd	Evelyn Partners
AECOM Ireland Ltd	Greenville
Arup Consulting	Gartner Ireland Ltd.
CBEC eco-engineering	Geosyntec Consultants Ltd
CDM Smith	Go West
RPS Group	Integrated Risk Solutions
APEM Limited	Krisolis Ltd.
Wallingford Hydro Solutions	Mabbett
ByrneWallace	M-CO
Camp Dresser & McKee (Ireland) Ltd	Morrow Communications
Carr Communications Ltd	ReidyBrophy Ltd.
Centre for Ecology and Hydrology, UK	Qualcom
CERC (GBP)	Ricardo
Clean Technology Centre	Sweco Ireland Ltd
Compass Informatics	Think HR
Dataworks	VITO (Flemish Institute for Technological Research)
ERINN Innovation Ltd.	SLR Consulting
Eir evo	Woodrow Environmental Consultants (APEM group)
Ergo	

EPA Publications 2023

Air

The following [air reports are published on the EPA website](#):

- ▲ *Air Quality in Ireland 2022*
- ▲ *Annual Air Quality Bulletin 2023*

Corporate

The following [corporate reports are published on the EPA website](#):

- ▲ *EPA Climate Action Roadmap 2022*
- ▲ *EPA Annual Report & Accounts 2022*
- ▲ *Tuarascáil Bhliantúil agus Cuntais 2022*
- ▲ *EPA Year in Review 2022*
- ▲ *Athbhreithniú ar 2022*
- ▲ *Gender Pay Gap Review 2023*
- ▲ *EPA Carbon Emissions Report 2021*

Public Authority

The following [Public Authority report is published on the EPA website](#):

- ▲ *Focus on Local Authority Environmental Enforcement Activity report 2022*

Circular Economy

The following [circular economy reports are published on the EPA website](#):

- ▲ *EPA Second Hand Clothing Qualitative Study Report 2022*
- ▲ *Textiles: Circular Retail Propositions National Survey 2022*
- ▲ *Circular Economy Programme Annual Report 2022*
- ▲ *Comparative study of waste recovery taxes/levies in Europe*
- ▲ *Green Public Procurement: Monitoring and Reporting by Government Departments*
- ▲ *National Waste Prevention Programme Annual Report 2021*

Water Quality

The following [water quality reports are published on the EPA website](#):

- ▲ *Water Quality in 2022: An Indicators Report*
- ▲ *Bathing Water Quality in Ireland in 2022*
- ▲ *Water quality monitoring report on nitrogen and phosphorous concentrations in Irish waters 2022*
- ▲ *Supporting information for the interim water quality review as required as a condition of Ireland's derogation under the Nitrates Directive - Technical Document*
- ▲ *12 monthly publications of the 'Hydrology Summary Bulletin' (Dec 2022 to Nov 2023)*
- ▲ *Ireland's National Water Quality Monitoring Programme 2022-2027*
- ▲ *Assessing lake water quality - EPA fact sheet*
- ▲ *Assessing river water quality - EPA fact sheet*
- ▲ *Assessing marine water quality - EPA fact sheet*
- ▲ *EPA Water Abstraction Register - December 2023*
- ▲ *Register of Hydrometric Stations in Ireland 2023*
- ▲ *Hydrology Summary Bulletins January- December 2023*

Drinking Water

The following [drinking water reports are published on the EPA website](#):

- ▲ *Drinking Water Quality in Public Supplies 2022*

Waste Water

The following [waste water reports are published on the EPA website](#):

- ▲ *Domestic Waste Water Treatment Systems (DWWTS) Inspections 2022*
- ▲ *Urban Waste Water Treatment in 2022*

Assessment

The following [assessment reports are published on the EPA website](#):

- ▲ *Good Practice Guidance on Strategic Environmental Assessment (SEA) and Landscape*
- ▲ *Good Practice Guidance on SEA for the Tourism Sector*
- ▲ *EIONET Ireland Network Brochure 2023*
- ▲ *Guidance on SEA Statements and Monitoring*

Climate Change

The following climate change reports are published on the [EPA website](#):

- ▲ *Climate Change in the Irish Mind Wave 1*
- ▲ *Climate Change in the Irish Mind Wave 1 Insight Report 1*
- ▲ *Climate Change in the Irish Mind Wave 1 Insight Report 2*
- ▲ *Ireland's Provisional Greenhouse Gas Emissions 1990-2022*
- ▲ *Ireland's Greenhouse Gas Emissions Projections 2022-2040*
- ▲ *Ireland's Air Pollutant Emissions 2021 (1990-2030)*
- ▲ *Ireland's Final Greenhouse Gas Emissions 1990-2021*

Waste

The following waste reports are published on the [EPA website](#):

- ▲ *Circular Economy and Waste Statistics Highlights Report 2021*
- ▲ *2022 Commercial Municipal Waste Characterisation Booklet*
- ▲ *2022 Household Municipal Waste Characterisation Booklet*
- ▲ *Best Practice Guidance for handling asbestos*

Radiation

The following radiation reports are published on the [EPA website](#):

- ▲ *Radiofrequency EMF in public spaces in Ireland- report and brochure*

Environmental research reports

The following research reports were published in 2023 and are available on the [EPA website](#):

Addressing climate change evidence needs

- ▲ Research 429: *Building Coastal and Marine Resilience in Ireland.*
- ▲ Research 436: *Assessing Potential for North Atlantic Integrated Atmospheric Research.*
- ▲ Research 437: *The Phenology of Perennial Ryegrass and its Potential Contribution to Grassland Carbon Sequestration.*
- ▲ Research 445: *CROSSDRO: Cross-sectoral drought impacts in complex European Basins.*

Delivering a healthy environment

- ▲ Research 428: *Percolation Testing of Soils for Onsite Wastewater Treatment.*
- ▲ Research 433: *Sense and Purify: Detect, Destroy and Remove Water Contaminants (SPy).*
- ▲ Research 434: *Persistent Organic Chemicals in the Irish Waste Stream,*
- ▲ Research 439: *Research on the Environment, Health, Consumer Behaviour and the Economy: ESRI Research Programme on Environmental Socio-Economics 2020-2022.*
- ▲ Research 442: *Impact of NO₂ on Health with Particular Emphasis on Vulnerable Groups.*

Facilitating a green and circular economy

- ▲ Evidence Synthesis Report 2: *Circular Bioeconomy Outlook Study 2030–2050 in Support of Climate Action, Sustainable Food and Biobased Systems.*
- ▲ Research 431: *Production of Advanced Gaseous Biomethane Transport Fuel in An Integrated Circular Bioenergy System.*
- ▲ Research 432: *Valorisation Alternatives to Landfill for Organic Residues.*
- ▲ Research 435: *Industrial Water 4.0 - A Framework for Catchment-based Digitally Integrated Industrial Water Stewardship.*
- ▲ Research 440: *Advances in Sustainable Nutrient Recovery for Management of Nitrogen Rich Residue Streams.*

Protecting and restoring our natural environment

- ▲ Research 430: *Sources, Pathways and Environmental Fate of Microplastics.*
- ▲ Research 438: *The Use of Earth Observation and Machine Learning for Industrial and Waste Crime Identification and Prevention.*
- ▲ Research 441: *Irish Natural Capital Accounting for Sustainable Environments (INCASE).*
- ▲ Research 443: *Remote Sensing of Irish Surface Waters.*
- ▲ Research 444: *Taxonomy and Phylogeography of Irish Arctic Char.*
- ▲ Evidence Synthesis Report 3: *Land Use Review: Fluxes, Scenarios and Capacity.*
- ▲ Evidence Synthesis Report 4: *Land Use Review: Fluxes, Scenarios and Capacity Synthesis Report.*





8

Financial Statements



8. FINANCIAL STATEMENTS

8.1 GOVERNANCE STATEMENT AND DIRECTORS' REPORT 2023

Governance

The Environmental Protection Agency (Agency/ EPA) was established under the Environmental Protection Agency Act, 1992, as amended (the Act). In accordance with Section 19 of the Act the Agency consists of a Director General and five Directors.

The Director General and other Directors are appointed by the Government in accordance with Sections 21 and 24 of the Act. The functions of the EPA are set out in Part III of the Act. The Director General and the Directors are accountable to the Minister for the Environment, Climate and Communications and the Minister for Housing, Local Government and Heritage. The Director General and Directors are responsible for ensuring good governance and perform this task by setting strategic objectives and targets and taking strategic decisions on all key business issues. The regular day-to-day management, control and direction of the EPA are the responsibility of the Director General and the Directors.

The Act does not use the term 'Board' to designate the organisation's governing body; instead, the Act refers to 'the Agency' and designated 'Directors of the Agency'. The Agency is compliant with the relevant board requirements set out in the Code of Practice for the Governance of State Bodies. The Director General serves as Chair of the Executive Board (the Board) and operational chief executive of the EPA, fulfilling both governance and management roles and is responsible for running the Agency. The Director General is accountable to the Oireachtas through the Public Accounts Committee.

