



Annual Environmental Report (AER) 2021

Company Name: Intel Ireland Limited

Licence Number: P0207-04

Address: Collinstown Industrial Park, Leixlip, Co. Kildare

Class of Activity¹:

- Class 2-Energy
- Class 12-Surface Coatings
- Class 13-Other Activities

¹ See Appendix I

Purpose of this Report

One of the functions of the Environmental Protection Agency (EPA) is to licence and regulate the activities² of large scale industrial (e.g. chemical, food processors, power plants) and waste facilities. Submitting an Annual Environmental Report (AER) is a requirement of all EPA licences.

An AER is a public document. To this end, this format has been developed for industrial and waste licence holders (other than the intensive agriculture sector) to use as a template. This is to assist any member of the public to interpret and understand the environmental performance of the licensed facility.

The AER is a **summary** of environmental information for a given year. It includes:

- Details of the licence holder's environmental goals achieved, goals to maintain compliance and/or improve their environmental performance;
- Answers to questions regarding their facility's activities;
- Tables of results from monitoring emissions such as air, water, noise, and odour; and
- Details of waste generated, accepted and treated.

An AER does **not** provide detailed technical data. Such information is available in three ways:

- 1) Contacting the licence holder directly. The Contact Us section of this template enables the licence holder to provide details of where a member of the public can obtain further information on topics reported in this document.

² See Appendix I

- 2) Some documents³ are available on the EPA website via the licence details page for each individual licence. This can be found by browsing either the <http://www.epa.ie/licensing/> or <http://www.epa.ie/enforcement/> pages of the EPA website.
- 3) All formal enforcement correspondence exchanged between the EPA and a licence holder during the regulatory process is available for public viewing by appointment at any EPA Office.

If you have a question or query about an AER or an individual EPA licensed facility see the EPA's website or contact the relevant EPA office. See <http://www.epa.ie/about/contactus/> for contact details.

³ This includes EPA site inspection and compliance monitoring reports, licence holders' self-monitoring reports, AERs and special reports

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Glossary

Abatement Equipment	Technology used to reduce pollution
AER	Annual Environmental Report.
Beyond Compliance	Beyond compliance is concept to help deliver greater organisational performance and long-term value for the environment, society and the economy.
CRAMP	Closure, Restoration and Aftercare Management Plan.
ELRA	Environmental Liability Risk Assessment.
Emission Limit Value	Limits set for specified emissions, typically outlined in Schedule B of an EPA licence.
EMS	Environmental Management System.
Environmental Goal	An objective or target set by a licensee as part of an environmental management system (EMS).
Environmental Pollutant	Substance or material that due to its quantity and/or nature has a negative impact on the environment.
Facility	Any site or premises that holds an EPA industrial or waste licence.
FP	Financial Provision.
GJ	Giga joules, an international unit of energy measurement.

Groundwater	All water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.
Incident	As defined by an EPA industrial or waste licence.
Inert Waste	Is waste that will not undergo physical, chemical or biological change thereby, is unlikely to cause environmental pollution or harm human health.
List of Wastes (LoW)	A list of wastes drawn up by the European Commission and published as Commission Decision 2014/955/EU.
Noise Sensitive Location	Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other installation or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels.
Non-Renewable Resource	A resource of economic value that cannot be replaced at the same rate it is being consumed e.g. coal, peat, oil and natural gas.
Oil Separator	Separator system for light liquids (e.g. oil and petrol).
PRTR	Pollutant Release and Transfer Register.
Renewable Resource	Wind, solar, aerothermal, geothermal, hydrothermal and ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases.
Sanitary Waste	Waste water from toilet, washroom and canteen facilities.

Storm Water	Rain water run-off from roof and non-process areas.
Surface Water	Lakes, rivers, streams, estuaries and coastal waters.
Trigger Level	A value set for a specific parameter, the achievement or exceedance of which requires certain actions to be taken by the licence holder.
Volatile Organic Compounds	Gases produced from solids or liquids that evaporate readily in ambient conditions.
Waste	Any substance or object which the holder discards or intends or is required to discard.
RCTO	Rotary Contractor Thermal Oxidiser
Trimix	Trimix waste treatment which strips ammonia from fluoride containing wastewater.

