THE CONTROL OF POLLUTION

(SILAGE, SLURRY AND

AGRICULTURAL FUEL OIL)

REGULATIONS (Northern Ireland) 2003

GUIDANCE NOTES

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THE CONTROL OF POLLUTION (SILAGE, SLURRY AND AGRICULTURAL FUEL OIL) REGULATIONS (Northern Ireland) 2003

INTERPRETATION OF THE REGULATIONS

In these Regulations the following terms mean:

Animal – any animal or bird bred or on agricultural land for the production of food, wool, skin or for other farming purposes.

Construct – includes install

EEA State – a State is a Contracting Party to the Agreement of the European Economic Area signed at Oporto on 2nd May 1992, as adjusted by the Protocol signed at Brussels on 17th March 1993

Farm – land occupied as a unit for agricultural purposes.

Forage crop – any crop grown as food for animals.

Freeboard (*not defined in the Regulations*) - the unfilled depth at the top of a slurry or effluent tank or compound.

Fuel oil – oil intended for use as a fuel for the production of heat or power, but does not include oil intended for use exclusively as fuel for heating a farmhouse or other residential premises on a farm and which is stored separately from other oil.

Reception pit – a pit used for the collection of slurry before it is transferred into a slurry storage tank or for the collection of slurry discharged from such a tank.

Relevant substance – slurry, any crop which is being made or has been made into silage and fuel oil.

Silage – any forage crop which is being, or has been, conserved by fermentation or preservation (including use of additives), or both, and which is intended for consumption by animals.

Silage effluent – is defined as effluent produced from any forage crop which is being made, or has been made, into silage or a mixture consisting wholly of or containing such effluent, rain or water coming from a silo, silage effluent collection system or drain.

Silo – any structure used for making or storing silage.

Slurry – is defined as:

(a) excreta, including any liquid fraction, produced by animals whilst in a yard or building, or

(b) a mixture containing such excreta or rainwater, seepage or washings containing or consisting of such excreta from a building or yard used by animals or from any structure in which dung or slurry is stored (including middens, high level slatted buildings and weeping wall structures), which is of a consistency that allows it to be pumped or discharged by gravity at any stage in the handling process.

Slurry storage system – a slurry storage tank; any reception pit and any effluent tank used in connection with the slurry storage tank and any channels and pipes used in connection with the slurry storage tank, reception pit or effluent tank.

Slurry storage tank – includes a lagoon, pit (other than a reception pit) or tower used for the storage of slurry.

Substantial enlargement (*not defined in the Regulations*) – EHS (in line with SEPA and EA) has interpreted "substantially enlarged" to mean alterations that increase the storage capacity of silos, effluent tanks, slurry stores, slurry tanks /channels and fuel stores by more than 10% of the original volume.

Substantial reconstruction (*not defined in the Regulations*) - EHS (in line with SEPA and EA) has interpreted "substantially reconstructed" to mean if more than 10% of the supporting wall(s) and /or base area of a silo, effluent tank, slurry store, slurry tank/channels or fuel store is /are reconstructed.

Waterway (*as defined in the Water (Northern Ireland) Order 1999*) – includes any river, stream, watercourse, inland water (whether natural or artificial) or tidal waters and any channel or passage of whatever kind (whether natural or artificial) through which water flows.

Yard (*not defined in the Regulations*) - EHS determines a yard to be any "enclosure used for the keeping of animals" (as defined by the Oxford English Dictionary). This definition will exclude a field.

GENERAL INTRODUCTION

POLICY

1. The Department of the Environment (DOE) has a duty to promote the conservation of Northern Ireland's water resources and the cleanliness of water in waterways and underground strata. Environment and Heritage Service (EHS), an agency within DOE, plays a key role in this.

2. It is EHS policy to maintain or improve the quality of surface waters and waters in underground strata as required by national policy, EC Directives and international agreements, and to generally manage river, estuarine, and coastal waters to be at least of "Good" status under the adopted classification schemes with no downward movement between classes.

THE REGULATIONS

3. The Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations (Northern Ireland) 2003, known as SSAFO, were made under the powers conferred on the Department of the Environment by Article 14 of the Water (Northern Ireland) Order 1999. **The legislation came into effect on 21 July 2003 and it is the responsibility of farmers to ensure their storage facilities comply with it.** EHS is responsible for enforcing these Regulations.

