

# MAKING POLLUTION PREVENTION PAY

*How not to run foul of  
pollution Law*



**David Cole**

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Design by ALS Designs, Waterlooville  
[www.als-designs.co.uk](http://www.als-designs.co.uk)

[dcole@pollutionpays.biz](mailto:dcole@pollutionpays.biz)  
Tel: 01299 823158  
Fax: 01299 823158

# Introduction

## **David Cole has been passionate about the Environment and the design of practical solutions to achieve zero pollution into the environment**

David served an apprenticeship with Ford motor company where he was involved with the maintenance of production plant. In the early 1990s he studied the high cost of spillages. All spills were dealt with by spill kits deployed to prevent the spillage reaching the drains. Following a study of waste disposal and accidents relating to slips and falls whilst dealing with spills he developed a product called envirovalve.

The concept of Envirovalve was to permanently place an airbag in the drain so that a button could be pressed by an operator to seal off the drains. The drain then became a tertiary containment vessel allowing the material to be salvaged for reuse. Major incidents could be dealt with in a controlled manor without risk to the operator.

The concept of a retro fit-able in-drain containment system was born.100s of sites now use David's original invention.

In 2006 the Environment agency asked David to develop a portable envirovalve for the Fire service to use. This equipment is now used as part of the response kit for dealing with fires on a daily basis.

The original concept of in-drain containment can be seen throughout many of the PPG's with reference to containment valves and portable stopper systems.

Tertiary containment is now a key part to a business's EMS. David has recently been part of the EA steering committee redrafting CIRIA164 as a result of the Bunsfield fire in 2005. As he works with key industries he develops new technology and has supported many industries to develop secure containment systems.

David believes innovation is the key to making a business profitable. If we have a good clean managed environment we have a sustainable business environment to work with.

We have picked out the key parts to being pollution free and hope that you contact us if you need help to understand your requirements.

Looking forward to hearing from you,

**David Cole**

**David Cole**

# What do I need to know about pollution containment and Why?

## 1. Polluter Pays

*“To cause or allow pollution is against the law. Society is no longer prepared to accept businesses that don’t take their environmental responsibilities seriously.”*

*“Magistrate Courts can impose fines up to £50,000 for pollution offences. If the case goes to crown court there is no limit to the fine and you could go to prison. As the polluter you may also have to pay the clean up and court costs.”*

**Source: Environment Agency ‘pollution prevention pays’  
January 2013**

In recent cases companies have been fined up to £200,000 for not having adequate environmental protection and are facing additional remediation and clean up costs which may run to hundred of thousands, pounds.

## 2. Where can pollution come from?

- Delivery and use of materials
- Overfilling containment vessels
- Plant equipments failure
- Containment failure

- Fires, explosion or failure to contain fire fighting water/foam
- Wrong sewer pipe connections
- Discharge of partially-treated or raw effluent
- Vandalism
- Flooding
- Blocked or damaged drains

### **3. Is Your Site Right?**

#### **Environmental Agency Ten Point Check List**

The Environment Agency have developed a 10 point check list, this checklist is the first step to understanding your environmental requirements. We hope that this tip booklet will allow you to complete the 10 point check list correctly and then address the areas of concern.

10 points may seem a simple survey but we suggest that you take some time to understand the points in the checklist.

*Example:* If you have a drainage contractor who cleans out you bunds and separators, do you know he completes the task correctly? Do you have all consignment notes for disposal? See note 8

*Example:* If you had a fire could you contain any run off generated from the fire fighting process? See not 1,2, 10

### **Site drainage**

- 1** Do you know where your drains go?
  - only clean water, such as roof drainage, to surface water drains
  - all contaminated water, such as sewage and trade effluent, to foul drains
- 2** Do you have an up to date drainage plan of your site?

### **Storing oils, chemicals and other polluting materials**

- 3** Are storage containers fit for purpose, regularly inspected and maintained?
- 4** Are storage areas and containers sited away from watercourses, surface water drains and unsurfaced areas?
- 5** Do storage containers have secondary containment, such as a bund, to contain any leaks or spills?
- 6** Do you have procedures for safe delivery and handling of materials?

### **Waste management**

- 7** Is your storage and handling of waste safe and does it comply with the law?
- 8** Do you know where your waste goes? Can you prove it's disposed of correctly?
- 9** Are you reducing and recycling your waste?

