Domestic Heating Oil Tank Guidance

Protecting your Health and the Environment from Leaks and Spills

This guidance has been prepared by the Welsh Land Contamination Working Group

CONTENTS

INTRODUCTION

If you, or someone you know, has an oil tank to supply oil-fired central heating, this booklet could help to avoid the significant cost, inconvenience and risks to your health and the environment which are caused when heating oil leaks or is spilled from the storage tank/pipework.

This booklet explains the things that can be done to prevent accidents such as leaks and spills, and the steps that should be taken if an accident does happen.

Most leaks are caused by poorly maintained or faulty tanks and pipework.

Most spills are caused by thefts or when the tank is being filled.

Oil is toxic and can cause harm to your health and your family's health, plants, animals, wildlife and the environment.

Oil can travel a long way in the ground and in water and can easily contaminate underground water sources by soaking deep into the ground. It can permeate through water supply pipes and contaminate drinking water supplies. It is important to make sure that your tank and the oil supply pipework is regularly and correctly maintained and to understand the consequences for you, if oil leaks, or is spilled from your system.

Leaks should be repaired without delay and spills should be quickly stopped from spreading and becoming any worse.

If an accident does happen, your local Council and Natural Resources Wales[1] can offer you advice and help to ensure that the clean up is done promptly and to the appropriate standard. They will not be able to undertake the clean up works themselves, or pay for the clean up for you.

Insurance companies may not pay if a leak has gone unnoticed or ignored over time. It is important to regularly check your tank and pipework for leaks and to monitor the amount of oil that you use. An increase in the amount of oil you use or a sudden decrease in the amount of oil in your tanks could mean that there is a leak.

[1] On the 1st April 2013 the Environment Agency Wales (EAW), Forestry Commission in Wales and Countryside Council for Wales (CCW) were amalgamated to become Natural Resources Wales. N.B. The Environment Agency remains in England.

RISKS TO HEALTH

Oil can be toxic to humans and pets/livestock. It can cause you and animals to become ill if it comes into contact with skin, if it is ingested through eating, drinking or if it is swallowed by accident and if the fumes and vapours that it gives off are inhaled (breathed in).

Children, babies, pregnant and breastfeeding women, those who are unwell and the elderly are at most risk.

Some of the symptoms that exposure to oil can cause can be serious and can get worse if you are exposed to the oil over long periods. The symptoms include:

- Headaches
- Nausea (feeling sick) and vomiting
- Dermatitis (skin rashes, itching, blistering, peeling of the skin)
- Sore throats
- Sore eyes
- Feeling dizzy, light headed, sleepy and being slow to react
- Stomach cramps and diarrhoea
- Kidney damage
- Breathing difficulties
- Pneumonia
- Unconsciousness

The fumes and vapours that are given off from oil are not only potentially toxic but can also be explosive when mixed with air.

Sometimes the levels of fumes and vapours that are given off are so high that it is not safe to stay at home until the oil has been cleaned up correctly.

Oil can soak into the ground and can travel a long way from where it has been spilt or leaked, with no trace at the surface.

This means that oil can travel through the ground into other people's gardens and onto other people's land, and cause them to become unwell. Oil can also travel down into the ground and affect drains, foundations and water supplies, so it is very important that you report any oil leaks or spills.

Oil is made up of many different substances and some of those substances can permeate through pipes including drinking water supply pipes and contaminate drinking water. This can cause the water to taste and smell unpleasant and can be a serious risk to health. Sometimes, the only solution is to replace the entire pipe which can be disruptive and very expensive.

RISKS TO THE ENVIRONMENT

Oil can be toxic to plants and wildlife and can cause serious pollution if it gets into surface waters (ponds, streams, rivers, lakes and the sea) and groundwater (underground water sources). Oil floats on water and can be dissolved in water, and so can be carried a long way from the leak or the spill, with no visible trace at the surface.

It can make animals, birds, fish and creatures that live in and around surface water very ill. It can cover their skin, feathers and fur and can poison them as they try to clean it off themselves. It can also cover the surface of the water and cut off their supply of oxygen.