4. The SSAFO Regulations set minimum legal standards; they do not change other legislation under which it is an offence to cause water pollution. There is a duty for farmers both to avoid causing pollution and to comply with the Regulations. Variations in local conditions may mean that on some farms more stringent standards are needed to prevent pollution. Farmers must ensure that their installations do not cause pollution.

5. If a pollution incident does occur, it is in everyone's interest that EHS is contacted immediately: the EHS **Emergency Pollution Hotline** Telephone number is **0800 807060**. Quick notification helps reduce the impact of the pollution and the cost of cleaning it up.

6. The implementation of The Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations (Northern Ireland) 2003 will help prevent pollution from agricultural sources and improve the environment for rural communities in Northern Ireland.

7. A copy of the Regulations can be obtained by post from The Stationery Office (see Appendix 6) or downloaded from the web-site: http://www.northernireland-legislation.hmso.gov.uk/sr/sr2003/20030319.htm

PURPOSE OF GUIDANCE NOTES

8. EHS wishes to work with farmers to offer help and guidance on complying with the SSAFO Regulations, or otherwise preventing pollution. These guidance notes provide

background information and guidance on the interpretation of the Regulations for EHS, Department of Agriculture and Rural Development (DARD), farmers, contractors and other interested parties. The guidance notes should assist farmers in complying with the Regulations.

9. The guidance notes aim to explain in simple terms some of the main points in the Regulations. They should not be regarded as a substitute for the Statutory Instrument, and are not intended to have legal force. The notes are purely illustrative, and no reliance should be placed upon them for the purposes of legal interpretation.

10. These guidance notes should be regarded as a living document. They may require alteration following further consultation and as a result of queries arising from the implementation of these Regulations and other Regulations and legislation. In particular, some details will be altered as a result of consultation on the proposed Nitrates Action Programme for the total territory of Northern Ireland.

TECHNICAL ADVICE

11. General technical advice on structures covered by these Regulations is available from DARD Building Advisors. Detailed plans and specifications, however, should be obtained from structural and civil engineering consultants and appropriate suppliers and contractors. EHS will require certification from a chartered structural or civil engineer to confirm that the design and construction, substantial enlargement or substantial reconstruction of silage, slurry or agricultural fuel oil stores complies with SSAFO Regulations in every respect. It is recommended, therefore, that farmers **consult a chartered structural or civil engineer** about their proposals at the planning stage**, prior to work beginning.**

BRITISH STANDARDS (see also Appendix 2)

12. BS 5502: 1993 is the British Standard code of practice for the design and construction of buildings and structures for agriculture. Part 22 of this code covers the design, construction and loading for buildings and structures for agriculture. Part 50 of the code covers the design, construction and use of storage tanks and reception pits for livestock slurry. BS 8007: 1987 (referred to in BS 5502: 1993) is the British Standard code of practice for design of concrete structures for retaining aqueous liquids. BS 5061: 1974 is the British Standard specification for the design and construction of cylindrical forage tower silos. **These codes of practice are technical, engineering manuals; any detailed specification of British Standard requirements should be made by qualified, chartered, civil or structural engineers.**

GENERAL ADVICE

13. General advice on pollution prevention and reduction measures is available from DARD Countryside Management Branch (CMB) (see Appendix 4). In particular, farmers should follow the advice given in the DARD “Code of Good Agriculture Practice

for the Prevention of Pollution of Water" and the "Code of Good Agricultural Practice for the Prevention of Pollution of Air and Soil".

HEALTH AND SAFETY ISSUES

14. Where, for the purpose of carrying out an inspection, it is necessary to enter an enclosed or underground tank the person in control of the premises must carry out an adequate assessment of risks to personnel (e.g. from liquid contents, unstable structures, unprotected edges, oxygen deficient or toxic atmospheres). Arising from the findings of the risk assessment, they must specify and implement a safe system of work for those involved. A secure working platform, with guard rails, should be provided where a person involved in inspection work could fall 2 metres or more to the floor. Any structure or excavation, in which liquid can accumulate and pose a drowning risk to children, must be securely fenced. This includes slurry lagoons and bunded fuel tanks. Further information and guidance on health and safety issues in agriculture is available from the Health and Safety Executive for Northern Ireland (see Appendix 4).

