A Green Paper on Firewater

June 2011

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A revised and updated version of the original paper first published in November 2010

SUMMARY

Firewater - this term refers to water and or foam used to fight a fire which requires careful disposal, due to it's potential toxicity. Despite being one of the most common pollution incidents that the Environment Agency attend, it's an area which the vast majority of businesses are completely ignorant about. This lack of awareness means that site architects, civil engineers and the site owners themselves are making no realistic provision for the containment of Firewater run-off. Without adequate containment the Emergency Services and Environment Agencies often have to delay the quenching of a blaze in order to calculate the impact of the run-off on the local environment. Between 2001 and 2009 in England and Wales, the Environment Agency (EA) attended 7519 fires in order to monitor and assist the Fire Service with containing firewater run-off. From these incidents the EA recorded 4523 cases where Firewater run-off had an impact on the local environment, 191 of these cases were deemed to have had a serious or major impact on the environment. Based on these published statistics, that equates to the EA attending an average of 70 firewater run-off incidents per week in England and Wales. The Firewater run-off from a blaze is a deadly cocktail that should be a paramount Health and Safety concern for virtually all businesses, especially as studies have shown that 80% of businesses close for good within 18 months of a major fire. The most recent statistics collected by the Association of British Insurers (ABI) indicate that the insured cost of fires in 2008 was £1.3 billion, a 16% increase on the previous year. Commercial fire damage reached a record £865 million, up 15% on 2007 figures. The most recent ABI figures also suggest that insurers paid out £639m — or £3.6m every day — for damage caused by fires in the first half of 2009. If this trend continues, it's anticipated that UK plc could stand to lose as much as £10 billion as a result of commercial and industrial fires by 2020. It's estimated that approximately 50% of all large fires at business premises were thought to be deliberate.

FIREWATER A DEADLY TOXIC COCKTAIL

For the vast majority of businesses a fire is one of the biggest risks and the greatest fears, so the sight of the Fire Service arriving to tackle the blaze is a very welcome sight. However, the extinguishing of the fire could be the catalyst for a whole new, and potentially more devastating set of problems ..... Firewater. This term refers to water and or foam used to fight a fire which requires careful disposal, due to it's potential toxicity. Despite being one of the most common pollution incidents that the Environment Agency attend, it's an area which the vast majority of businesses are completely ignorant about. Between 2001 and 2009 in England and Wales, the Environment Agency (EA) attended 7519 fires in order to monitor and assist

the Fire Service with containing firewater run-off. From these incidents the EA recorded 4523 cases where Firewater run-off had an impact on the local environment, 191 of these cases were deemed to have had a serious or major impact on the environment. Based on these published statistics, that equates to the EA attending an average of 70 Firewater run-off incidents per week in England and Wales.

Firewater contains materials stored in the building, as well as dissolved and particulate materials formed from the combustion process itself, and those generated through the quenching process. Firewater can be particularly polluting when the building or site being extinguished contains materials, ranging from pesticides to detergents. Certain types of premises, including farms and chemical sites pose special risks because of the types of materials present. Like any liquid, Firewater will always find the path of least resistance, and on many sites this is via Sustainable Drainage Systems (SUDS) chambers. Although these systems are very effective in diverting rainwater from directly entering public sewers, streams and rivers there is evidence that in the event of large spill or Firewater run-off incident that they can actually exacerbate the problems.

Although any type of building has the potential to produce toxic materials in the event of a fire, parcel warehouses for example are packed with boxes, the contents of which are unknown to the site owner, who will be ultimately financially liable for any resulting Firewater pollution. The Fire Service estimate that they use approximately 500,000 litres of water per hour to fight an average fire, at the height of the Buncefield disaster 250,000 litres of foam and 25 million litres of water were being used.

Unless the site has adequate containment for the run-off, the threat of pollution to rivers, groundwater and aquatic life from Firewater is often assessed as being so great that In many cases the Fire Service will allow the incident to burn itself out. Thereby sacrificing your business in favour of the environment. In addition to watching helplessly as your business disappears before your eyes, the Environment Agency can prosecute, imposing fines and passing on the full costs involved in returning the local environment back to it's pre-incident conditions, including re-stocking of rivers etc. Before being allowed to commence trading, you will also be required to implement the kind of containment and safeguards that should already have been in place. A recent blaze at a chemical factory in Huddersfield is estimated to have cost the company £6m in damage and loss of business, they have also been hit with a bill for £300k from the Environment Agency and HSE for their incident investigation costs.

