TUFFA TANKS

LABC Assured

FIRE PROTECTION EXPERT GUIDE

May 2021

Fire rated oil tanks have the exact same function as conventional heating oil tanks, however, they are equipped with an additional safety feature – a factory fitted flame-retardant material which acts as a fire barrier. This means that fire rated oil tanks can be installed adjacent to (or even inside) buildings and boundaries - unlike conventional oil tanks which must be sited at least 1.8 meters away from buildings.

Tuffa's fire rated oil tanks are so unique and innovative that many homeowners using heating oil, and even some tank installers, aren't aware of the upgrade when choosing a tank. This isn't surprising when you consider that we are the only manufacturer of plastic fire rated oil tanks.

We've made this expert guide to help installers and domestic tank owners alike to understand more about fire protection and where you can install a fire rated oil tank. Some of the topics covered include types of fire rated oil tanks, benefits of fire protection, and regulations regarding fire separation distances and fire barriers.

QUICK LINKS:

1. What is a fire rated oil tank?

Tuffa's fire rated oil tanks serve as an alternative means of compliance when compared to traditional fire barriers. The system has been thoroughly and independently fire tested to validate its resistance and is Local Authority Building Control (LABC) Assured. Because the Tuffa fire rated tank is integrally fit with a compliant fire barrier they can be installed within 1.8 meters (as close as 300mm) of structures including eaves, fences and adjacent to buildings.

Due to British Standard updates in 2019 (BS 5410-1 8.5) oil tank installations using a fire barrier require a minimum distance of 300mm separating the tank from buildings or other boundaries. This is to allow for suitable inspection of the tank's exposed surfaces. Additionally, where access is required to the tank, e.g. for filling with oil, then at least 600mm access is required.

2. Oil tank fire regulations

Under Building Regulations (Document J, Section 5, p.63.) conventional heating oil storage tanks are required to be installed in an isolated location with strict 'fire separation distances' ensuring a minimum distance from other structures. Contrary to popular belief the risk being controlled isn't that the tanks themselves start a fire. The tank's isolation is actually to protect the contents of the oil tank from surrounding structures which might spread the fire to the tank.

- Fire separation distances

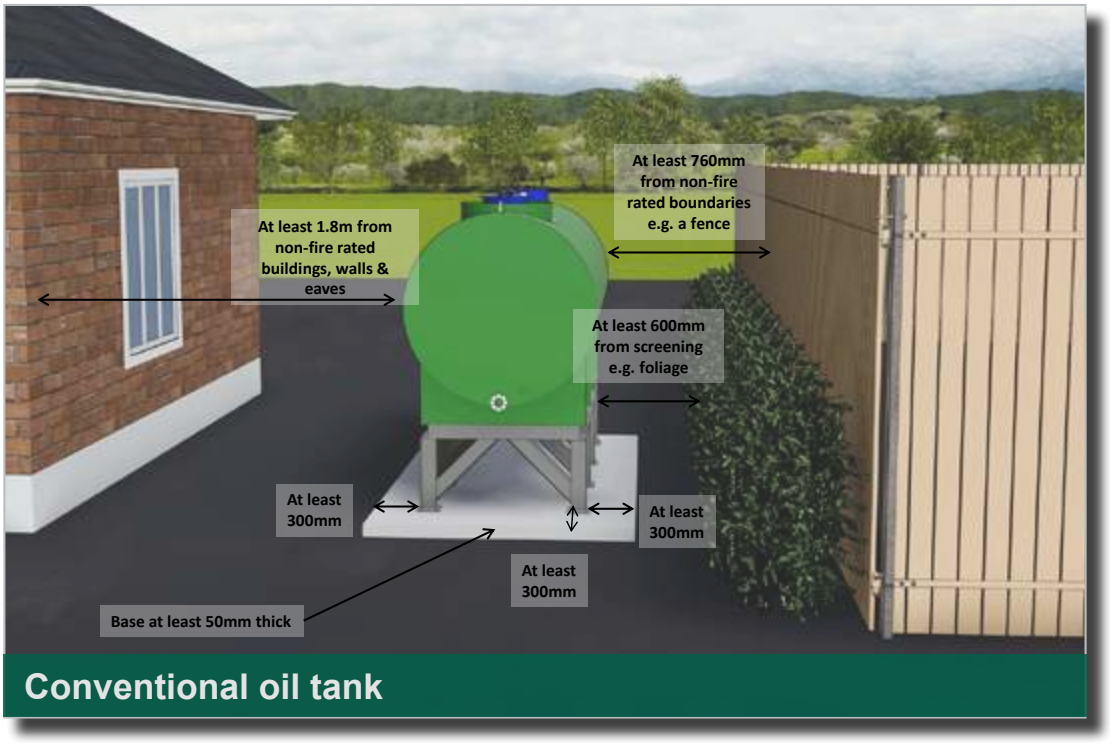
Domestic fire separation distances state the minimum required distance a conventional oil tank must be installed away from boundaries:

