Domestic Heating Oil Tanks

Protecting your Health and the Environment from Leaks and Spills

Flintshire County Council - Pollution Control May 2020

Introduction

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

This booklet explains the things that can be done to prevent accidents such as leaks and spills, who to contact for advice 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 happen 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 reserves by soaking deep into the ground. It can eat through water supply pipes and contaminate drinking water supplies.

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 will offer you advice and can ensure that the cleaning up is done promptly and to the appropriate standard but they will not be able to do, or to pay for, the clean up for you.

Insurance companies may not pay if a leak has been gone unnoticed or ignored over time. 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.

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.

Risks to Health

Oil is toxic to humans and animals. It can cause you and your 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 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 leaked or has been spilled.

This means that oil can travel through the ground into other people's gardens and 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 and 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 eat 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 is 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 carried a long way from the leak or the spill.

It can make animals, birds, fish and creatures that live in 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 many areas. It is found deep underground and can be used for large scale public supplies and for small private supplies.

Oil can travel quickly and over large distances in groundwater with no trace at the surface of the ground.

Most of these 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 do not have to test the water that they use in the same way and so it is very important that you report any oils leaks or spills.

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Risks to Property

Heating oil can soak into the ground and cause plants and lawns to die back or to die off completely. It can soak into the brickwork and foundations of buildings and 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 spilled and could 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, can damage the structure of the tank and can cause the surrounding ground and the point where the septic tank discharges to become contaminated too.

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 spilled is reduced. These steps include,

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, wet and oily patches on the ground, damage, leaks, loose parts and fittings and signs of tampering.

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.

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

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 and an alarm to alert you if oil has leaked into the bund. Some tanks come with a device which show how much oil is left in your tank and can be plugged into a socket in the house and operated remotely.

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 a bund should be built around the tank.

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.

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 110% of the capacity of the tank, i.e. capacity of the tank + 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 water 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.

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.

If any oil is spilled during delivery or while your tank is being filled, you should ensure that your oil delivery company cleans up the spilled oil appropriately. It is not normal to spill oil during deliveries and washing up liquid, hosing with water, rags, newspaper or cat litter are not suitable for cleaning up spills and may make the problem worse.

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

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 with a built in bund. Tanks with electronic sensor devices to show the level of the oil in the tank are much better than sight gauges.

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, wind-blown 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

There are Regulations which explain where you can and can't put an oil storage tank and there may be additional requirements in areas that are vulnerable to pollution.

Oil can't be stored in areas,

- within 50 metres of a spring, well or borehole
- within 10 metres of a surface watercourse such as a pond, river, stream, ditch or lake or wetland.
- where spilled oil could get into drains
- where spilled oil could run over the ground and into drains or a watercourse or pond
- 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
- in areas that are at risk of flooding.
- underneath the eaves of a building
- in garages or sheds

Information about flood risk areas is available from Natural Resources Wales.

You should contact your local Council's Building Control department and Natural Resources Wales for advice about where to put an oil storage tank.

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 prevent it from spreading.

Never use soaps, washing up liquids or detergents as they will only disperse the oil. Don't be tempted to hose or wash away the oil as this is likely to make the problem worse.

Spill kits are available to buy and 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.

Never leave spilled 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 disposed of promptly and correctly. Contact your local Council for advice.

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. You 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 spilled and it causes the ground, surface water or groundwater to become contaminated, if it causes an unacceptable risk to human health or the environment or if it causes damage to property then you may be required to clean it up by the Council or Natural Resources Wales.

Formal action to require you to clean it up may be taken against you in accordance with;

- Part 2A of the Environmental Protection Act 1990
- Environmental Damage and Liability Regulations 2009
- Environmental Permitting Regulations 2010
- Control of Pollution (Oil Storage)(Wales) Regulations 2016

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 your neighbours' properties 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 up following a leak or spill, 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 department at your local Council.

If you are thinking of installing or replacing an oil storage tank and the property where the tank will be is within or is adjacent to land or a property within a National Park, the Broads, 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 Disposing an Old Tank

An old tank should be replaced with a new tank with a built-in bund that is fitted with an alarm to warn you when oil has leaked from the tank into the bund.

From March 2016, if you are replacing a tank or installing one for the first time, the tank and the pipework that goes with it must comply with the Control of Pollution (Oil Storage)(Wales) Regulations 2016.

Don't purchase or install a tank without making sure that it complies with the Regulations first. You may be prosecuted if it doesn't.

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 an oil tank
- 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 if you 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 by contacting Natural Resources Wales

What to do if you find a leak or spill

If you do find leaking or spilled 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. 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

- Contact Natural Resources Wales on their 24 hour number 0300 065 3000
- Prevent the oil from getting into drains and watercourses.
- If oil gets into the drains or underneath a building, notify the Fire Service.
- Tell your insurance company and make a claim for the cost of repairs and the clean-up.
- Keep a record of the actions that you have taken.

Who to Contact

Flintshire County Council
Contaminated Land Officer
Pollution Control
County Hall
Mold
Flintshire
CH76NF

01352 703400

Natural Resources Wales

0300 065 3000

Welsh Water

0800 0520130