One of the most serious incidents of Firewater pollution occurred in 1986 at a chemical factory in Switzerland, in the five hours it took to extinguish the fire an estimated 30 tons of pesticide entered the River Rhine. The contaminated

run-off travelled down 900km of the river killing hundreds of thousands of fish and waterfowl. In November 2010 a blaze at a warehousing and distribution site near Darlington resulted in a cocktail of Firewater and factory products, mainly shampoo, contaminating the River Skerne and killing hundreds of fish. In early January 2011 a suspected arson attack on an industrial estate in the West Midlands resulted in contaminated Firewater making it's way via the drains to a local wildlife haven. At first the Environment Agency reported that it had contained the Firewater, but two weeks later local residents reported around 500 dead fish at the Nature Reserve. There have also been several high profile fires at tyre depots, which caused Firewater run-off pollution to local rivers and streams, one of these fires burned for seven weeks. In some cases factories and depots have been closed down for more than a year. Sadly, in many cases the sheer weight of the financial fines, remuneration costs and inadequate insurance cover mean that the closures are permanent. Studies have shown that 80% of businesses close for good within 18 months of a major fire. Even minor fires can cause serious problems for businesses, as insurance companies will not pay out for damaged equipment if they have been deemed to be in breach fire codes. Unless companies realise the dangers and their responsibilities, legal and moral, and have permanent auto-monitored drainage containment systems installed, this type of incident will continue to occur.

Any company looking to attain or keep ISO 14001 accreditation must show a cohesive and adequate containment policy for spill control and Firewater. The dangers of Firewater aren't limited to real fires, a false alarm which triggers the sprinkler system can expel between eight and twenty four gallons of water, per sprinkler, per minute. Environmental Innovations Limited have pioneered several products which can contain spills and Firewater safely within a sites existing drainage. The systems can be easily retro-fitted, and at a fraction of the cost of bunding an entire site. These installed systems can be configured to work in tandem with existing alarm systems to ensure that they monitor and deploy automatically to contain the contaminating substances. Ingeniously using the drainage system itself as a containment vessel, by securely blocking the outlets with lockable non-return valves to prevent pollution of local water supplies. The spill or contaminated Firewater run-off can then be safely extracted, treated and where possible, recycled. The system then returns to it's monitoring stance, allowing normal flow to resume in readiness for a future incident. This system of containing Firewater within the drain is approved and recommended by the Fire Service in their current manuals and in PPG28, and is sophisticated enough to even generate incident warning text or voice-mail messages to alert the emergency services and key staff.

The very nature of an accident means that it cannot occur at a convenient time, and with 362,000 fires in the UK in 2009 the odds are stacked against anyone who hasn't put extensive preventative measures in place. The recent

introduction of European Directive ELD 2004/35/EC has tightened regulations and penalties to ensure that the 'polluter pays'. The new legislation can even impose prison sentences on negligent directors, and the size of the fine and cost of the clean-up, bears no relevance to the size of the companies balance sheet. And as many companies have found to their horror, their basic liability insurance more often than not won't cover them for environmental clean-up costs, especially if there are doubts that adequate precautionary measures had been in place. Something else to consider is that It's estimated approximately 50% of all large fires at business premises were thought to be deliberate.

There is little doubt that ignorance of the dangers of Firewater and related Environmental Legislation is a major factor, however, it's also apparent that a great many companies are simply gambling the costs of doing something to protect their site against the chances of being caught and prosecuted. It might be reprehensibly possible, to keep a spill contained from the authorities, even if it's not contained from polluting the environment, but a fire is something that will be a literal beacon to everyone for miles around that there is a potential environmental disaster taking place.

The most recent statistics collected by the Association of British Insurers (ABI) indicate that the insured cost of fires in 2008 was £1.3 billion, a 16% increase on the previous year. Commercial fire damage reached a record £865 million, up 15% on 2007 figures. The most recent ABI figures also suggest that insurers paid out £639m — or £3.6m every day — for damage caused by fires in the first half of 2009. If this trend continues, it's anticipated that UK plc could stand to lose as much as £10 billion as a result of commercial and industrial fires by 2020.

Ethically and legally it's simply not an option to adopt a "fingers crossed" attitude to containment precautions. Companies have a responsibility of care to their staff, their neighbours, human and aquatic, the environment and their balance sheet. In the Environment Agency's own words, prevent, detect, contain and mitigate.