PLANNING ISSUES

15. Planning permission may be required for proposed new farm storage facilities, depending on the size and location of the proposal. Further information and guidance on planning issues in agriculture is available from the Northern Ireland Planning Service (see Appendix 4).

THE APPROACH ADOPTED IN THE REGULATIONS

16. The objective of the Regulations is to set out what is required from those who are in control of silage, slurry and agricultural fuel oil so as to minimise the risk of water pollution from these substances. They do not, in general, specify the means to be adopted to meet these requirements. Structures that comply with the current British Standards will meet the requirements (provided all other, non-structural specifications of the Regulations are met). It is wise in all cases to check the requirements set out in the Regulations.

SCOPE OF THE REGULATIONS

SUBSTANCES AND STRUCTURES COVERED BY THE REGULATIONS

17. The Regulations apply to:

- **silage making and storage** *(Regulation 3)***,** - including tower silos, baled silage (bagged or wrapped), non-baled, bagged silage (Ag-bags), field clamps and silage effluent tanks;
- **slurry storage systems** *(Regulation 4)***,** including stores for effluent such as yard water contaminated with animal excreta, run-off from solid manure stores in

yards, washings from buildings or yards used by livestock, reception pits and associated pipes and channels; and

- **agricultural fuel oil stores** *(Regulation 5)*.

SUBSTANCES AND STRUCTURES NOT COVERED BY THE REGULATIONS

18. The Regulations do not apply to:

- Dairy parlour washings and roof/yard water not containing animal excreta;
- residues from fish farms *(Regulation 2(1))*;
- manure from horses *(Regulation 2(1))*;
- slurry stored temporarily in a tanker *(Regulation 4(2))*;
- solid manure stored in field heaps *(Regulation 2(1))* (see Appendix 1); and
- underground, mobile (temporarily for transport purposes), or domestic fuel stores, or where the total quantity of fuel stored does not exceed 1250 litres *(Regulation 5)*.

PLEASE NOTE

19. As a consequence of anticipated legislative changes, the definition of slurry may alter and, subsequently, the SSAFO Regulations may no longer apply to yard water lightly contaminated by animal excreta.

CONTROLLED AND EXEMPT STRUCTURES

Controlled structures *(Regulations 6 and 8)*

20. Where construction, substantial enlargement, or substantial reconstruction of storage facilities has been completed **after 1 December 2003**, the facilities must comply with the Regulations (controlled structures). This is the date that will be quoted by EHS on forms and correspondence.

Exempt structures *(Regulation 6)*

21. Stores that were in use or built **before 1 December 2003**, and which have not been substantially altered after that date, are exempt from the Regulations. For all exempt structures, farmers should ensure the structure does not give rise to a significant risk of water pollution in a waterway or underground strata. If any exempt structure does pose a significant risk of pollution, EHS may require works to be done, or precautions to be taken, to bring the structure up to an acceptable standard and reduce the pollution risk. If such works are not deemed a substantial reconstruction and are completed to an acceptable standard, within the agreed time-scale, the structure will not lose exemption.

LOSS OF EXEMPTION *(Regulation 8)*

22. A structure will lose exemption if:

- it is substantially enlarged;
- it is substantially reconstructed (unless, in the opinion of EHS, the risks of pollution are reduced by the reconstruction); or,
- any requirement of a Notice served under Regulation 9 of the Regulations is not complied with within the time period stated on the notice.

Substantial enlargement and substantial reconstruction *(Regulation 8)*

Definition of substantial enlargement and substantial reconstruction

23. EHS has interpreted "substantially enlarged" to mean alterations that increase the storage capacity of silos, effluent tanks, slurry stores, slurry tanks /channels and fuel stores by more than 10% of the original volume. A store will be deemed substantially reconstructed if more than 10% of its supporting wall(s) and /or base area is /are reconstructed.

Mitigating circumstances

24. In certain circumstances, and in consultation with the EHS Agricultural Regulations Team, a greater amount of enlargement or reconstruction may be permitted without a structure losing its exemption. One example would be where current storage on the farm is inadequate, but no site is available for building a new store at least 10 m away from any waterway. Another would be where the risk of water pollution is considered negligible. In both these cases an enlargement or reconstruction of up to 25 % of the original size of the structure may be considered by EHS to be acceptable without a loss of exemption. Any substantial enlargement or reconstruction of this nature must be agreed to, in writing, by EHS before work begins. A flow chart to clarify this decision making process is illustrated in **Diagram 1**.