Disclaimer

These are **not** legal definitions. Legal definitions can be found in the corresponding legislation.

Declaration

I, Marina Lucey (Environmental Health & Safety Manager), confirm that by ticking the box below, all information in this report is truthful and accurate to the best of my knowledge and belief.

In addition, I confirm that all monitoring and performance reporting required by our EPA licence and summarised herein is available for inspection by the EPA.

Tick here



1) Introduction

See below a brief description of our facility and a summary of our environmental performance in 2021.

Intel is a semiconductor manufacturing facility licensed by the Environmental Protection Agency (EPA) to manufacture integrated circuits and printed circuit boards.

Secondary licensed activities taking place on site to support the manufacturing process include:

- Operation of combustion installations with a rated thermal input equal to or greater than 50 Megawatts and
- Surface treatment of products using organic solvents, in particular for coating and/or cleaning, with a consumption capacity of more than 200 tonnes per year

The site operates in strict compliance with its EPA licence. There were 18 minor environmental incidents in 2021. Of these 18 minor environmental incidents, 17 were relating to continuous analyser downtime for air abatement equipment and 1 was related to our emissions for hydrogen fluoride being close to the applicable limit for one set of emission points (Fab 24 Bridge Acid Scrubbers) during one sampling round (Q2'2021). There was no impact to the environment from any of these incidents. Further details on these are provided in Section 5 of this report.

There were 3 complaints received from neighbours in 2021, two relating to noise and one relating to odour. All were fully investigated and closed out. Further details are provided in Section 4 of this report.

Production increased by approximately 4% in 2021 compared to 2020.

Construction work continued on a new manufacturing building on site in 2021.

Intel's Environmental Management System is certified to the ISO 14001 standard. The site underwent an ISO 14001 surveillance audit in May 2021

and an ISO 50001 surveillance audit in December 2021 which were carried out by the National Standards Authority of Ireland (NSAI). Also, the site underwent its recertification audit to the Business Working Responsibly Mark provided by Business in the Community and NSAI.

In 2021, Intel Ireland won 2nd prize for ‘Sustainability Team of the Year’ at the National Green Awards.

Intel Ireland also contributes to the achievement of Intel’s RISE (Responsible, Inclusive, Sustainable & Enabling) Sustainability 2030 goals. More information on our environmental goals at site level & our work which goes beyond compliance are provided in Section 2 and Appendix III.

Contact Us

If you have any questions or would like further information on any aspect of our licensed activity, please contact us directly.

See below details:

Lisa Harlow – Global Public Affairs
lisa.harlow@intel.com Tel: 01-6067000

2) How we Manage our Facility

Environmental Management System

Explanation

To ensure our facility's activities do not cause environmental pollution we are required to have detailed documentation systems in place to help us manage and track our environmental performance. These systems are referred to as Environmental Management Systems (EMS). We review our EMS every year and set up-to-date **environmental goals** to continually improve our environmental performance.

The information below sets out the environmental goals for our facility to help us prevent environmental pollution and reduce our impact on the environment. Target dates for completing each goal and progress towards achieving the goal are outlined in Table 1.

Table 1 Environmental Goals

Environmental Goal	Target Date	Progress
Provide an improved storm water class.	Jan 2021	Complete
Increase awareness of environmental noise amongst personnel within Intel operations.	Dec 2021	Complete
Develop a new application to improve the management of refrigerants.	Dec 2021	Delayed (due June 2022).
Meet the Intel Corporate waste target to achieve zero total waste to landfill by 2030.	Dec 2029	On track In 2021 – 0.5% waste to landfill
Contribute to Intel corporate target to implement circular economy strategies for 60% of our	Dec 2029	Ahead of schedule In 2021 – 92% achieved