### **Emergency response**

- 10** Do you have a plan, equipment and training to deal with pollution and fire emergencies which is regularly tested.

## **4. Legislation**

ALL commercial sectors are governed by environmental regulation; this is enforced by the regulator and courts. A list of the main regulations are shown below.

This framework applies to any commercial organisation, Colleges/Universities, Local Authorities, Factories, Logistic, Transport, Fuel, Sole traders etc. The fundamental aim of the legislation is to protect Public Health, animals, plants, land and water. The basis of the legislation is equal to all member states of the European Union.

European countries may not always address pollution at the time due to political and economic pressure. The Environmental damage regulations (EDR) are a retrospective law allowing a country to look back, what may be ignored for economic reasons can therefore be addressed when the climate is more suitable?

## **5. What are Guidelines for?**

The Environment Agency (EA) publishes Pollution Prevention Guidelines (PPG's) and the CIRIA Reports with a general theme "Contain at source".

The PPG's and the CIRIA reports are the equivalent to the motorists "Highway code" i.e. the lay persons understanding of how to comply with the legislation. Spending time reading them will furnish any company with the right tools to operate within the law.

Should you have a pollution incident and you are operating within these guidelines it will not prevent the clean up cost however it will minimise any risk of prosecution.

NB: The PPG's can only cover a small part of technology and will become outdated very quickly. The PPG's aim is to provide a base level to encourage business to invest time and money into sustainable and cost effective controls.

## 6. PPG's

PPG's generally refer to everyday operational requirements some of these guidelines are listed below.

- **PPG1: General guide to pollution prevention.**
- **PPG2: Above Ground Oil Storage Tanks:**

*Guide to the correct storage and servicing of oil tanks*

Following these guidelines will help you comply with the requirements of the Control of Pollution (Oil Storage) (England) Regulations 2001 (OSR England), the Control of Pollution (Oil Storage) Regulations (Northern Ireland) 2010 and the Water Environment (Oil Storage) (Scotland) Regulations 2006.

- **PPG3: Use and design for oil separators:**

Separators (Interceptors) can be found in locations where there is a risk of Hydrocarbons reaching controlled water. Car parks, loading areas, Highways, refuelling areas etc. PPG3 gives guidance of usage and an understanding of how separators work and how to maintain and monitor them.

- **PPG7: Refuelling facilities:**

Safe guidance to storage and delivery of fuels including section 8 which refers to the problems created by Bio fuel mixes and means of containment.

- **PPG13: Vehicle Washing and Cleaning**

Gives clear guidance to any business cleaning vehicles. Cleaning vehicles can cause serious pollution if not carried out correctly.

- **PPG18: Control of Firewater and major spills & CIRIA164 Control of Major spills and firewater run-off:**

Guidance to protecting controlled water during fires. Many businesses fail to address the pollution risk of catastrophic events. Even relatively low risk businesses e.g. shops pose a risk from contaminated sprinkler water reaching controlled water. Gives guidance to planning, identifying and managing risk. CIRIA164 also addresses major spills and the design principals needed to deliver a robust containment system; looking at the reliability of secondary and Tertiary containment systems.

- **PPG21 & PPG22: Incident Response Planning**

Guidance on planning and managing spills and incidents.

- **PPG26: Drum / Bulk container (IBC's) Storage:**

Advice on storage and handling techniques preventing spills reaching the environment.

## **7. Environmental Agency**

The Environmental Agency (EA) is a Government Body responsible for Protecting and Improving the Environment in England and Wales. The Environmental Agency enforces legislation, having powers of Civil Sanctions. They can enter your site at will and impose on the spot fines.

However one of their primary roles is also to advise and help industry. If there are areas of Legislation or PPG's that are not understood then the EA will advise. They could be considered as the best free environmental advice resource available.

## **8. Insurance**

Since the introduction of the EDR the full liability of environmental harm has become more common. Most businesses have environmental liability cover however this relates to third party claims. If a site has a pollution incident that the Regulator decides to act upon the site is unlikely to be covered under insurance. "Pollution is against the law" The regulator is not a third party therefore it is unlikely that a standard insurance policy will cover remediation or legal fees.