Groundwater is a very important source of drinking water in Wales. It is found underground and is used for many private water supplies, as well as for large scale public supplies

Private water supplies are used by people in rural areas and the majority of heating oil tanks are also found in rural areas where there are limited mains gas supplies.

Water companies are required by law to test the water that they supply to ensure that it is safe to drink, but those people that use a private water supply cannot test the water that they use in the same way, and so it is very important that you report any oils leaks or spills.

RISKS TO PROPERTY

Heating oil can soak into the ground and cause plants and lawns to die back or die off completely. It can also soak into the brickwork and foundations of buildings and it can damage or destroy the damp proof course.

Sometimes the only solution is to remove and replace the affected areas of the building which can be very disruptive and expensive.

If the oil finds its way along drains it can travel a long way from where it was spilt and potentially cause dangerous levels of vapours to build up.

If oil finds its way into septic tanks and soakaways, it can cause dangerous levels of vapour to build up here too. It could also damage the structure of the tank and can cause the surrounding ground and the point where the septic tank discharges to become contaminated.

Sometimes the only solution is to excavate and replace the drains, septic tank and soakaways which can be very disruptive and expensive.

PREVENTING A LEAK OR SPILL

It is always better to prevent an incident from happening, than it is to deal with the effects of it after it has happened.

There are a number of steps that you can take to make sure that the risk of your oil leaking or being spilt is reduced. These steps include the following actions.

1. Maintenance

Check your tank, valves, gauges, pipe work and bund regularly. Look out for rust, corrosion, bulges, cracks, splits, holes, drips, wet and oily patches on the ground, damage, leaks, loose parts and fittings, and signs of tampering.

Make sure that valves and gauges are protected from the risk of being knocked, dislodged or becoming damaged.

Once a year, arrange for a registered OFTEC (Oil Firing Technical Association) technician to inspect and service your heating system all the way from the storage tank to the boiler.

2. Security

Oil storage tanks are vulnerable to thieves and vandals.

Make sure that the lid of your tank fits properly and keep it locked. If your tank has an inner section, keep that locked too and don't keep the keys to the locks by the tank.

3. Monitor

Keep an eye on how much oil you use. If you notice a sudden decrease in the amount of oil in the tank, or an increase in the amount of oil that you would normally use, this could mean that there is a leak.

Even the amount of oil lost from a small leak can build up to a large spill if it goes unnoticed or is left ignored over time.

It is a good idea to keep a record of when you check your tank, how much oil has been used, how much oil was delivered and when it was delivered.

Modern oil storage tanks are fitted with a built in bund[2] or second skin and an alarm to alert you if oil has leaked into the bund. Some tanks come with a device which shows how much oil is left in your tank and can be plugged into a socket in the house and operated remotely.

[2] A bund is a trough built around the tank so that if the tank leaks or is ruptured, the oil is contained so that it does not escape and cause contamination.

Alarm systems and remote monitors are available to buy to be fitted to older tanks too.

If your tank does not have a bund then it is advisable to replace the tank with a modern tank that does. If you can't replace your tank, then it is recommended that a bund is built around the tank.

The bund should be built from engineering brick, concrete or other materials which don't allow oil to soak through and which make the bund as watertight and leak proof as possible. The bund should be large enough to hold the capacity of the tank plus 10%.

Do not be tempted to make a hole or drain through the wall of the bund. Every now and again you may need to empty rainwater from inside the bund but it is very important that there is no hole in the bund. If there is a hole and oil does leak from the storage tank, then the oil would drain out through the hole.

Although not required by law in Wales[3], building a bund around your tank could minimise the damage that would be caused if the oil escaped.

You should also be aware of where to find the pipe work from the tank and know where it goes to and from.

Make sure that tree roots, digging, building works, gardening or other works taking place on the ground don't damage the pipe work.