manufacturing waste streams, in partnership with our suppliers.		
Reduce environmental impact of front of house waste being produced on site.	Dec 2021	Complete
Implement design improvements of the F14 RCTO solvent abatement system to reduce bypasses.	Oct 2021	Delayed (Substantially completed in 2021 with final minor adjustments due in June 2022).
Contribute to the Intel Corporate water conservation 2030 goals through the site's water conservation programme.	Dec 2029	On track (Note: On-going year on year target) In 2021 – Completed water modelling for the site.
Contribute to the Intel Corporate energy conservation 2030 goals through the site's energy conservation programme.	Dec 2029	On track (Note: On-going year on year target) In 2021 – 8.4M kWh savings achieved.
Successfully complete surveillance audit of ISO 50001 Multisite Energy Management System, with Ireland as the headquarter site.	Dec 2021	Complete
Maintain and improve our site Biodiversity Program.	Jan – Dec 2021	Complete
Continuously improve our EHS Management Systems.	May 2021	Complete
Improve internal and external environmental awareness.	Jan – Dec 2021	Complete
Maintain and improve our site Biodiversity Program.	Jan – Dec 2022	On track
Contribute to the Intel Corporate water conservation 2030 goals through the site's water conservation programme.	Dec 2029	On track

Contribute to the Intel Corporate energy conservation 2030 goals through the site's energy conservation programme.	Dec 2029	On track
Successfully complete recertification audit of ISO 50001 Multisite Energy Management System, with Ireland as the headquarter site.	Dec 2022	Not commenced
Improve internal and external environmental awareness	Jan – Dec 2022	On track
Improve our site EHS Management Systems - Implement revised environmental aspects process	July 2022	On track
Upgrade of Exhaust Volatile Organic (Solvent Exhaust System) Continuous Emissions Monitoring System	Dec 2022	On track

Comment

The site Environmental Management Program captures projects relating to both Intel's legal requirements and also voluntary commitments the site makes in line with Intel Corporation's RISE 2030 Sustainability Goals (10-year goals).

Beyond Compliance

Explanation

We are legally required to comply with our environmental licence. However, the EPA realise that some sites go further than just complying with their environmental licence requirements. Some projects carried out at facilities can have long term positive impacts on the environment and local communities.

The EPA's beyond compliance initiative is encouraging us to identify and report on these environmental and sustainability projects. For example, the project could involve renewable energy, biodiversity, water conservation or exemplar community engagement.

Did any project completed on your site in the reporting year go beyond your licence requirements?

Yes

No

If yes, provide details of one case study in Appendix III that demonstrates how the project went beyond compliance of your licence.

Intel Ireland goes beyond its legal & EPA licence requirements in many areas of environmental management. Information on our annual environmental goals and their progress is provided in Section 2 Table 1 of this report and many of these goals relate to voluntary commitments Intel makes to improve its environmental performance and align to Intel's RISE Sustainability Goals 2030.

For 2021, we have chosen to provide information on Intel's Biodiversity Program in Appendix III of this report.

3) Energy & Water

Energy

Explanation

Fossil fuels such as coal, gas and oil are non-renewable resources. As a result, our EPA licence requires that we measure our energy use and set targets to improve the energy efficiency of our activities and reduce our overall use, where possible. Where we have the means and technology on-site to generate energy, this is also captured in this report.

The information below summarises the energy used this year compared to the previous year and includes renewable and non-renewable energy types.

Table 2 Energy Used

Energy Used (GJ)	Quantity	% Increase/ decrease on previous year
Electricity	3,319,208	7%
Heavy Fuel Oil	0	0%
Light Fuel Oil	4,162	5%
Natural Gas	795,887	-3%
Coal / Solid Fuel	0	0%
Peat	0	0%
Renewable Biomass	0	0%
Renewable Energy Generated On-site	0	0%
Total Energy Used	4,119,256	5%

Comment

The electricity used at the Intel Ireland site is generated off site from 100% renewable sources as covered by Guarantees of Origin.

The information below summarises the energy we generated on our site this year with specific focus on renewable energy generation.

