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Wales

Silage, slurry and agricultural fuel oil storage

The Water Resources (Control
of Pollution) Silage, Slurry and
Agricultural Fuel Oil (Wales)
Regulations 2010 (SSAFO)



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What are the regulations?

The Water Resources (Control of Pollution) Silage, Slurry and Agricultural Fuel Oil (Wales) Regulations 2010 (SSAFO).

These regulations set out the requirements for the design, construction and maintenance of storage facilities for silage, slurry and agricultural fuel oil to prevent water pollution. They apply to all installations completed since September 1991.

What you need to know

To help you, this booklet outlines the key aspects of the regulation requirements for building silage clamps, slurry stores and fuel oil storage tanks.

It is important that you seek professional advice for their design and construction. Please ensure that you only use contractors or builders who understand and build in accordance with the SSAFO regulations.

We would like you to contact us as soon as possible to discuss any issues before constructing new facilities.

What are the standards you must comply with?

Since 1991, if you are building a new storage facility or substantially enlarging or substantially reconstructing an existing facility, you must ensure that:

- it is constructed to last 20 years with proper maintenance, unless it is a below ground silage effluent tank which must be designed to last 20 years without maintenance.
- it will at all times meet performance standards, e.g. silage effluent storage tanks must be impermeable each time they are used.
- it is not constructed within 10 metres of inland waters, which include watercourses, land drains and ditches, into which silage effluent, slurry or fuel oil could enter.

When should you contact us?

We would like you to contact us as early as possible in the planning stage as we may be able to help save you time and money. We will make sure you are complying with the regulations and minimising pollution risks in the most cost-effective manner.

Regulations require you to notify us, in writing at least 14 days before using a system that is new, substantially enlarged or substantially re-constructed. We have forms available to help you provide the necessary information.

Important points

Silage, slurry and fuel oil have been the source of serious pollution, often due to inadequate storage capacity or poor construction.

Sufficient storage for silage effluent and slurry or manure is essential to prevent the need for spreading outside the growing season or during inappropriate weather and soil conditions.

If any silage-making, slurry storage system or agricultural fuel oil (i.e. not domestic fuel oil) store poses a significant risk of pollution to surface or to ground waters, then we may issue a Notice to require you to make improvements.

This highlights the importance of contacting us to discuss any issues before altering your structures or constructing new facilities.

Please ensure that you only use contractors or builders who understand and build in accordance with the SSAFO regulations. By maintaining and managing your system carefully, you will also protect your investment.

Silage storage

Baled and wrapped or bagged silage must not be stored or opened within 10 metres of a watercourse.

If you use field silage sites to make or store field silage, or non-baled silage in large bags, for example 'Ag bags', you must notify us at least 14 days before you first use the site.

Silage clamps have to meet the following main requirements:

- 1) The silo base, effluent tank and drains must all be impermeable and resistant to attack from silage effluent. The base of the silo must be designed and constructed in accordance with BS8007 or BS5502 Part 21.
- 2) Where walls are used, the base must extend beyond walls. All silage clamps must include a perimeter drainage channel connecting to an effluent tank.
- 3) All effluent must be collected and contained. The silage effluent tank capacity must be 20 litres/cubic metre of silo capacity – up to 1500 cubic metres, plus an additional 6.7 litres/cubic metre of silo capacity thereafter.
- 4) No part of this installation be within 10 metres of a watercourse or land drains.
- 5) Silos and drains must be capable of lasting for 20 years (with routine maintenance).
- 6) Below-ground effluent tanks must be capable of lasting for 20 years without maintenance. We will expect a certificate to confirm suitable design and construction and we have a form to help you with this.

7) If the silo has walls, they must be designed to BS5502 Part 22 and be resistant to attack from silage effluent.

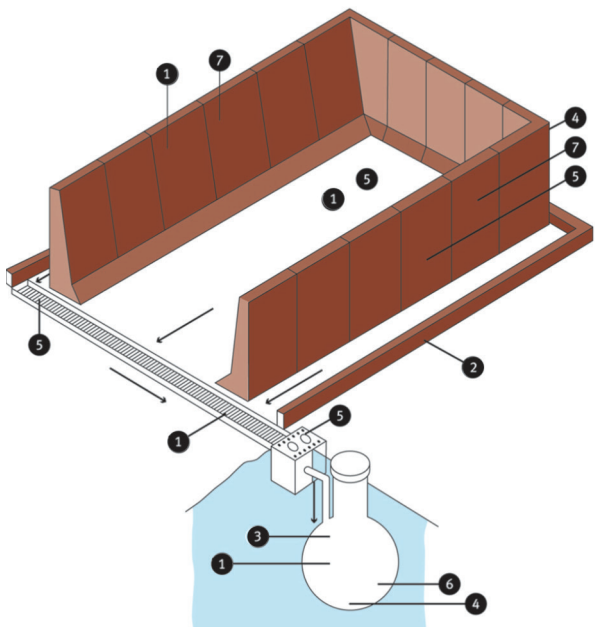


Diagram above shows silage storage on the farm



Image above shows silage storage on the farm

Slurry storage

Slurry is defined as liquid or semi-liquid matter composed of excreta produced by livestock while in a yard or building. Slurry includes parlour and yard washings, and any contaminated rainfall. Separating clean rainwater from roofs and yards can reduce the slurry storage capacity required.

No part of the system may be situated within 10m of a watercourse, which slurry could enter if it escaped unless Natural Resources Wales first agrees in writing measures to avoid pollution.