There is no limit to remediation charges following an incident, remediation costs can escalate from thousands to millions of pounds. It is important to work with the 10 Point check list and relevant PPG's to review the potential risk that your business has and how a major incident would impact on your business.

## **9. Use your Environmental Management System (EMS)**

The purpose of an Environmental Management System is to prepare and plan the control of an environmental incident. For the EMS to be of use it must be up to date, readily available and understood by all key staff. Not locked away in remote file. Test the EMS procedures in the same way you would test your fire drill. Record all your tests.

Try to imagine a spill happening right now, what would you do?

## **10. Having ISO14001 does not Mean you are Compliant !**

Businesses use ISO14001 to show that they have an understanding of the impact their business has on the environment. ISO14001 is not a single level; it is a moving target for business wanting to achieve low carbon and environmental impact. All sites with ISO14001 will have committed to an environmental management system (EMS)

### **Would your EMS hold up in an emergency ?**

You should have a clear understanding of zero spill release to the environment. Having ISO14001 gives a business increased opportunities but if pollution does occur they leave their EMS open to scrutiny.

If you have areas that wouldn't meet ISO14001 they should be noted as a None Compliance and passed to a responsible person.

You cannot use ignorance as part of a defence following a pollution incident but failure to escalate a NC leaves the individual and company open to prosecution.

## **11. Staff Training**

Any EMS and ISO14001 system will address staff training. Making all staff aware of their responsibility to the environment can have a major impact on reducing incident and saving money. Staff cannot highlight hazards if they don't have the skills or empowerment to deal with them. Persons causing pollution can be held culpable. An act of pollution can result in a prison sentence for the responsible person.

## **12. Penstock Valves for low volume spills**

Penstock valves have been a generic term used for many years. The valve is best suited to controlling and managing flows of clean process materials. They have been used for many years by industry as storm drain isolation valves but are unlikely to seal off a spill. The basic valve uses metal faced seals requiring a back pressure to create a seal. Drainage runs have a maximum operating pressure of 0.5bar where a penstock valves works up to 16bar. The continual flow of silt also prevents the valve seating correctly.

Any site using containment valves should inspect and test routinely the operation and serviceability of any containment

system. If the valves leak it is unlikely that they will prevent any pollution escape. If the valve is leaking it is probably not meeting your sites EMS or insurance requirements.

### **13. Drainage and Spill tips**

Drains can be considered just like blood vessels in the body. If the drains fail the site is going to have a heart attack. Looking after the drains regularly is a cost effective solution.

Drains are usually gravity fed taking water or foul away from a building. If a spill or fire occurs the drainage network will be a main source of pollution. The correct maintenance and identification of site drainage can be a key part to the EMS. If the drains are blocked, cracked, unidentified or incorrectly connected there is little chance of preventing a pollution escape.

Using conventional above ground spill kits to stop spills reaching drains can be a difficult challenge. Can staff safely reach or enter the spill area to deploy equipment. Spills occur as unplanned events so staff will never be fully ready to respond. If an operation is high risk the site should eliminate the hazard with automation and proactive controls.

If a containment valve has been fitted the drain run itself should be in a condition capable of containing the relevant head pressure. Drains should be tested to 0.5bar static head when installed. Overtime joints and pipe work will become damaged and should be inspected just like any other part of the business. Many COMAH and high risk sites utilise Tertiary containment systems whereby the sealing of drains allows the filling of a bunded area. If the Drains or Valves

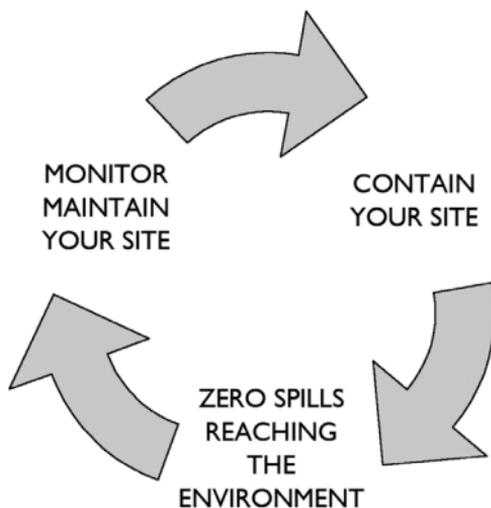
don't seal the bund system is unlikely to fill. In the event of a fire the runoff water may need to be held for several days or weeks, this can only be achieved if the system is fit for purpose and operational.