The Directors of the Agency are referred to as 'Board Members', and the Agency's governing body is known as the Board. The Board fulfils both governance and management roles and its activities are organised into five Offices, with each Director having operational responsibility for an Office.

Board Responsibilities

The EPA has been granted a wide range of powers and duties under the Environmental Protection Agency Act, 1992, as amended and other relevant environmental and radiation protection legislation.

The role of the Board of any public body is to provide strategic leadership, direction, support and guidance for the body and promote commitment to its core values, policies and objectives. In addition to the special Board responsibilities set out in the Code of Practice for the Governance of State Bodies (the Code) and in the Act, the EPA's Board holds specific governance and management responsibilities as the Board of a State body which include:

- ▲ to ensure that the body carries out its responsibilities as set out by statute or by ministerial order;
- ▲ to provide leadership, vision and direction for the body;
- ▲ to define the mission of the body, decide its strategic goals and develop the policies required to achieve those goals;
- ▲ to ensure good management, to monitor the achievements of management and to ensure that a proper balance is achieved between the respective roles of board and management;
- ▲ to set performance targets, including key financial targets and, in particular, to agree and closely monitor the budget;
- ▲ to ensure that the body behaves ethically and in a manner that accords with the core values of the body;
- ▲ to define and promote the body's role in the community by developing mechanisms for gathering the views of customers and stakeholders and by keeping people informed in an open, accountable and responsible way.

Legislatively, the Board has responsibility for the management of the EPA, but for practical purposes it is empowered to delegate responsibility to other staff for operational purposes. Section 25(6) of the Act provides that the Agency may perform or exercise any of its functions through or by any director or other person or body who has been duly authorised by the Agency in that behalf.

Since the establishment of the EPA, the Board has delegated discretionary powers to various levels in the EPA. The delegation of powers continues to grow as the Agency acquires further legislative functions over time.

The EPA's Strategic Plan 2022–2026 sets out the priority actions that the EPA will take to deliver on our purpose of protecting, improving and restoring our environment.

The work and responsibilities of the EPA are set out in: the EPA Strategic Plan; the EPA Work Programme; and the Oversight Agreement with the Department of Environment, Climate and Communications and the Department of Housing, Local Government and Heritage.

Each month, the Board has a dedicated meeting on governance and management issues which include but not limited to:

- ▲ Declaration of interests
- ▲ Progress reports from individual Offices
- ▲ Financial management
- ▲ Implementation of the Strategy
- ▲ Communications management
- ▲ Corporate Governance issues (including internal audit)
- ▲ HR and staffing issues
- ▲ Risk Management

Section 50 of the Environmental Protection Agency Act, 1992, as amended requires the EPA to keep, in such form as may be approved by the Minister for the Environment, Climate and Communications with consent of the Minister for Public Expenditure, NDP Delivery and Reform, all proper and usual accounts of money received and expended by it.

In preparing these financial statements, the EPA is required to:

- ▲ select suitable accounting policies and apply them consistently;
- ▲ make judgements and estimates that are reasonable and prudent;
- ▲ prepare the financial statements on the going concern basis unless it is inappropriate to presume that it will continue in operation;
- ▲ state whether applicable accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements.

The EPA is responsible for keeping adequate accounting records which disclose, with reasonable accuracy at any time, its financial position and enables it to ensure that the financial statements comply with

Section 50 of the Act. The maintenance and integrity of the corporate and financial information is the responsibility of the Director General and Directors.

The Board is responsible for approving the annual plan and budget. The performance of the EPA is monitored on a monthly basis through the submission to the Board of progress reports on the EPA's Strategic & Interim Outcomes. A year-end evaluation of the 2023 EPA Work Programme Activities was completed, and the 2023 year-end Financial Management Report was submitted to the Board in February 2024.

The EPA is also responsible for safeguarding its assets and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The Board considers that the financial statements of the EPA give a true and fair view of the financial performance and the financial position of the EPA at 31 December 2023.

Board Structure

The Board consists of a Director General and five other Directors, one of whom acts as Deputy Director General, all of whom are appointed by the Government. The Director General is appointed for a period of seven years and the other Directors are appointed for a period of five years. The Director General and Directors respectively may be reappointed by the Government for a second or subsequent term of office.

Requirements arising from the Annex to the Code of Practice for the Governance of State Bodies 2016, on Gender Balance, Diversity and Inclusion recommends that State Boards achieve 40% representation of women and of men on State Boards. The procedures for the appointment of the Director General and Directors of the EPA are laid down in Sections 21 and 24 of the EPA Act respectively. The EPA Director General and the Directors are selected by a committee as prescribed in the EPA Act and appointed by the Government via an open recruitment process. In selecting candidates, the committee has regard to knowledge and experience, including relevant experience in environmental and radiological matters. At 31 December 2023 the EPA Board included a gender balance of 33% female and 67% male.

The Board met for General Board meetings on twelve occasions in 2023. The table below details the appointment date for Board members who served during 2023.

Board Member	Role	Date Appointed
Ms Laura Burke	Director General	8 November 2011*
Mr Gerard O’Leary	Deputy Director General	8 May 2012**
Dr Micheál Lehane	Director	1 May 2016*
Dr Eimear Cotter	Director	1 September 2017*
Dr Tom Ryan	Director	25 August 2018*
Ms Sharon Finegan	Director	19 April 2021***
Mr David Flynn	Director	23 October 2023

* Second term

** Third term

*** Resigned on 12 April 2023

Audit and Risk Committee

The EPA has established an Audit and Risk Committee (ARC) that comprises six external members and one member from EPA Senior Management. The role of the ARC is to support the Board in relation to its responsibilities for issues of risk, control and governance and associated assurance. The ARC is independent from the financial management of the organisation. In particular, the ARC ensures that the internal control systems including audit activities are monitored actively and independently. The Chairperson of the ARC meets regularly with the Director General and reports at least annually to the Board on the performance of the ARC.

There were five meetings of the ARC in 2023. The membership of the ARC at the end of 2023 is set out in the following table:

ARC Member	Role	Date Appointed
Mr Tom Barry	(Outgoing Chairperson)	12 February 2016*
Ms Caroline Bocquel	(Chairperson)	28 November 2017**
Prof Áine Ryall	Member	20 October 2020**
Mr Raymond Smith	Member	20 October 2020**
Mr Harvey Bradshaw	Member	1 March 2022
Mr David Owens	Member	13 December 2022
Mr Damian Allen	Member	25 July 2023
Ms Colette Byrne	Member	1 October 2023

* Completed term as Chairperson in January 2023

** Second term

Board Sub Committees

The Board has established two Board Sub Committees.

- 1. ICT Board Sub-Committee** comprises two Board members and is supported by Programme Managers, the senior ICT team and a senior Analytics team representative. The Board members of this committee are Dr Micheál Lehane (Chairperson) and Mr Gerard O’Leary. There were ten meetings of the ICT Board Sub-Committee in 2023.
- 2. People and Culture Board Sub-Committee** comprises three Board members. The role of the People & Culture Board Sub-Committee is to provide strategic HR oversight so that the EPA achieves the strategic outcome of “a culture of excellence where people give their best”. The Board members of this committee are Mr Gerard O’Leary (Chairperson), Dr Tom Ryan and Dr Eimear Cotter. Four meetings were held during 2023.

External Advisory /Consultative Committees

The Board is also advised by the following key external committees, each of which was established under legislation:

- ▲ EPA Advisory Committee
- ▲ Dumping at Sea Advisory Committee

- ▲ Genetically Modified Organisms (GMO) Advisory Committee
- ▲ Health Advisory Committee
- ▲ Radiological Protection Advisory Committee

Schedule of Attendance, Fees and Expenses

There were 12 General Board meetings in 2023. A schedule of attendance at the General Board meetings for 2023 is set out below. Eleven of the 12 General Board Meetings were held in EPA headquarters and one General Board Meeting was held in the EPA Inspectorate, Dublin:

Number of meetings	Board Attended/Out of Possible	Fees 2023 €	Expenses 2023 €
Ms Laura Burke	12/12	0	77
Mr Gerard O'Leary	12/12	0	147
Dr Micheál Lehane	12/12	0	0
Dr Eimear Cotter	10/12	0	160
Dr Tom Ryan	12/12	0	0
Ms Sharon Finegan	2/3	0	0
Mr David Flynn	3/3	0	391
Total		0	775

A schedule of attendance at the ARC meetings for 2023 is set out below including the fees and expenses received by each member:

Number of meetings	Audit & Risk Committee Attended/Out of Possible	Fees 2023 €	Expenses 2023 €
Mr Tom Barry (Outgoing Chairperson)	1/1	855	286
Ms Caroline Bocquel (Chairperson)	5/5	0	1096
Prof Áine Ryall	5/5	0	0
Mr Raymond Smith	5/5	0	0
Mr Harvey Bradshaw	4/5	0	377
Mr David Owens	4/5	0	184
Mr Damian Allen	1/1	0	0
Ms Colette Byrne	1/1	0	33
Total		855	1976

Disclosures Required by Code of Practice for the Governance of State Bodies (2016)

The Board is responsible for ensuring that the EPA has complied with the requirements of the Code, as published by the Department of Public Expenditure, NDP Delivery and Reform in August 2016. The following disclosures are required by the Code:

Employee Short-Term Benefits Breakdown

Employees' short-term benefits in excess of €60,000 are set out in Note 8 (c) of the financial statements.