4. Deliveries

Always supervise deliveries of oil, especially if the tank can't be seen by the person filling tank while it is being filled. The point where your tank is filled should be within a bund. If your tank is filled at a point away from the tank an alarm or device should be fitted to prevent the tank from over-filling.

To minimise the risk of over-filling, don't order more oil than you have room for in your tank. Check the level of oil in the tank before arranging a delivery.

If your tank has a sight gauge, make sure that the valve is closed when the delivery is complete.

It is not normal to spill oil during deliveries, but the delivery driver should have an appropriate spill kit on hand. Washing up liquid, rags, newspaper or cat litter are NOT sufficient to clean up spills.

Seek the advice of your local Council's Contaminated Land Officer if oil has been spilt or if you are not sure whether it has been cleaned up thoroughly.

[3] Some commercial and larger tanks (>3500 litres) may legally need to be fitted with a bund and you should check with your Building Control and NRW to establish whether this is the case.

5. Sight Gauges

Sight gauges are a way of checking how much oil is left in the tank. These gauges are vulnerable to being knocked loose and becoming damaged, and because they are connected to the inside of the tank, oil can escape through them.

Sight gauges are not suitable for use on a tank without a built in bund.

You can protect the sight gauge on your tank and minimise the risk of a leak from it in a number of ways including;

- make sure that the sight gauge is fitted within the bund,
- make sure that it is properly supported so that it is not loose and vulnerable to being knocked or damaged,
- make sure that the gauge is fitted with a valve to close it automatically,
- never leave the valve open,
- only open the valve when checking to see how much oil is left in the tank,
- always supervise deliveries and check that the valve is closed when the delivery is complete.

If you check your tank using a dipstick, make sure that the dipstick is suitable for the tank. A dipstick should only be used on the tank that it was intended for. You can't check your oil tank using the dipstick from your car or van.

6. Location

Guidance is available on where you can and can't put an oil storage tank and there may be additional requirements in areas that are vulnerable to pollution. You should contact your local Council's Building Control Section or Natural Resources Wales for advice about where to put an oil storage tank.

Oil should not be stored in areas;

- within 50 metres of a spring, well or borehole,
- within 10 metres of a watercourse such as a pond, river, stream, ditch or lake,
- where spilled oil could get into drains,
- where spilled oil could run over the ground and into drains or a watercourse,
- where spilled oil could soak into the ground,
- where spilled oil could pollute groundwater,
- where the tank can't be seen from the filling point,
- above roof level or where spilled oil could run along guttering and into drains; and
- in areas that are at risk of flooding (information about flood risk areas is available from the Natural Resources Wales).

7. Spill Kits

It's a good idea to keep a spill kit close to your oil storage tank so that if you do notice a leak or a spill, you can immediately prevent it from spreading.

Spill kits are available to buy online or from builders merchants, health and safety specialists etc… Their contents usually vary depending on the size of the spill that you may need to contain. Choose a spill kit that's suitable for the size of tank that you have.

Most spill kits contain items such as rubber gloves, pads, barriers and granules which can be used to absorb the oil. It's important to remember that they only soak up oil on the surface and do not remove oil from concrete, tarmac, paving slabs and the ground or from water.

A large container or bucket of dry sand can be useful for soaking up oil. The container that it is stored in should have a lid as wet sand won't work.

Detergents such as soap and washing up liquid are not suitable and will only disperse the oil. Don't be tempted to hose or wash away the oil as this will make the problem worse. Never leave spilt oil to wash away in the rain and never allow or encourage it to go down a drain or into a pond or watercourse.

Oil soaked pads, sand, cloths and granules should be bagged and disposed of promptly and correctly. Firms should hold a 'waste carriers licence' and dispose of waste at an appropriately licensed facility. For further advice contact your Local Authority.

The Environment Agency sticker for Oil Tanks is a useful reminder of the key points discussed above – this is designed to be stuck on your tank and is therefore a frequent reminder of what maintenance checks should be undertaken, delivery checks and what to do if a spill occurs.

INSURANCE

It is important that you know and understand the level of cover that your insurance policy includes.

