

PFAS FAQ

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1. What are PFAS compounds?

PFAS (per- and polyfluoroalkyl substances) are a group of thousands of long-lasting synthetic compounds used in many industries (including aerospace, automotive, food processing, pharmaceutical, clothing, construction, household products, cookware and firefighting) since the 1950s. PFAS can pass into the soil, water and air during production and use. Further detail on PFAS in Europe can be found in the links below:

- [Information on PFAS from European Chemicals Health Agency](#)
- [European Legislation related to PFAS](#)

2. How widespread is this issue?

PFAS is a global issue. Because of their widespread use and persistent properties, they have now been found in the environment, humans, animals, food, water and soil in almost every country in the world, not only at airports, fire stations, landfills, pharmaceutical

and manufacturing sites, but even the most remote areas on the planet. In Europe, the [Le Monde Map of PFAS Contamination](#) identifies 44,500 sites where PFAS contamination has either been detected or is presumed to exist. These sites include landfills, pharmaceutical plants and manufacturing sites in addition to fire stations and airports. The Le Monde Map identifies up to 90 sites in Ireland that could potentially be contaminated with PFAS. EPA research has suggested that the major contributor to PFAS exposure in the Irish population is via the diet and/or less well-studied pathways like dermal uptake from PFAS-containing fabrics and cosmetics.

- [Elucidating Human Exposure in Ireland to BFRs and PFASs](#)

3. How might someone be exposed to PFAS?

Because PFAS are so widespread in our environment, exposure to PFAS is possible in many ways. PFAS can be ingested (e.g. through cooking methods,

water), inhaled (e.g. if present in dust), and absorbed through the skin (e.g. if present in personal care products or home consumer products). The HSE has noted that for potential health effects related to PFAS, current scientific evidence is not conclusive. HSE Guidance can be accessed here: [Frequently Asked Questions](#)

4. What legislation is in place to address this issue?

Legislation to control and limit production of PFAS has come into effect both within the European Union and internationally over the last decade. Differences in regulatory limits exist between countries. A summary of the legislation as it applies in Ireland is set out below:

- **Surface Water** (surface water refers to any water above ground): There is no legal requirement for organisations to monitor for PFAS in surface water. Under the Water Framework Directive (WFD), local authorities have a responsibility to monitor for PFAS in

surface water. The regulatory limit for surface water in catchment monitoring is an annual average of 0.65 ng/l for one PFAS compound.

- **Groundwater** (ground water refers to water beneath the surface, in rock and soil pore spaces and fractures): There is no legal requirement for organisations to monitor for PFAS in groundwater, unless specified in their industrial emissions licencing conditions. There is no relevant licencing requirement for Dublin Airport. There is no legal limit currently in place for PFAS in groundwater.
- **Soil / Concrete:** There is no legal requirement for organisations to monitor soil that is in situ for the presence of PFAS. Excavated soil / concrete must be tested to ensure it meets the Waste Acceptance Criteria (WAC) before transferring to an authorised facility. When PFAS is detected in excavated soil at any level then this soil must be disposed of at facilities licenced to accept it.
- **Drinking water:** The legal level of acceptable PFAS in drinking water is 100 ng/l and includes limits for

total PFAS of 500 ng/l. Suppliers of water for human consumption will be obliged to monitor water for PFAS from 11 January 2026 under the 2023 Drinking Water Regulations (Drinking Water Directive). The water supplied for consumption at Dublin Airport is supplied by Uisce Éireann.

5. What is the role of the Environmental Protection Agency (EPA) on this issue?

The EPA is the designated Competent Authority in Ireland in relation to the EU Persistent Organic Pollutants (POPs) Regulation. POPs are a group of chemicals, including many PFAS compounds, that remain stable over long periods of time and are harmful to humans and the environment. Under the EPA's Action Plan on POPs, several investigations related to PFAS were carried out, including the monitoring of groundwater and surface water for PFAS and examining the risks posed by PFAS.

- [What are PFAS? \(epa.ie\)](https://www.epa.ie/)

6. What is the role of Fingal County Council (FCC) on this issue?

Local authorities have responsibility for enforcing environmental legislation, including the Local Government (Water Pollution Act (1977)) and conducting any subsequent investigations. Local Authorities are also responsible for the implementation of River Basin Management Plans (under the WFD) at county level. These plans set out the actions to be taken to improve water quality and achieve 'good' ecological status in water bodies (rivers, lakes, estuaries and coastal waters) by 2027.

7. What is the role of Uisce Éireann on this issue?

Uisce Éireann will have national responsibility for monitoring for PFAS in drinking water from January 2026, under European Union (Drinking Water) Regulations.

8. [What is the role of the Health Service Executive \(HSE\) on this issue?](#)

The HSE manages the public health and social care services in Ireland and has a role in addressing threats to public health. The HSE has issued an FAQ in relation to PFAS which is linked below.

- [Frequently Asked Questions Per- and poly-fluoroalkyl substances in Drinking Water \(hse.ie\)](#)
- [Interim FAQs - PFAS in Drinking Water](#)

9. [What was the source of PFAS on Dublin Airport campus?](#)

The primary source of PFAS at airports was the use of aqueous film-forming foam (AFFF), which was used historically to fight petroleum-based fires at airports. These foams contained fluorinated surfactants that helped the foam spread rapidly over flaming liquids, cooling and extinguishing fires efficiently. The use of these foams was common across Europe.

In 2010 (under the Stockholm Convention on POPs and the EU POPs Regulations) one PFAS compound known as PFOS, was restricted. However, the PFOS-free aqueous film forming foam (AFFF) products supplied by manufacturers after this date still contained other PFAS compounds not subject to regulatory restrictions.