Enlargement and reconstruction of less than 10 %

25. A proposal for work that enlarges or reconstructs the structure by less than 10 % may have implications for the load bearing capacity or impermeability of the store. In such cases, it is strongly recommended that an engineer is consulted to ensure that these parameters are not adversely affected and that the store remains fit for purpose.

Minor alterations and repairs

26. Minor alterations and repairs would not necessarily mean loss of exemption, e.g. minor changes to a reception pit or channels would not cause a slurry storage tank to lose its exemption. Minor changes may include replacement of sluices and valves, general repairs and maintenance such as repair of small holes/cracks. **Table 1** illustrates some examples of these points.

Diagram 1: Flow chart for decisions on enlargement and reconstruction

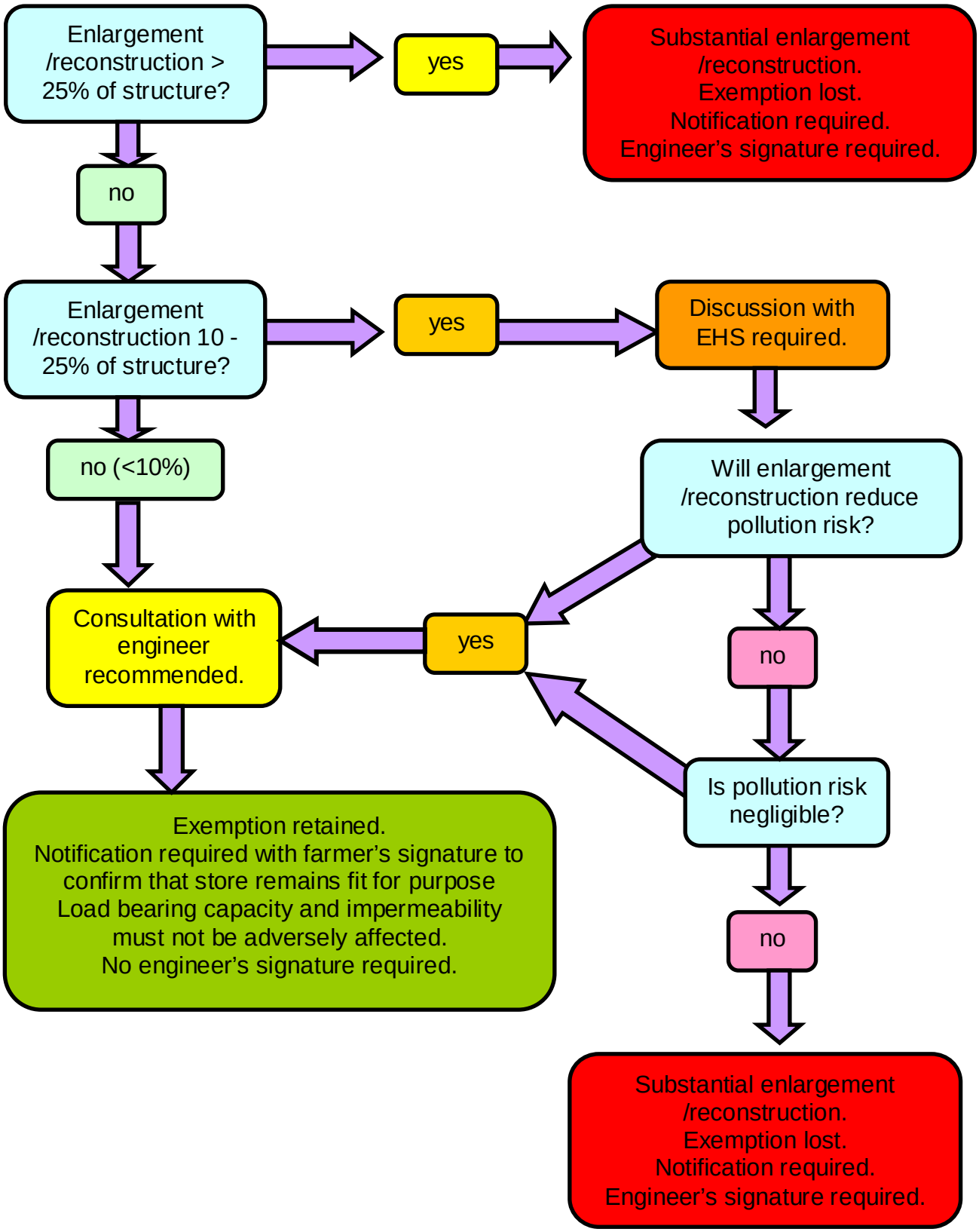


Table 1: Proposed effects of actions on exemption status - examples

Proposal	Exemption Status
Minor repairs and maintenance of pits, walls etc	**Retained**
Replace part of one wall of silo	**Retained** provided that it is less than 10% of total (*or less than 25% in some cases – see Diagram 1*). It must be ensured silo remains fit for purpose.
Re-skim silo floor using appropriate materials (to reduce ponding)	**Retained** subject to integrity and impermeability of underlying floor being demonstrated
Re-skim silo floor with hot rolled asphalt (HRA)	**Retained** subject to integrity and impermeability of underlying floor being demonstrated
Resurface or dig up and relay floor of silo	**Lost**
Construct a slurry transfer channel	**Retained**: it must be ensured that the structural integrity and impermeability of connected stores are not adversely affected.
Replace more than 10% of panels on slurry store (*or more than 25% in some cases – see Diagram 1*)	**Lost**
Repair or modify slurry storage tank by more than 10% (*or more than 25% in some cases – see Diagram 1*)	**Lost**
Relocate or replace fuel tank (more than 1250 litres)	**Lost**
Replace more than one wall of silo during lifetime of pit.	**Lost**
Non compliance with a Notice	**Lost**

Construction of slurry transfer channels

27. The provision of a slurry transfer channel, **not designed for more than two days storage of slurry**, which does not provide any "storage" capacity and is just a transfer route, would not be considered a substantial enlargement. However, the construction of a transfer channel may have implications for the load bearing capacity or impermeability of connected stores. In such cases, it is strongly recommended that an engineer is consulted to ensure that these parameters are not adversely affected and that the stores remain fit for purpose.

Re-laying and resurfacing of silo floors