Table 3 Energy Generated

Energy Generated	Quantity (GJ)	% Increase/ decrease on previous year
Renewable Energy	0	0
Total Energy Generated	0	0

Comment

No renewable energy was generated on-site. All electricity supplied to site is 100% renewable as covered by Guarantees of Origin.

Water

Explanation

Water is a natural resource and we are required by our EPA licence to identify ways to reduce our use where possible. Water used in industry can be extracted from groundwater, rivers and lakes (surface water), taken from public water supplies (Irish Water), recycled from the facility's processes or harvested from rainwater.

The information below summarises and compares the quantity of water used this year compared to the previous year.

Table 4 Water Used

Source of Water Used	Quantity (m³/year)	% Increase/decrease on previous year
Groundwater	0	N/A
Surface Water	0	N/A
Public Supply	7,659,176	5%
Recycled Water	1,893,934	51%
Rainwater	0	N/A
Total Water Used	9,581,300	8%

Comment

Intel recycles water internally by diverting certain streams of process water from drain for use in facilities systems. This is one part of Intel's water conservation programme which also utilises other water saving opportunities. The reason for the increased level of water recycling from 2020 was due to improved accounting of water reuse on-site.

4) Environmental Complaints

Explanation

Our EPA licence requires that activities do not cause environmental nuisance such as odour, dust or noise. Our licence also requires that we have procedures in place to record, investigate and respond to environmental complaints if or when they arise.

We have an environmental complaints procedure in place where you can contact us⁴ directly. You can also contact the EPA⁵ if you wish to make an environmental complaint, confidentially or not.

See the information below for a summary of **all** the environmental complaints relating to our activities made directly to us and to the EPA this year.

Table 5 Summary of All Environmental Complaints Received in

Type of Complaint	Number of Complaints	Number Closed
Odour / Smells	1	1
Noise	2	2
Dust		
Water Quality		
Air Quality		
Waste		
Litter		
Vermin/Flies/Birds		
Soil Contamination		
Vibration		
Other		

⁴ See Section 1, Introduction – Contact Us

⁵ If you wish to contact the EPA to make an environmental complaint about an EPA licenced facility, please go to <https://lema.epa.ie/complaints>

Comment

All 2021 noise concerns were fully investigated and resolved. Follow up actions were communicated to the complainants with continuous engagement during the investigation.

The odour concern was also investigated, and there were no on-site sources or conditions which would cause any off-site odour.

5) Environmental Incidents

Explanation

It is our responsibility as an EPA licensed facility to ensure we have systems in place to prevent incidents that have the potential to cause environmental pollution. If an incident occurs, we are required to report it to the EPA, investigate the cause and fix the problem.

The EPA classify environmental incidents into 5 categories based on the potential impact on the environment:

- Minor
- Limited
- Serious
- Very Serious
- Catastrophic

See Table 6 for the number of the environmental incidents we reported to the EPA this year.

Table 6 Number of Environmental Incidents

Incident Category	Minor	Limited	Serious	Very Serious	Catastrophic
Abatement Equipment Offline					
Breach of Ambient ELV					
Breach of Emission Limit					
Explosion					
Fire					
Monitoring Equipment Failure	17				
Odour					
Spillage					
Breach of trigger Level					
Uncontrolled Release					

Incident Category	Minor	Limited	Serious	Very Serious	Catastrophic
Other (Close to emission limit value)	1				

Comment

17 minor incidents were related to air monitoring equipment going offline due component failures. During this period, the abatement units were always operating within specification. There was no impact to the environment as a result of the monitoring equipment being offline.

1 minor incident was proactively reported related to our emissions for hydrogen fluoride being close to the applicable limit for one set of emission points (Fab 24 Bridge Acid Scrubbers) during one sampling round (Q2'2021). The site was in compliance with its emission limit value and there was no impact to environment.

6) Our Environmental Emissions

Explanation

We are required to ensure the emissions from our activities do not cause environmental pollution.