CASE STUDY


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In May 2010 a large explosion and fire broke out at the Grosvenor Chemicals Factory in Linthwaite, West Yorkshire. It took more than 150 firefighters and 25 fire engines to bring the serious blaze under control. The fire had ripped through parts of the factory which housed glue-based products and pesticides creating dangerous fumes. Concerns over the toxic smoke closed 15 local schools and many businesses and local residents were told to stay indoors as a precaution. However, as with many fires the problems didn't stop with the extinguishing of the flames. Despite the best efforts of the Fire Service and the Environment Agency Firewater run-off entered the River Colne killing hundreds of fish. Tragically fish stocks in the river were only just starting to recover from a foam spillage in July 2007 and a chemical leak in March 2008.

The fire is estimated to have cost the company £6m in damages and lost business. They were also hit with a bill for £300k to cover the investigation costs of the HSE and EA.


© www.saddleworthnews.com

As an indication of the long term effects of a Firewater incident like this, restocking of the River Colne with 5,000 four-month old grayling began in June 2011. It is hoped that the fry will grow in the river and begin to spawn themselves in the spring of 2013.

Further reading on this story

http://www.bbc.co.uk/news/uk-england-leeds-13726998

http://www.saddleworthnews.com/?p=1932

http://www.examiner.co.uk/news/local-west-yorkshire-news/2010/05/24/linthwaite-grosvenor-chemicals-fire-health-warnings-over-toxic-cloud-86081-26507840/

http://www.examiner.co.uk/news/local-west-yorkshire-news/2010/11/15/legal-dispute-over-300k-bill-for-investigation-into-linthwaite-grosvenor-chemicals-fire-86081-27657657/

FIREWATER NEWS REPORTS 2009 to 2011

June 2011 Four people were killed in an explosion and fire at the Chevron oil refinery in west Wales. The explosion was in a 730 cubic metre storage tank where maintenance was being carried out. Once the site is safe a multi-agency investigation into the cause of the explosion will commence. Our thoughts are with the family, friends and colleagues of the deceased …
http://www.bbc.co.uk/news/uk-wales-south-west-wales-13635757

June 2011 Special equipment has been brought in by the Environment Agency after a blaze broke out in a waste recycling unit on the Suffolk /Essex border.Fire fighters issued a public safety message after burning waste material and plastic inside the centre sent copious clouds of black smoke billowing towards homes ...
http://www.eadt.co.uk/news/update_air_monitoring_equipment_brought_in_as_plumes_of_thick_black_smoke_rise_from_haverhill_recycling_centre_1_912235

June 2011 More than 60 firefighters have spent the night tackling a major blaze at a waste oil depot in Kent. The fire officer said foam had to be used to put out a very hot oil fire, while two high volume water supplies were needed for a major foam strike - one for cooling and one for foam production ...
http://www.bbc.co.uk/news/uk-england-kent-13651666

June 2011 Scores of fish have been found dead in a brook running through a Peterborough beauty spot. Environment Agency officials have been alerted but say it could be some days before the results of tests to find out the cause of the death are known. It is feared by some residents that a factory fire nearby last month may have polluted the brook, causing the fish to die …
http://www.peterboroughtoday.co.uk/news/environment_2_17112/concern_as_fish_die_in_beauty_spot_brook_1_2224957

May 2011 Shell UK has admitted health and safety breaches after an explosion and fire at a gas terminal in Norfolk. By failing to notify the Environment Agency of the failure or malfunction of the separator vessel VG110 it had not complied with a pollution control regulation. By failing to prevent emissions of run-off and fire-fighting foam, the firm admitted it had failed to comply with a pollution prevention control permit ...
http://www.hvnplus.co.uk/news/shell-admits-charges-over-gas-blast/8614618.article

May 2011 More than 50 firefighters battled a blaze which ripped through outbuildings at a Shropshire farm destroying two businesses.The Environment Agency was also called in a bid to prevent toxic water used to dose the flames at the fibreglass unit from entering a nearby pool which could have killed fish stocks" …

http://www.shropshirestar.com/news/2011/05/23/huge-fire-near-bridgnorth-destroys-two-businesses/

May 2011 Members of the public are being urged to avoid the area around the scene of a large fire at a plastics recycling plant in Leicestershire. Leicestershire Fire and Rescue Service and the EA are working to try to prevent run-off from the water being used to tackle the fire getting into local watercourses ...
http://www.inloughborough.com/news/099709/Statement%20on%20behalf%20of%20agencies%20dealing%20with%20a%20fire%20at%20Loughborough%20%203pm%20update

