

**WAT-G-060**

**EASR Guidance: GBR 26, 27 & 28: Oil storage**

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# Purpose

This document provides information and guidance for anyone carrying out the storage of oil which is authorised by Water GBR 26, GBR 27 or GBR 28 under The Environmental Authorisations (Scotland) Regulations.

This guidance does not cover any other permissions that may be required.

# What activities does this guidance apply to?

This guidance applies to:

* GBR 26: The storage of oil, which is not waste oil, in a portable container with a capacity of less than 200 litres.
* GBR 27: The storage of oil on premises used as a private dwelling (except where the premises is a vehicle or vessel), where the oil is;

1. Stored in a container with a capacity of 2,500 litres or less.
2. Used solely to serve a fixed combustion appliance installation providing space heating or cooking facilities.

* GBR 28: The storage of oil, other than waste oil, on premises other than;

1. Where the premises is a vehicle or vessel.
2. Where the storage is;
3. An activity specified at activities 26 or 27 of this Chapter.
4. Otherwise authorised under these Regulations.
5. In a container which is wholly underground (unless situated wholly within a building underground).

# Background to oil storage regulation

The provisions of The Water Environment (Oil Storage) (Scotland) Regulations 2006 (OSR) were moved into an amendment of the Water Environment (Controlled Activities)(Scotland) Regulations (CAR) in 2017 as General Binding Rule 26, 27 and 28 (GBR26, 27 and 28). GBR26, 27 and 28 are now in the Environmental Authorisations (Scotland) Regulations 2018 (EASR) (as amended).

When the OSR moved to CAR, the specific exclusion of sites where there is an onward distribution of oil was not carried forward. These sites required to either comply with GBR28 or apply for a licence (this licence is now named a permit under EASR) to store oil as a site for onward distribution.

# Understanding water GBR 28

## 4.1 What does water GBR 28 not apply to?

Water GBR 28 does not apply to:

* Uncut bitumen.
* Storage of oil in vehicles.
* The storage of oil in any container situated wholly underground (unless situated within a building underground).
* Where oil is stored in accordance with:
  + GBR 26 or 27
  + otherwise authorised under these Regulations.

## 4.2 Is oil stored at marinas, on banks or on pontoons covered by GBR 28?

The definition of a premise includes land and mobile plant but does not include vehicles or vessels. Storage at all marinas (inland and coastal), on banks or on pontoons must comply with GBR28. Tanks in these locations should also be secured to prevent them lifting or floating away in the event of unusually high tides or floods.

Oil storage on barges at coastal marinas comes under the jurisdiction of the harbour master and as such is not covered by GBR 28. The storage of petroleum is additionally controlled by the Petroleum Consolidation Act and a license is required from the petroleum licensing authority, usually the Fire Service or Local Authority Trading Standards Department. There may also be local bye-laws in place for inland waterways.

## 4.3 Is storage within buildings covered by GBR 28?

Oil storage within buildings must comply with GBR 28. Whilst we prefer use of 'traditional' tank secondary containment systems, the 110% secondary containment requirements of the GBR may be met within the building itself eg 110% secondary containment may be provided within the building by forming a 'lip' on doorways and calculating the floor area capacity. All other requirements of the GBR must still be met, such as additional requirements of the secondary containment system relating to impermeability, no drains etc.

## 4.4 Is the storage of grease authorised by GBR 28?

Not necessarily. However, best practice is that where grease is stored in a container with a storage capacity of 200 litres or greater we would ask for the grease to be stored on a drip tray to ensure that any leaking or spilt oil cannot enter the water environment.

## 4.5 Do heat transfer fluids like those within transformers or fluid filled cables come under GBR 28?

No. The oil within transformers is being used rather than stored. However, bulk tanks for storing these oils are regarded as oil in storage and will normally come under the requirements of the GBR. Some transformer header tanks may come into this category if they are connected directly to the transformer by means of a 'one way - tank to transformer' feed pipe. If the transformer has an expansion tank (where oil leaves the tank and enters the transformer and on expansion leaves the transformer and re-enters the tank), the container is regarded as being part of the transformer with oil in use and is therefore not stored and does not come under the GBR. However, in order to minimise the risk of polluting the water environment we recommend following the requirements of GBR 28 where possible. Transformers in storage awaiting installation or disposal are not generally regarded as oil storage containers for the purposes of the GBR but it is good practice to provide secondary containment where there is a risk of oil spillage.