## 14. Firewater, what is it?

Firewater is the material used to control and extinguish a fire. During a fire Sprinklers and other fire suppression systems will produce runoff. This runoff will be a pollutant if allowed to escape a site. If the pollutant causes a risk to the environmental or public health the regulator will consider the option to prosecute.

Your EMS should consider how to manage a major fire.

## 15. The complete spill cycle



## 16. Spill protection

### How Do We Contain At Source?

Equipment for dealing with Water/ground pollution, Spills and Fire Water runoff.

- ❑ **SPILL KITS**
  - Reactive, used as clean up and to contain spill area
  - Manual deployment.
  
- ❑ **Bunds**
  - Fixed permanent bunds containing >110% of stored product
  - Portable bunds for barrels and used product
  - Bund walls
  - Kerbs
  - Sleeping policeman
  
- ❑ **Drain protection & Covers above ground**
  - Flexible mats to seal over tops of Drains
  - Metal clamps to fix over the top of drains
  
- ❑ **Drain protection , tertiary containment**
  - Portable Bladder system
  - Fixed Bladder system
  - Mechanical valve systems
  - Divert to storage tanks
  
- ❑ **Ponds , lagoons & settling ponds**
  - Run off ponds

## SPILL KITS

Spill kits have been used primarily as a reactive product to deal with a spill quickly and efficiently. They can be used to create containment around a spill to prevent the spillage spreading. Most of the materials used in spill kits are disposed of as contaminated waste. The basic spill kit is designed to deal with relatively confined spills up to 250ltrs. The deployment will require staff to enter the spill area and consideration must be made as to the safety of usage. Can someone safely reach the spill without the risk, could the spill be an acid, give off a gas? Could someone slip when we trying to reach the spill? When using a spill kit the spill and spill kit become contaminated waste and will need to be disposed of correctly.

### **Pros**

- Cheap
- Industry accepted
- Ease of usage

### **Cons**

- Land fill, bigger the spill the more waste
- Reactive only
- Not good for firewater or large spills
- Single usage
- Require manual observation and deployment

## BUND

A bund is fitted around bulk storage facilities to contain a minimum of 110% of the stored material. Bunds are required to control residual loss as well as total failure. When outside the bunds will fill with water if uncovered, rain water must be

kept low as it will affect the 110% capacity. Bund pumps are the best option to keep bund water levels controlled; many sites still rely on manual inspection and pumping. The bund pump must be suitable to filter any pollutant found in the bund water. During the Bunsfield fire in 2005, bunds on the site failed causing uncontrolled contamination of the area around the site.

### **Pros**

- Fixed
- Industry accepted

### **Cons**

- Must be maintained well, kept empty
- Expensive to build
- Often not built to standards due to cost
- Contamination of collected water

## **PALLET BUNDS AND TEMPORARY BUNDS**

Pallet bunds are designed to carry oil drums and collect operating loss and spills. If stored outside they will fill with water and require manually emptying. They are designed to contain 110% of stored material. Drums must be placed correctly and should be maintained well to prevent failure.

Temporary bunds are used when dealing with major spills and fires. The run off can be pumped into the bund preventing pollution of controlled water. Bunds can also be used to store chemical, stock, fish whilst maintenance is completed.

They do require manual placement and storage.

## **Pallet bund**

### **Pros**

- Easy to use
- Industry accepted

### **Cons**

- Fill with water if outside
- Need to be manually emptied to prevent spillage from overfilled bund
- Risk of over loading
- Plastic units not fire proof

## **Temporary Bunds**

### **Pros**

- Portable
- Easy to use
- Industry accepted

### **Cons**

- Expensive
- Planned use only

## **DRAIN COVERS**

Drain covers can be flexible mats made of a chemical resistant material, Neoprene, Clay etc or a fixed metal cover that can be clamped over a drain. They need to be deployed correctly and the operator will need to use the correct PPE and identify the spill hazard before entering the spill area. The covers prevent the spill entering the drain. When containing a spill with a drain cover other spill kit products will be need to control and clear up the spill. When using drain covers it will encourage a spill to spread increasing the need to quickly manage the area to prevent other drain been exposed.

