

**Environment, Health and Safety Committee**  
**Note on:**  
**LEGAL AND ETHICAL RESPONSIBILITIES FOR**  
**ENVIRONMENTAL PROTECTION**

*This Note aims to provide background information and to give the consensus view of experts on the legal and ethical responsibilities of RSC members for environmental protection. This Note is a companion to the EHSC Note on "Individual legal responsibilities for health and safety at work".*

## **1 Background**

The environment is defined as consisting of all, or any of the following media - air, water and land; and this forms the basis for environmental law. Chemists need to understand the general principles of environmental law. They also need to be aware of environmental impacts that may arise from their work activities and their use of chemicals. The law places specific duties on organisations and some individuals with regard to the protection of the environment. The purpose of this Note is to provide chemists with general information about their legal and ethical responsibilities in relation to environmental protection. It does not give specific practical examples.

An organisation's actions or inactions may give rise to either criminal or civil proceedings in relation to environmental issues. Such proceedings are usually taken against the organisation but in certain limited circumstances can be taken against individuals. The application of environmental legislation to individuals is limited compared to health and safety legislation. However, before addressing individual legal responsibilities it is necessary to consider the full scope of environmental legislation.

Statute law is made by Parliament. Most environmental law places duties on organisations but in some cases on individuals, notably directors. If there is a breach of statute a range of remedies are available to the Enforcing Authority including the serving of notices and the bringing of a prosecution before a Criminal Court. Following a successful prosecution the Court can impose a penalty as punishment for the wrong that has been done.

Common law refers to traditional law in England and Wales, the principles and rules of that are contained in decisions of the courts as reported in the law reports. As far as the environment is concerned, organisations and individuals have a duty of care to their neighbours. If an organisation or an individual person causes pollution and a neighbouring property suffers the effects of this pollution for example from noise, discharges to water or odours, then the property owner can sue the organisation or the individual in a Civil Court for damages. If the case is proven the property owner is entitled to compensation for the damage which has been done.

There are certain differences in the Common Law in Scotland but these are not dealt with in this Note. In Northern Ireland, the approach to both Statute and Common Law is similar to the English approach but again the differences are not covered in this Note.

## **2 Statute Law**

There is a wide range of environmental legislation and duties imposed on organisations. Currently environmental legislation can be grouped under the following headings: pollution prevention and control, air pollution, statutory nuisance, waste, noise and vibration pollution, water pollution, food, pesticides and chemicals, planning control and the recovery of packaging waste.

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The EHSC welcomes comments on this Note. Please send them to the Committee Secretary:  
Environment, Health and Safety Committee  
Royal Society of Chemistry  
Burlington House  
Piccadilly  
London  
W1J 0BA

Tel: +44 (0) 207 440 3337  
Fax: +44 (0) 207 437 8883  
Email: ehsc@rsc.org

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## **2.1 Pollution Prevention and Control**

The Environmental Protection Act 1990 (EPA), Part 1 established the principle of Integrated Pollution Control (IPC) for processes with a significant potential for environmental impact. The aim of the EPA was to control emissions into the environment as a whole (land, water and air) rather than having different statutes and enforcement frameworks for each part of the environment.

The Environmental Protection (Prescribed Processes and Substances) Regulations made under the EPA listed the processes as either Part A or Part B processes. Part A processes cannot be operated in England and Wales without an authorisation from the Environment Agency or in Scotland without authorisation from the Scottish Environment Protection Agency. Part B processes are dealt with in Section 2.2 below.

The original IPC system has now been replaced by a system of Integrated Pollution Prevention and Control (IPPC) in line with the requirements of EU Directive 96/61 and the requirements of IPPC are incorporated into the Environmental Permitting Regulations (England and Wales) 2010. This legislation consolidates the permitting requirements of IPPC with certain other legislation, requiring the operators of an installation to obtain a single Environmental Permit covering all relevant legislation. A separate note is available giving more details on the IPPC system.

