Guidance on protecting health and the environment from domestic heating oil spills

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1. Introduction

1.1 Oil is a valuable fuel, especially in rural areas, but it can be a source of pollution too. If you or someone you know has oil fired central heating, this leaflet could help you avoid the considerable cost, inconvenience and hazards that can arise from an oil leak.

1.2 Over recent years, there has been an increasing number of pollution incidents caused by faulty or badly maintained domestic central heating oil tanks. In some circumstances, drinking water supplies have been contaminated. Houses have been evacuated because oil in the ground has produced fumes that have made it impossible to live in the properties.

1.3 The Essex Contaminated Land Consortium, which consists of representatives from all Essex Local Authorities, has jointly produced this booklet to help prevent oil spills and also to advise on what to do in the unfortunate event of one happening. A little time and money spent on maintenance now could avoid clean up costs in the order of tens of thousands of pounds in the future.

1.4 ***Please note that the Local Authority and the Environment Agency will not be able to do the clean up for you. We can offer you advice and will ensure that the spill is cleaned up to the correct standards.***

2. Oil & the Environment

2.1 Oil is toxic and harmful to plants and animals. It threatens wildlife habitats and is a danger to water at the surface and underground.

2.2 Groundwater (water stored in the ground) is a major water resource in many parts of Essex. Over 80% of our public water supply boreholes are supplied by groundwater, as are many rural households. Spilt oil can migrate into surface water and groundwater. Depending on the soil and rock type, oil can travel quickly over a large distance underground without there being any trace at the surface.

2.3 Oil spills occur regularly in Essex. This is a result of the large number of domestic oil tanks, especially in rural villages, where there is limited mains gas supply.

2.4 Between June 2001 and September 2008 more than 150 pollution incidents reported to the Environment Agency involved spills from domestic and commercial heating oil facilities. Of these 23% were due to tank failures, 25% to pipe work failures and 29% due to accidental damage.

2.5 Cleaning up oil spills is difficult and can be very expensive. A recent domestic spill cost a householder over £100,000 to clean up. If a public drinking water company's drinking water source is affected the cleanup cost can exceed £1 million. It could also result in the abandonment of a source and relocating to a new site which could cost many millions of pounds.

2.6 Heating oil and other fuels can also attack plastic water pipes, leading to unpleasant taste and smells, and potential health risks. In the area supplied by Anglian Water, nearly 50 events have been reported over the last five years involving damage to plastic water pipes due to spillages of heating oil. These have affected both domestic and commercial premises, and each case has involved considerable disruption to the customers involved, including costly replacement of plastic pipe work.

3. Oil & Health Risks

3.1 Fumes from oil can give people symptoms such as:-

- ❖ Headaches;
- ❖ Nausea and vomiting;
- ❖ Skin rashes;
- ❖ Sore throats;
- ❖ "Feeling drunk" (sleepy, fuzzy-headed, slow to react, dizzy);
- ❖ If levels of oil fumes are very high, it could be possible to lose consciousness.

3.1 Vapours from oils in confined spaces can become explosive when mixed with air.

3.2 Oil that seeps into the soil can contaminate drinking water by penetrating supply pipes. This can cause an odour and unpleasant taste and over a longer period can be a serious risk to your health. The only solution is complete replacement of the entire pipe, which can be extremely costly.

Safeguards are in place to ensure that water from public drinking water supplies is always safe to drink. Water quality is checked at every stage on its journey to customers' taps. Advanced water treatment processes and an extensive monitoring programme are in place to ensure the water supply is of the highest quality.

4. Other Risks From Oil

4.1 Spilt oil can soak into brickwork and weaken the structure of a building.

4.2 Spilt oil at the surface will kill vegetation, including garden lawns.

5. What Insurance Cover Do You Need If An Oil Leak Occurs?

5.1 Make sure that you have adequate insurance cover, which does not just replace the lost oil.

5.2 When acquiring a tank, or property with one, make sure that your building insurance policy covers leaks and spills from it! Not all household insurance policies cover this type of leak.