28. Silo floors that have been replaced or overlaid must comply with the Regulations, as such work is deemed to be a substantial reconstruction. However, re-skimming a silo floor (without digging up), with, e.g., specialist mixtures, would not normally result in a loss of exemption, provided the integrity and impermeability of the underlying floor is demonstrated. Similarly, re-surfacing a floor with hot rolled asphalt (HRA) would not result in loss of exemption, provided the integrity and impermeability of the underlying floor is demonstrated.

Application of loss of exemption

29. Where a structure has been substantially enlarged or substantially reconstructed, the Regulations apply to the **whole** structure and not just the newly extended or reconstructed part. However, if, for example, a store lost exemption because the floor was replaced, this would not necessarily mean that the walls required replacement. An engineer would need to sign off that the original walls were structurally sound and fit for purpose. Similarly, if a store was substantially enlarged, an engineer would need to sign off that the original parts were structurally sound, suitable for extension (i.e. the remaining, original walls would bear the new loadings), and would remain fit for purpose. It is recommended that farmers always consider the option of building new storage, rather than renovating existing stores.

Slurry storage capacity

30. As with the construction of new slurry storage, if existing slurry storage is substantially reconstructed or enlarged, the farmer must demonstrate that they have the storage capacity required by the legislation. The requirement for four months' storage capacity under the SSAFO Regulations is currently being reviewed and may be increased as a result of the implementation of other legislation.

ENFORCEMENT OF THE REGULATIONS

EHS ENFORCEMENT AND PROSECUTION POLICY

31. The general EHS Enforcement and Prosecution Policy for Environmental Protection is outlined in the 'Managing the Water Environment in Northern Ireland 2000' report published by EHS. It can also be viewed on the EHS web-site at www.ehsni.gov.uk

RESPONSIBILITY FOR COMPLYING WITH THE REGULATIONS *(Regulation 9)*

32. The Regulations require the person with custody or control of the substance or the storage structure to take action. It is this person that EHS would serve with a Notice, if necessary. Disputes about who has custody or control would need to be resolved

ultimately by the courts. It is considered that the term would normally be understood to mean the person who has the *right* to control the substance or structure.

REQUIREMENT TO CARRY OUT WORKS

33. If, on inspection by a representative EHS, controlled or exempt stores are found to pose a significant risk of pollution to a waterway or underground strata, EHS may require works to be carried out, or precautions or other steps taken, in order to reduce the pollution risk to a minimum. For exempt structures, if such works are not deemed a substantial reconstruction and are completed to an acceptable standard, within an agreed time-scale, then the structure will not lose exemption.