1. 1.8m away from a building or structure (e.g. a garage or shed)
2. 1.8m away from eaves of a building
3. 1.8m away from building openings (such as doors or windows)
4. 1.8m away from oil fired appliance flue terminals
5. 760mm away from a non-fire rated boundary such as a wooden fence
6. 600mm away from screening (e.g. trellis and foliage) that does not form part of the boundary

- Tuffa's fire rated oil tank

Tuffa's fire rated oil tanks serve as an alternative means of compliance when compared to traditional fire barriers. The system has been thoroughly and independently fire tested to validate its resistance and has been awarded with Local Authority Building Control (LABC) Assurance. Because the Tuffa fire rated tank is integrally fit with a compliant fire barrier they can be installed within 1.8 meters (as close as 300mm) of structures including eaves, fences and adjacent to buildings.

Due to British Standard updates in 2019 (BS 5410-1 8.5) oil tank installations using a fire barrier require a minimum distance of 300mm separating the tank from buildings or other boundaries. This is to allow for suitable inspection of the tank's exposed surfaces. Additionally, where access is required to the tank, e.g. for filling with oil, then at least 600mm access is required.



Conventional oil tank

- Can I install an oil tank internally?

Oil tanks can be installed within an uninhabited building (e.g. a garage) at a domestic property but require a fully enclosed non-combustible fire resistant chamber with 60 minute fire resistance. Our Fire Protected Oil Tanks are factory-fitted with an independently tested fully encompassing fire resistant material which offers 60 minute fire resistance. A Tuffa 60 minute fire resistance oil tank can be installed inside a domestic building provided that the tank:

- Is installed in an uninhabitable area (e.g. a garage or outbuilding)
- Is fitted with at least 60 minute fire protection
- Has a secondary containment system (bund) which can hold 110% capacity of the primary tank. All our Fire Protected Oil Tanks are integrally bunded.
- Is installed at the lowest possible level in the building or structure
- Is sited with at least a 300mm clearance separating the tank and other structures or barriers
- Is sited with at least 600mm clearance where physical access is required (e.g. for filling the tank)
- Is vented to the open air sufficiently to prevent stagnation, independently of any other part of the premises and preferably by natural means. Our Fire Protected Oil Tanks with 60 minute fire resistance are factory-fitted with a remote vent and remote fill connection points.