## **2.2 Air Pollution**

The EPA also introduced a system for Local Authority Air Pollution Control by which Part B prescribed processes cannot operate without an authorisation from the Local Authority. A similar system now operates under the Environmental Permitting Regulations.

The Clean Air Act 1993, also administered by the Local Authority, controls the emission of dark smoke, grit and dust. Under this Act the emission of dark smoke is prohibited from chimneys and industrial premises and there are limits on the emission rate of grit and dust from furnaces. The Local Authority can declare smoke control areas. There are also provisions in relation to the length of chimneys under the Act.

## **2.3 Statutory Nuisances**

Smoke, fumes, gases, dust, steam, odours and noise are examples of statutory nuisance. Under the EPA abatement notices can be served by the Local Authority to stop or prevent a statutory nuisance. Alternatively, an individual can apply to a Magistrates Court for an abatement order.

## **2.4 Waste**

Part II of the EPA imposes duties on waste producers requiring them to:

- prevent anyone from depositing, treating or disposing of waste illegally;
- prevent the escape of waste;
- ensure that waste is transferred to (and by) an authorised person; and
- ensure that an accurate description of waste is provided when the waste is transferred and ensure that a transfer note is completed.

The Environmental Permitting Regulations (England and Wales) 2010, subject to some minor exemptions, require permits to be held by those persons or organisations involved in the disposal, treatment or storage of waste. The Hazardous Waste (England and Wales) Regulations 2005 (as amended) and the Waste (England and Wales) Regulations 2011 cover the identification and management of hazardous wastes, formerly known as "special wastes". Chemists should be aware of the employer's rules, procedures and controls relating to waste, including measures aimed at waste minimisation or recovery. Disposal of certain electrical equipment may be covered by the Electronic and Electrical Equipment Regulations 2006 (as amended).

Separate EHSC Notes are available giving further information on waste management and waste assessment.

## **2.5 Noise and Vibration Pollution**

Noise and vibration emitted from a site that is prejudicial to health or is a nuisance is in general considered as a statutory nuisance, see above. However, there is a range of more specific controls within other legislation including Part III of the Control of Pollution Act 1974, the Noise and Statutory Nuisance Act 1993, the Noise Act 1996, the Control of Noise (Codes of Practice for Construction and Open Sites) (England) Order 2002 and the Control of Noise (Codes of Practice for Construction and Open Sites)(Wales) Order 2002. Noise is also considered as an environmental pollutant under the Environmental Permitting (England and Wales) Regulations 2007.

## **2.6 Water Pollution**

The main legislative requirements relating to the discharge of trade effluent and water pollution are the EPA, the Water Industry Act 1991, the Water Resources Act 1991 and the Environmental Permitting Regulations (England and Wales) 2010. In order to discharge Consent must be obtained from the Environment Agency, in England and Wales, or the Scottish Environment Protection Agency in order to discharge trade effluent into controlled waters, and from the local sewage undertaker (Water Companies in England and Wales, Scottish Water in Scotland and Water Services in Northern Ireland) for discharge into sewers. It is an offence to discharge trade effluent either into controlled waters or a sewer without such consent.

The Water Framework Directive (2000/60/EC) promotes an integrated approach to the protection, improvement and sustainable use of the water environment. It provides a comprehensive framework but is a complex document with extensive annexes. The Directive has been implemented recently in England and Wales as the Water Environment (Water Framework Directive) Regulations 2003, in Scotland as the Water Environment and Water Services (Scotland) Act 2003 and in Northern Ireland as the Water Environment (Water Framework Directive (Northern Ireland)) Regulations. These Regulations require the identification of priority hazardous substance discharges that must cease by 2020 and priority substances the use of which must be phased out by the same date. Other regulations will be introduced in due course to establish and implement river basin districts under the requirements of the Directive. The EU Groundwater Daughter Directive (Directive 2006/118/EC) introduces the precautionary approach to prevent pollution.