5.3 Check that your insurance policy covers leaks from oil, damage to your property and to your neighbours' ("third parties") property and the necessary clean up costs. Check with your insurer to see if environmental damage is covered e.g. pollution of ground and surface water. Your policy should also cover loss to private water supplies, such as wells, on your property and neighbouring land.

5.4 If your policy does not cover the above, get it covered or find a policy that does! If a leak occurs and you are not insured, you may have to pay for the clean-up out of your own pocket!

REMEMBER IT IS YOUR RESPONSIBILITY TO CONTACT YOUR INSURER!

Note:
Insurance companies may not pay if the leak has been occurring over time, so regular inspection of your tank and monitoring your usage is important.

6. Oil Spills & The Law

6.1 If oil contaminated soil pollutes ground or surface water, damages property and, most importantly, risks harm to human health, you may be required to clean it up under **Part 2A of the Environmental Protection Act 1990**. This is enforced by your Local Authority. The Local Authority's involvement is two-fold:

1. To make sure that the contamination is cleared to the correct standard; **and**

2. To record that the site is decontaminated. This is important if you wish to sell your house in the future because the council regularly receives enquiries from potential house buyers. Therefore we want to be in a position to tell purchasers that the site is clean, rather than risk devaluing your property or your neighbours' properties.

6.2 The Environment Agency is responsible for protecting water resources and making sure that groundwater and surface waters are not polluted. They may be able to take enforcement action under the **Water Resources Act 1991** if these waters have been directly polluted by oil.

6.3 Where private water supplies become polluted the Local Authority can require remedial works to be carried out under the **Private Water Supplies Regulations 1991**.

6.4 All new and replacement oil tanks serving boilers must comply with the **Building Regulations 2000**.

Please see "*Approved Document J: Combustion appliances and fuel storage systems*". This provides guidance on properly installing your tank the in order to comply with the regulations. This can be found at:

http://www.planningportal.gov.uk/england/professionals/buildingregs/technicalguidance/bchpapartj/bchpapartjappdoc

6.5 All domestic oil tanks with a volume of over 3500 litres must comply with the **Control of Pollution (Oil Storage) (England) Regulations 2001**. For more information see the "*Domestic Oil Storage in England and Wales*" leaflet available from the Environment Agency.

7. How To Prevent Pollution

7.1 Taking action to prevent pollution in the event of a leak from your oil tank can prevent environmental damage and avoid a costly clean up. Cleaning up an oil spill is disruptive and time consuming. It can take months or years of digging trenches and sinking boreholes on your land, monitoring visits and meetings with Local

Authority Officers, the Environment Agency, insurance companies, loss adjusters, consultants and solicitors.

7.2 The following information will help you to avoid all of this:

- If your tank is not bunded, consider building one. A bund is a collection trough which sits under the oil tank. In the event of the tank leaking, all the oil will be retained within this leak proof trough. The bund should have the capacity to hold at least 10% more than the capacity of the tank because it can collect rainwater over time. Bunds can be built of brick, concrete or other watertight material. From time to time you may need to empty rainwater out of it, but do not be tempted to fit a drain hole, unless fitted with a tap which can be securely closed. Some designs of tank include a bund. The tank also should have a secondary wall or "skin" which acts as a safety net if the tank is damaged.

- It is now a legal requirement for most commercial and larger tanks (more than 3,500 litres) to be fitted with a bund. Although not a legal requirement for domestic tanks we would strongly recommend bunding in all cases.

- You must site your tank at least 10 metres from a pond, river, ditch or lake and at least 50 metres from a borehole or spring where possible. The Oil Firing Technical Association (OFTEC) can advise you of the best place to site or re-site your tank to minimise your pollution risk.

- Get advice from your Local Authority Building Control Department to ensure that it complies with the Building Regulations 2000.

- Always get new tanks installed by a qualified OFTEC registered technician.

- Never leave sight gauge valves open. The valves should be opened whenever you take a reading of the level of your oil tank. Use automatically closing valves or electronic gauges to British Standard accreditation.