We are required to monitor any of the following emissions that we make:

- Storm water
- Waste water
- Air
- Groundwater
- Noise

We regularly test any such emissions for specific pollutants and materials to ensure they do not contain levels of pollution that exceed emission limit values (ELVs) or cause environmental pollution. If monitoring of an emission indicates an ELV is exceeded, we are required to report this to the EPA⁶.

The next sub-sections of this report summarise our compliance with any ELVs set in our EPA licence. Some emissions monitored do not have specific ELVs, but we still carry out monitoring and report all incidents that may give rise to environmental pollution.

⁶ See section 5, Incidents

Storm Water

Explanation

Storm water is rain water run-off from roof and non-process areas of a facility, e.g. car parks, and generally shall not contain any pollution. Storm water is usually released into a local water body after a basic form of treatment. Our EPA licence requires that we manage storm water to ensure no polluting substances or materials are released into the environment.

The information below summarises how the storm water from our facility is treated, where it is released and the results of monitoring this year.

1. Storm water from our facility is managed prior to release by;

Site storm water flows via interceptors to the site's storm water retention pond and then to the River Rye. Flow and pH of the discharge to the River Rye is continuously monitored. There is an outlet valve which can be closed remotely or manually at any time if there are any concerns over the discharge quality.

2. Storm water from our facility is released into the following water bodies:

River Rye water.

Table 7 Summary of Storm Water Monitoring

Parameter measured	No. of Samples	% Compliant⁷	Comment
pH	Continuous monitoring	100%	Trigger levels agreed with the EPA
Flow	Continuous monitoring	N/A	
COD	52	N/A	
Conductivity	52	N/A	
Total Organic Carbon (as C)	52	N/A	
Total Heavy Metals	2	N/A	

Comment

All storm water emissions monitoring was carried out as per IE Licence P0207-04.

⁷ % compliant = [(number of samples compliant) / (number of samples taken)] x 100. Compliance could refer to emission limit values or trigger levels. The EPA commonly use trigger levels on stormwater discharges.

Waste Water

Explanation

There are two types of waste water that can be produced:

- Process waste water produced from the activities and;
- Sanitary waste water from toilets, washrooms and canteens.

Our EPA licence requires us to manage our waste water on or off-site and ensure that it does not cause environmental pollution when discharged into the environment.

The information below summarises how we treat the waste water produced from our activities, where it is released and the results of monitoring this year.

1. Waste water produced by our activities is treated as follows before discharge to a receiving waterbody;

The various wastewater streams generated at Intel are treated in different treatment plants on-site. These include systems to remove ammonia, hydrofluoric acid waste and metals. The treated wastewater streams are then neutralised onsite before being discharged to Irish Water's Leixlip Municipal Waste Water Treatment Plant for further treatment.

2. Treated waste water from our facility is released into the following water bodies:

Waste water from Intel is discharged to Irish Water's Leixlip Municipal Waste Water Treatment Plant for further treatment before being discharged back into the River Liffey.

Table 8 Summary of Waste Water Monitoring

Parameter measured	No. of Samples	% Compliant	Comment
COD Equivalence	52	100%	
Inorganic Suspended Solids	52	100%	
Suspended Solids	52	100%	
Total Dissolved Solids	52	100%	
Total Nitrogen	52	100%	
Total Phosphorus	52	100%	
Fluorides (as total F)	52	100%	
Cyanides (as total CN)	52	100%	
Arsenic and compounds (as As)	52	100%	
Copper and compounds (as Cu)	52	100%	
Chromium and compounds (as Cr)	52	100%	
Nickel and compounds (as Ni)	52	100%	
Tin	52	100%	
Lead and compounds (as Pb)	52	100%	
Total heavy metals	52	100%	
Ammonia (as N)	52	N/A	

Cobalt	52	N/A	
Nitrate (as N)	52	N/A	
Sulphate	52	N/A	
Volumetric flow	Continuous monitoring	100%	
pH	Continuous monitoring	100%	
Temperature	Continuous monitoring	100%	

Comment

All waste water emissions monitoring was carried out as per IE Licence P0207-04. All samples were within compliance limits.