Consultancy Costs

Consultancy costs include the cost of external advice to management and exclude outsourced 'business-as-usual' functions and staff training and development providers.

	2023 €	2022 €
Legal Advice, including Financial Provision of Licensed Activities.	1,560,938	1,228,728
Pension Scheme Actuarial Valuation	5,166	4,859
HR Consultancies	14,590	8,856
Public Relations	153,693	150,601
Internal Audit & Corporate Governance	90,606	73,099
Procurement Consultancy and Advice	40,152*	21,181
Strategy & Board Consultancy	26,265	58,794
Total Consultancy Costs	1,891,410	1,546,118

*Includes the development of Green Public Procurement advice for the Public Sector

Legal Costs and Settlements

The table below provides a breakdown of amounts recognised as expenditure in the reporting period in relation to legal costs, settlements and conciliation and arbitration proceedings relating to contracts with third parties. This does not include expenditure incurred in relation to general legal advice received by the EPA which is disclosed in Consultancy costs above.

	2023 €	2022 €
Legal fees – legal proceedings	408,490	557,774
Conciliation and arbitration payments	0	0
Settlements	0	0
Total	408,490	557,774

Travel and Subsistence Expenditure

Travel and subsistence expenditure is categorised as follows:

	2023 €	2022 €
Domestic		
- Board	63,459	59,853
- Employees	1,231,903	913,928
International		
- Board	17,350	16,889
- Employees	171,243	142,148
Total	1,483,955	1,132,818

Hospitality Expenditure

The Income and Expenditure Account includes the following hospitality expenditure:

	2023 €	2022 €
Staff hospitality*	12,094	15,799
Other hospitality	0	0
Total	12,094	15,799

*Includes Employee Assistance programme and contributions to Staff Sports and Social Clubs.

Statement of Compliance

The Board has adopted and has put procedures in place to ensure compliance with the Code of Practice for the Governance of State Bodies (2016). The EPA was in compliance with the Code of Practice for the Governance of State Bodies for 2023.

Signed on behalf of the Board.



Laura Burke

Director General

Date signed: 31 May 2024

8.2 STATEMENT ON THE SYSTEM OF INTERNAL CONTROL 2023

1. Scope of Responsibility

On behalf of the Environmental Protection Agency (EPA) I acknowledge the Directors' collective responsibility for ensuring that an effective system of internal control is maintained and operated, for preparing the accounts of the EPA and for complying with all statutory obligations applicable to the EPA. This responsibility takes account of the requirements of the Code of Practice for the Governance of State Bodies (2016).

2. Purpose of the System of Internal Control

The system of internal control is designed to manage risk to a tolerable level rather than to eliminate it. The system can therefore only provide reasonable and not absolute assurance that assets are safeguarded, transactions authorised and properly recorded, and that material errors or irregularities are either prevented or detected in a timely way. While the effectiveness of an internal control system can change over time, the EPA reviews and updates such systems as required.

The system of internal control, which accords with guidance issued by the Department of Public Expenditure, NDP Delivery and Reform has been in place in the EPA for the year ended 31 December 2023 and up to the date of approval of the financial statements.

3. Key Control Procedures to Provide Effective Internal Control

i) Annual Review of the Effectiveness of Control

The Executive Board (the Board) conducted an annual review of the effectiveness of the internal controls which concluded in February 2024. In undertaking this review the Directors considered the following:

- ▲ Details of the system of internal controls in 2023 including Risk Management, Financial Management, Internal Audit, Ethics, Information Systems, Business Planning & Reporting.
- ▲ ICT Compliance Report 2023.
- ▲ Annual Report on Compliance with Corporate Legislation 2023.
- ▲ Safety, Health & Welfare Report 2023.

- ▲ Risk Management Assurance Statements 2023.
- ▲ Audit & Risk Committee Chairperson's Report 2023.

Annual Assurance Statements in relation to Budgetary Responsibilities for 2023 were submitted to the EPA Board at their meeting in January 2024 and have been presented to and signed by the Director General, in line with the provisions of the EPA Finance Manual.

ii) Breaches in Control

There was one reported instance of a breach in control in 2023 and detailed in section 3(vii) of this document.

iii) Material Losses or Frauds

There were no reported material losses or frauds in 2023.

iv) Review of Statement on Internal Control

This Statement on the System of Internal Control 2023 was reviewed by the EPA's Audit & Risk Committee (ARC) and the Directors in February 2024 to ensure that it accurately reflects the control system in place during 2023.

v) Steps taken to ensure an appropriate control environment

The Directors of the EPA have taken steps to ensure an appropriate control environment within the EPA by:

- ▲ Publishing and implementing the EPA Strategic Plan 2022 –2026. This strategy, the EPA's sixth, was published in May 2022 and sets out what we intend to achieve over the next five years in delivering our mandate and our purpose to protect, improve and restore our environment through regulation, scientific knowledge and working with others.
- ▲ Implementing the recommendations of the OECD review of EPA's institutional and organisational set-up. The review examined our structures, accountability, business processes, reporting and performance management as well as role clarity, relationships, distribution of powers and responsibilities with other government and non-government bodies. The overall finding of the review was that "the EPA has established itself as

a trusted and respected body for environmental and radiological protection that is recognised for its scientific integrity.”

- ▲ Agreeing a detailed work programme each year and monitoring and evaluating progress against that work programme on a monthly basis.
- ▲ Holding regular Board meetings, including monthly management meetings where the Agenda includes strategic issues such as Corporate Governance, Financial Management, Corporate Strategy and staffing matters.
- ▲ Maintaining and implementing an EPA Finance Manual and a set of financial policies and procedures to control the significant financial elements of the EPA’s business.
- ▲ Adhering to a Corporate Governance Framework that provides a clear and comprehensive summary of the principal aspects of corporate governance for the Directors and senior managers.
- ▲ Maintaining a comprehensive schedule of insurances to protect the EPA’s interests.
- ▲ Establishing and maintaining an Audit & Risk Committee. (see Section 3(ix) Monitoring Effectiveness of the System of Internal Control)
- ▲ Implementing a Risk Management Policy and Framework, appointing an Executive Risk Committee (ERC) and a Chief Risk Officer. (see Section 3(vi) Risk and Control Framework)
- ▲ Monitoring and assessing compliance with corporate legislation in accordance with EPA Policy.
- ▲ Defining management responsibilities, delegating appropriate functions, and reviewing and approving all EPA policies and procedures.
- ▲ Adopting a Code of Business Conduct for Directors and Staff in accordance with the requirements of the Code of Practice for the Governance of State Bodies.
- ▲ Ensuring compliance with the Ethics in Public Office Acts requirements and Sections 37 & 38 of the EPA Act 1992, relating to the Declaration and Disclosure of Interests.
- ▲ Establishing mechanisms for ensuring the adequacy of the security of its information and communication technology (ICT) systems which include;
 - ▶ the establishment of appropriate policies and control procedures,
 - ▶ effective organisational structures including segregation of duties and
 - ▶ the delegation to the internal audit unit of the responsibility for specific reviews and evaluations of ICT systems through the process of Annual Internal Audit Plans.

Legislatively, the Board has responsibility for the management of the EPA, but it is empowered to delegate responsibility to other staff for operational purposes. Section 25(6) of the EPA Act provides that the EPA may perform or exercise any of its functions through or by any Director or other person or body who has been duly authorised by the EPA in that behalf. The Programme Managers in charge of various functions are delegated operational responsibility for carrying out the work of the EPA.

Since the establishment of the EPA, the Board of the Agency has delegated discretionary powers to various levels in the EPA. The delegation of powers continues to grow as the EPA is assigned further statutory responsibilities over time. The EPA maintains a comprehensive register of relevant environmental legislation, a register of powers delegated by the Board and Board Reserved Functions. These registers are reviewed and approved by the Board as required.

vi) Risk and Control Framework

The EPA has implemented a risk management system which identifies and reports key risks and the management actions being taken to address and, to the extent possible, to mitigate those risks.

In 2022, the EPA published its revised Risk Management Policy following a review of its risk management processes. The review process resulted in amendments to both the Office Risk Registers and the Corporate Risk Register resulting in a risk management process which is more dynamic and better meets the needs of the EPA. In 2023 the Executive Risk Committee commenced a comprehensive risk assessment of the EPA’s Strategic Plan 2022–2026, with the aim of identifying any significant risks to achieving our Strategy.

The EPA’s Risk Management Policy sets out our risk appetite, the risk management processes in place and details the roles and responsibilities of staff in relation to risk. The EPA’s Risk Management Policy and Structures continue to be in compliance with the Code of Practice for the Governance of State Bodies 2016.

