

Polychlorinated biphenyls

Important information about regulations that may affect your business

If your business uses high voltage electrical equipment (such as ground mounted transformers shown right or pole mounted transformers shown below), manufactured before 1987 it may contain chemicals called **Polychlorinated Biphenyls** (PCBs). Use of PCBs is **highly restricted** due to their effects on the environment.

You need to comply with the regulations that require the registration, disposal and decontamination of most PCB-containing equipment, and requires most equipment to be taken out of use by the end of 2025.



Currently the main legal use for PCBs is inside older high voltage transformers (there are other exceptions).

If you think you may have equipment that contains PCBs you may need to check if it should be registered with your environmental regulator (the Environment Agency in England). Most types of equipment that contains PCBs must be disposed of as soon as possible, certain equipment can be kept until the end of 2025, and certain equipment can be kept to the end of its useful life.

Polychlorinated biphenyls

-Uses, effects and restrictions

Polychlorinated biphenyls (PCBs) were used in a wide variety of products because they are chemically inert, stable at high temperatures and flame resistant.

These desirable properties are also why these man-made chemicals pose a threat; due to their stability it is very difficult to remove them from the environment and levels build up (bioaccumulate) through the food chain.

Bioaccumulation particularly affects animals with high levels of body fat, and PCBs have been found in polar regions and other areas where there is little or no use.



PCBs were mostly added to equipment as a flame retardant. Equipment that could contain PCBs includes;

- Ground and pole mounted electrical transformers
- Process heating equipment
- Vacuum pumps
- High temperature hydraulics
- Electrical resistors
- Bushings
- Fluorescent light ballasts
- Hospital equipment
- Heat transfer equipment
- Power factor capacitors (example below)



Polychlorinated biphenyls

- Effects on the environment

Here are two examples of the environmental effects of Polychlorinated Biphenyls (PCBs) in Great Britain.

Heron chicks born with rickets

These heron chicks were born at a nature reserve near Newark in Nottinghamshire with extreme deformities. PCB contamination had prevented uptake of calcium from their diet, leading to low bone density. It was discovered that a single leaking transformer had contaminated their feeding grounds and in total over 22,000 chicks were affected.



Lulu the killer whale

Lulu was a member of the only pod of Orcas that are native to Britain. She was washed up on a Scottish beach and when analysed was found to have **over 100 times the level of PCBs at which they are known to affect health**, making her one of the most contaminated marine animals ever. PCBs didn't kill Lulu, but they had affected her ability to reproduce; despite being an adult female she had never had a calf and no calves have been spotted in this pod for over 30 years. If this continues the pod will be extinct within the next 20 years.

Polychlorinated biphenyls

- Legal guidance notes

We have prepared this guidance to introduce **The Environmental Protection (Disposal of Polychlorinated Biphenyls and Other Dangerous Substances) (England and Wales) Regulations 2000 (SI 2000 no. 1043)** and the **amended regulations (SI 2020 no. 489)** (hereafter ‘the Regulations’) which prohibit the possession of polychlorinated biphenyls (PCBs) and most equipment that contains them. There are limited exceptions.

- The Regulations also require the correct labelling of all Contaminated Equipment, the premises where such equipment is held and decontaminated transformers. These requirements are specified in regulations 4(4)(d) and 5.

- Regardless of registration, you must arrange for other contaminated equipment to be correctly disposed of or decontaminated as soon as possible, and declare the intended date for this work when you register.

The full text of all relevant legislation is available online, free of charge, at [Legislation.gov.uk](https://www.legislation.gov.uk)

Some **definitions** from the regulations are listed below. If you do not understand what is required of you or if you are in any doubt, you should seek legal advice.

- **Contaminated Equipment** is any equipment which contains 5dm³ (5 litres) or more of fluid containing PCBs with a concentration over 0.005% by weight.
- **PCB** means any of the following substances—
 - polychlorinated biphenyls,
 - polychlorinated terphenyls,
 - monomethyl-dibromo-diphenyl methane,
 - monomethyl-dichloro-diphenyl methane,
 - monomethyl-tetrachlorobiphenyl methanein any mixture with a concentration greater than 0.005% by weight.
- **Regulation 2 (1)(ii)** states that “any thing of a type which may contain PCBs shall be treated as containing PCBs unless it is reasonable to assume the contrary

Polychlorinated biphenyls

- Further information

We are the Environment Agency. We protect and improve the environment and make it a better place for people and wildlife.

We operate at the place where environmental change has its greatest impact on people's lives. We reduce the risks to people and properties from flooding; make sure there is enough water for people and wildlife; protect and improve air, land and water quality and apply the environmental standards within which industry can operate.

Acting to reduce climate change and helping people and wildlife adapt to its consequences are at the heart of all that we do.

We cannot do this alone. We work closely with a wide range of partners including government, business, local authorities, other agencies, civil society groups and the communities we serve.

Our Contact Details

Email: pcb-enquiries@environment-agency.gov.uk

Telephone: Call our National Customer Contact Centre on **03708 506 506** and ask to discuss the PCB Regulations.