Air

Explanation

Generally, three types of air emissions are monitored from industry in Ireland: gases, dust (particulates) and odour. Our EPA licence requires us to ensure that any air emissions from our activities do not cause air pollution or create an odour nuisance.

The information below details the number of air emission points we monitor, the results from testing the air emissions and any odour assessments carried out by us and the EPA this year.

1. We monitor air emissions from the following number of emission points at our facility.

70

Table 9 Summary of Air Emissions Monitoring

Parameter measured	No. of Samples	% Compliant	Comment
Carbon Monoxide	RCTO: continuous monitoring Trimix: 8 samples Boilers: 13 samples	100%	
Nitrogen Oxides (as NO₂)	RCTO: continuous monitoring Trimix: 8 samples Boilers: 13 samples	100%	
Total Organic Carbon	RCTO: continuous monitoring	100%	

Total Acids (as HCl)	Acid Scrubbers: 78 samples	100%	
Hydrofluoric acid (Gaseous) (as HF)	Acid Scrubbers: 78 samples	100%	
Total Fluorides (as HF)	Acid Scrubbers: 78 samples	100%	
Organics Class I	RCTO: 92 samples	100%	
Organics Class II	RCTO: 40 samples	100%	
Ammonia	Trimix: 8 samples Ammonia Scrubbers: 16 samples	100%	
Volumetric Flow	RCTOs: 92 samples Acid Scrubbers: 156 samples Ammonia Scrubbers: 16 samples Trimix: 8 samples Speciality Exhaust: 4 samples	100%	
Inorganic Dust Particles Class I	Speciality Exhaust: 4 samples	100%	
Inorganic Dust Particles Class II	Speciality Exhaust: 4 samples	100%	
Inorganic Dust Particles Class III	Speciality Exhaust: 4 samples	100%	

Total Dusts	Speciality Exhaust: 4 samples	100%	
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Comment

All air emissions monitoring required by the IE Licence P0207-04 were carried out. All samples were within compliance limits.

Table 10 Summary of Odour Assessments Carried Out

Assessment Conducted By	No. of Odour Assessments	% Compliant⁸	Comment
Licence Holder	0	N/A	
EPA	0	N/A	

Comment

Odour monitoring is not required by the site Industrial Emissions Licence P0207-04.

⁸ A compliant odour assessment is based on EPA Odour Impact Assessment Guidance available at <http://www.epa.ie/pubs/advice/air/emissions/ag5-odourassessment.html>

Fugitive Solvent Emissions

Are you required to monitor fugitive solvent air emissions from your facility?

Yes

No

Explanation

The use of solvents is regulated under Irish and European Union (EU) Regulations⁹. Solvents are chemicals that, by their nature, are volatile (evaporate readily under ambient conditions). Solvents can be found in many inks, glues and cleaning agents. Due to the volatility of solvents some emissions may be released into the atmosphere during our activities before being captured in our air treatment system. This type of emission is called a **fugitive solvent emission**.

The information below summarises the quantity of solvents used this year, the percentage of fugitive solvent emissions (% of total quantity used) and whether the percentage complied with the targets set in the EU Regulations.

Table 11 Summary of Fugitive Solvent Emissions

Quantity of Solvents Used (Kg)	% Fugitive Solvent Emissions	Compliant
5,650,224	0.53	Yes

Comment

As per IE Licence P0207-04 Condition 6.11.1, fugitive solvent emissions shall not exceed 15% of total solvent input. In 2021, solvent emissions were only 0.53% which is well within compliance limits.

⁹ See Annex VII of the Industrial Emissions Directive

<https://ec.europa.eu/environment/industry/stationary/ied/legislation.htm>

Groundwater

Explanation

Groundwater is an important and sensitive resource in Ireland. Our EPA licence requires that we monitor groundwater to ensure our activities do not cause groundwater pollution.

Understanding how groundwater flows through soil and rock layers and eventually into surface and coastal waters is a complex science. Sometimes groundwater pollution that occurred in the past can take years and even decades to disappear. Therefore, it is important that experts help us monitor and interpret results from groundwater monitoring and testing.