10. [Do firefighting foams used at Dublin Airport today still contain PFAS compounds?](#)

No. Since 2013, the firefighting foam used by Dublin Airport Fire Service has been an ICAO approved foam classified as fluorine free. Fluorine-free foams do not contain any PFAS compounds.

11. [When was it discovered that PFAS was present on the campus at Dublin Airport?](#)

During site investigations carried out at Dublin Airport in 2016, PFAS was found in the soil at a site that previously

housed the former firefighting training ground. This was monitored as part of the programme of works at this site. Over the following years, legislation and awareness of this issue increased. This led to the appointment in 2021 of leading expert consultants, Fehily Timoney, to help daa to address PFAS at Dublin Airport. The consultants recommended an extended period of continued monitoring to fully establish a conceptual site model of the PFAS in ground and surface water on the Dublin Airport campus. This necessitated a 28-month period of testing to baseline the status and account for seasonal fluctuations in ground and surface water.

12. [What were the overall findings of this PFAS monitoring report?](#)

The report confirms that varying levels of PFAS were found as expected in surface water, ground water and soil, with higher concentrations being found closer to areas where PFAS-firefighting foam was used historically. Highest concentrations are summarised below.

- **Surface water:** The highest level of PFOS detected in a watercourse was 50.60 ng/l in one sample from the Cuckoo Stream. The highest level of PFOS from a manhole sample was 1,430 ng/l at a location close to the former firefighting training ground site.
- **Groundwater:** The highest levels of PFAS in groundwater were detected at the site of a former firefighting training ground (maximum sum of 20 PFAS level 4,111 ng/l).
- **Soil:** The highest levels of PFAS found in soil were up to 568 µg/kg (PFOS) and up to 416 µg/kg (summed PFAS excluding PFOS) detected in in-situ and stockpile soil samples collected in an area where daa is building a new apron.

13. Did testing take place outside of the Dublin Airport campus?

Surface water monitoring was completed at over 40 landside locations, 12 of which are located off campus and within 4km of the campus. The next phase

of this programme will include a more extensive period of monitoring outside of the campus. The PFAS levels detected in surface water offsite are significantly lower than levels detected in known source areas onsite. The highest average PFOS concentrations were recorded in the Cuckoo Stream, Sluice and Kealy Stream. In the Sluice, maximum PFOS concentrations in a downstream monitoring location (location further from campus) are approximately half of the levels identified at an upstream monitoring location. Tributaries of the Ward contain low levels of PFOS. PFOS concentrations in the Mayne and the Santry Rivers are higher in downstream samples (locations further from campus) than in sampling locations adjacent to the airport boundary indicating these surface waters may also be receptors of other sources of PFOS downstream of the airport.

14. Is the drinking water at Dublin Airport affected?

The drinking water supplied at Dublin Airport is provided by Uisce Éireann and is not taken from groundwater sources or wells at Dublin Airport.

15. Why was soil removed from Dublin Airport in 2023 sent to an overseas facility?

As part of the development of an area where daa is currently building a new apron, daa was required to dig out a very large volume of soil. When tested, this soil was found to contain evidence of the presence of PFAS compounds (at low but variable levels, from non-detect to 0.415 mg/kg). The presence of PFAS at any level prevented material being reused on site, and the volume of soil (over 150,000 tonnes) meant that the soil could not be accepted at any appropriately licenced waste facilities in Ireland. As such daa arranged to have the soil removed and treated in overseas facilities at significant cost.

16. What are the next steps?

The first necessary phase of the monitoring programme, which has taken 28 months, is now complete. The focus to date has been on developing a conceptual site model which identifies Sources, Pathways and Receptors of PFAS contamination. This analysis allows daa to understand where PFAS may be present and the levels at locations on campus. The next steps will include:

- Continued campus monitoring, expanded to include a wider range of off-site locations, to develop an external risk profile for both ground and surface water.
- Ensure soil monitoring for PFAS for any new onsite projects.
- Development of a suite of management and remediation options to address PFAS, where found.
- Continued engagement with the relevant authorities on this issue.

Links

1. <https://echa.europa.eu/hot-topics/perfluoroalkyl-chemicals-pfas>
2. <https://eur-lex.europa.eu/eli/dir/2020/2184/oj>
3. https://www.lemonde.fr/en/les-decodeurs/article/2023/02/23/forever-pollution-explore-the-map-of-europe-s-pfas-contamination_6016905_8.html
4. https://www.epa.ie/publications/research/environment--health/Research_Report_343.pdf
5. <https://www.hse.ie/eng/services/list/1/envIRON/water/faqs-on-pfas-in-drinking-water.pdf>
6. <https://www.epa.ie/our-services/monitoring--assessment/waste/chemicals/pops/>
7. <https://www.epa.ie/our-services/monitoring--assessment/waste/chemicals/pfas/>
8. <https://www.fingal.ie/>
9. <https://www.water.ie/>
10. <https://www.hse.ie/>
11. <https://www.hse.ie/eng/health/hl/water/drinkingwater/interim-pfas-position-paper-dec-2022-hse-nat-dw-grp.pdf>
12. <https://www.daa.ie/environmental-social-governance/>

Glossary

PFAS: Per- and polyfluoroalkyl substances

PFOS: Perfluorooctane sulfonic acid

ng/l: nanogram per litre

µg/kg: microgram per kilogram

mg/kg: milligram per kilogram

For further information visit:

<https://www.dublinairport.com/corporate/corporate-social-responsibility/sustainability>