Significant risk *(Regulation 9)*

34. EHS must define what constitutes "a significant risk of water pollution" arising from the storage and handling of silage, slurry and fuel oil. Every eventuality cannot be covered in guidance, and staff will take each case on its own merits and in light of local circumstances. However, the following general points will be taken into consideration:

- if there has been or is likely to be a detrimental effect on downstream users of a waterway (public, industrial or agricultural water supplies);
- if there has been or is likely to be a fish kill;
- if there has been or is likely to be adverse effects on aquatic life;
- if there has been or is likely to be contamination of the bed of a waterway;
- if there is extensive visible pollution of a waterway;
- if there has been or is likely to be interference with amenity use of a waterway;
- if there are recurrent breaches of the Regulations and /or the DARD Codes of Good Agricultural Practice; or
- if pollution of waters in underground strata (including pollution of a well) is likely.

Groundwater pollution

35. The Regulations refer to "….any significant risk of pollution in a waterway or underground strata…". Hence, even if a silage, slurry or agricultural fuel oil store is not located close to a surface waterway, farmers must ensure that the risk of groundwater pollution is minimised. For this reason, earth sumps and soakaways are not permitted in connection with controlled structures. The use of existing earth sumps and soakaways with exempt structures, and the use of existing earth floored silos will be assessed by EHS on a case by case basis by consideration of the risk of groundwater (and surface water) pollution. Pollution of groundwater is an offence under Article 7 of the Water (Northern Ireland) Order 1999.

Structures taken beyond use

36. As an alternative to undertaking works or precautions to bring an structure posing a risk of pollution up to an acceptable standard, a farmer could agree with EHS to take the structure out of use. Random inspection may be undertaken by EHS to confirm that the agreement is being complied with. If, at a later date, the farmer wishes to bring the structure back into use, EHS should be contacted to discuss this as further deterioration of the structure may have occurred since works or precautions were originally specified. In such cases an engineer's report may be required to confirm that the originally specified works are sufficient to minimise the risk of pollution.

NOTICE REQUIRING WORKS *(Regulation 9)*

37. EHS hopes to work constructively with farmers to implement the SSAFO Regulations, in order to prevent pollution from agricultural sources. However, where necessary, under the Regulations, a Notice can be served requiring works to be carried out, or precautions or other steps taken, to minimise the risk of pollution of water in a waterway or underground strata. Any Notice would be served on the person with custody or control of a substance, or storage structure, in circumstances in which the Regulations apply.

38. Notices are powerful legal tools and will normally only be used if a farmer has failed to carry out works, or take precautions, already requested by EHS. An outline of one possible enforcement scenario is illustrated in Diagram 2. A farmer will be advised of the actions required, usually firstly in an advisory letter, and then (if no action is taken) in a warning letter. The action to be taken and the time frame for completion will be discussed and agreed with the farmer and will take account of the severity of the pollution risk, but also the time necessary for making repairs etc.

39. For exempt structures a Notice may include requiring an exempt structure to meet some or all of the standards applying to new structures. For controlled structures which do not comply with the Regulations, a Notice will require them to be brought up to standard. If a Notice requires structural work to be carried out, the farmer should consult a chartered structural or civil engineer for a detailed specification of the work. DARD Countryside Management Branch (CMB) can provide general advice on pollution prevention and reduction measures.

40. A Notice may also include the requirement to implement any relevant measures recommended in "The Code of Good Agricultural Practice for the Prevention of Pollution of Water" (published by DARD).

APPEALS AGAINST NOTICES *(Regulation 10)*

41. Provision is made in the Regulations for appeals to the Water Appeals Commission (see Appendix 4), should the terms of a Notice be considered unreasonable. Appeals must be submitted in writing within 28 days of the date on which the Notice was served.

42. The appeal must include a full statement of the grounds of appeal and it would be helpful if the following documents were also attached:

- a copy of the Notice served on the farmer;
- any relevant correspondence;
- a plan of the farm, showing the installation in question and its relation to waterways and drains; and
- a statement that the appellant is the farmer on whom the Notice was served, or a statement from the farmer authorising someone to act on his/her behalf.