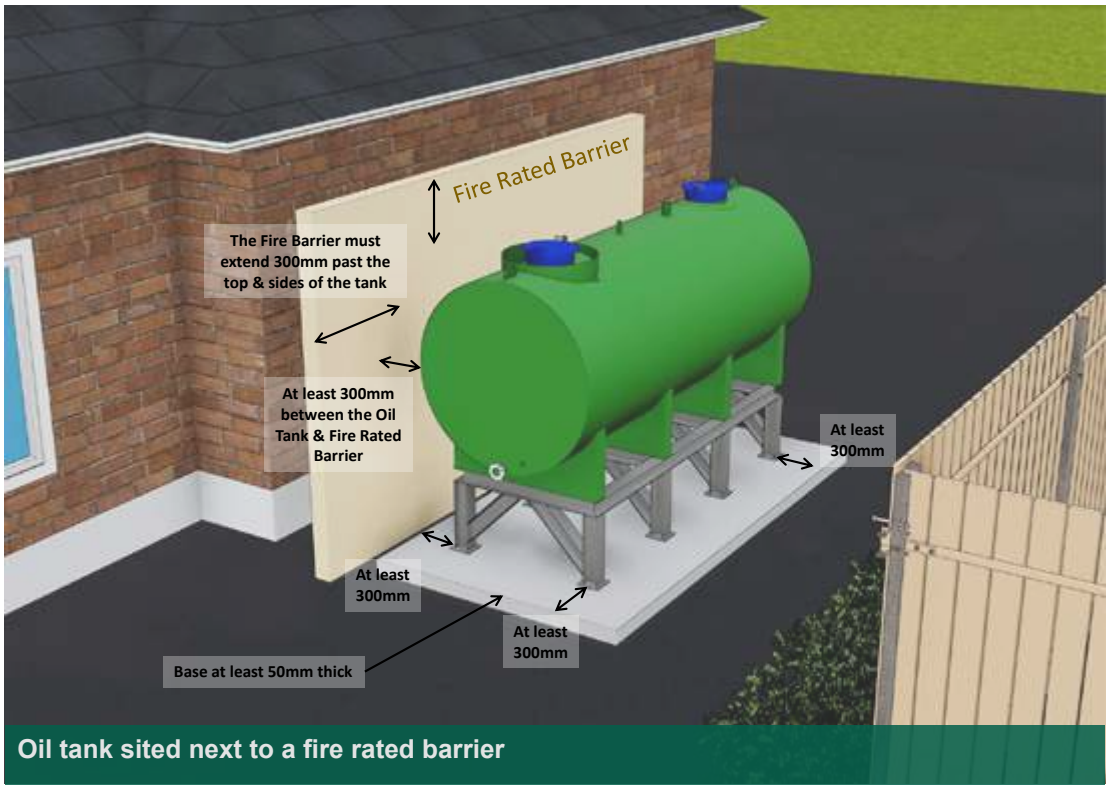
A risk assessment should always be conducted by the Competent Person installing the tank or the building inspector before carrying out any installation. We strongly recommend that a risk assessment is completed before purchasing a Fire Protected Oil Tank.

Illustration of an oil tank installed within a garage

Please note this image is for illustrative purposes, all internal installations of our Fire Protected Oil Tanks should be conducted according to a risk assessment and site-specific requirements.

- Oil tank fire barrier

A more widley known but less practical way to install your oil tank within 1.8 meters of a building is to use an external non-combustible fire barrier with at least 30 minutes fire resistance. Externally constructed fire barriers are required to extend at least 300mm higher and wider than any part of the tank. This is to ensure that the barrier completely interposes itself between the tank and any part of the building. The oil tank must be installed at least 300mm away from the barrier to allow tank inspection access.



Oil tank sited next to a fire rated barrier

- What base must my tank be sited on?

An oil tank must be installed on a solid, non-combustible base which extends at least 300mm beyond the perimeter of the entire tank. The thickness of the base depends upon the material used:

- Concrete at least 100mm thick
- Paving stones at least 50mm thick positioned close to each other on level ground
- Stonework at least 50mm thick

What if my oil tank is installed on piers?

If the oil tank is manufactured from steel then it can be sited on piers. Raising an oil tank has the benefit of allowing air to flow around the bottom of the tank which can help to prevent condensation and corrosion. It also makes visual inspection beneath the tank possible.

Installing an oil tank on piers is often a preferred option for oil boilers which are gravity fed from the tank. Note that Tuffa's steel tanks are manufactured with steel runners which enables airflow around the bottom of the tank without the need for piers.

3. What types of oil tank fire barriers are available?

There are two main types of oil tank fire barriers. A fire barrier can either be integrally fit within the oil tank (like Tuffa's fire rated oil tanks), or the fire barrier can be externally constructed from masonry or other approved materials. Within the fire rated tank category, there are two sub-types: plastic and steel.