Slurry storage facilities requirements:

- 1) Slurry stores, tanks, pipes, and channels must be impermeable. Where walls of the slurry store are not impermeable (e.g. weeping wall stores), the base must extend beyond the walls and have perimeter drains that connect to a slurry tank.
- 2) The base and walls of the slurry storage tank, any effluent tank, channels and reception pit, and the walls of any pipes, must be protected against corrosion, as described in BS 5502, Part 50 (1993).
- 3) Slurry storage tank and reception pit must be designed to BS 5502, Part 50 (1993).
- 4) The reception pit and associated channels must normally hold at least two days slurry production, including likely rainwater.
- 5) A slurry storage tank must normally hold at least four months' production, including allowance for likely rain water. In designated Nitrate Vulnerable Zones (NVZ), you will need to hold five or six,

months’ production. If you farm in a NVZ area, you should consult your local Natural Resources Wales office.

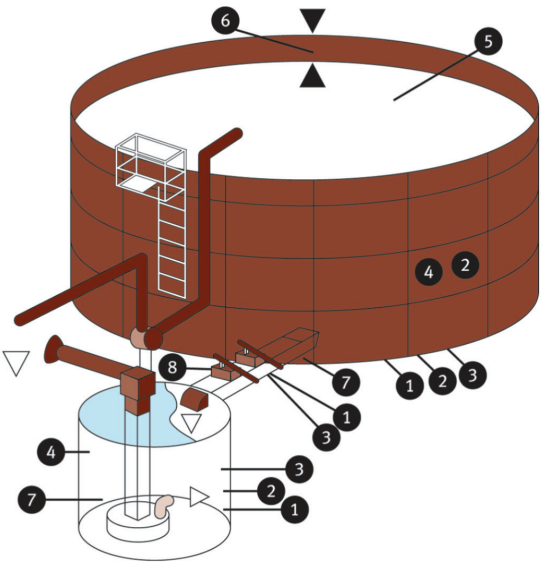


Diagram above shows above ground slurry store

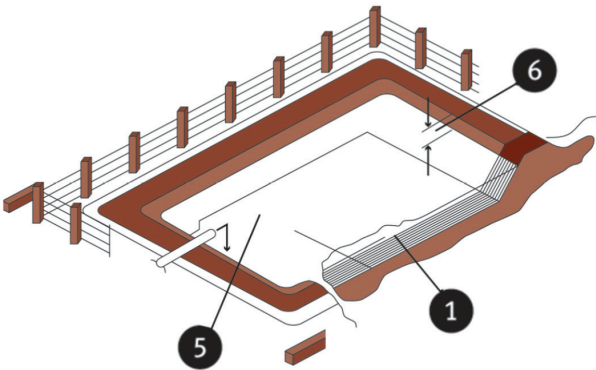


Diagram above shows an earth banked lagoon

- 6) The slurry storage tank must be designed to have a minimum 300mm except earth banked stores which must have a minimum 750mm freeboard maintained at all times.
- 7) All parts of the slurry storage system must be designed to last for 20 years with routine maintenance.
- 8) Any fixed drainage pipe from the slurry store must have 2 valves in series. These must be locked shut when not in use (from 2010 at least 1 metre spacing between the valves).

Agricultural fuel oil storage

Agricultural fuel oil stores requirements:

- 1) Storage of fuel oil must be contained within a bund capable of containing either 110% of the capacity of the largest tank or 25% of the total capacity of multiple tanks (or drums and barrels) whichever is the larger.
- 2) The bund and base must be impermeable (e.g. no internal drains or drains holes) and made to last for 20 years (with routine maintenance). There must be no rainwater drain valve, not even with a tap.
- 3) Every part of fuel store must be within the bund.
- 4) Taps and valves must be within the bund and must discharge downwards and be shut and locked when not in use.

- 5) Flexible pipes must be fitted with an automatic closure valve and shall be locked within the bund when not in use.
- 6) No part is to be within 10 metres of a watercourse, which fuel oil could enter if it were to escape.

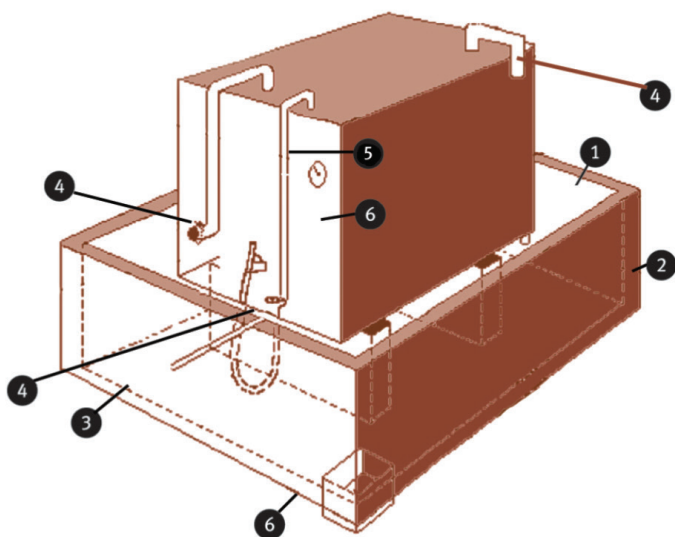


Diagram of correct agricultural oil storage

Advice and guidance

You can find out more about how to store silage, slurry and agricultural fuel oil from:

Welsh Assembly Government: The Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) (Wales) Regulations 2010 - Guidance Note for Farmers.

We also have a series of fact sheets on the SSAFO regulations, available from: www.naturalresourceswales.gov.uk

Would you like to find out more about us?

Then call our customer services on

email enquiries@naturalresourceswales.gov.uk

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www.naturalresourceswales.gov.uk

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