April 2011 Thirty firefighters have spent several hours tackling a blaze at a chemicals factory in Bolton, crews included environmental protection officers "Dialogue was established with United Utilities and the Environment Agency due to the water run-off from the incident" …
http://menmedia.co.uk/manchestereveningnews/news/s/1417455_firefighters-tackle-chemical-blaze-in-bolton

April 2011 A pallet firm where a fire raged for more than nine months is facing court after being charged by the Environment Agency. South Wales Fire and Rescue Service spent nearly ten months battling the blaze at the recycling factory as up to 300 tonnes of wood continued to burn despite efforts to remove hundreds of tonnes of smouldering material from the site ...
http://www.southwalesargus.co.uk/news/8971263.Firm_faces_charges_over_nine_month_Cross_Keys_pallet_blaze/#

March 2011 Firefighters fought a blaze which ripped through a pharmaceutical company, destroying a massive warehouse and sparking a warning for people to stay indoors. “The fire fractured water pipes in the building and this, added to the amount of water we used, caused a run-off into a nearby brook but the Environment Agency was at the scene dealing with the situation” ...
http://www.northantset.co.uk/news/local/firefighters_keep_blaze_at_bay_1_2535266

February 2011 Environment Agency Wales has hailed the action of North Wales Fire and Rescue Service and two north Wales farmers to avoid a major pollution incident following a fire. A combination of new environmental equipment provided by the Agency and responsible action from the farmer prevented this contaminated water from polluting the rivers …
http://www.farminguk.com/news/Fire-service-and-farmers-save-river-from-pollution_19930.html

January 2011 Firewater runoff from firefighting efforts flowed into storm sewer systems and then into a local creek and lake. Nearby residents found dead fish floating in unnatural-coloured water in the creek the day following the fire. The clean-up cost is estimated at $4million …
http://www.bclocalnews.com/okanagan_similkameen/kelownacapitalnews/news/114178189.html

December 2010 The chemicals that spilled after a fire at a Chemical plant off wiped out aquatic life in a stretch of Trail Creek and cost two dozen people their jobs. Environmental groups believe budget cuts over the past few years at the state Environmental Protection Division, the lead state agency in environmental disasters like the Trail Creek spill, may be so deep that the agency may not be able to do its job of environmental protection any more ...
http://onlineathens.com/stories/123110/new_763658698.shtml

November 2010 A fire at a chemical factory which polluted the River Colne, is estimated to have cost the company £6m in damages and lost business, now they have been hit with a £300k bill by the HSE and Environment Agency for their investigation into the incident ...
http://www.examiner.co.uk/news/local-west-yorkshire-news/2010/11/15/legal-dispute-over-300k-bill-for-investigation-into-linthwaite-grosvenor-chemicals-fire-86081-27657657/

November 2010 Owners Of Tyre Depot Face Firewater Contamination Prosecution After Blaze in Ely. The fire involved tyres and shredded rubber material, and had spread to the site buildings, several site vehicles and fuel storage tanks. The EA are prosecuting the firm under the 1990 Environmental Protection Act …
http://www.wisbechstandard.co.uk/news/owners_of_fenland_tyre_depot_destroyed_in_blaze_to_face_environment_agency_prosecution_1_684584

November 2010 Up to 100 fish were discovered dead after products stored at the Stiller Warehousing and Distribution factory in County Durham, mixed with water used by firefighters and covered the water with thick foam, in places up to 15ft deep. It is estimated that about 100,000 litres of contaminated water found its way into the river. The fire began when about 7,500 pallets containing aerosols caught light ...
http://www.thenorthernecho.co.uk/news/8670847.Police_say_factory_fire_was_not_started_deliberately/

November 2010 Firefighters had to deal with 50mph winds as they tackled a huge barn blaze in Chester which destroyed hundreds of tonnes of hay, straw and wood. Incident commander Duncan Palin “If water is used to fight a fire involving straw or hay and the debris and water combination swills on to nearby land or streams then this becomes an environment issue. “So following agreement from the Environment Agency we took the decision to leave the incident to burn itself out” ...
http://iccheshireonline.icnetwork.co.uk/0100news/0100regionalnews/tm_headline=chester-firefighters-tackle-wimbolds-trafford-barn-fire-in-50mph-winds&method=full&objectid=27667598&siteid=50020-name_page.html