The Corporate Risk Register identifies the key risks facing the EPA and details the controls and actions needed to mitigate risks and the responsibility for the operation of controls assigned to specific staff. The Corporate Risk Register is developed and managed by the Executive Risk Committee, reviewed by the Audit and Risk Committee and presented to the EPA Board for approval. Additionally, risk assessments of critical services have been carried out as part of a Business Continuity Project.

Each Director provides bi-annual assurance statements to the Board acknowledging responsibility for the on-going update, monitoring and review of the Risk Register for their Office and for ensuring the implementation of the Risk Management Policy.

I can therefore confirm that a control environment containing the following elements is in place:

- ▲ Procedures for key business processes have been documented.
- ▲ Financial responsibilities have been assigned at management level with corresponding accountability.
- ▲ There is an appropriate budgeting system with an annual budget which is kept under review by senior management.
- ▲ There are systems aimed at ensuring the security of the information and communication technology systems.
- ▲ There are systems in place to safeguard the assets.
- ▲ A system for the control of programme expenditure including procedures for the approval and payment of grants and processes to monitor the progress towards achieving the objectives.

vii) Financial & Budgetary Information

The system of internal controls is based on a framework of regular management information, a system of delegation and accountability, a set of financial and administrative procedures including segregation of duties. In particular it includes:

- ▲ A comprehensive budgeting system with an annual budget, which is reviewed and approved by the Board. The budgeting system also includes the preparation of two formal revised budgets in June and September, both of which are submitted to the Board for approval.

- ▲ The assignment of budgets and budgetary authority and responsibility for specific functions to selected managers.
- ▲ Arrangements for all purchasing to be conducted and controlled through the EPA's financial management system and procedures.
- ▲ Monthly reviews by the Board of financial management reports.
- ▲ Adoption of an annual Corporate Procurement Plan and the appointment of a Procurement Officer.

The inbuilt controls in the Financial Systems have continued to operate as normal during 2023.

During 2023, it was identified that the PRSI classification of two individuals was incorrect. The EPA engaged with the Department of Social Protection to rectify this matter. A total of €197,957 was paid in March 2024 and no penalties or interest arose.

viii) Procedures for addressing financial implications of major business risks

The financial implications of business risks have been considered through the formal business risk assessment process and in the preparation of the EPA Internal Audit Plans. These are further assessed and evaluated through the phased implementation of the EPA's Internal Audit Plan.

ix) Monitoring effectiveness of the System of Internal Control

The EPA has established and maintained an Audit & Risk Committee, comprising six external members, one of whom is the Chairperson, and one EPA senior manager, as part of the on-going systematic review of the control environment and governance procedures within the EPA, to oversee the internal audit function and advise the Board in relation to the operation and development of that function.

The EPA has established an internal audit function which is adequately resourced and conducts a programme of work agreed with the ARC. The EPA engages external expertise to conduct internal audits.

The EPA Internal Audit Plan 2023–2024 was progressed during the year with progress on the implementation of the actions required arising from each audit reviewed regularly and reported to the Audit & Risk Committee at each ARC meeting and the Board.

The Internal Audit Plan 2024–2025 was developed during 2023 and reflects the corporate risks identified for the EPA by the Executive Risk Committee, audits identified by EPA Management and the Audit and Risk Committee and developments and issues in relation to Corporate Governance that have arisen in the Public Sector in general. This Internal Audit Plan was reviewed by the Audit & Risk Committee and approved by the EPA Board in October 2023.

4. Procurement

I confirm that the EPA has procedures in place to ensure compliance with current procurement rules and guidelines. There were no instances of non-compliant procurement in 2023.

5. Research Funding

The Department of Public Expenditure, NDP Delivery and Reform Circular 13/2014 Management of and Accountability of Grants from Exchequer Sources (the Circular) outlines the public financial management principles, procedures and additional reporting requirements to be followed in the management of grant funding provided from public money.

The EPA is compliant with this Circular and has procedures for the approval and payment of grants and processes to monitor the progress towards achieving the research objectives.

Annually, the Department of the Environment, Climate and Communications informs the EPA that it can continue to operate the existing pre-funding arrangements under the EPA's Research Programme pending receipt of formal Department of Public Expenditure, NDP Delivery and Reform approval.

6. Review of Effectiveness

I confirm that the EPA has procedures to monitor the effectiveness of its risk management and control procedures. The EPA's monitoring and review of the effectiveness of the system of internal control is informed by the work of the internal and external auditors, the Audit and Risk Committee, and the senior management within the EPA responsible for the development and maintenance of the internal control framework.

I confirm that the Directors conducted an annual review of the effectiveness of the internal controls for 2023 in both January and February 2024 and are satisfied that the system of internal control is sound.

In previous years, the EPA undertook an Internal Audit of the Review of the Effectiveness of Internal Financial Controls. For 2023, the Board approved an Internal Audit Plan which contained three financial audits with respect to Debt Collection, Travel & Subsistence, and Salaries & Allowances. These audits undertook a thorough and detailed analysis of the subject area, the results of which indicate that reasonable assurance can be placed on the adequacy and operating effectiveness of controls to mitigate and/or manage financial risks with respect to each audit area.

7. Internal Control Issues

Other than the item identified in section 3(vii) above, no breaches to internal controls were identified in relation to 2023 that require disclosure in the financial statements.

Signed on behalf of the Board.



Laura Burke
Director General

Date signed: 31 May 2024

8.3 COMPTROLLER AND AUDITOR GENERAL REPORT FOR PRESENTATION TO THE HOUSES OF THE OIREACHTAS

Opinion on the financial statements

I have audited the financial statements of the Environmental Protection Agency for the year ended 31 December 2023 as required under the provisions of section 50 of the Environmental Protection Agency Act 1992. The financial statements comprise

- ▲ the statement of income and expenditure and retained revenue reserves
- ▲ the statement of comprehensive income
- ▲ the statement of financial position
- ▲ the statement of cash flows, and
- ▲ the related notes, including a summary of significant accounting policies.

In my opinion, the financial statements give a true and fair view of the assets, liabilities and financial position of the Environmental Protection Agency at 31 December 2023 and of its income and expenditure for 2023 in accordance with Financial Reporting Standard (FRS) 102 – *The Financial Reporting Standard applicable in the UK and the Republic of Ireland*.

Basis of opinion

I conducted my audit of the financial statements in accordance with the International Standards on Auditing (ISAs) as promulgated by the International Organisation of Supreme Audit Institutions. My responsibilities under those standards are described in the appendix to this report. I am independent of the Environmental Protection Agency and have fulfilled my other ethical responsibilities in accordance with the standards.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Report on Information other than the financial statements, and on other matters

The Environmental Protection Agency has presented certain other information together with the financial statements. This comprises the annual report, the governance statement and Directors' report and the statement on internal control. My responsibilities to report in relation to such information, and on certain other matters upon which I report by exception, are described in the appendix to this report.

I have nothing to report in that regard.



Andrew Harkness

For and on behalf of the
Comptroller and Auditor General

12 June 2024

8.4 APPENDIX TO THE REPORT

Responsibilities of Directors

As detailed in the governance statement and Directors' report, the Directors are responsible for

- ▲ the preparation of financial statements in the form prescribed under section 50 of the Environmental Protection Agency Act 1992
- ▲ ensuring that the financial statements give a true and fair view in accordance with FRS 102
- ▲ ensuring the regularity of transactions
- ▲ assessing whether the use of the going concern basis of accounting is appropriate, and
- ▲ such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Responsibilities of the Comptroller and Auditor General

I am required under section 50 of the Environmental Protection Agency Act 1992 to audit the financial statements of the Environmental Protection Agency and to report thereon to the Houses of the Oireachtas.

My objective in carrying out the audit is to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement due to fraud or error. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs, I exercise professional judgement and maintain professional scepticism throughout the audit. In doing so,

- ▲ I identify and assess the risks of material misstatement of financial statements whether due to fraud or error; design and perform audit procedures responsive to those risks; and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error,

as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- ▲ I obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal controls.
- ▲ I evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures.
- ▲ I conclude on the appropriateness of the use of the going concern basis of accounting and, based on the audit evidence obtained, on whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Environmental Protection Agency's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my report. However, future events or conditions may cause the Environmental Protection Agency to cease to continue as a going concern.
- ▲ I evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

I report by exception if, in my opinion,

- ▲ I have not received all the information and explanations I required for my audit, or
- ▲ the accounting records were not sufficient to permit the financial statements to be readily and properly audited, or
- ▲ the financial statements are not in agreement with the accounting records.

Information other than the financial statements

My opinion on the financial statements does not cover the other information presented with those statements, and I do not express any form of assurance conclusion thereon.

In connection with my audit of the financial statements, I am required under ISAs to read the other information presented and, in doing so, consider whether the other information is materially inconsistent with the financial statements or with knowledge obtained during the audit, or if it otherwise appears to be materially misstated. If, based on the work I have performed, I conclude that there is a material misstatement of this other information, I am required to report that fact.