The information below is a basic summary of the condition of the groundwater this year.

1. Do you have a groundwater monitoring programme in place?

Yes

No

2. Have the groundwater monitoring results over the last 5 years indicated the presence of groundwater pollution?

Yes

No

Table 12 List of Groundwater Pollutants Identified

Pollutants
Extractable hydrocarbons at a single localised monitoring well MW18 (related to a historical local diesel spill in 1997).

3. Give details of the investigations and subsequent actions taken, where applicable, to manage the groundwater pollution.

Localised residual hydrocarbon contamination at MW18. Risk assessment and monitoring has confirmed there is no potential for migration and is contained locally. Source removed and natural degradation and monitoring is ongoing.

Noise

Explanation

Our EPA licence requires that we monitor noise emissions from our facility. Noise monitoring can be conducted at the boundary of our facility and/or at locations beyond the boundary referred to as “noise sensitive locations”. Noise monitoring requires the use of special noise monitoring equipment. Our EPA licence requires that noise produced by our facility shall not exceed the noise limit values and/or give rise to nuisance.

The information below gives a summary of when and where we conducted noise monitoring this year and if results complied with our EPA licence limits.

1. We conducted noise monitoring on the following dates this year:

- 13,16, 21 July 2021
- 10,11 August 2021
- 24,25 November 2021
- 15,16 December 2021

2. Where was the noise monitoring carried out?

- i. the boundary of our facility;
- ii. noise sensitive locations off-site; or
- iii. both.

Both at the boundary of our facility and at noise sensitive locations

3. Were measured noise levels compliant with your EPA licence limits?

Yes

No

If No, we took the following actions to address the noise level exceedances?

Comment

In 2021, as confirmed by the annual noise monitoring survey, Intel operated within the noise limits stipulated in the site Industrial Emissions Licence.

7) Waste

Waste Generated

Explanation

Our EPA licence requires us to manage the waste we generate in a manner that does not cause environmental pollution.

We manage, store and record hazardous, non-hazardous and inert waste we generate in accordance with our licence. We ensure that this waste is subsequently treated or disposed of in accordance with the relevant waste Regulations.

The information in Table 13 is a summary of waste we generated this year and the percentage increase or decrease on the previous year. The percentage recovery is the amount of total waste generated that was reused, recycled or recovered.

Table 13 Waste Generated

Type	Quantity (Tonnes)	% Increase/ decrease on previous year	% Recovery
Hazardous	25,550	+1%	93.9%
Non-Hazardous	19,881	-23%	97.4%
Inert	43,182	-66%	99.9%
Total Tonnes	88,613	-50%	97.6%

Comment

There was a reduction in both non-hazardous and inert waste in 2021 as the large construction project on site progressed to a different stage where less of these wastes were being produced. As a result, Total Waste decreased by 50% in 2021.

Waste Accepted

Did you accept waste onto your facility for storage, treatment, recovery or disposal this year?

Yes

No

Explanation

Our EPA licence requires us to manage the waste we accept in a manner that does not cause environmental pollution.

We manage, store and record all incoming and outgoing hazardous, non-hazardous and inert waste. The waste we accept may be treated, recovered, disposed or stored at our facility depending on our licence requirements.

The information in Table 14 provides a summary of waste we accepted this year and the percentage increase or decrease on the previous year. The percentage recovery is the amount of total waste accepted that was reused, recycled or recovered.

Table 14 Waste Accepted

Type	Quantity (Tonnes)	% Increase/ decrease on previous year	% Recovery
Hazardous	N/A		
Non-Hazardous	N/A		
Inert	N/A		
Total Tonnes	N/A		

8) Financial Provision

Explanation

Our EPA licence requires us to assess the risk our activities pose to the environment if we cease our activities or if an incident occurred. If we are identified as a high risk facility¹⁰ by the EPA, we are required to put provision in place such as a financial bond or insurance to cover the cost of restoring our site to a satisfactory condition. This financial provision can then be used to cover the cost of managing the restoration or clean up should such an event occur.