- Check your tank, pipe work, gauges, sight valves and bund regularly. Look for corrosion, bulging, damage, interference and signs of leaks. Get a qualified OFTEC registered technician to service and inspect your tank and pipes at least once a year. Also get your delivery company to assess your oil tank in terms of health and safety and pollution prevention.

- If you have underground pipe work, do you know exactly where it runs? Make sure that no above ground activities can puncture it and ask an OFTEC technician about pipe work testing.

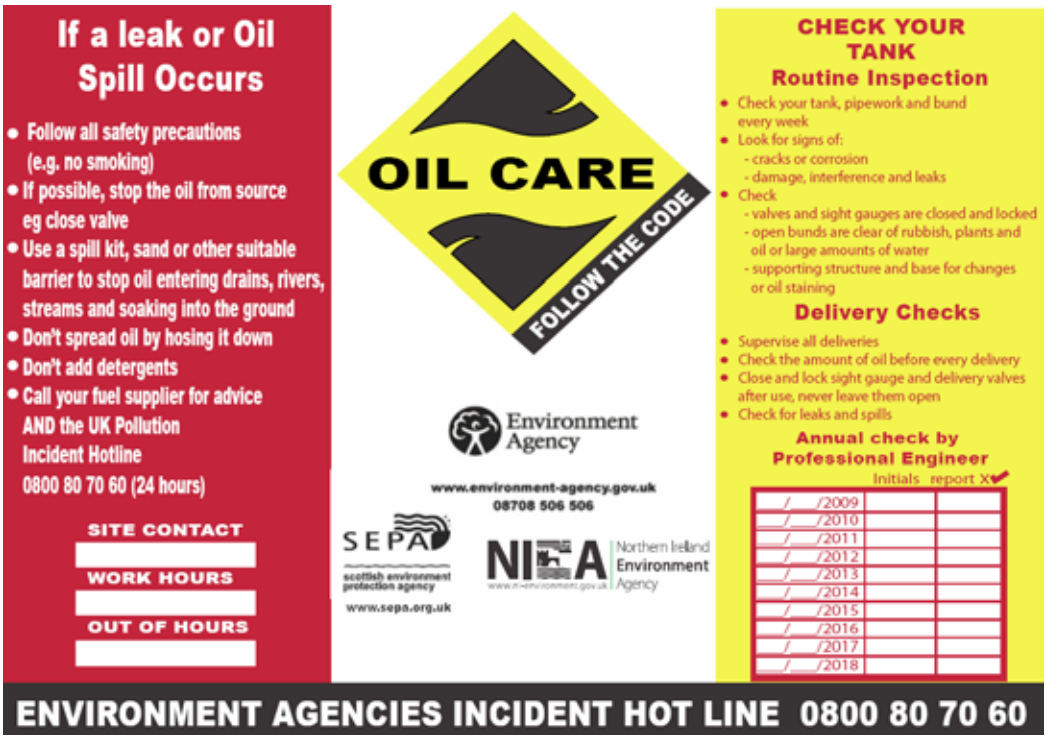
- Monitor how much oil you use so that you will be quickly alerted by any unknown loss. Even small leaks can add up to a large loss over time if left unchecked. Alarm systems that alert you to a leak are available.

- Always supervise oil deliveries, particularly if the delivery driver cannot see your tank during filling. If the filling point of your tank is remote from the tank an alarm or device should be fitted to prevent over-filling.

- Keep a bucket of ***dry*** sand close by to absorb spills. Do not store sand where it can become wet e.g. by rainwater. Some oil distributors can provide better

oil absorbent materials for use in an emergency. All oil contaminated material must be removed and disposed of appropriately as soon as possible; it must not be left for rainwater to wash it away.

- Make sure you have the Environment Agencies "Domestic Oil Care Tank" Sticker on your tank (See Below). **It tells you what to do if you have an oil leak or spill**.



- If your oil tank is no longer in use, it is recommended that you have it safely removed and disposed of by a suitably experienced and licensed person - make sure that all remaining oil is removed first. Old tanks may become damaged or rusty. Even empty tanks will contain some oil and it is possible for any that remains to leak out or be washed out by rainwater. Safe removal will also eliminate the unpleasant odours sometimes associated with oil storage.

