

HEATBASE Ltd FACTSHEET 32 (B)

Oil Tanks located within a Building or structure (England)

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Oil and LPG Fuel Storage installations including the pipework connecting them to the combustion appliances in the buildings they serve should be located and constructed so that they are reasonably protected from fires which may occur in buildings or beyond boundaries or any other potential source of fire. Fire risk structures are not always defined as a building nor does it mean the building has to be made of combustible material, they can include garages, garden sheds, greenhouses, summerhouses, outbuildings, cars, vans, mobile homes and caravans, static caravans, log stores and fixed position barbeques etc. In other words, anywhere a fire may start and spread to the Oil Storage Tank. See interpretation of a building or structure and the definition of a boundary in Fact Sheet 15 Warnings and Non-Compliance to Building Regulations.

The Regulations and Standards governing both Domestic and Non-Domestic Oil storage tanks installed within a building or structure are very complicated and have many different variables. Although we will give the following references, it is still advisable that you take instruction from the Fire brigade, Local Authority Building Control and property Insurers.

PREVENTION OF ENVIRONMENTAL POLLUTION

1. All Oil tanks located within a Building or structure must either be of the integrally bunded type or incorporate a masonry bund in accordance with CIRIA Report 163.

PROTECTION AGAINST FIRE

Currently fire rated oil tanks are not licensed to be installed within buildings or structures.

1. DOMESTIC OIL TANKS WITH A CAPACITY OF 3500 L OR LESS

The Oil tank(s) must be in a dedicated enclosed chamber (consisting of structural walls, floor & a ceiling or roof) that has a minimum fire resistance of 60 minutes. It must have a 60 minute fire resistant self-closing door which opens outwards & is openable from inside the chamber without the need of a key. The chamber should be ventilated directly to open air (preferably by natural means) to prevent stagnation. No wall or roof should be closer than 300mm from any side or top of the tank to allow inspection, but if access around the tank is required for inspection and maintenance this distance should be increased to a minimum of 600mm. Any light fittings should be of the bulkhead or well glass type & any switches should be outside the chamber. If an Oil tank is located within a building or structure then it must be of the integrally bunded type or have a masonry bund in accordance with CIRIA Report 163, which can form part of the chamber, but the access door to the chamber must not form part of the bund. The chamber must not be used for storage.

2. NON-DOMESTIC OIL TANKS WITH A CAPACITY 1250 L OR LESS

The Oil tank(s) must be in a dedicated enclosed chamber (consisting of structural walls, floor & a roof of concrete) that has a minimum fire resistance of 60 minutes, external walls should be imperforate except for access or ventilation. It must have a 60 minute fire resistant self-closing door which opens outwards & is openable from inside the chamber without the need of a key. Doors in internal walls separating all chamber access doors from the rest of the building, including the appliance or plant room should have a fire rating of 30 minutes and be kept shut and bolted. The chamber should be ventilated directly to open air (preferably by natural means) to prevent stagnation or the build-up of an explosive atmosphere. No wall or roof should be closer than 300mm from any side or top of the tank to allow inspection, but if access around the tank is required for inspection and maintenance this distance should be increased to a minimum of 600mm. Any light fittings should be of the bulkhead or well glass type & any switches should be outside the chamber. If an Oil tank is located within a building or structure then it must be of the integrally bunded type or have a masonry bund in accordance with CIRIA Report 163, which can form part of the chamber, but the access door to the chamber must not form part of the bund. The chamber must not be used for storage.

Even if the tank chamber complies with the above, you are advised to consult with your insurers as they may require a higher standard of construction.

3. NON-DOMESTIC OIL TANK WITH A CAPACITY BETWEEN 1251 AND 3500L

The Oil tank(s) must be in a dedicated enclosed chamber (consisting of structural walls, floor & a roof of concrete) that has a minimum fire resistance of 120 minutes, external walls should be imperforate except for access or ventilation. It must have a 120 minute fire resistant self-closing door which opens outwards & is openable from inside the chamber without the need of a key. Doors in internal walls separating all chamber access doors from the rest of the building, including the appliance or plant room should have a fire rating of 60 minutes and be kept shut and bolted. The chamber should be ventilated directly to open air (preferably by natural means) to prevent stagnation or the build-up of an explosive atmosphere. No wall or roof should be closer than 300mm from any side or top of the tank to allow inspection, but if access around the tank is required for inspection and maintenance this distance should be increased to a minimum of 600mm. Any light fittings should be of the bulkhead or well glass type & any switches should be outside the chamber. If an Oil tank is located within a building or structure then it must be of the integrally banded type or have a masonry bund in accordance with CIRIA Report 163, which can form part of the chamber, but the access door to the chamber must not form part of the bund. The chamber must not be used for storage.

Even if the tank chamber complies with the above, you are advised to consult with your insurers as they may require a higher standard of construction.

4. DOMESTIC AND NON-DOMESTIC OIL TANK ABOVE 3500L

The Oil tank(s) must be in a dedicated enclosed chamber (consisting of structural walls, floor & a roof of concrete) that has a minimum fire resistance of 240 minutes, external walls should be imperforate except for access or ventilation. It must have a 240 minute fire resistant self-closing door which opens outwards & is openable from inside the chamber without the need of a key. Doors in internal walls separating all chamber access doors from the rest of the building, including the appliance or plant room should have a fire rating of 120 minutes and be kept shut and bolted and marked: OIL STORE THIS DOOR TO BE KEPT SHUT. The chamber should be ventilated directly to open air (preferably by natural means) to prevent stagnation or the build-up of an explosive atmosphere. No wall or roof should be closer 300mm from any side or top of the tank to allow inspection, but if access around the tank is required for inspection and maintenance this distance should be increased to a minimum of 600mm. Any light fittings should be of the bulkhead or well glass type & any switches should be outside the chamber. If an Oil tank is located within a building or structure then it must be of the integrally banded type or have a masonry bund in accordance with CIRIA Report 163, which can form part of the chamber, but the access door to the chamber must not form part of the bund. The chamber must not be used for storage.

Even if the tank chamber complies with the above, you are advised to consult with your insurers as they may require a higher standard of construction.

5. NON-DOMESTIC OIL TANK LOCATED WITHIN A CLASS 3 BUILDING

Class 3 Buildings include places of public entertainment and assembly e.g. Public Houses, clubs, dance halls, schools, village halls, community centres, churches or other places of worship or study and large buildings which are defined as a building with a height exceeding 24m if it also has an area exceeding 390 square meters on any floor, any building with a height of more than 30m or any building used for trade or manufacture with a cubic content exceeding 7000 cubic meters. Oil tanks located within a building falling into this category are limited to a maximum of 1000L daily service tank, supplied by an additional external bulk storage tank.

Due to the complexity of standards covering these installations, and that a higher level of construction may be required by the local building control department, the fire and rescue service or insurers, you are advised to consult with them to ensure the Installation is safe and compliant.