Insurance companies may not pay if a leak has gone unnoticed or has been ignored over time. It is important to regularly check your tank and pipework for leaks and to monitor the amount of oil that you use. An increase in the amount of oil you use or a sudden decrease in the amount of oil in your tank could mean that there is a leak.

Some insurance policies include cover for the cost of the clean up of oil leaks and spills caused by damaged tanks, thefts and accidents, but not all of them do and this is usually something that you have to ask your insurance company to include when you take out your policy.

Some insurance policies only cover the cost of replacing the oil that has been lost as a result of the leak or the spill.

It is important that your insurance policy includes cover for oil leaks and spills, thefts, accidental damage, damage to your property and your neighbours' property and the costs of the clean up. Your policy should also include cover for losses to you and others such as private water supplies/wells on your property and neighbouring land. If your insurance policy does not provide this level of cover then you should change it to make sure that it does.

If there is a leak or a spill and you are not insured then you may have to pay for the cost of the repairs, the cost of putting right any damage and for the cost of the clean up.

It is your responsibility to contact your insurance company.

OIL SPILLS – THE LAW

If your oil leaks or is spilt and it causes contamination of the ground, groundwater or surface water, or if it causes an unacceptable risk to human health or the environment, or damages property, then you may be required to clean it up by the Council or Natural Resources Wales.

Formal action, requiring you to clean it up may be taken against you in accordance with

- Part 2A of the Environmental Protection Act 1990
- Section 161 of the Water Resources Act 1991

If you do not clean up oil as you are required to, then you are at risk of being taken to Court. You also risk devaluing your property and possibly your neighbours' properties too and you may have trouble selling your home.

The Council regularly receives enquiries about properties that are for sale and if you haven't cleaned a spill or leak up, the Council will not be able to tell prospective purchasers or solicitors that the contamination has been dealt with.

If you are replacing an oil storage tank or if you are installing one as part of an oil-fired central heating system or to provide fuel to a cooker, you must make sure that it complies with the Building Regulations 2010. Further information about this is available from the Building Control Section at your local Council.

If you are thinking of installing or replacing an oil storage tank, and the location is within, or is adjacent to land or a property within a National Park, an Area of Outstanding Natural Beauty, a Conservation Area or a World Heritage Site then you should contact your local Council's Planning Department for advice as you may need planning permission before you do so.

REPLACING AND DISPOSAL OF AN OLD TANK

It is always better to replace an old tank with a new, double-skinned/bunded tank that is fitted with an alarm to warn you when oil has leaked from the tank into the bund.

There are plenty of manufacturers, suppliers, designs and features to choose from and a tank that is suitable for one property may not be suitable for another. There is no 'one size fits all' option.

It is not recommended that you carry out any sort of DIY on your oil storage tank, pipe work or central heating system as if you make a mistake and cause a leak or a spill. Your insurance policy may be affected and your insurance company may not pay for any repairs or clean-up.

Before any work is carried out to install your new tank, Building Regulations require you to notify your Local Authority Building Control Building Inspector that you intend to install a new tank.

It's not just the installation of new tanks that you need to let the Building Inspector know about, you should also notify them if you intend to do any of the following things:

- Install pipe work
- Install or bring into use an oil fired appliance such as a stove, cooker or boiler
- Install, alter or bring into use a central heating system
- Install or alter a flue, flue liner or chimney
- Install a hot water storage tank or system

It can be useful to (and can save you time and expense) discuss your plans with a Building Inspector before you decide what to buy, who to appoint and what works to do.

The old tank should be drained of any residual oil and oily sludge that may be inside by a suitably licensed waste company. The oil, sludge and tank must be taken away and disposed of by a suitably licensed waste company.

It is your responsibility to ensure that you hand over your waste to a suitably licensed company and to retain the paperwork and receipts (called Waste Transfer Notes) that they must give to you. You must keep them for 4 years.

You can find advice on disposing of your waste and check if the company that you intend to appoint is licensed on the Environment Agency's website or by contacting the Natural Resources Wales.

