

## Spot What We Can Do About Pollution

The subject of 'the environment' and 'pollution' is now something we have grown accustomed to hearing. It is a rare day when the items are not mentioned on the television or in the newspapers, but what does the term 'pollution' actually mean? And when did it become so fashionable to promote the issues?

Pollution of the Natural Environment by Simon Pattullo Investigating officer for SEPA

What Effects Do We Really Have On The Environment? In relation to environmental awareness, a great number of changes have been over the last few decades. It probably all started in 1979 when the then government put the subject of the environment on the public agenda. Since then public interest has grown, and now we find ourselves in the midst of heightened awareness for all we do. Take the Anya Hindmarsh 'Not a Plastic Bag' campaign for example. Together with the non-profit campaign group 'We Are What We Do', this cotton bag was created by the leading designer and released as an alternative to the non-biodegradable plastic bags typically provided by supermarkets. Only a limited number were produced and soon the bags became fashion items. A limited-release token of materialism, perhaps, but while it was seen by many as a fashion statement, the point is that people also thought about the environment and the effects that small personal changes could make. There were reports of people refusing plastic bags from supermarkets, instead using these designed reusable, sturdy, 'fashionable' bags instead. It furthered the appeal of being environmentally aware. As interest grew, at least two major supermarkets advertised their backing of the campaign and actively promoted the use of their own reusable bags in opposition to the flimsy plastic ones. Too Much Of A Substance In The Wrong Place.

These days we have pressure put on us to reduce our carbon footprints, to eat organic, to buy from local food sources, to switch appliances off at the mains, to reduce, reuse, recycle what we can, to think before we flush, all the buzz phrases. The environment and pollution are now a part of everyday life, but what actually is 'pollution'? The definition can be given as "the changing of a natural environment either by natural or artificial means so that the environment becomes harmful to the living things normally found in it", although it is probably easier to think in terms of "too much of a substance in the wrong place". There is a common link between the people and animals that live in the environment and the natural cycles of nature. It sounds like a very basic premise, but this symbiosis often results in pollution to one extent or another. The scale of this pollution changes between country to country and even from town to town. The effects of the seemingly exponential growth of industry in China, for example, cannot be compared to the effects of a septic tank discharge from a house to a stream, but each can be classed as pollution in their own right, and each, at the end of the day, has to be reduced to some extent in order to improve the environment as a whole. Pollution can take many forms and generally affects water, land, or air, or a combination of these. Pollution of the water environment can come from, as mentioned above, an undersized septic tank used by a small number of houses in the countryside, although more major sources would be from a large sewerage network serving hundreds of thousands of people, the release of oil from cargo tankers, the discharge of slurry from a farm, or leachate from a landfill. And the list goes on. The effects are likely to be the similar - aesthetic impacts, discolouration of the water, potential death of river life, eutrophication - albeit to differing extents. What Is Pollution? Pollution is a very subjective thing - what is unacceptable to one person may not appear to be much of a problem to another, so how do we know what pollution actually is? The easy answer is to refer back to the definition given earlier, that pollution is 'too much of a substance in the wrong place'. It we walk along a riverside and notice a pipe discharging unsightly material into the river, we can probably assume that it is pollution. Where we see a chimney stack emitting black smoke, we can probably agree it is not meant to be, where we smell noxious gas which makes us recoil, we can probably think that something should be done about it. This introduction of a substance to unnatural surroundings has the result of altering the natural cycle. A substance high in organic content (sewage, perhaps, or slurry) in a river of good quality, for example, will quickly strip it of oxygen as it is broken down, thereby reducing the capacity for other forms of life to survive. Other major sources of pollution can have appreciable effects on air quality and land contamination. Emissions from industry have to be appropriately monitored and controlled to reduce the release of particulate matter and noxious fumes; and the movement, storage, and treatment of waste has to be tightly controlled to reduce the potential for vermin infestation, contamination of ground, and the spreading of disease. Pollution Control While great improvements have been made in this country, there is still an awful lot of work to be carried out. The current attitude towards the management of waste (the vast majority is still sent to landfill) is a hot topic and one that is continually debated. There is clearly a need for further education in order to alter the current 'throw away' attitude that exists. This is also seen with the issue of flytipping - the deposit of waste material on others' land - which is still rife despite concerted efforts of environmental regulatory bodies to have this addressed. There are regulatory authorities set up with the task of improving the environment as their core function. North of the border, Scottish Natural Heritage (SNH), the Scottish Environment Protection Agency (SEPA), and local authorities all have this responsibility, and are all obligated to respond to calls from the public. Since the advent of the Nature Conservation Act in 2004, all public bodies have had a duty to actively promote biodiversity, the variety and variability of living organisms in an environment, and as a result have to control pollution. Licensing A major source of control carried out by these regulatory bodies is through the licensing regime and its allocated duties. When an activity is proposed which may, directly or indirectly, create pollution to any extent, this will be assessed and, should the risk to the environment prove acceptable, ultimately regulated, usually under a chargeable licence to which a named person will be responsible. The licence holder then has the responsibility to adhere to the various conditions stated in the licence, and the regulatory body who ensures this is the case will carry out

routine inspections. Should a breach of these conditions occur, a series of enforcement steps are available. These range from a simple conversation with the holder, alerting him to the breach, right through to the collation of evidence and the submission of a report to the procurator fiscal for consideration. This monitoring takes place in the natural environment as well as licensed premises, to provide an understanding of its continual condition. Where problems are highlighted, investigations will begin to source the pollution and improve the situation. There is pressure through European Directives and local government policy to have the condition of the environment improved to certain standards by certain dates. Details of these requirements can be found on the SEPA website

[www.sepa.org.uk](http://www.sepa.org.uk). However, there are only so many staff in each of these organisations, and it would be impossible to have every stretch of Scotland's environment monitored daily. This means that, to some extent, there is a reliance on the public to alert these organisations to any problems. SEPA is the lead organisation in Scotland in terms of pollution control, and is the lead regulatory authority for discharges to water, emissions to air, and licensing of waste operations. There is a 24-hour emergency number which can be used to report any signs of pollution, 0880 80 70 60, and the public would be encouraged to use this number to report any signs of pollution or concern.