## 4.6 Does oil stored within a generator come under GBR 28?

It depends on whether the oil is being stored or used. GBR 28 applies to generators where the oil is being stored rather than used, and where no exemptions from the GBR apply. They will therefore apply to stand-by generators which are storing oil for later use. Where a generator is in regular or constant use and its day tank is of a capacity such that the oil will be used during an operating day, the oil will be regarded as **'in use'** and the regulations will not apply. But if oil is not all used up in the operating day it will be regarded as being stored and the regulations will apply. Even if the regulations do not apply the potential for environmental harm from an oil spill remains and we therefore recommend that all generator tanks and pipe work are provided with secondary containment as good practice.

## 4.7 Does an empty tank have to comply with GBR 28?

The regulations exist to prevent oil escaping to the environment so while an empty tank should technically comply with regulations, we would expect common sense to prevail. Most abandoned tanks will have an oily residue at the bottom which could cause pollution so we advise that redundant tanks are properly decommissioned and removed in accordance with relevant EASR waste requirements. Where removal is not possible, they should be filled with a material that ensures they cannot be brought back into use.

## 4.8 Does GBR 26, 27 & 28 cover the volume of oil stored or the size of the container?

The GBRs 26 and 27 cover the size of the container. For example, domestic properties with a storage tank greater than 2500 litres that only ever have 1500 litres of oil stored would have to comply with GBR 28.

# Guidance on GBR 28 Rules

## 5.1 What are the main requirements of the rules?

It is the responsibility of the storage tank owner to ensure the tank complies fully with the regulations. Please read the GBRs for the full scope and rules. The main requirements are:

* The container must be strong enough to hold the oil without leaking or bursting.
* The container must be positioned to avoid damage as far as is reasonably practicable.
* A secondary containment system such as a bund or drip tray must be provided to catch any oil leaking from the container or its ancillary pipe work and equipment.
* The secondary containment system must have sufficient capacity to contain at least 110% of the maximum contents of the container. If more than one container is stored, the bund should be capable of storing at least 110% of the largest tank or 25% of the total storage capacity, whichever is the greater. In the case of drums the capability should be at least 25% of total storage capacity.
* Oil stored in mobile bowsers must also be bunded.
* Bund base and walls must be impermeable to water and oil and checked regularly for leaks.
* Any valve, filter, sight gauge, vent pipe or other ancillary equipment must be kept within the bund when not in use.
* Above-ground pipe work must be properly supported.
* Below-ground pipe work must be protected from physical damage and have adequate leak detection. If mechanical joints have to be used, they should be readily accessible for inspection.

## 5.2 How do I know if my tank complies with GBR 28 or not?

There is some confusion about the terms ‘double skinned’, ‘integrally bunded’, ‘twin walled’ and ‘bunded’ plastic and steel tanks in relation to above-ground oil storage, and which are environmentally acceptable.

Unfortunately, manufacturers and suppliers of these tanks have used a variety of these terms with different interpretations. Our guidance on this is set out below.

A ‘double skinned tank’ is a primary tank with another ‘skin’ placed around it and a very small gap between the two. None of the pipe work or ancillary equipment is contained. The risk of oil being lost from ancillary equipment and pipe work is high, so tanks should have all ancillary equipment such as sight gauges, taps and valves retained within a secondary containment system.

Double skinned tanks are not compliant with the regulations unless additional secondary containment is provided for the tank and its ancillary equipment, such as an in-situ constructed bund.

Proprietary tank systems come in a large range of designs and are produced by many different manufacturers who may make certain claims about the environmental performance of their products. To prevent the confusion described above, ‘Proprietary Tank System’ or just ‘Tank System’ is the preferred generic term for tanks often referred to as integrally bunded or twin walled. Some tanks systems may have adequate secondary containment to comply with regulation requirements. However, some may be regarded as ‘high specification primary containers and would therefore be non-compliant without additional containment.