WHAT TO DO IF YOU FIND A LEAK OR SPILL

If you do find leaking or spilt oil, there are a number of steps that you should take to ensure that it is dealt with promptly and correctly and to prevent it from becoming worse.

The following steps explain what you should do, who you should notify and who can help you to deal with the incident.

- Act quickly.
- Stop the leak or spill at the source immediately.
- Put a bucket or suitable container under dripping oil to catch it. Do not use containers that will be used to store food for humans or for animals. Containers that have had oil in them will need to be disposed of.
- Prevent spilled oil from spreading and in particularly prevent it from getting into drains and watercourses. Use dry sand, a spill kit or other absorbent material.
- Avoid getting the oil on your skin and clothing.
- Wash your hands and don't smoke, eat or drink when or after you are in contact with the oil.
- Keep children and pets away from the affected area.
- Arrange for any remaining fuel likely to leak from the tank to be removed by a fuel supplier or someone who is suitably licensed to take it away. Don't try to do this yourself and don't store oil in a building or a shed or a vehicle.
- If your water supply or water supply pipe work may have been affected, do not drink the water and contact your water supplier, for example Welsh Water.
- Do not hose the oil away.
- Don't add detergents or soaps.
- Contact your local Council and ask for the Contaminated Land Officer.
- Also contact the Natural Resources Wales on their 24 hour number 0800 80 70 60.
- Tell your insurance company and make a claim for the cost of repairs and the clean-up. Insurance companies may have specific contractors they will want to use to clean up spills.
- If oil gets into the drains or underneath a building, notify the Fire Service.
- Keep a record of the actions that you have taken.

Who to Contact

Your Local Council is:

Rachel Kershaw
Contaminated Land Inspector
Pembrokeshire County Council
County Hall
Freemans Way
Haverfordwest
SA61 1TP

pollution.control@pembrokeshire.gov.uk
Tel: 01437 776532 or General enquiries: 01437 764551

Natural Resources Wales

www.naturalresourceswales.gov.uk
enquiries@naturalresourcewales.gov.uk
General enquiries: 0300 065 3000 (Mon-Fri 8am-6pm)
Incident hotline: 0800 807060 (freephone 24hr service)

Dŵr Cymru (Welsh Water)

www.dwrcymru.com
Water services and emergencies: 0800 052 0130

Sources of Further Information

Environment Agency Pollution Prevention Guideline 2 (PPG2), August 2011 – Above ground oil storage tanks (a 28 page detailed guidance document for tank owners and users which is specifically written for domestic and small or medium sized commercial oil storage). It provides more in depth details on the types and construction of tanks (and associated parts) and their installation and maintenance, relevant legislation and further sources of information.

(www.environment-agency.gov.uk)

The EA also have a leaflet called 'Oil Care – Looking after your heating oil in the south east' which provides further similar guidance to this document, but actually draws on specific examples of spills and the impact of those spills.

Glossary

Borehole	A narrow vertical hole driven into the ground (in this instance, used for extracting groundwater as a private water supply).
Bund	A large sealed trough built around a tank, so that leaks or spills from the tank can be captured in the event of tank failure. A bund should be able to hold the volume of the tank, plus 10%. In addition to maintenance checks, the bund may need periodic emptying of collected rainwater.
Groundwater	Water which is below the surface of the ground, held in shallow soil or deeper rock. Groundwater flows underground and can supply water to springs and rivers. It can be extracted for drinking water, by drilling a borehole.
Septic tank	Usually a small tank dug into the ground, receiving and treating sewage by bacteria.
Soakaway	Typically a large pit dug into the ground and filled with granular material, which allows clean rainwater to drain back into the ground.
Spill kit	A kit containing equipment, absorbents and instruction for cleaning spills of potentially hazardous liquids or materials. Spills kits are tailored to suit the type of spill that may be encountered. They should be readily available in the event of a spill.

This document has been adapted from a document prepared by Flintshire County Council.