The Water Act 2003 gives increased powers to magistrates to increase fines and stronger powers for the Drinking Water Inspectorate.

The Food and Environment Protection Act 1985, Part II requires that licences are obtained from the Department for the Environment, Food and Rural Affairs (DEFRA) for the dumping of substances or articles at sea or under the seabed. It is an offence to dump at sea without such a licence. It is understood that no such licences have been issued in the last 20 years or so.

## **2.7 Food, Pesticides and Chemicals**

The Food and Environmental Protection Act (FEPA), provides controls to reduce the risk of contamination of food in the environment. Part I of the Act gives Ministers the power to make emergency orders to prevent hazards to human health if there is an escape of substances of such descriptions and in such quantities and in such circumstances as are likely to create a hazard to human health.

Part III of the FEPA deals with both the control of pesticides and the issuing of codes of practice relating to the use of pesticides. A statutory code of practice for the safe use of pesticides on farms and holdings has been prepared which combines guidance under both FEPA and HSWA. Although failure to comply with the code is not an offence itself, it may be used as evidence in any legal proceedings for breaches of the regulations made under these two Acts. The Control of Pesticides Regulations 1986 made under FEPA gave a legal basis to the former Pesticides Safety Precautions Scheme for the approval of new and existing pesticides. However, the responsibilities for pesticides are in transition. Pesticides have recently been divided into plant protection products and biocides. Plant protection products are now covered in separate Plant Protection Products Regulations applying both in England and Wales and in Scotland.

Biocides are now covered in the Biocidal Products Regulations 2001. Those substances formerly approved under The Control of Pesticides Regulations are being reviewed under either the Plant Protection Products or the Biocidal Products Regulations and are being taken into the more recent associated approval schemes.

The packaging, labelling, transport, storage and use of chemicals are covered in a number of sets of Regulations (both national and European wide). Some of these Regulations include environmental issues, notably the Control of Major Accident Hazards Regulations 1999 (COMAH) (as amended), the Classification, Labelling and Packaging (CLP) Regulations (EC No. 1272/2008) and the REACH Regulations (EC No. 1907/2006). These latter two Regulations require that the risks to the environment from the most hazardous substances are assessed by suppliers and information on the environmental hazards and conditions of safe use are provided to the users of such substances via a safety data sheet.

COMAH applies to premises that store certain scheduled dangerous substances above specified quantities. The aim of the regulations is to prevent and mitigate the effects of major accidents, which involve these scheduled dangerous substances, to both individuals and the environment.

## **2.8 Planning Controls**

The system for land use planning required by the Town and Country Planning Act 1990 (as amended) is one of the major "anticipatory controls" for environmental protection. The system was designed to further the prevention of environmental degradation rather than deal with it after the event. Conditions can be attached to planning consent to reduce the environmental impact of a proposed development. For particular types of development, scheduled in the Town and

Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999, an environmental impact assessment has to be undertaken as part of the planning application procedure.

The Planning (Hazardous Substances) Regulations must also be complied with; these require hazardous substances consent (hsc) to be obtained for the presence of hazardous substances at or above specific amounts, known as controlled quantities, at storage or manufacturing locations. The controls ensure that hazardous substances can be kept or used in significant amounts only after the responsible authorities have had the opportunity to assess the degree of risk arising to persons in the surrounding area, and to the environment.

## **2.9 Recovery of Packaging Waste**

Under the provisions of the Environment Act 1995, a range of Regulations has been made in to implement the Packaging Waste Directive. The Producer Responsibility Obligation (Packaging Waste) Regulations 2007 set targets for the recovery and recycling of various types packaging waste. The targets are reviewed from time to time. The Packaging (Essential Requirements) Regulations 2003 require that the packaging volume and weight be limited to the minimum adequate amount to maintain the necessary level of safety, hygiene and acceptance for the packed product and for the consumer. The packaging needs to be designed, produced and commercialised in such a way as to permit its reuse or recovery, including recycling and to minimise its impact on the environment when packaging waste or residues from packaging waste management operations are disposed of. The concentration of lead, cadmium, mercury and hexavalent chromium in packaging is also limited.