### **Pros**

- Low cost
- Industry accepted
- Can be reused (not clay mats)

### **Cons**

- Manual handling
- Manual installation
- Can leak if not fitted correctly
- Require other measures to be used

### **PORTABLE Drainblok™**

Temporarily stop a flow in a duct, normally used at a pre identified location within the storm drain. The equipment is deployed by a trained operator turning the drain into a containment vessel. Airbags can contain very large spills when combined with site drainage. Can be used as a proactive system when carrying out maintenance where it would be difficult to control a spill area. When used for a spillage the material can be vacuumed and recycled. As with spill kits the spill needs to be identified before entering any hazard. The operator must observe that the system stays inflated.

### **Pros**

- Large containment
- Industry accepted (Used by Fire service and Environment Agency)
- Recycle containment
- Part of EMS ISO14001
- Operators do not enter spill area

### **Cons**

- Requires trained operation
- Bags can fail

- Drains need to be inspected
- Identify spill prior to operation

### **FIXED Drainblok™ SYSTEM**

This is a similar principal to the portable Drainblok™ accept the air bag is fitted permanently into a pre identified location. The stoppers can be inflated by the activation of a controller placed in a safe zone, thus reducing the need for staff to come into contact with a spillage. The fixed system requires a site drainage plan and drains to be maintained as a tertiary system. Can seal off a site in a few minutes but have proved difficult to test on a regular PM inspection. Once deployed they can stay inflated for a reasonable time but any air loss within the system will result in failure.

#### **Pros**

- Easy to use, Push or remote activation
- Can be fully automated with alarms
- Supports iso14001 fire water containment planning
- Fixed
- Industry accepted

#### **Cons**

- Stopper can leak or fail
- Air leaks in system prevent full operation
- Short term seal
- Rodent damage
- Difficult to test
- Confined space entry needed when working in manhole.
- Must be maintained

## 17. Spill Containment Table

Spill Containment	Reactive	Proactive	Ease of Remote Activation	Retro fit-able	Manual handling
<b>Spill Kits</b>	YES	NO	NO	YES	YES
<b>Fixed Bund</b>	YES	YES	N/A	YES	N/A
<b>Portable Bund</b>	YES	NO	N/A	YES	YES
<b>Chemical Stores</b>	YES	YES	N/A	YES	N/A
<b>Drain Covers</b> • Clay • Neoprene mat • Mechanical clamp	YES	YES	N/A	YES	YES
<b>Portable Bladder System</b>	YES	YES	N/A	YES	YES
<b>Fixed Bladder System</b>	YES	YES	YES	YES	NO
<b>Fixed Penstock</b>	YES	YES	SEE COMMENT	SEE COMMENT	SEE COMMENT
<b>Toggle valve system</b>	YES	YES	YES	YES	YES
<b>Tertiary bunding</b>	YES	YES	N/A	N/A	N/A

Type	Solar powered	Testable	Suitable for long term containment	Comments
	N/A	NO	NO	Manual users require a good understanding of risk prior to use
	N/A	YES	YES	REF TO CIRIA164. Expensive and require high capital expenditure
	N/A	YES	YES	Require good EMS used with other containment systems and equipment
	N/A	YES	YES	Primary used for Chemical and IBC storage. Normally fitted with bunded base. Expensive.
	N/A	YES	YES	Drain covers are similar to spill kits, they require installation. Some are single use only. If used during a spill operator must use correct PPE
	N/A	YES	NO	Used by fire service for blocking drains where the operator need to be kept away from the spill. Designed to be used once but can be tested.
	YES	YES	NO	Uses a fixed stopper. Ideal as a single use emergency system. Prone to air leaks due to rat damage so needs regular inspection. Fits most pipe types and is installed quickly. Some systems claim to auto reset but bladder material stretches over time and systems require inspection. Bladders need time to inflate.
CONT	NO	YES	SEE COMMENT	Penstock require correct installation and are most suited to the process and water industry. Have been used as the preferred containment valve by the EA but are not water tight and are difficult to test for operation. Not easy to retro fit automation is normally by industrial drives.
	YES	YES	YES	Special designed valves to retro fit into storm drains and manholes. Valves can be operated manually or remotely
	N/A	YES	YES	Equipment can range from kerbs, sleeping policemen and drains. The bunds can be part of everyday equipment not always seen as part of the environmental control.