8. What Should You Do If An Oil Leak Occurs?

STOP THE FLOW AT SOURCE BY TURNING THE TAP OFF

DOs

- In the event of a spill, stop the flow at the source by turning off the tap or stop flow at the filling truck;
- Prevent oil entering a watercourse by obtaining absorbent materials from your oil distributor - if not, cover in ***dry*** sand;
- Contact your fuel supplier to arrange for any remaining fuel likely to leak out to be removed;
- Do not drink your tap water if you suspect that it might be contaminated and if you notice any unusual taste or smell to your tap water following a spillage of heating oil, contact your Local Water Company immediately for advice and to arrange for your water to be tested, or if it is a private water supply, contact your Local Authority. Contact details for all Local Authorities in Essex can be found on the back page of this leaflet;
- Contact the Environment Agency by calling their free 24-hr emergency pollution hotline on 0800 80 70 60;
- Inform your insurance company that a leak has occurred and make a claim for the cost of repair and clean up;
- Contact your Local Authority's Environmental Health Department. Contact details for all Local Authorities in Essex can be found on the back page of this leaflet;
- If you have a plastic tank, rub soap into any split to seal it if possible - **this is only a temporary solution!**
- Prevent the oil from entering a river, drain or groundwater by putting down sand or earth to absorb the spill - keep a bucket or bag of dry sand nearby.

DON'Ts

- ❖ Do not delay taking action;
- ❖ Do not assume the problem will go away;
- ❖ NEVER drink any water suspected to be contaminated;
- ❖ NEVER use detergents or try to wash away the oil with a hose as this makes it worse.

Please note that even use of dry sand will not stop contamination unless the oil-contaminated sand is removed and appropriately disposed of once used.

Taking action quickly will stop or minimise pollution.

Taking action quickly will save money.

Taking action quickly may stop the Local Authority or the Environment Agency taking enforcement action against you.

9. What Impact Would an Oil Spill Have on Your Life?

An Example of a Domestic Heating Oil Spill That Occurred In Essex

9.1 In 2007 a smell of oil was noticed coming from a ditch near two homes. The smell was also found in the cellar of one house and the Environment Agency was called to investigate. The problems continued and the damp-proofing in the cellar started to dissolve. Oil began to enter the room. It was discovered that a neighbour's old, rectangular, steel, oil-storage tank had been leaking for an unknown length of time. The remaining oil was drained from the tank to stop any further spillage. The owner and the home owners contacted their insurance companies.

9.2 First of all it was important to find out how far the oil had spread and then it was necessary to find out what was needed to clean it up and make everything safe. Indoor air in both houses was tested for harmful vapours that could be breathed in, holes were dug in rooms to see how far and how deep the oil had spread beneath the houses and drinking water was tested.

9.3 The investigation found that:

- Walls and foundations had been damaged by oil soaking into the brickwork;
- Oil had entered the groundwater and had spread to the gardens and ditches on the other side of the road;
- Dangerous vapours that could be breathed in were entering the properties.

9.4 The occupants of the homes were immediately moved out because of the concerns for their health. Then both properties were underpinned so that contaminated soils could be removed without affecting the stability of the buildings. The floors and gardens were dug out to a depth of up to one and half metres. The contaminated soil was put into skips, taken away and replaced with clean soil. Contaminated groundwater was pumped out into a temporary pit in the garden. It was then treated on site to destroy the contamination before it could be taken away.

9.5 Once the oil-contaminated soil and water had been removed, further testing was necessary to check if there was any oil remaining. Then the floors were put back with a membrane installed to stop any remaining vapours entering the properties. A "wall" of clay was also constructed in the ground in front of the properties to stop any possible remaining oil in the ground from seeping back in to the homes. Finally, walls were re-plastered and decorated and gardens landscaped.

9.6 Officers from the Local Authority & the Environment Agency made sure at each stage that the clean up operation was carried out properly and recorded how it was done.