## **2.10 Liabilities**

Most environmental legislation imposes duties on organisations. There are very few specific duties imposed on employees comparable to Sections 7 and 8 of HSWA. One is contained in the Control of Pesticides Regulations 1986, see below. However, in a similar manner to Section 37 of HSWA, under the Environmental Protection Act 1990 (EPA), the Water Resources Act 1991 and the Clean Air Act 1993 impose duties on Directors of organisations. If an offence is committed with the consent or connivance of, or is attributable to neglect on the part of any Director, Manager, Secretary or similar officer of a body corporate, or any person purporting to act in such a capacity, the person concerned can be prosecuted individually in addition to any prosecution taken against the body corporate. This requirement relates to the most senior level of management who are, in effect, part of the "directing mind" of an organisation and, therefore, control it. The requirement does not relate to someone described as a "manager" but who does not exercise control of the organisation. The role of managers and other employees is discussed below. Anyone who uses pesticides at work must take all reasonable precautions to protect the health of other persons, animals and plants, to protect the environment and to avoid the pollution of water. Any person who fails to take such action could be subject to prosecution.

## **3 Penalties Under Statute Law**

Criminal proceedings for offences under the environmental legislation may be initiated by the appropriate enforcing authority, such as the Environment Agency of England and Wales, Local Authority, sewage Authority, or with the consent of the Director of Public prosecutions. Prosecutions under environmental legislation may be heard either before a Magistrate's Court or, for more serious offences, by a judge and jury at the Crown Court. Both the prosecutor and the accused can elect the form of trial. Magistrates can also refer a prosecution to a Crown Court if they believe that they have inadequate powers to deal with it themselves.

The maximum fine that can be imposed in a Magistrates Court is £20,000. Magistrates can also impose custodial sentences of up to twelve months imprisonment for certain offences including the breach of an improvement notice, prohibition notice or court remedy order (see below).

In the Crown Court, fines for offences under environmental legislation are unlimited. The Crown Court also has the power to imprison individuals for up to two years for certain offences, including the breach of an improvement notice, prohibition notice or a court remedy order.

In addition to, or instead of, any penalty imposed, a court may issue a Court Remedy Order requiring the body or person concerned to correct any matters needed to achieve compliance with legislation under which the prosecution was brought. Failure to comply with such an order is an offence and a further prosecution can be brought for contempt of court.

As a matter of general principle, it is illegal to offer insurance against criminal liability. Thus you cannot insure against the payment of a fine or compensation for imprisonment. However, it is possible to insure against court costs and the legal expenses involved in the conduct of criminal proceedings.

## 4 Duties Under Common Law

There are three main types of common law that impose potential environmental liabilities:

- the rule in *Rylands v Fletcher*;
- nuisance, and
- negligence.

The rule arising from the case of *Rylands v Fletcher* has potentially widespread application to certain types of pollution incidents. The case was heard by the House of Lords in 1868 and it was held that the owner of a reservoir was liable for the damage that was caused to an adjoining landowner by water that escaped from the reservoir and flooded that landowner's mine shafts. The rule imposes strict liability, i.e. liability without having to prove negligence, on any person who controls land, for the natural consequences of escape of any substance that they brought onto the land or that accumulated on the land. An exception to liability exists if the defendant can prove that the use of the land is "natural".

Nuisance can be either private or public. A private nuisance is an unlawful interference with a person's use or enjoyment of land or some right over or in connection with the land. Examples could include noise, vibration, odour or a leaking sewerage pipe. A claimant may seek damages for the harm to their property and /or an injunction to restrain the defendant from continuing the nuisance. As a general rule the claimant must own a proprietary interest in the land affected. If the defendant's use of the land is reasonable they are not liable for the harm.