- Plastic fire rated oil tanks

Our plastic oil tanks are all bunded and manufactured from polyethylene, a recyclable material known to be extremely hard-wearing. Both the inner and outer tank are roto moulded - a process which makes a strong single unit. The fire-retardant material encompasses the inner tank protecting the fuel from igniting during the stated time. Our plastic bunded tanks are designed to have a life expectancy in excess of 20 years and come with a 10 year warranty when registered. Our plastic fire rated oil tanks are a cost-effective yet durable alternative to steel and have been tried and tested since 2005.

- Steel fire rated oil tanks

Our bunded steel oil tanks are manufactured using high-grade mild steel which has high tensile strength and resistance to impact damage. Steel tanks are more expensive than plastic but offer greater security and longevity with a designed life expectancy in excess of 30 years. Our steel fire rated oil tanks also come with a 10 year warranty and have been tried and tested since 2005.

- Oil tank fire barrier

Fire barriers are constructed externally from the tank and can enable you to site a tank within closer proximity to structures than Building Regulations conventionally allow. Fire barriers are built between the oil tank and a structure to protect the contents of the tank from fire. They can be constructed by a variety of approved materials including brick, stone, or fire rated panels.

4. FAQs

- Who can sign off the installation?

The Competent Persons Scheme was introduced by the Department of Communities and Local Government (CLG) to enable Competent Persons to self-certify certain types of building work (including oil & heating). This means your installer can fit and certify the oil tank without prior approval from building control. For the installer this means:

- In the majority of cases, you don't have to use a local council or approved building inspector to check your work without the need for building control fees your customers benefit from lower prices.
- You must sign off the installation for it to comply with Local Authority Building Control.

- What do I need to do with the LABC certificate?

If you have your oil tank installed by a Competent Person they are able to self-certify their installations. In most cases the LABC certificate should not need to be presented to the local authority.

As an official Supplier Member of the Association of Plumbing and Heating Contractors (APHC) we recommend this trade association for high standards of service and ease of installation. You can find an APHC approved installer on the APHC website.

If your installer has not been involved with purchasing the tank then they might not be aware that Tuffa's fire rated tank offers an alternative mode of compliance compared with fire barriers. This is because our fire rated system is an innovative and unique technology. If questioned you can make your installer aware of the LABC Assured Status, or ask them to call us on 01889 567700 so we can explain the product's compliance.

Where the installation is not signed off by an installer under a Competent Persons scheme, the LABC certificate can be presented to the local authority to confirm compliance.

- What size heating oil tank do I need?

Use the table below as a guide of Tuffa manufactured tanks suitable for your usage:

- Are your fire protected oil tanks bunded?

Tuffa only manufactures fire protected tanks which are bunded. The fire-rated material is contained between the inner tank and bund while still having a capacity to hold a minimum of 110% of the inner tanks contents.

- What standards and regulations do your tanks meet?

Tuffa's fire protected tank range complies with oil storage regulations and British Standards for plastic and steel oil tanks the UK. Additionally, our fire resistant tanks have received further independent testing to test the robustness of the fire-retardant material. They meet the following standards:

• Section J 5.4 of Building Regulations, Table 5.1 for Fire Protection for oil storage tanks
• Code of Practice for Oil Firing standards BS5410
• Our Fire Protected Oil Tanks are registered with LABC under the LABC Assured scheme
• Independently fire-resistance tested in accordance with BS 476 Part 22: 1987 (Warrington Fire Research Centre)
• Meets GPP guidelines for above ground oil storage tanks (GPP2)

Tuffa has manufactured fire rated heating oil tanks for thousands of domestic properties and hundreds of non-domestic locations including government institutes such as the NHS and MOD. This stands testament to the quality and safety of our fire protection technology.

If you have any more questions about fire rated oil tanks, or if you would like to enquire about prices, then please contact our sales support team on 01889 567700 or by emailing sales@tuffa.co.uk.

You can also subscribe to our newsletter to stay up to date with news, guides, product updates and more.