In total it was suspected that up to 2500 litres of oil may have been lost. As a result:

- More than 30 holes were dug
- More than 200 tonnes of contaminated soils were dug up and removed
- Nearly 90,000 litres of contaminated water were removed by tanker
- Clean-up work took at least 18 months during much of which time residents were forced to stay away
- Total clean up costs *at each house* were around £200,000. This was covered by the householders' insurance

10. Where Can You Get More Information?

The Oil Firing Technical Association (OFTEC)

For information about your nearest OFTEC registered technician please contact OFTEC at:

OFTEC
Foxwood House
Dobbs Lane
Kesgrave **Tel: 0845 6585 080**
Ipswich **Email: enquiries@oftec.org**
IP5 2QQ **Website: www.oftec.org**

Additionally, you could visit the OFTEC website and download the joint OFTEC, Environment Agency and Federation of British Oil Suppliers leaflet "Get To Know Your Oil Tank."

This can be found at http://www.oftec.org/documents/Gettoknowyouroiltank.pdf

Environment Agency

The Environment Agency Incident Hotline is 0800 80 70 60.

For free Oil Care Tank stickers, copies of the leaflets "Domestic Oil Storage in England and Wales" and "Get to know your oil tank" go to the Publications Catalogue via the Planning and Research section of the Environment Agency's website at www.environment-agency.gov.uk.

Local Authorities, Water Suppliers & Sewerage Undertakers in Essex

Contact details for all Local Authorities, Water Suppliers and Sewerage Undertakers in Essex can be found on the back page of this leaflet;

11. Remember….

- Make sure your tank is well maintained and serviced annually.
- Although not a legal requirement for tanks under 3,500 litres, consider purchasing a bunded tank - it will help prevent damage in the event of a leak.
- Make sure you have adequate insurance which includes the cost of clean up of both your property and your neighbours'.

If you do suspect that fuel oil has leaked, or is leaking from your tank

- Do not delay - the problem will not go away.
- Contact your insurance company, Local Authority & the Environment Agency immediately.
- Do not drink the water if you suspect that it might be contaminated.
- If you have mains water supply - Contact Your Local Water Company immediately.
- If you have a private water supply - Contact Your Local Authority's Environmental Health Team immediately.
- Seek immediate advice if there is a strong smell of oil inside your property or that of any of your neighbours.

Contact Information

Local Authorities

Basildon District Council
01268 294280 01268 294550
ehs@basildon.gov.uk

Braintree District Council
01376 552525 01376 557767
envprotection@braintree.gov.uk

Brentwood Borough Council
01277 312509 01277 312526
envhealth@brentwood.gov.uk

Castle Point Borough Council
01268 882200 01268 882327
environmentalhealth@castlepoint.gov.uk

Chelmsford Borough Council
01245 606800 01245 606681
environmental.services@chelmsford.gov.uk

Colchester Borough Council
01206 282581 01206 282598
pollution@colchester.gov.uk

Epping Forest District Council
01992 564000 01992 561016
information@eppingforestdc.gov.uk

Harlow District Council
01279 446111 01279 446639
env.health@harlow.gov.uk

Maldon District Council
01621 854477 01621 875899
environmentalservices.request@maldon.gov.uk

Rochford District Council
01702 546366 01702 545737
environmentalservices@rochford.gov.uk

Southend-On-Sea Borough Council
01702 652955 01702 215517
info@southend.gov.uk

Tendring District Council
01255 686767 01255 686404
environmental.services@tendringdc.gov.uk

Thurrock Council
01375 652955 01375 652780
environmental.health@thurrock.gov.uk

Uttlesford District Council
01799 510510 01799 510567
environmental@uttlesford.gov.uk

Other Organisations

Veolia Water East
Mill Hill
Manningtree
Essex
CO11 2AZ
0845 1489288

Veolia Water Central
Tamblin Way
Hatfield
Herts
AL10 9EZ
0845 7823333

The Environment Agency
National Customer Contact Centre
08708 506506
Incident hotline
0800 807060

Anglian Water
Customer Services
PO Box 10642
Harlow
CM20 9HA
08457 919155

Essex & Suffolk Water
Sandon Valley House
Canon Barns Road
East Hanningfield
Chelmsford
Essex
CM3 8BD
0845 782 0999