A public nuisance is an unlawful act by a defendant that materially affects the reasonable convenience and comfort of a class of persons or their health, lives or property. Typical activities that could amount to a public nuisance are owning or operating rubbish dumps or other storages of noxious waste that affect the locality. The claimant need not own a proprietary interest in the land affected by the alleged nuisance but they must prove that the alleged nuisance was not the type of harm suffered by the public at large. Defendants in nuisance actions are not limited to owners or occupiers of land who originate a nuisance but also include those who permit a known nuisance to continue on the land owned or occupied by them.

Negligence arises if a person is in breach of the legal duty of care that they owe to another person who they are aware may be affected by their actions, so as to cause the other person harm that is a foreseeable consequence of that breach of duty. In order to establish liability the claimant must prove that he/she was owed a duty of care, that the duty was not discharged and that this led to harm or a loss.

Trespass to land may also impose environmental liability where there is a direct interference with neighbouring land. However, many incidents give rise to indirect migration of pollutants, so that trespass may not be applicable in the majority of cases.

In common law the employer is vicariously liable for the acts and omissions of his employees during the course of their employment. Employers are, therefore, liable for the harm to the environment caused by their employees. As a result, any action that is taken alleging nuisance or negligence has to be against the employer.

## 5 Professional Behaviour

In most cases environmental legislation does not impose specific responsibilities on individuals. However, the duties and responsibilities of managers and employees are usually described in their employer's environmental policy and management system, job descriptions and contracts of employment.

Under general environmental legislation there is no formal requirement for an organisation to appoint a competent person or to have competent assistance as required under HSWA.

However, the application procedure for IPPC permits does require the applicant to identify the way organisational responsibilities are to be discharged and the individuals that are responsible. The Environment Protection Act goes further and requires that a waste management permit can only be issued to a "fit and proper person". Such a person should be technically competent and this can be demonstrated by obtaining a Certificate of Technical Competence from the Waste Management Industry Training Board that is appropriate to the type of waste facility being operated.

Notwithstanding the above specific requirements, all organisations need to employ competent persons to help them to comply with environmental legislation. This can be achieved either by appointing their own employees who have the relevant expertise and training or by using the services of a consultancy or an individual consultant. Within many organisations it is a chemist who provides the necessary expertise. However, the ultimate responsibility for compliance with environmental legislation remains with the organisation.

Chemists, whether they are directors, managers, employees or consultants, are expected to behave in a responsible manner as outlined in the RSC's Code of Conduct. The RSC expects members to use their skills to advance and safeguard the welfare of humanity, particularly in the fields of health and safety and environment. Members should be

aware of the law relating, inter alia, to environmental protection. Members should use their knowledge and experience for the protection and improvement of the environment. In addition to any legal obligations, members also have a duty to minimise adverse effects on the environment, to recommend and use best environmental practice and to seek opportunities to promote sustainable development. As part of their obligations to their employers and to society, members should identify hazards and assess the environmental impact of their activities and give appropriate advice. Members should regard the environment as an asset to be subject to continual improvement rather than simply a resource for consumption.

## **Conclusion**

Individual legal responsibilities for chemicals in the environment are not as well defined as those for health and safety at work. Nevertheless, chemists have an important role to play and they need to use their professional expertise in accordance with the RSC's Code of Conduct. Environmental issues are important and chemists need to continue to develop their expertise and keep up to date in this rapidly changing field.

In order to provide additional guidance to members on environmental issues a series of EHSC Notes has been prepared covering environmental management systems, environmental risk assessment, integrated pollution prevention and control, waste disposal, and waste assessment, life-cycle assessment, green chemistry and the precautionary principle.

This Note was prepared by a Working Party of the RSC Environment, Health and Safety Committee.

The members of the Working Party were: Dr I Wrightson (Chairman), S J Cooper, Dr M Crookes, Dr N King, Dr P Lewis, J Lerner, Dr D H Lohmann, Dr C Maxwell, D M Sanderson, Dr C Watts, P Jackson and Dr S Lipworth (Secretary).

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