Reporting on other matters

My audit is conducted by reference to the special considerations which attach to State bodies in relation to their management and operation. I report if I identify material matters relating to the manner in which public business has been conducted.

I seek to obtain evidence about the regularity of financial transactions in the course of audit. I report if I identify any material instance where public money has not been applied for the purposes intended or where transactions did not conform to the authorities governing them.

8.5 STATEMENT OF INCOME AND EXPENDITURE AND RETAINED REVENUE RESERVES FOR THE YEAR ENDED 31 DECEMBER 2023

		<u>2023</u>	<u>2022</u>
	Note	€'000	€'000
Income			
Oireachtas Grants – DECC	2(a)	56,048	51,480
Oireachtas Grants – DHLGH	2(b)	7,418	6,094
Emissions Trading Costs Recovered	3	1,813	1,579
Income from Radiological Activities	4	792	772
Licensing Activities	5	766	599
Enforcement Activities	6	10,602	9,777
Sundry Receipts	7	628	503
Net Deferred Retirement Benefit Funding	23(c)	10,523	10,648
Total Income		88,590	81,452
Expenditure			
Remuneration	8	32,687	30,287
Retirement Benefit Costs	23(a)	13,723	13,795
Travelling Expenses	9	1,619	1,261
Laboratory and Field Costs	10	1,687	1,785
Accommodation Costs	11	2,281	2,280
Administration Costs	12	11,542	10,199
Consultants	13	421	380
Grants, Contractors and External Service Providers	14	9,438	8,465
Environmental Research Programme Payments	15	10,574	9,090
Depreciation	16	5,614	5,552
Total Expenditure		89,586	83,094
Surplus / (Deficit) for the Year before Appropriations		(996)	(1,642)
Transfer (to)/ from the Capital Account	17	(82)	142
Surplus / (Deficit) on Disposals of Fixed Assets		(4)	7
Surplus /(Deficit) for the Year after Appropriations		(1,082)	(1,493)
Surplus at 1 January		3,242	4,735
Surplus at 31 December		2,160	3,242

All income and expenditure for the year relate to continuing activities at the reporting date.

The Statement of Cash Flows and notes 1 to 27 form part of these financial statements.

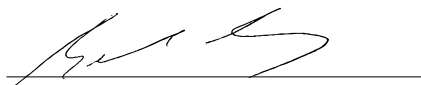
On behalf of the Board of the Environmental Protection Agency:



Laura Burke

Director General

Date signed: 31 May 2024



Gerard O'Leary

Deputy Director General

8.6 STATEMENT OF COMPREHENSIVE INCOME FOR THE YEAR ENDED 31 DECEMBER 2023

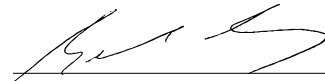
	Note	2023 €'000	2022 €'000
Surplus / (Deficit) after appropriations		(1,082)	(1,493)
Experience gains / (losses) on retirement benefit obligations	23(d)	4,182	(5,489)
Changes in assumptions underlying the present value of retirement benefit obligations		(6,934)	117,105
Actuarial (Loss) / Gain in the year		(2,752)	111,616
Adjustment to deferred retirement benefits funding		2,752	(111,616)
Other Comprehensive Income for the year		(1,082)	(1,493)

The Statement of Cash Flows and notes 1 to 27 form part of these financial statements.

On behalf of the Board of the Environmental Protection Agency:



Laura Burke
Director General



Gerard O'Leary
Deputy Director General

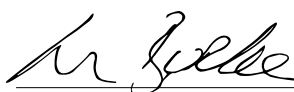
Date signed: 31 May 2024

8.7 STATEMENT OF FINANCIAL POSITION AS AT 31 DECEMBER 2023

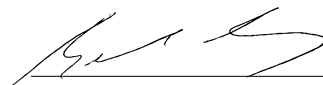
		<u>2023</u>	<u>2022</u>
	Note	<u>€'000</u>	<u>€'000</u>
Fixed Assets - Property, Plant & Equipment	19	37,822	37,740
Current Assets			
Receivables	20	4,144	3,683
Cash and cash equivalents	21	8,676	8,462
		12,820	12,145
Current Liabilities (amounts falling due within one year)			
Payables	22	(10,666)	(8,909)
Net Current Assets		2,154	3,236
Total Assets less Current Liabilities before Retirement Benefits		39,976	40,976
Retirement Benefits			
Retirement benefit obligations	23(b)	(247,114)	(233,839)
Deferred retirement benefit funding asset	23(c)	247,114	233,839
		0	0
Total Net Assets		39,976	40,976
Representing			
Capital account	17	37,816	37,734
Retained revenue reserves		2,160	3,242
		39,976	40,976

The Statement of Cash Flows and notes 1 to 27 form part of these financial statements.

On behalf of the Board of the Environmental Protection Agency:



Laura Burke
Director General



Gerard O'Leary
Deputy Director General

Date signed: 31 May 2024

8.8 STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 DECEMBER 2023

	2023	2022
	€'000	€'000
Net Cash Flows from Operating Activities		
(Deficit) / Surplus of Income over Expenditure	(1,082)	(1,493)
Depreciation and Impairment of Fixed Assets	5,614	5,552
(Increase) in Receivables	(461)	(431)
Increase / (Decrease) in Payables	1,757	36
Interest Paid	0	52
Deficit / (Surplus) on Disposal of Fixed Assets	4	(7)
Transfer (from) / to Capital Account	82	(142)
Net Cash Inflow from Operating Activities	5,914	3,567
Cash Flows from Investing Activities		
Payments to acquire Property, Plant & Equipment	(5,702)	(5,410)
Proceeds on disposal of fixed assets	2	7
Net Cash Flows from Investing Activities	(5,700)	(5,403)
Cash Flows from Financing Activities		
Bank Interest Paid	0	(52)
Net Cash Flows from Financing Activities	0	(52)
Net Increase / (Decrease) in Cash and Cash Equivalents	214	(1,888)
Cash and Cash equivalents at 1 January	8,462	10,350
Cash and Cash Equivalents at 31 December	8,676	8,462

8.9 NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2023

1 Accounting Policies

The basis of accounting and significant accounting policies adopted by the Environmental Protection Agency are set out below. They have all been applied consistently throughout the year and for the preceding year.

a) General Information

The Environmental Protection Agency was set up under the Environmental Protection Agency Act, 1992, with its headquarters at Johnstown Castle Estate, County Wexford.

Primary Objectives - the description of EPA's operations and principal activities is set out in the Annual Report which accompanies these Financial Statements.

The Environmental Protection Agency is a Public Benefit Entity (PBE).

b) Statement of Compliance

The financial statements of the Environmental Protection Agency for the year ended 31 December 2023 have been prepared in accordance with FRS 102, the financial reporting standard applicable in the UK and Ireland issued by the Financial Reporting Council (FRC).

c) Basis of Preparation

The financial statements have been prepared under the historic cost convention and in the form approved by the Minister for the Environment Climate and Communications, with the concurrence of the Minister for Public Expenditure, NDP Delivery and Reform under Section 50 of the Environmental Protection Agency Act, 1992. The following accounting policies have been applied consistently in dealing with items which are considered material.

d) Revenue

State Grants

Revenue is generally recognised on an accruals basis; one exception to this is in the case of State Grants which are recognised on a cash receipts basis.

Licensing Activity Income

Applicants for environmental licences/permits are required to pay the full application fee at the time of making the application. The amounts received are apportioned to the Statement of Income and Expenditure and Retained Revenue Reserves for the two main licensing activities on completion of the following stages of the licensing/permitting process:

Industrial Emissions Directive, Integrated Pollution Control and Waste Management Licences:

Application	30%
Proposed Determination	50%
Licence Issue	20%

Waste Water Discharge Licences:

Application	10%
Acknowledgement of complete application	40%
Licence Decision Issue	50%

Other Revenue

Other revenue is recognised on an accruals basis.

e) Emissions Trading Unit

The Emissions Trading Unit (ETU) was established within the Environmental Protection Agency in 2003. The costs of administering the emissions trading scheme are reimbursed to the EPA by the Department of the Environment, Climate and Communications, from the proceeds of the sale of allowances, which are paid directly to the Department.

f) Research Grant Payments

The EPA enters into commitments in respect of research projects awarded for funding. Expenditure on these research projects is charged in the financial statements on the basis of the initial payments which are made on signing of the grant award, interim payments which may be made subject to satisfactory performance and further payments which are issued on receipt and verification of claims in respect of work completed. Costs incurred by the EPA in the implementation of the research programmes are charged to the financial statements as they are incurred.

g) Property, Plant and Equipment

Property, plant and equipment are stated at cost less accumulated depreciation, adjusted for any provision for impairment. Depreciation is provided on all property, plant and equipment at rates estimated to write off the cost less the estimated residual value of each asset on a straight-line basis over their estimated useful lives, as follows:

Buildings	2% per annum
Furniture and Fittings	10% per annum
Laboratory and Field Equipment	15% per annum
Equipment	20% per annum
IT and Computer Equipment	25% per annum
Motor Vehicles	20% per annum

Leasehold improvements are depreciated over the life of the lease.