October 2010 Environment Agency chiefs have been called in to help investigate a major barn blaze near Market Drayton and monitor water run-off pollution control (Firewater) which resulted in the death of around 100 fish in a nearby lake ...
http://www.shropshirestar.com/news/2010/10/01/environment-agency-to-probe-north-shropshire-barn-fire/

October 2010 A fire at an industrial estate sparked a chemical emergency. The chemical was later identified as being used in the manufacture of detergent, but because of its corrosive nature, United Utilities and the Environment Agency officials have been called out. A specialist firm is now on site working to prevent chemical reaching the drains or local watercourses …
http://menmedia.co.uk/manchestereveningnews/news/s/1345144_chemical_alert_after_fire

July 2010 Five firms have been ordered to pay almost £10m between them in combined fines and costs for their parts in the Buncefield oil depot explosion. Hertfordshire Fire and Rescue Service had to set up and maintain containment of the fire water and foam run off from the Buncefield disaster. At the height of the incident 250000 litres of foam and 25 million litres of water were used ...
http://www.bbc.co.uk/news/uk-england-10660356

July 2010 A fire at a tyre firm on an industrial estate in Wem, Shropshire, burned for almost 20 hours. About 50 firefighters were sent to tackle the fire at Kingpin Tyres, the third fire at the firm since April of 2009.
http://www.bbc.co.uk/news/10505570

July 2010 A fire at a packaging and recycling centre in Wales required 150 firefighters to bring the blaze under control. The Fire Service worked closely with the Environment Agency in attempts to contain the Firewater and try to prevent environmental damage ...
http://www.packagingnews.co.uk/environment/fire-crews-tackle-wastecare-blaze/

June 2010 Solvent Factory fire Station manager Craig Holmes said the chemicals involved made the situation more difficult."After consulting with hazardous materials officers we decided the best course of action would be to adopt a defensive role. "That is not applying water on to the fire for the simple reason of the environmental impact from the water run-off would have been more damaging than the fire itself" ...
http://www.bbc.co.uk/news/10336273

March 2010 Hundreds of tonnes of peat, garden waste and wood ignited and burned for nine days causing serious Firewater run-off concerns. “But if we were to try to extinguish it with large volumes of water, the water has to go somewhere and that may cause an environmental impact. What we’re trying to do is extinguish it as quickly as possible with the least amount of environmental impact.” ...
http://www.granthamjournal.co.uk/news/grantham-area-news/recycling_plant_fire_burns_on_nine_days_after_blaze_ignited_1_366086

December 2009 An international waste management company were fined £240k Fine following a major chemical fire in Preston. 132,000 litres of chemicals were set alight, HSE inspectors believe it was caused by lithium batteries igniting nearby waste materials ...
http://www.hse.gov.uk/press/2009/coinw001veolia09.htm

June 2009 High Street Fashion chain New Look was fined £400,000 after breaching fire safety regulations when a fire broke out at its Oxford Street store. The business was fined £250,000 for failing to supply a "suitable and sufficient" fire risk assessment for the premises and £150,000 for failing to adequately trained staff, showing just how costly cutting back on fire safety procedures can be in the long run ...
http://www.nowletsgetstarted.co.uk/fire_safety_survey.aspx

OLDER INCIDENTS

January 2008 Deformed calves born after Buncefield - Hertfordshire MP Mike Penning raised the issue in parliament saying a farmer blamed the deformities on the use of perfluorooctanesulphate (PFOS).
http://news.bbc.co.uk/1/hi/england/beds/bucks/herts/7179187.stm
Mike Penning "www.mikepenning.com" is Conservative MP for Hemel Hempstead, He has previously served on the Health Select Committee and as executive member of the Conservative 1922 Committee. He was a Shadow Minister for Health from 2007 to 2010. Prior to that he served as an Essex fireman for many years. Quote from him "The oil companies are putting profits before the safety and wellbeing of my constituents. They cannot be allowed to get away with re-opening the site before compensation has been settled and before the results of the HSE Inquiry are known."

