

**ENVIRONMENTAL
LIABILITY:
WATER POLLUTION**

**RISK DIRECTORY
2021/2022**



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INTRODUCTION

Environmental liability usually arises out of the legal obligation to rectify environmentally damaged or polluted surroundings. It is often based upon the principal that the polluter pays, i.e. those that cause pollution are responsible for the clean-up costs. Additional liabilities can also arise from civil action and criminal fines. Pollution can be defined as ‘the introduction or presence of harmful substances or products into the environment, which because of their properties or quantity, cannot be absorbed by the ecosystem’.

Environmental pollution can affect land, water or air, or a combination of these. Pollution can be either sudden or gradual. Sudden pollution can be caused by a single act, event or emission, such as the toxic sludge spillage by MAL Zrt in Hungary in 2011. Gradual pollution takes place over a period of time and consists of numerous or continuous events. An example would be a leaking oil tank that may only release low levels of pollutant but cause significant cumulative damage.

This guidance seeks to provide details of how water can become polluted, key legislation and risk reduction and control measures.

WATER POLLUTION



In order for pollution to occur all three of the following must be in place:

- **Source**, such as a hazardous substance.
- **Pathway**, i.e. the route the source takes to the receptor.
- **Receptor**, i.e. that which is harmed by the source.

Example sources of water pollution include:

SOURCE	POLLUTANT	EFFECT
Agriculture	Organic materials and de-oxygenators	Reduces the oxygen content in water, which can affect aquatic life
Agriculture	Fertilizers	The excessive growth of algae affecting aquatic life
Industries using heavy metals and pesticides	Toxic substances	Food contamination and arising health issues
Industries generating particulate by-product	Suspended solids	Contamination of water supplies
Industries using water for temperature control, such as power stations	Thermal pollution	Excessive growth of algae and harm to fish populations. if inhaled

Water pollution can be caused by what are known as ‘point source pollution’, or ‘diffuse pollution’. Point source pollution would involve an identifiable release of a pollutant into a water source via a direct pathway, such as a spillage of chemicals into a river or lake. Diffuse pollution is where pollution is more gradual involving a more complex pathway, such as rainwater washing pollutants from the land, before finding its way into a watercourse. The nature of the pathway can make the source of diffuse pollution more difficult to identify. Water pollution can be difficult to control, depending on the type of watercourse affected. A fast-flowing river would rapidly disperse pollutants, whilst pollution into a lake or reservoir may take longer to disperse.

Examples of receptors include people, animals, plants, ecosystems and controlled waters.

KEY LEGISLATION



It should be noted that there is considerable difference in water pollution legislation between England and Wales, Scotland and Northern Ireland.

As such, the majority of legislation detailed below is applicable in England and Wales only. A summary of water pollution legislation applicable in Scotland and Northern Ireland is available here:

SCOTLAND



NORTHERN IRELAND



Key legislation applicable in England and Wales (unless specified otherwise) includes:

THE WATER RESOURCES ACT 1991 (AS AMENDED)

- a) **relevant territorial waters**, that is to say, subject to subsection (4) below, the waters which extend seaward for three miles from the baselines from which the breadth of the territorial sea adjacent to England and Wales is measured;
- b) **coastal waters**, that is to say, any waters which are within the area which extends landward from those baselines as far as:
 - the limit of the highest tide; or
 - in the case of the waters of any relevant river or watercourse, the fresh water limit of the river or watercourse,
 together with the waters of any enclosed dock which adjoins waters within that area;
- c) **inland freshwaters**, that is to say, the waters of any relevant lake or pond or of so much of any relevant river or watercourse as is above the fresh water limit;
- d) **groundwaters**, that is to say, any waters contained in underground strata.

N.B. Subsection (4) referred to above grants the Secretary of State power to determine other waters as controlled waters.



The Act covers a wide range of water related topics, such as: control of pollution; flood defences; control of fisheries; and management of water resources. It should be noted that some parts of the original legislation have now been amended or replaced by other legislation.

The legislation allows the enforcing authority to impose works notices to prevent or remedy water pollution to controlled waters. Where the enforcing authority undertakes such works, the Act allows them to recover their costs from those who caused or knowingly permitted the pollution. The scheme for works notices is defined within The Anti-Pollution Works Regulations 1999 (as amended). Another duty imposed by the legislation is the requirement to hold a licence to abstract or impound water.

THE WATER INDUSTRY ACT 1991 (AS AMENDED)

This Act, which is principally aimed at the water and sewage sector, regulates discharges into sewers, and makes it an offence to discharge trade effluent outside the constraints of a consent.

Trade effluent is defined by the legislation as follows:

Trade effluent:

- (a) means any liquid, either with or without particles of matter in suspension in the liquid, which is wholly or partly produced in the course of any trade or industry carried on at trade premises; and*
- (b) in relation to any trade premises, means any such liquid which is so produced in the course of any trade or industry carried on at those premises,*

but does not include domestic sewage.