Residual value represents the estimated amount which would currently be obtained from disposal of an asset, after deducting estimated costs of disposal, if the asset were already of an age and in the condition expected at the end of its useful life.

h) Capitalisation of Internally Developed Software

The external costs of software developed for internal use are capitalised where it can be separately identified as software for use by the Agency and where it is expected to convey business benefits for a number of future years. The salary costs of software development staff are also capitalised.

i) Capital Funding

The fixed assets of the EPA and advances to fund work in progress and asset purchases are met from a combination of capital grants, approved borrowing and allocations from current revenue. Funding sourced from grants (including that used to repay borrowings) is transferred to a capital account which is amortised in line with the depreciation of the related assets.

j) Inventory

All inventory, including consumables are written off in the year of purchase.

k) Receivables

Receivables are initially measured at transaction price and are subsequently carried at this amount, less a provision for doubtful debts. The provision for doubtful debts is established when there is objective evidence that the Environmental Protection Agency will not be able to collect all amounts owed to it. All movements in the provision for doubtful debts are recognised in the Statement of Income and Expenditure and Retained Revenue Reserves.

l) Operating Leases

Rental expenditure under operating leases is recognised in the Statement of Income and Expenditure and Retained Revenue Reserves over the life of the lease. Expenditure is recognised on a straight-line basis over the lease period, except where there are rental increases linked to the expected rate of inflation, in which case these increases are recognised when incurred. Any lease incentives received are recognised over the life of the lease.

m) Employee Benefits

Short-term Benefits

Short-term benefits such as holiday pay are recognised in the year, and benefits that are accrued at year end are included in the Payables figure in the Statement of Financial Position.

Retirement Benefits

The Environmental Protection Agency previously established its own defined benefit pension schemes, which are funded annually on a pay-as-you-go basis from monies available to it, including monies provided by the Department of the Environment, Climate and Communications and from contributions deducted from staff and members' salaries. The Environmental Protection Agency also operates the Single Public Services Pension Scheme (Single Scheme), which is a defined benefit scheme for pensionable public servants appointed on or after 1 January 2013. Single Scheme members' contributions are paid over to the Department of Public Expenditure, NDP Delivery and Reform (DPER).

Pension costs reflect pension benefits earned by employees and are shown net of staff pension contributions from employees. An amount corresponding to the pension charge is recognised as income to the extent that it is recoverable, and offset by grants received in the year to discharge pension payments.

Actuarial gains or losses arising on scheme liabilities are reflected in the Statement of Comprehensive Income, and a corresponding adjustment is recognised in the amount recoverable from the Department of the Environment, Climate and Communications.

The financial statements reflect, at fair value, the assets and liabilities arising from the Environmental Protection Agency's pension obligations and any related funding, and recognises the costs of providing pension benefits in the accounting periods in which they are earned by employees. Retirement benefit scheme liabilities are measured on an actuarial basis using the projected unit credit method.

Pension liabilities represent the present value of future pension payments earned by staff to date. Deferred pension funding represents the corresponding asset to be recovered in future periods from the Department of the Environment, Climate and Communications.

n) Critical Accounting Judgements and Estimates

The preparation of the financial statements requires management to make judgements, estimates and assumptions that affect the amounts reported for assets and liabilities as at the date of the Statement of Financial Position and the amounts reported for revenues and expenses during the year. However, the nature of estimation means that the actual outcomes could differ from those estimates. The following judgements have had the most significant effect on amounts recognised in the financial statements.

Retirement Benefit Obligation

The assumptions underlying the actuarial valuations for which the amounts recognised in the financial statements are determined (including discount rates, rates of increase in the future of compensation levels, mortality rates and healthcare cost trend rates) are updated annually based on current economic conditions, and for any relevant changes to the terms and conditions of the pension and post-retirement plans.

The assumptions can be affected by:

- (i) the discount rate, changes in the rate of return on high-quality corporate bonds.
- (ii) future compensation levels, future labour market conditions.

2 State Grants

		2023	2022
		€'000	€'000
Grants from the Department of Environment, Climate and Communications:			
(a) Oireachtas Grant – Grants from the Department’s Vote:			
Current	Subhead – E3	38,622	35,167
Capital	Subhead – E3	16,404	15,537
Other Programmes	Subhead – E3	1,022	776
Total DECC Oireachtas Grants		56,048	51,480
The Current grant shown is net of single scheme employee contributions of €481K (2022: €420K) remitted to DPER.			
Grants from the Department of Housing, Local Government and Heritage:			
(b) Oireachtas Grant – Grants from the Department’s Vote:			
Current	Subhead – B3	5,901	5,358
Capital	Subhead – B3	1,517	736
Total DHLGH Oireachtas Grants		7,418	6,094
 Total State Grants		 63,466	 57,574

Research Funding of €12.1M (2022: €10.3M) provided by the Department of Environment, Climate and Communications is a specific allocation to meet the cost of environmental research. €13.25M was expended on these research activities in 2023 (2022: €11.404M). See Note 15.

3 Emissions Trading Unit (ETU) Activities

	<u>2023</u>	<u>2022</u>
	<u>€'000</u>	<u>€'000</u>
Costs of Emissions Trading Unit recovered from Auction Funds, etc.	1,813	1,579
Total Funding of ETU Costs	<u>1,813</u>	<u>1,579</u>

4 Income from Radiological Activities

	<u>2023</u>	<u>2022</u>
	<u>€'000</u>	<u>€'000</u>
Calibration Service	31	26
Radiation Monitoring Service	182	212
Radiological Licensing and Enforcement	563	512
Miscellaneous	16	22
Total Income from Radiological Activities	<u>792</u>	<u>772</u>

5 Licensing Activities - IED & IPC, Waste and WWD

	<u>2023</u>	<u>2022</u>
	<u>€'000</u>	<u>€'000</u>
Licence Fees prepaid at 1 January	1,765	1,441
Fees Received	953	965
Less Refunds Paid	(12)	(42)
Licence Fees prepaid at 31 December (see Note 22)	(1,940)	(1,765)
Amount credited to the Statement of Income and Expenditure and Retained Revenue Reserves	<u>766</u>	<u>599</u>

Licensing: Industrial Emissions Directive (IED), Integrated Pollution Control (IPC) and Waste

Under Section 83 of the Environmental Protection Agency Act, 1992 the EPA is responsible for the licensing of large/complex industrial and other processes with significant polluting potential. Under Section 40 of the Waste Management Act, 1996 the EPA is responsible for the licensing of all significant waste recovery & disposal activities operated by local authorities and private enterprises.

Licensing: Waste Water Discharges (WWD)

The Waste Water Discharge (Authorisation) Regulations 2007 provide for the licensing of urban waste water discharges. Discharges from areas that serve over 500 population equivalent require a licence from the EPA. Areas that serve less than 500 population equivalent are required to be certified by the EPA. The EPA's licensing income arises from fees charged in respect of processing such licensing applications.

6 Enforcement Activities - IED & IPC, Waste, WWD and Drinking Water

	2023	2022
	€'000	€'000
Enforcement Charges Invoiced	10,310	9,591
Enforcement Income from Prosecutions	292	186
Total Income from Enforcement Activities	10,602	9,777

Under Section 96 of the Environmental Protection Agency Act, 1992 the EPA is responsible for the regulation of large/complex industrial and other processes with significant polluting potential. Under Section 15 of the Waste Management Act, 1996 the EPA is responsible for the regulation of all significant waste recovery and disposal activities operated by local authorities and private enterprise. Under the Waste Water Discharge (Authorisation) Regulations 2007 the EPA is responsible for the regulation of waste water discharges. Under the European Union (Drinking Water) Regulations 2014 the EPA may charge for monitoring the quality of water supplies intended for human consumption. The EPA's enforcement income arises from fees charged in respect of this enforcement work.

7 Sundry Receipts

	2023	2022
	€'000	€'000
Sundry	628	503
	628	503

8 Remuneration

(a) Aggregate Employee Benefits

	2023	2022
	€'000	€'000
Staff short-term benefits	29,633	27,681
Termination benefits	0	0
Employer's contribution to social welfare PRSI	3,129	2,680
Total Salary Costs	32,762	30,361
IT Development Salary costs capitalised	(75)	(74)
Salary Costs charged to the Statement of Income and Expenditure and Retained Revenue Reserves	32,687	30,287

The total Salary cost of €32.8M includes an accrual of €1,057,000 (2022: €958,000) in respect of accumulated staff annual leave entitlements. During 2023, it was identified that the PRSI classification of two individuals was incorrect. The EPA engaged with the Department of Social Protection to rectify this matter. A total of €197,957 was paid in March 2024 and no penalties or interest arose. €481,000 (2022: €420,000) of Single scheme members pension contributions has been deducted and paid over to the Department of Public Expenditure, NDP Delivery and Reform. The total number of Single Scheme members at year end was 217 (2022: 184).