September 2006 One of the 'UK's leading water and swimming pool chemical treatment companies, whose careless operational practices led to a major fire incident and decimated the entire fish population along an eight mile stretch of the River Coln, has been ordered to pay £146,000. Biolab (UK) Ltd pleaded guilty to two charges of failing to take all measures necessary to prevent a major accident, and to limit the consequences of such an accident, and causing pollution to the River Coln.
http://www.environment-agency.gov.uk/news/123716.aspx

FURTHER ESSENTIAL READING

PPG28 Controlled Burn

This guidance will help you decide when and how to use a controlled burn as part of a fire fighting strategy to prevent or reduce damage to the environment. You should consider this guidance on a site by site basis when developing an incident response plan for your site.
Download full Guidance at
"http://publications.environment-agency.gov.uk/pdf/PMHO1005BJIT-e-e.pdf"

PPG29 - Publication Summer 2011

Safe storage - Combustible materials, prevent and control fire: PPG 29 - Consultation

This is new guidance currently under development. The public consultation closed on 24 December 2010. This is a link to the consultation documents. We hope to have the guidance available in the summer of 2011.

Fire Service Manual

This Fire and Rescue Manual is the first manual within the Fire Service Operations series dedicated to the protection of the environment. This publication provides information and guidance designed to support firefighters, Fire Brigade Service managers, and trainers in their work at operational incidents, training events, and during day-to-day activities.

Download full manual here

"http://www.communities.gov.uk/publications/fire/environmentprotectvol2"

The Full DEFRA Guidance on the New Environmental Civil Sanctions :

The EA intends to start to use these new powers on 4th January 2011.

"http://www.defra.gov.uk/environment/policy/enforcement/pdf/defra-wag-guidance.pdf"

PPG7 : Refuelling Facilities :

Advice on how to protect the environment through the safe delivery, storage and dispensing of fuels.

http://publications.environment-agency.gov.uk/epages/eapublications.storefront

PPG18 Managing Fire Water and Major Spillages

These guidance notes have been drawn up to assist in the identification of the equipment and techniques available to prevent and mitigate damage to the water environment caused by fires and major spillages.

Download full Guidance at

"http://publications.environment-agency.gov.uk/pdf/PMHO600BBUD-e-e.pdf"

PPG21 : Pollution - Incident Response :

Good practice guidance to produce incident response plans for dealing with

accidents, spillages and fires, to help protect the environment.

http://publications.environment-agency.gov.uk/epages/eapublications.storefront

PPG22 : Incident Response – Dealing with Spills :

Advice on how to deal with spillages to avoid pollution.
http://publications.environment-agency.gov.uk/epages/eapublications.storefront

PPG26 : Safe Storage -
Drums and Intermediate Bulk Containers :

The regulations apply to: tanks (can be permanent or temporary); drums greater than 200 litres capacity; intermediate bulk containers (IBCs); mobile bowsers.
All above PPGs are available for download at
http://www.environment-agency.gov.uk/business/topics/pollution/39083.aspx

Impact is proportional to dose x sensitivity

The dose is determined by the concentration of the pollutant, mass flow rate and exposure period. The sensitivity depends on the location of the site and the characteristics of the receptors.
The assessments should include impacts on: human health, the water environment, air pollution and the ground, including deposition from the air.
The key stages in a full risk assessment of an accidental release of contaminants are summarised in a table available on the following link :

http://publications.environment-agency.gov.uk/pdf/PMHO1005BJIT-e-e.pdf

ENVIRONMENTAL LIABILITY DIRECTIVE 2004/35/EC :

The Directive establishes a strong framework for environmental liability based on the "polluter pays" principle, with a view to preventing and remedying damage to animals, plants, natural habitats and water resources, and damage affecting the land. Where the polluter is at fault or negligent powers exist to ensure that the costs as well as any fines are allocated, in extreme cases prison sentences can be enforced.
Download full Directive www.europa.eu

IS YOUR SITE RIGHT?

Use this Environment Agency 10-point checklist to help you make sure

Storing and handling oils, chemicals and other risky materials

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

Waste management

5. Is your storage and handling of waste safe and does it comply with the law?
6. Do you know where your waste goes? Are you sure it's disposed of correctly?
7. Are you reducing and recycling your waste? Do it and save money.

Site Drainage

8. Do you have an up to date drainage plan of your site?
9. Is your site drained correctly?

- only clean water, such as roof drainage, to surface water drains.
- all contaminated water, such as sewage and trade effluent, to foul drain.

Dealing with pollution emergencies

10. Do you have a plan, equipment and training to deal with pollution emergencies?

If you answered 'no' to any question, or are unsure, use the Environment Agency's "Pollution Prevention Pays – getting your site right" guidance available from their website or call us for advice **+44 (0)1279 600 440**

If you have any questions about Firewater or how to make your business safer for your staff and the environment please call

+44 (0)1279 600 440