## Two Case Studies

### Case Study One

#### **Problem:**

Following a fire a metal plating company found that cyanide leaked through penstock valves in to a river killing fish. The site decided to install a new valves systems with a visual weekly test procedure prior to any action being taken by the EA.

#### **Solution:**

David Cole was asked by the customer to develop a fully automated tertiary containment system. The system would work from the fire alarm eliminating the need for manual activation. The valves were fitted into the manhole out falls to allow easy visual inspection and testing.

#### **Result :**

In 2013 the EA took court action against the site for £500,000. The court found the company guilty of pollution but reduced the fine to £133,000 due to the fact that the site had addressed the original problem rather than wait for the case to come to court.

## Case Study Two

### **Problem:**

A major food manufacturer needed to monitor storm drainage Ph levels due to suspected ground contamination

### **Solution:**

David Cole designed a battery powered Ph system linked to a GSM email alert. When the Ph value exceeded consent levels the isolation valves on the site would close allowing the flow to be treated in the effluent plant.

### **Result:**

The site discovered that during rain fall the Ph levels rose to a very high level. The site decided to isolate the drainage permanently until the ground contamination could be isolated and removed.

## Testimonials

*“County Drains have been working with Dave for the past 10 years. We have found his knowledge of the Environment Regulations a benefit to our customers and the products he designs to prevent pollution are second to none.*

*Dave will study and Environmental situation and come up with a plan to prevent a major catastrophe, such as how to control fire water, spillages and also bio fuels such as Ad Blue.*

*We have no hesitation in recommending Dave Cole to any of our clients.”*

**Stewart Osgood** - Director  
COUNTY DRAINS LEICESTER LTD

*“Working with David allowed us to use existing site topography and drainage systems to maximise emergency containment on site*

- create meaningful quick response scenario's;*
- which were easily communicated to and understood by regulatory bodies, emergency services and on site staff;*
- satisfy our legal duties set out in our operational permit and under the COMAH regulations;*
- operate the site, having confidence that we are able cope with emergency situations around the clock;*
- install systems, which were not over complicated allowing for rapid troubleshooting when faults are found during routine testing;*
- plan for alternative arrangements when issues arise.”*

**Graham Vaughan**  
Abbey Metal finishing HS&E Manager

# Appendix

## Pollution Legislation

- **EU Water Framework Directive**

Provides a framework for improved water protection through the implementation of river basin management plans.

- **Groundwater Directive 80/68/EEC**

Together with the Groundwater Daughter Directive 2006/118/EC aims to protect groundwater from pollution. Under Article 22 of the Water Framework Directive the 1980 Directive is due to be repealed in December 2013.

- **Freshwater Fish Directive 2006/44/EC**

Aims to protect and improve the quality of rivers and lakes to encourage healthy fish populations. Under Article 22 of the Water Framework Directive (WFD) the Directive is due to be repealed in July 2013. Designated waters will become protected areas under the WFD.

- **Shellfish Waters Directive 2006/113/EC**

Aims to protect shellfish populations and sets the standard for water quality in estuaries and other areas where shellfish grow and reproduce. Under Article 22

of the Water Framework Directive the 1980 Directive is due to be repealed in October 2013.

- **Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) (Amendment) Regulations 2010 SI 1091 (Environment Agency)**

Amends 2010/639, by correcting defects in definition and offences clauses.

- **Nitrates Directive 91/676/EEC**

Forms part of the Water Framework Directive and aims to reduce water pollution by nitrate from agricultural sources and to prevent such pollution occurring in the future.

- **Nitrate Pollution Prevention (Amendment Regulations 2012 SI 1849 (Environment Agency)**

Designation of nitrate vulnerable zones, Amends SI 2008/2349. Other previous revision SI 2009/3160.

- **Environmental Impact Assessment and Natural Habitats (Extraction of Minerals by Marine Dredging) (England and Northern Ireland) Regulations 2007 SI 1067 (Environment Agency)**

Controls dredging in marine waters, by requiring consultation with the regulator and an environmental statement as part of the application

- **Environmental Damage (Prevention and Remediation) (Amendment) Regulations 2010 SI 587 (Natural England Local Authorities and Environment Agency)**

Brings into force rules to force polluters to prevent and repair damage to water systems, land quality, species and their habitats and protected sites. The polluter does not need to be prosecuted first, so remedying the damage will be faster. Previous revisions SI 2009/153 and 2009/3275.