In 2023, €1,117,000 of Additional Superannuation Contribution (2022: €1,066,000) has been deducted from staff and paid to the Department of Environment, Climate and Communications.

(b) Analysis of staff by location:

	<u>2023</u>	<u>2022</u>
Headquarters	205	183
Regional Inspectorate Castlebar	29	27
Regional Inspectorate Cork	64	57
Regional Inspectorate Dublin	138	139
Regional Inspectorate Kilkenny	22	26
Regional Inspectorate Monaghan	16	16
Regional Offices	2	6
	<u>476</u>	<u>454</u>

A further 44 sanctioned posts will be assigned to EPA locations in 2024.

(c) Analysis of staff salary costs in excess of €60,000:

The number of employees whose employee benefits fell within each band of €10,000 from €60,000 upwards is as follows:

	<u>2023</u>	<u>2022</u>
€60,000 to €70,000	106	85
€70,000 to €80,000	57	51
€80,000 to €90,000	26	42
€90,000 to €100,000	29	24
€100,000 to €110,000	4	6
€110,000 to €120,000	8	5
€120,000 to €130,000	2	0
€150,000 to €160,000	3	4
€160,000 to €170,000	1	1
€180,000 to €190,000	0	1
€190,000 to €200,000	1	0

The total number of staff employed (WTE) at year end was 460.5 (2022: 434.5).

(d) Staff Short-Term Benefits

	<u>2023</u>	<u>2022</u>
	<u>€'000</u>	<u>€'000</u>
Basic Pay	29,571	27,609
Overtime	0	0
Allowances	62	72
	<u>29,633</u>	<u>27,681</u>

(e) Key Management personnel

Key management personnel in the Environmental Protection Agency consists of the Director General and the 5 members of the Board of Directors. The Directors of the Environmental Protection Agency are full time executive Directors. They are paid an inclusive salary and consequently no Directors or Board fees are paid. The total value of employee benefits for key management personnel is set out below:

	<u>2023</u>	<u>2022</u>
	<u>€'000</u>	<u>€'000</u>
Salary	886	935
Allowances	14	17
	<u>900</u>	<u>952</u>

This does not include the value of retirement benefits earned in the period. The key management personnel are members of the Environmental Protection Agency (Director General and Director) staff pension scheme and their entitlements in that regard do not extend beyond the terms of the model public service pension scheme.

(f) Director General Salary and Benefits

The Director General remuneration package for the financial period was as follows:

	<u>2023</u>	<u>2022</u>
	<u>€'000</u>	<u>€'000</u>
Salary	191	182

This does not include the value of retirement benefits earned in the period. The Director General is a member of the Environmental Protection Agency (Director General and Director) staff pension scheme and her entitlements in that regard do not extend beyond the terms of the model public service pension scheme.

9 Travelling Expenses

	<u>2023</u>	<u>2022</u>
	<u>€'000</u>	<u>€'000</u>
Travel and Subsistence	1,484	1,133
Motor Vehicle Expenses	135	128
	<u>1,619</u>	<u>1,261</u>

This includes Executive Board travel expenditure of €80,809 (2022: €76,741).

10 Laboratory and Field Costs

	<u>2023</u>	<u>2022</u>
	<u>€'000</u>	<u>€'000</u>
Laboratory and Field Expenses	940	1,053
Equipment Repairs and Maintenance	685	689
Protective Clothing	62	43
	<u>1,687</u>	<u>1,785</u>

11 Accommodation Costs

	<u>2023</u>	<u>2022</u>
	<u>€'000</u>	<u>€'000</u>
Rent and Rates	690	735
Power, Light and Heat, Cleaning	912	889
Repairs, Maintenance, Security	679	656
	<u>2,281</u>	<u>2,280</u>

12 Administration Costs

	<u>2023</u>	<u>2022</u>
	<u>€'000</u>	<u>€'000</u>
Telephone and Postage	496	430
Printing of Publications and Stationery Supplies	459	310
Insurance	228	222
ICT Expenditure	5,379	4,354
Audit Fees	29	29
Corporate Governance and Internal Audit Costs	101	78
Legal fees, advice and related costs	1,969	1,791
Meeting, External Committee and Guest Speaker Expenses	530	496
Staff Appointment and other related costs	260	229
Bank Interest and Charges	13	63
Books, Periodicals, and Library	103	95
Staff Development and Training Costs	475	495
Advertising	89	54
Communications	1,168	1,256
Sundries	243	297
	11,542	10,199

13 Consultancy Costs

	<u>2023</u>	<u>2022</u>
	<u>€'000</u>	<u>€'000</u>
Consultants	421	380
	421	380
The EPA Offices which made use of these consultancies were:	<u>€'000</u>	<u>€'000</u>
Office of Communications and Corporate Services	67	35
Office of Environmental Sustainability	0	7
Office of Evidence and Assessment	261	232
Office of Radiation Protection and Environmental Monitoring	67	47
Office of the Director General / Cross Office	26	59
	421	380

14 Grants, Contractors and External Service Providers

	<u>2023</u>	<u>2022</u>
	<u>€'000</u>	<u>€'000</u>
Contractors and External Service Providers	7,956	6,873
Grants	1,482	1,592
	9,438	8,465
The EPA Offices which incurred costs under this heading were:	<u>€'000</u>	<u>€'000</u>
Office of Communications and Corporate Services	677	705
Office of Environmental Sustainability	2,028	2,989
Office of Evidence and Assessment	4,148	2,940
Office of Environmental Enforcement	665	692
Office of Radiation Protection and Environmental Monitoring	1,920	1,139
	9,438	8,465

15 Environmental Research

		<u>2023</u>	<u>2022</u>
		<u>€'000</u>	<u>€'000</u>
EPA Research Programme	Grant Payments	12,123	10,320
EPA Research Programme	Grant Refunds	(199)	(201)
Co-Funding Research Income		(1,350)	(1,029)
Research Programme Payments		<u>10,574</u>	<u>9,090</u>

The current EPA environmental research programme was launched in 2021. It is being funded through a combination of Exchequer funding and co-funding provided by other research funding organisations. The EPA Research Programme aims to put science and innovation at the centre of environmental protection in Ireland through the development and proactive transfer of knowledge.

Research Co- Funding		<u>2023</u>	<u>2022</u>
		<u>€'000</u>	<u>€'000</u>
In addition to the funding provided by DECC, the following research co-funding was received:			
Department of Agriculture Food and the Marine		364	509
Met Éireann / Department of Housing, Local Government and Heritage		245	73
National Parks and Wildlife Service		170	19
Agence Nationale de la Recherche		160	0
The Marine Institute		139	108
JPI Climate		71	0
Health Service Executive		66	44
The Office of Public Works		36	36
Geological Survey of Ireland		35	113
Sustainable Energy Authority of Ireland		26	6
Department of Transport		17	56
Office of the Planning Regulator		0	50
Sundry / Other		21	15
Total Co- Funding		<u>1,350</u>	<u>1,029</u>

In 2023 EPA Research Programme expenditure was €13.25M, including Grant Payments of €12.123M as shown above and implementation and activity costs of €1,326K which are reported under the Travel, Lab and Field, Administration and Contractors cost headings.

In 2022 EPA Research Programme expenditure was €11.404M including Grant Payments of €10.337M as shown above and implementation and activity costs of €1,067K, which are reported under the Travel, Lab and Field, Administration and Contractors cost headings.

A further €493K of grant payments (2022: €269K) to research projects is included in the Grants figure at Note 14.

At 31 December 2023 commitments entered into but not yet charged to the financial statements in respect of Research projects amounted to €34,869K (2022: €28,886K) with the following breakdown:

	<u>2023</u>	<u>2022</u>
	<u>€'000</u>	<u>€'000</u>
Outstanding Grant Commitments at 1 January	28,868	24,841
Grants Approved during the year	19,151	15,758
Grants Decommitted during the year	(932)	(1,328)
Grant Payments made in the year	(12,417)	(10,604)
Refunds of Grant payments received in the year	199	201
Outstanding Commitments at 31 December	<u>34,869</u>	<u>28,868</u>

These figures exclude EPA implementation costs in respect of Research programmes.

16 Depreciation of Fixed Assets

	<u>2023</u>	<u>2022</u>
	<u>€'000</u>	<u>€'000</u>
Depreciation of Property, Plant and Equipment (Note 19)	5,614	5,552
	5,614	5,552

17 Capital Account

	<u>2023</u>	<u>2022</u>
	<u>€'000</u>	<u>€'000</u>
At 1 January 2023		37,734
Transfer from Income and Expenditure Account:		
Income Allocated for Capital purposes - Fixed Asset Additions	5,702	
Less:		
Disposals at cost	(1,539)	
Less prior depreciation on disposals	1,533	
	(6)	
Depreciation charge for year	(5,614)	
Net Transfer (to) / from Income and Expenditure Account		82
At 31 December 2023		37,816

At 31 December 2023 the Capital Account balance includes €14,175 (2022: €14,175) in respect of prepayments for fixed assets (see Note 20 - Receivables).