A consent will typically permit specific volumes and types of discharge in addition to prescribing conditions to ensure the sewage treatment process is not damaged by the discharge. This will usually require that the trade effluent is pre-treated to ensure it is compatible with normal sewage. Further duties and restrictions can be imposed via The Trade Effluents (Prescribed Processes and Substances) Regulations 1989 (as amended).

ENVIRONMENTAL PERMITTING REGULATIONS (ENGLAND AND WALES) 2016 (AS AMENDED)

The Regulations define those activities requiring an environmental permit or registration of exemption before they can be undertaken. It is an offence under this legislation to cause or knowingly permit a water discharge activity, such as discharging trade or sewage effluent into inland freshwater or coastal waters, unless complying with an environmental permit or exemption. Full details of activities covered are available here:

[CLICK HERE](#)



ENVIRONMENTAL DAMAGE (PREVENTION AND REMEDIATION (ENGLAND) REGULATIONS 2015

These Regulations, which are applicable in England only, implement the principle of the polluter pays. Similar legislation is in place in Wales, Scotland and Northern Ireland, which is available here:

[WALES](#)



[SCOTLAND](#)



[NORTHERN IRELAND](#)



The Regulations only apply in respect of pollution which occurred since 1st March 2009 when the original legislation was introduced. and in relation to operators of defined activities contained within Schedule 2. The list of defined activities can be viewed here:

[CLICK HERE](#)



The Regulations specifically define 'environmental damage' as:

'... damage to:

- a) protected species or natural habitats, or a site of special scientific interest,*
- b) surface water or groundwater,*
- c) marine waters, or*
- d) land.'*



Under the Regulations, operators of an activity must take all practicable steps to prevent damage where there is an imminent threat and notify the appropriate enforcing authority. The enforcing authority can serve notice on the operator detailing the measures required to prevent damage and the timescales for completion. Where environmental damage has already been caused, the operator must take all practicable steps to prevent further damage, and again must inform the relevant enforcing authority who may serve notice on the operator to prevent further damage.

All investigations into the cause and extent of the environmental damage are to be undertaken by the enforcing authority. If the damage is deemed to be environmental damage, the operator will be notified. The operator must then submit proposals for the remediation of the environmental damage to the enforcing authority, including timescales. A remediation notice is then served on the operator, specifying: the damage; remediation measures; time period for the remediation measures to be taken; whether any ongoing monitoring or investigations are to be undertaken; and the right to appeal against the notice. Further remediation notices may be served if necessary.

The Regulations stipulate three types of remediation:

Primary Remediation	Any remedial measures which return the damaged area to the condition it would have been had the damage not occurred.
Complementary Remediation	Consists of measures, including at alternative sites, where primary remediation does not fully reinstate the damage caused.
Compensatory Remediation	Consists of measures to compensate for the loss of natural resources or impaired services from the date of damage until remediation has achieved its objective.

Persons found guilty of an offence under these Regulations are liable to fines and/or imprisonment, up to a maximum of two years. Where a body corporate is found guilty, negligent responsible persons of that body corporate can also be found guilty.



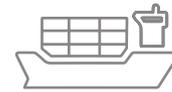
CONTROL OF POLLUTION (OIL STORAGE) (ENGLAND) REGULATIONS 2001

These Regulations relate to bulk storage of oils in excess of 200 litres on industrial and commercial premises in England. Similar legislation applies in Scotland and Northern Ireland but not Wales.

The requirements include:

- Oil should be stored in a sufficiently strong container.
- There must be a secondary containment system, or bund.
- Any valves, filters or similar devices must be located within the secondary containment system.
- Where a fill pipe is located outside the secondary containment system, this must be provided with a drip tray.
- Taps and valves on mobile bowsers to be fitted with a lock and be locked shut when not in use.

It should be noted that the Regulations do not apply to the storage of waste oil or storage within buildings.



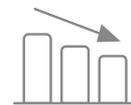
**OVER 300 SERIOUS
WATER POLLUTION INCIDENTS
IN ENGLAND EVERY YEAR**

All existing environmental legislation in Great Britain (England, Scotland and Wales), has been retained under the European Union (Withdrawal) Act 2018, but reference to the European Union has been removed from individual pieces of legislation where appropriate.



RISK

RISK REDUCTION AND CONTROL MEASURES



SITE DRAINAGE

There are three main types of drains that may be present on industrial and commercial premises. Surface water drains should carry only uncontaminated run-off rainwater to a watercourse. Foul water drains carry dirty or contaminated water to a sewage works for treatment. Some sites may also have trade effluent drains, which are designed to carry contaminated water to an on-site treatment plant prior to discharge off-site.