- **Environmental Civil Sanctions Order 2010 SI 1157 (Environment Agency)**

Allows the environmental regulator to impose civil sanctions on a business committing certain environmental offences, as an alternative to prosecution and criminal penalties of fines and imprisonment.

- **Environmental Civil Sanctions (Miscellaneous Amendments) Regulations 2010 SI 1159 (Environment Agency and Natural England)**

Amends 2010/1157 to set out the offences that civil sanctions may be imposed for.

- **Local Authorities Flood and Water Management Act 2010**

Introduces powers for local authorities to manage flood risk and allows water companies to restrict water use during shortages. When fully in force, it will encourage sustainable drainage systems and introduce a risk based approach to reservoir safety.

- **The Environmental Permitting (England and Wales) Regulations 2010**  
**SI 675 (Environment Agency and Local Authority)**

Provide a consolidated framework for environmental permits and exemptions for industrial activities, mobile plant, waste operations, mining waste operations, water discharge activities, groundwater activities and radioactive substances activities. It also sets out the powers, functions and duties of the regulators. There are a number of other previous revisions and revocations between 2007 and 2012.

- **The Environmental Permitting (England and Wales) (Amendment) Regulations 2012 SI 630 (Environment Agency and Local Authority)**

Amend the EPR 2010 making minor changes to exemptions, changes the procedure for transferring environmental permits in certain situations permits and reduces requirements for certain anaerobic digestion installations and those who burn waste derived fuel that has ceased to be waste.

- **Control of Pollution (Oil Storage) Regulations 2001 SI 2954 (Environment Agency)**

Imposes general requirements for preventing pollution of controlled waters from oil storage, particularly fixed tanks or mobile bowsers. Makes contravention a criminal offence.

- **Bathing Water Directive 76/160/EEC**

Aims to protect public health and the environment from pollution in bathing waters. The revised EU Directive 2006/7/EC will be come into force in 2015 when we will publish our first classification of bathing waters.

- **The Bathing Water Regulations 2008 SI 1097 (Environment Agency)**

Implements the revised bathing Directive in England and Wales and establishes the management of bathing water quality.

- **Urban Wastewater Treatment Directive 91/271/EEC**

Aims to protect the environment from the adverse effect of waste water discharges.

- **The Urban Waste Water Treatment (England and Wales) (Amendment) Regulations 2003 SI 1788 (Environment Agency)**

Amend the Urban Waste Water Treatment (England and Wales) Regulations 1994. Requires monitoring across the collection, treatment and discharge of urban waste water and the discharge of waste water from industrial sites.

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Amend the Urban Waste Water Treatment (England and Wales) Regulations 1994. Requires monitoring across the collection, treatment and discharge of urban waste water and the discharge of waste water from industrial sites.

*“County Drains have been working with Dave for the past 10 years. We have found his knowledge of the Environment Regulations a benefit to our customers and the products he designs to prevent pollution are second to none.*

*Dave will study and Environmental situation and come up with a plan to prevent a major catastrophe, such as how to control fire water, spillages and also bio fuels such as Ad Blue.*

*We have no hesitation in recommending Dave Cole to any of our clients.”*

**Stewart Osgood** - Director  
COUNTY DRAINS LEICESTER LTD

.....  
“Working with David allowed us to use existing site topography and drainage systems to maximise emergency containment on site

- create meaningful quick response scenario’s;
- which were easily communicated to and understood by regulatory bodies, emergency services and on site staff;
- satisfy our legal duties set out in our operational permit and under the COMAH regulations;
- operate the site, having confidence that we are able cope with emergency situations around the clock;
- install systems, which were not over complicated allowing for rapid troubleshooting when faults are found during routine testing;
- plan for alternative arrangements when issues arise.”

**Graham Vaughan**  
Abbey Metal finishing HS&E Manager



David Cole • [dcole@pollutionpays.biz](mailto:dcole@pollutionpays.biz)  
Tel: 01299 823158 • Fax: 01299 823158

Sandy Lane, Stourport on Severn, Worcestershire DY13 9QB