18 Taxation

The EPA is specifically exempted under the provisions of Section 32, and Schedule 2, of Finance Act, 1994. Accordingly, no taxation charges have been included in the accounts.

19 Fixed Assets - Property, Plant & Equipment

	<u>Total</u>	<u>Buildings</u>	<u>Furniture & Fittings</u>	<u>IT & IS Equipment</u>	<u>Lab & Field Equipment</u>	<u>Motor Vehicles</u>
Cost	€'000	€'000	€'000	€'000	€'000	€'000
At 1 January 2023	98,413	45,401	6,914	31,267	13,554	1,277
Additions	5,702	1,395	340	2,770	1,197	0
Disposals	(1,539)	0	(34)	(1,140)	(343)	(22)
At 31 December 2023	102,576	46,796	7,220	32,897	14,408	1,255
Depreciation						
At 1 January 2023	60,673	16,956	5,310	27,270	9,976	1,161
Charge for Year	5,614	904	673	2,759	1,224	54
On Disposals	(1,533)	0	(32)	(1,136)	(343)	(22)
At 31 December 2023	64,754	17,860	5,951	28,893	10,857	1,193
Net Book Value						
At 31 December 2023	37,822	28,936	1,269	4,004	3,551	62
At 31 December 2022	37,740	28,445	1,604	3,997	3,578	116

The EPA regional inspectorate building at Seville Lodge, Kilkenny was constructed by the Office of Public Works on a site acquired for EPA. The legal transfer of the site to the EPA is being processed by the OPW through the Chief State Solicitors Office.

In 2023 the EPA capitalised €2.5M (2022: €2.088M) in respect of the external cost and €75K (2022: €74K) in respect of the internal salary cost of software development for internal use. This is in line with our Accounting Policy for Capitalisation of Internally Developed Software.

20 Receivables

	<u>2023</u>	<u>2022</u>
	<u>€'000</u>	<u>€'000</u>
Debtors	2,011	1,707
Prepayments	2,119	1,962
Prepayments for Fixed Assets	14	14
	<u>4,144</u>	<u>3,683</u>

21 Cash and cash equivalents

	<u>2023</u>	<u>2022</u>
	<u>€'000</u>	<u>€'000</u>
Cash and Bank Balances	<u>8,676</u>	<u>8,462</u>

22 Payables

	<u>2023</u>	<u>2022</u>
	<u>€'000</u>	<u>€'000</u>
Amounts falling due within one year:		
Licence Fees Prepaid	1,940	1,765
Other Deferred Income	376	309
Trade and Other Expenses	8,350	6,835
	<u>10,666</u>	<u>8,909</u>

Included in Trade and Other Expense above are the following amounts due to the Revenue Commissioners:

Professional Service Withholding Tax	364	381
PAYE/PRSI/USC	926	897
VAT	318	317
Relevant Contract Tax	9	0
	<u>1,617</u>	<u>1,595</u>

23 Retirement Benefit Costs

(a) Analysis of total retirement benefit costs charged to the Statement of Income and Expenditure and Retained Revenue Reserves

	<u>2023</u>	<u>2022</u>
	<u>€'000</u>	<u>€'000</u>
Current Service Cost	6,935	11,293
Interest on retirement benefit scheme liabilities	8,326	3,989
Employee Contributions	(1,538)	(1,487)
	<u>13,723</u>	<u>13,795</u>

(b) Movement in net retirement benefit obligations during the financial year

	<u>2023</u>	<u>2022</u>
	<u>€'000</u>	<u>€'000</u>
Net retirement benefit obligation at 1 January	233,839	334,807
Current service costs	6,935	11,293
Interest costs	8,326	3,989
Actuarial (gain) / loss	2,752	(111,616)
Pensions paid in the year	(4,738)	(4,634)
Net retirement benefit obligation at 31 December	<u>247,114</u>	<u>233,839</u>

(c) Deferred Funding for Retirement Benefits

The EPA recognises these amounts as an asset corresponding to the unfunded deferred liability for retirement benefits on the basis of the set of assumptions described below and a number of past events. These events include the statutory basis for the establishment of the retirement benefit schemes, and the policy and practice currently in place in relation to funding public service pensions including contributions by employees and the annual estimates process. The EPA has no evidence that this funding policy will not continue to meet such sums in accordance with current practice.

The net deferred funding for retirement benefits recognised in the Statement of Income and Expenditure and Retained Revenue Reserves was as follows:

	<u>2023</u>	<u>2022</u>
	<u>€'000</u>	<u>€'000</u>
Funding recoverable in respect of current year retirement benefit costs	15,261	15,282
Resources applied to pay retirement benefits	(4,738)	(4,634)
	<u>10,523</u>	<u>10,648</u>

The deferred funding asset for retirement benefits at 31 December 2023 amounted to €247.1M (2022: €233.8M).

(d) History of defined benefit obligations

	<u>2023</u>	<u>2022</u>	<u>2021</u>	<u>2020</u>	<u>2019</u>
	<u>€ M</u>	<u>€ M</u>	<u>€ M</u>	<u>€ M</u>	<u>€ M</u>
Defined benefit obligations	247	234	335	307	280
Experience gains / (losses) on defined benefit scheme liabilities:					
Amount (€ M)	4.182	(5.489)	3.143	3.606	7.264
Percentage of Scheme Liabilities	1.7%	-2.3%	0.9%	1.2%	2.6%

The cumulative actuarial loss recognised in the Statement of Comprehensive Income amounts to **€90.9M** (2022: **€88.2M**).

(e) General Description of the Schemes

The schemes are defined benefit final salary pension arrangements with benefits and contributions defined by reference to current "model" public sector scheme regulations. The schemes provide staff members with a pension (being 1/80 per year of service), a gratuity or lump sum (being 3/80 per year of service) and spouse's and children's pensions. Normal Retirement Age is a member's 65th birthday, and pre-2004 members have an entitlement to retire without actuarial reduction from age 60. The schemes provide Board members with a pension (being 1/48 per year of service), a gratuity or lump sum (being 1/32 per year of service) and spouse's and children's pensions. Board members are entitled to retire when their contract ends. Pensions in payment (and deferment) normally increase in line with general public sector salary inflation.

The valuation used for FRS 102 disclosures has been based on a full actuarial valuation performed on 10 May 2024 by a qualified independent actuary, taking account of the requirements of the FRS in order to assess the scheme liabilities at 31 December 2023.

The principal actuarial assumptions were as follows:	<u>2023</u>	<u>2022</u>
Future salary increases	3.30%	3.60%
Future retirement benefit increases	2.80%	3.60%
Future state pension increases	2.30%	2.60%
Discount rate	3.15%	3.60%
Future inflation	2.30%	2.60%
Revaluation in deferment	2.80%	3.10%

Life Expectancy

Mortality Pre-Retirement - Male: 62% of PNML00, Female 70% of PNFL00.

Mortality Post Retirement - Male: 58% of ILT15, Female 62% of ILT15.

The mortality basis adopted explicitly allows for improvements in life expectancy over time, so that life expectancy at retirement will depend on the year in which a member attains retirement age. The table below shows the life expectancy for members attaining age 65 in 2023 and 2043.

Year of attaining age 65	<u>2023</u>	<u>2043</u>
Life expectancy - male	87.1	89.3
Life expectancy - female	89.4	91.4

24 Lease Commitments

At 31 December 2023 the Environmental Protection Agency had the following future minimum lease payments under non-cancellable operating leases for each of the following periods:

	<u>2023</u>	<u>2022</u>
	<u>€'000</u>	<u>€'000</u>
Payable within one year	660	679
Payable within two to five years	1,791	1,991
Payable after five years	1,225	1,511

Operating lease payments recognised as an expense were €682K, (2022: €720K).

25 Related Party Disclosures

The EPA has adopted procedures to govern its decision making in accordance with the Environmental Protection Agency Act, 1992 and the Ethics in Public Office Act, 1995 and regulations made thereunder. These procedures have been adhered to by the EPA during the year.

Key management personnel in the EPA consist of the Director General and the members of the Board of Directors. Total compensation paid to key management personnel, including Directors salaries, vouched expenses and the Director General's remuneration amounted to €981K (2022: €1,029K).

In the normal course of business the Agency may approve grants and may also enter into other contractual arrangements with undertakings in which EPA Key management personnel have an interest.

The following transactions were carried out with related parties:

	2023	2022
	€'000	€'000
Purchase of Goods and Services:		
Other Related Parties	4	64
	4	64

Payable to related parties:

	€'000	€'000
Other Related Parties	0	13
	0	13

These payables arise from purchase transactions.

In cases of potential conflict of interest, Board members absent themselves and do not participate in discussions regarding these matters.

26 Comparative Figures

Some changes have been made to the presentation of items in the financial statements and the comparative figures have been reclassified where necessary on a basis consistent with the current year presentation.

27 Approval of Financial Statements

The Financial Statements were approved by the Board of Directors on 31 May 2024.



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