It is imperative that all drains are suitably connected, and not just to the nearest drain. All manhole covers, gullies and gratings should be suitably marked, usually via a colour coded approach. Typically, blue indicates a surface water drain, red a foul sewer and yellow a trade effluent drain. It is recommended that an up-to-date drainage plan be maintained and made available to anyone working on the drainage system. This is necessary for both routine maintenance and in the event of an emergency.

Areas to consider as part of the plan include:

- Drainage layout and access.
- Foul drains and surface water drains to be indicated along with direction of flow.
- Layout of buildings and roads.
- Separators, sumps and soakaways.
- Off-site discharge points for surface water and trade effluent.
- Watercourses, boreholes or wells on or near the site.
- Suitable locations on site for emergency and/or portable storage.
- Location of any on-site treatment areas for trade effluent.
- Location of fire hydrants.
- Bunded areas including details of liquids stored and retention capacity



DOMESTIC SEWAGE

All drainage from sinks, toilets, showers, canteens etc. should be connected to the foul water drains.

INTERCEPTORS AND OIL SEPARATORS

These are often located at the end of a site's drainage system, where surface water enters a watercourse or other controlled water. They operate on the principal of oil floating on the surface of water, and solids sinking to the bottom. They are commonly used in locations such as industrial yards, car parks and vehicle maintenance areas.

Interceptors should be subject to regular inspection and the removal of collected oil and silt.

TRADE EFFLUENTS

Where there is a possibility of the discharge of trade effluents, it is important that the organisation assesses the most suitable treatment method. The following options are available:

- The effluent could be collected from site by a road tanker and taken to a suitable licensed treatment plant. This may be appropriate for effluent such as waste oils.
- The effluent could be discharged directly via the foul water drains to a sewage works. This would be the subject of a consent and will depend on the type and volume of effluent to be discharged. This may not be appropriate for some effluent.
- Partially treat the effluent on-site before discharging to a sewage works. This may be most suitable for highly acidic or alkaline effluent and again this will be subject to a consent. Any discharged effluent must be between 6 and 9 on the pH scale of acidity/alkalinity. This method can cause metal salts to be precipitated, which will need to be filtered out.
- Discharge to controlled water following treatment. Again, this will be tightly controlled via a consent.
- Treat the effluent on-site and re-use the treated water for site use. This can be a cost-effective method where large volumes of effluent are treated on-site.

STORAGE AND TRANSPORTATION OF POLLUTANTS

The storage and transportation of potentially polluting substances in tanks, drums, pipes etc. should be subject to strict controls. Examples of good practice include:

- Minimising the use and storage of potential pollutants.
- Locating bulk storage facilities away from areas vulnerable to environmental damage.
- Whenever possible, avoiding underground storage and pipework, as leaks can be difficult to identify and repair. Where these cannot be avoided, regular monitoring of contents should be undertaken.
- Providing secondary containment facilities, such as bunds, double-skinned tanks etc. Secondary containment should have a minimum capacity of 110% of the total tank volume. Where there is more than one tank in the same bund, the bund should have a capacity of 110% of the largest tank, or 25% of the total capacity of all tanks, whichever is greater.
- Labelling receptacles with their content and capacity.
- Conducting regular inspections and planned preventive maintenance.
- Supervising all deliveries. These should take place away from the surface water drains. Catch pits with isolating valves may need to be fitted at the delivery point. Automatic cut-off valves and alarms can also be fitted to delivery points to prevent over-filling.
- Considering the use of non-interchangeable colour-coded connections or pipework.
- Ensuring good levels of site security, such as perimeter fencing, CCTV, intruder alarms, lockable valves etc.

POLLUTION INCIDENT RESPONSE PLANS

The environmental impact of leaks and spills can be minimised if effective measures are undertaken. A Pollution Incident Response Plan would normally address all environmental impacts, not only those relevant to groundwater. Areas to consider as part of the plan include:

- Emergency contact details.
- Inventory and location of potential pollutants.
- Site layout.
- Site drainage plan.
- Location of emergency response equipment, such as drain covers and spill kits.
- Emergency procedure protocol.
- Incident reporting procedure (including emergency services).

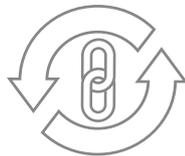


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ACKNOWLEDGEMENTS, REFERENCES AND RECOMMENDED FURTHER READING

- Environmental Management Systems - ISO 14001 - BSI
- Discharges to Surface Water and Groundwater: Environmental Permits - Gov.UK
- Environmental Permitting - Core Guidance for the Environmental Permitting (England and Wales) Regulations 2016
- Oil Storage Regulations for Business - Gov.UK: <https://www.gov.uk/guidance/storing-oil-at-a-home-or-business>

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