Slurry Lagoon Storage & Construction

Frequently Asked Questions

Slurry is a valuable source of nutrients and when used appropriately, can help to reduce the reliance on bagged fertilisers. However, it's also a highly polluting material that must be managed and contained securely. Here are some of the frequently asked questions (FAQ's) from farmers and contractors when considering a slurry lagoon:

Q. I need to increase slurry storage – what are my options?

A. When looking at slurry storage on farm, the options are above ground tanks, below ground concrete tanks and earth bank lagoons with sheet liners. You also might want to look at ways to keep clean and dirty water separate around the steading and consider Rural SuDS systems as a way of treating lightly contaminated water, instead of putting additional liquid into your slurry storage system.

Q. Do I need planning permission for a slurry lagoon?

A. A slurry lagoon is classed as an engineering operation and not as a building and as such, is considered a permitted development unless one of the following caveats apply;

- The development would be carried out on agricultural land less than 0.4 hectare in area. (i.e. holding size)
- The height of any part of the works within 3 kilometres of the perimeter of an aerodrome would exceed 3 metres;
- Any part of the development would be within 25 metres of the metaled portion of a trunk or classified road; or
- Any part of the lagoon would be within 400 metres of the curtilage of any protected building

A "protected building" means any permanent building which is normally occupied by people or would be so occupied, if it were in use for purposes for which it is apt; but does not include -

- A building within the agricultural unit; or
- A dwelling or other building on another agricultural unit which is used for or in connection with agriculture.

In other words, even if the farmhouse or a farm cottage occupied by farm staff is within 400 m of the proposed lagoon, it can still be treated as permitted development unless another of the caveats apply. If any house which is separately owned or tenanted by someone who has no interest in or employment with the farm is within 400 m of the proposed lagoon, then full planning is required.

If any of the caveats apply, the lagoon will require full planning permission and cannot be handled under "prior notification".

[1]In terms of Class 18 of the Town & Country Planning (General Permitted Development) (Scotland) Order 1992 (as amended).

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Q. Do I need a Building Warrant?

A. Yes. In Scotland, a building warrant is required for any slurry store or silage effluent tank.

Q. Do I need to discuss a slurry lagoon with SEPA?

A. Yes. You will need SEPA approval before bringing any new storage facilities into use. Contact with SEPA prior to construction for comment on the proposal is recommended.

Q. I'm not looking for a grant to fund the lagoon, do I still need a liner?

A. Yes. Due to the risk of pollution, Scottish Government and SEPA are now both of the opinion that all slurry lagoons must be lined with a sheet liner. Due to the risk of pollution, its widely anticipated that future regulation will require all lagoons to be lined. With these changes to legislation expected, it is unlikely SEPA will be approving any new slurry lagoon constructed solely of earth.

Q. What kind of liner do I need? Can you recommend suppliers?

A. There are numerous liner suppliers working in England and Scotland. SEPA has been working with suppliers identifying what is required as the minimum, using the guidance in the CIRIA document *Livestock manure and silage storage infrastructure for agriculture* (C759).

For HDPE/LDPE/PVC type liners, SEPA will be looking for a **minimum thickness of 1.5mm** with a non-woven geotextile liner underneath (in line with CIRIA Livestock manure and silage storage infrastructure for agriculture (C759) publication). For Butyl and EPDM liners, a non- woven geotextile will be required underneath with **minimum liner thickness of 1mm**. Many engineers are **requiring a minimum liner thickness of 2mm for these materials**.

Q. How do I know the chosen lining material will meet SEPA's specification?

A. Farmers and contractors should contact SEPA to confirm the products suitability prior to committing to purchase**.**

Q. Do I need to fit a leak detection system?

A. You don't have to fit a leak detection system. However If a leak detection system is required by the engineer, this must be agreed in advance with SEPA. SEPA will be looking for drawings of the leak detection system and lagoon layout prior to agreement for work to go ahead.

Q. How big does the lagoon need to be?

A. Slurry lagoons should provide a minimum of 22 weeks for livestock and 26 for pig slurry. The lagoon will also have to have the capacity to collect all contaminated drainage from dirty yards, winter run-off from silage pits etc. for 22 weeks, the quantity of any cleaning waters draining to the store over the said period and any imported slurry or digestates. Under grant funding, a longer storage period may be required. or digestates.

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Q. Does the lagoon need to be covered?

A. Not at present, however a cover would reduce the collection of rainfall over the 22 week period and help to minimise ammonia losses. It would be worth discussing the option of fitting (or retrofitting a cover in the future, should this be required) with your engineer at the at the design stage.

Q. My neighbour can apply for grant support for slurry storage under AECS, but my farm doesn't qualify for this option. Why is that?

A. To get best value from the limited budget available, the diffuse pollution operational area (or Priority Catchments) have been used to target the water quality options available under AECS (Agri-Environment Climate Scheme). In general, this means that the catchments which have been prioritised for action to tackle diffuse pollution would have access to the SRDP water quality options such as slurry storage. There is a limited budget, so Scottish Government have had to target the options to areas where they are most needed.

Q. I want to minimise the amount of water I collect and put into the slurry store. What should I do with 'clean' runoff from closed silage pits?

A. When the pit is closed, any runoff shed off the pit should be clean – make sure its not going onto a dirty yard or apron and adding to the volume of dirty water you need to collect and store. When the pit is open, runoff is classed as contaminated and needs to be collected or treated via a constructed farm wetland. When the silage pit is empty, if silage residue remains you still need to collect any runoff. Once the pit has been cleaned and power-hosed out, water is then classed as clean (note any silage effluent from the clamp is very polluting and should be collected).

Q. Do I need SEPA authorisation before using the slurry lagoon?

A. Yes. SEPA's form SSA-F-001 should be completed and returned to SEPA a minimum of 28 days prior to a new facility being brought into use. The form should be signed by the person having control or custody of the substance being stored in the lagoon and should also be signed by a chartered engineer to certify that it has been designed to satisfy the requirements of the SSAFO regulations and by the builder to certify that it has been built to the engineer's design.

Note compiled by Rebecca Audsley, Sarah Kerr, Jim Campbell, Seamus Donnelly (SAC Consulting) and Stephen Field (SEPA).

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[2] The Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) (Scotland) Regulations 2003 .

Find other useful information and resources related to the 'Slurry Storage & Construction' events on our webpage at www.fas.scot/slurry-lagoons

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