1. Are you required to have an agreed financial provision in place?

Yes

No

2. What year was your Closure, Restoration and Aftercare Management Plan (CRAMP) last agreed by the Agency?

An updated CRAMP was submitted to the Agency in March 2021 to account for inflation.

3. What year was your Environmental Liability Assessment Report (ELRA) agreed by the Agency?

An updated ELRA was submitted to the Agency in March 2021 to account for inflation.

4. Has there been any significant changes on your site since the last agreements?

Yes

No

¹⁰ See Appendix II

If yes, have you submitted details to the EPA?

Yes

No

N/A

Note: A major construction project was underway on site during 2021 but this facility was not handed over to Intel during 2021. When the new facility is handed over to Intel (expected in 2022), the CRAMP and ELRA will be updated to incorporate this facility and any other changes which affect the CRAMP and ELRA.

Appendix I

Class of Activity

Industrial and waste facilities are classed into different sectors depending on the nature of their activity and its potential impact on the environment. The EPA Act 1992 as amended, outlines these as follows:

Class 1	Minerals and other materials
Class 2	Energy
Class 3	Metals
Class 4	Mineral fibres and glass
Class 5	Chemicals
Class 6	Intensive Agriculture ¹¹
Class 7	Food and drink
Class 8	Wood, paper, textiles and leather
Class 9	Fossil fuels
Class 10	Cement, lime and magnesium oxide
Class 11	Waste
Class 12	Surface Coatings
Class 13	Other Activities

¹¹ This reporting template is not applicable to the **intensive agriculture sector**. Their annual environmental reporting structure is different and can be found at [Compliance & Enforcement: Licensees: Reporting Publications | Environmental Protection Agency \(epa.ie\)](#)

Appendix II

High Environmental Risk Categories

If an industrial or waste licence falls into one of these categories it is deemed, by the EPA, as a high environmental risk. As a result, the licence holder is required to have financial provision in place. See section 8, Financial Provision.

1. Landfills
2. Non-Hazardous Waste Transfer Station
3. Incineration and Co-Incineration Waste Facilities
4. Category A – Extractive Waste Facilities
5. Upper and Lower Tier Seveso Facilities
6. Hazardous Waste Transfer Stations
7. High Risk Contaminated Land
8. Exceptional Circumstances

NOTE:

This list is subject to change.

See the link below for further information.

[Compliance & Enforcement: Financial Provisions Publications | Environmental Protection Agency \(epa.ie\)](#)

Appendix III

Beyond Compliance

The case study below shows how we went beyond the requirements of our licence in the reporting year in the area of biodiversity.

Intel have implemented a biodiversity program which is incorporated into the site Environmental Health & Safety Management system. Annually, we carry out work to further enhance our biodiversity program with a focus on improvements to the River Rye and our commitment as a business supporter of the All-Ireland Pollinator Plan.

In 2021, we worked with our 'Friends of the River Rye' group which consists of Kildare County Council, Inland Fisheries Ireland, local fishermen, Intel and the UCD Aquens group to complete a gravel spawning bed project in the River Rye which will provide an environment for fish and invertebrates and encourage river catchment improvements. We also released the [River Rye podcasts](#) to promote biodiversity externally. An updated [River Rye video](#) was published to explain the work we do with the support of the UCD Aquens group and Inland Fisheries Ireland in improving the River Rye catchment.

The site added additional pollinator friendly planted areas to the site (IR4 plaza area, IR2 area and beside new water tanks). We installed new signposting to pollinator friendly areas and new bird boxes to trees beside IR2 carpark area. Intel sponsored biodiversity signs for the local community and funded planting boxes for the local Tidy Towns. We also sponsored the Tidy Estates competition in 2021. Awareness initiatives occurred in 2021, these included the commissioning of an artist to provide four pencil sketches of Intel's biodiversity features which were posted to social media channels and will be provided as art at the site. An [updated biodiversity awareness video](#) was published externally. Additional information on our work in this area can be found in the [AIPP Business Supporters Annual Review 2021](#).