Some proprietary integrally bunded tank systems take the volume of the primary tank into account when calculating secondary containment capacity and provide additional secondary containment capacity of less than 110% of actual primary tank capacity. This is generally acceptable where, if there was a leak in the primary container, oil could find its own level in both containers. In this instance the primary container contributes to the total containment capacity, which as long as it totals 110%, will be acceptable. A similar position is achieved in a conventional bund, where the tank is situated low down.

GBR 28 states that the secondary container ‘must have a capacity of not less than 110% of the containers storage capacity...’, but this can be interpreted to mean that the secondary container must be ‘capable of containing 110% volume of the primary container and, where applicable, the volume provided by the primary container can be taken into account’.

In determining if a tank system is acceptable you should consider if the ancillary equipment is adequately dealt with, such as being within the secondary container. This is where some tank systems have fallen down in the past.

## 5.3 Where can I get more information on how to build a bund?

[CIRIA report 163 Construction of Bunds for Oil Storage Tanks.](https://www.ciria.org/CIRIA/CIRIA/Item_Detail.aspx?iProductCode=R163&Category=BOOK)

## 5.4 Can I take the volume of the primary tank into account when calculating secondary containment capacity?

Yes, GBR 28 states that the secondary containment system "must have a capacity of not less 110% of the container's storage capacity". The volume provided by the primary container can be taken into account where applicable. Most proprietary tank systems are designed so that the oil finds its own level in both containers if the primary container leaks. In this instance the primary container contributes to the total containment capacity. A similar position is achieved in a conventional bund where the tank is situated towards the bottom.

However, you should take into account that such systems may only provide a 10% containment capacity in the event of overfilling. For example, a maximum volume delivery made to a tank more than 10% full will result in a loss of oil from the secondary container. The use of an overfill prevention device is good practice and you should consider these or other additional pollution prevention safeguards, such as additional containment capacity.

Another important issue in determining if a proprietary tank system is acceptable is whether the ancillary equipment is adequately managed, such as being within the secondary container, which some proprietary tank systems may not provide.

## 5.5 Can an isolating valve and filter be outside the secondary containment?

Yes. In a situation involving a fixed draw off from a prefabricated tank the isolating valve and filter can be outside the containment. In this instance they would be regarded as ancillary to the down stream equipment. The isolating valve needs to be accessible in an emergency so can be outside the prefabricated system, but we recommend that they are put inside the secondary containment if possible.

## 5.6 What is a mechanical joint in underground pipe work?

A mechanical joint is any join in a pipe where two or more pieces of pipe have been put together using a fitting attached to the ends of both pipes and which can be taken apart. Compression and threaded fitting are examples of mechanical joints. Welded, braised or soldered joints are not considered to be mechanical. They will not include continuous pipe work made from metal or plastic.

For further information see British Standard 5410 Part 1: 2016 Code of Practice for Oil Firing.

## 5.7 How can I test my pipe work for leaks?

The regulations require that underground pipe work is tested for leaks every 5 or 10 years depending on if there are mechanical joints present.

Where pipe work manufacturers' test instructions are not available, British Standard 5410 Parts 1 and 2 have information about pressure testing of pipe work for oil firing installations. A competent person should undertake pressure testing. Pipe work made from plastic, copper and steel will require different types of testing, as will different size pipes. We recommend that the same method should be adopted for non-oil firing applications such as refuelling facilities.

## 5.8 How can I show that my underground pipe work complies with Regulation GBR28 (f) iii?

The purpose of this section of the regulations is to discourage the use of mechanical joints in new underground pipe installations following some serious pollution incidents caused by corroded or damaged underground pipe work.

The GBR does apply to existing underground pipe work. Existing oil firing systems should have been installed in accordance with the relevant sections of British Standard 5410 or with OFTEC TI/134 Installing oil supply pipes underground*.* These standards stress the importance of laying pipes in accessible ducts where possible. If you cannot demonstrate that pipes have been installed in such a manner then further investigation may be needed, taking into account industry standard lengths of pipe work and the accessibility of the pipe.

## 5.9 Does my tank need an overfill prevention device?

The GBR requires that if the tank and vent pipe cannot be seen from where the filling operation is controlled, such as at remote fill points, then an automatic overfill prevention device must be fitted to the tank. Fixed tank probes that send a signal to the point where delivery is controlled are acceptable. We encourage the use of fail–safe overfill prevention devices and overfill warning alarms.

It is good practice to have an overfill prevention alarm fitted to all systems, even if not required by the regulations.

## 5.10 What is meant by a screw fitting for tank filling being in "good condition"?

The GBR does not define "good condition". However, we think it is sensible to consider whether a fitting is fit for purpose in the broadest sense. You should make sure the screw thread is usable and that deliveries to the tank using the fitting can be made safely and securely. Using the screw fitting should not increase the risk of oil spillage or jeopardise operator health and safety, for example from working at height. You should discuss the suitability of the tank's screw fitting with your oil delivery company.

## 5.11 Does my pump have to be within the secondary containment?

GBR28 Rule (c) does not require pumps to be situated within the secondary containment system. However, it is good practice to make sure that any foreseeable oil leak would be contained within secondary containment, for example a bund or drip tray, and could not cause pollution.

You should check GBR28 (f) viii for specific requirements for pumps used with fixed tanks, GBR28(g) (ii) (2) for separate requirements for pumps used with mobile bowsers and GBR28 (f) vii for requirements for containment for flexible pipes from delivery pumps.

## 5.12 Are distributors committing an offence by delivering to a non-compliant tank?

No, it is the non-compliance of the tank that constitutes the offence. However, if a pollution incident occurs during or following a delivery, we will look closely at the circumstances to determine if the distributor used appropriate judgements to decide if the tank was fit to receive the delivery.

## 5.13 Will SEPA expect oil delivery company drivers to have sufficient expertise to be able to identify a non-compliant tank?

We expect drivers to have suitable training to undertake the job. That training should include appropriate industry guidance. The key requirement is to use common sense when handling a product that has a big environmental impact.

## 5.14 Who is responsible for a tank that is loaned to a customer?

It depends on what exactly is meant by loaning and what agreements and conditions are attached to the loan. A company supplying an unbunded tank to a customer would not necessarily be in breach of the regulations because it is the customer who has custody or control of the oil (not the tank). A company supplying tanks without bunds is unlikely to be in breach of the regulations, subject to any agreement/contract regarding the loaning of the tank.

We would urge customers to insist on being supplied with bunded tanks to reduce their liability under the regulations. A supplier could provide a tank that was not bunded for a user to install in a bund. The ultimate responsibility must rest with the site operator who has custody or control of the oil.

## 5.15 What legal requirements are there for maintenance of tanks?

There are no legal requirements for maintenance in the regulations but there is guidance in [Guidance for Pollution Prevention Note 2 (GPP2)](https://www.netregs.org.uk/media/1890/guidance-for-pollution-prevention-2-2022-update.pdf). OFTEC qualified registered technicians do an annual check on tank installations when they routinely inspect a boiler and they also produce a tank checklist.

We expect visual checks to be carried out at least weekly and would encourage tank checks to become part of the routine maintenance schedule.

The person with custody of the tank is still required by the regulations to ensure that the container is of sufficient strength and structural integrity that is unlikely to burst or leak in ordinary use.

# Understanding GBR 27, Domestic oil storage

It is the responsibility of the storage tank owner to ensure the tank complies fully with the regulations. Please read the GBRs for the full scope and rules.

The GBRs cover the size of the container and not the amount of oil stored within them. Domestic tanks with a capacity greater than 2,500 litres need to comply with GBR 28.

Domestic oil tanks with a capacity of less than 2,500 litres are covered by GBR 27. The rules of GBR27 require that any container that is installed or altered must comply with the requirements of any applicable regulations under the Building (Scotland) Act 2003. The technical aspects of the Act can be found in the [Domestic Technical Handbook](https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2023/12/building-standards-technical-handbook-april-2024-domestic/documents/building-standards-technical-handbook-april-2024-domestic/building-standards-technical-handbook-april-2024-domestic/govscot%3Adocument/2024%252B09%252BDomestic%252BTechnical%252BHandbook%252B-%252BComplete.pdf) which requires a risk assessment to determine the need for secondary containment.

For the purposes of the GBR “domestic” includes:

* Holiday homes and bed and breakfast establishments where the owner lives on the property.
* A house containing an office providing the building is used wholly or mainly as a private dwelling.

Residential care homes are not covered by GBR 27 because they are not used wholly or mainly as a private dwelling.

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