A copy of the appeal and any accompanying statement should also be sent to EHS.

OFFENCES AND PENALTIES *(Regulation 12)*

43. If the terms of a Notice are not complied with, within an agreed time-scale, exempt stores covered by that Notice will lose exempt status and the farmer could be liable to prosecution for contravening the Regulations (with regard to either controlled or previously exempt structures).

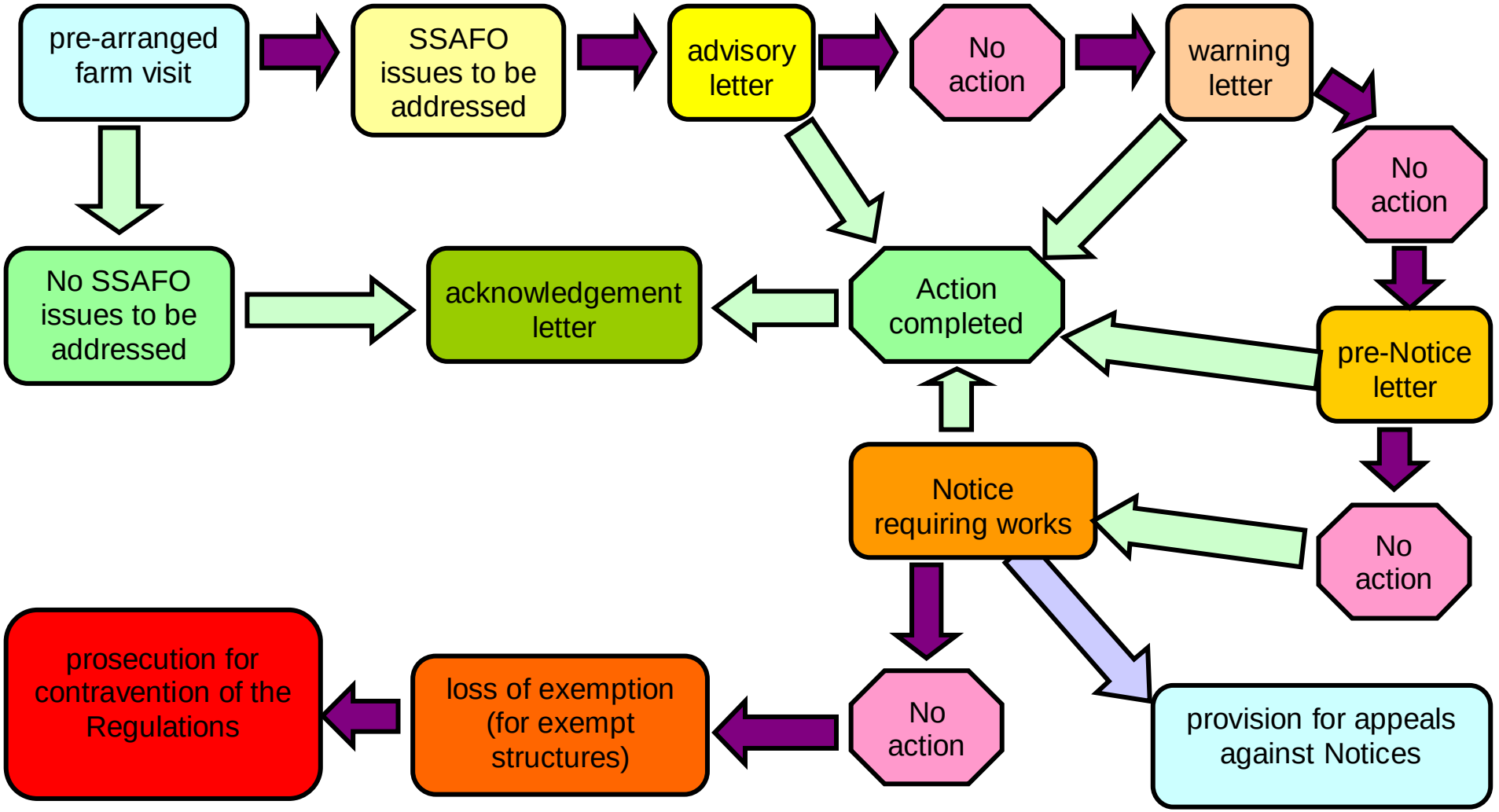
44. A person found guilty of an offence shall be liable:

(a) on summary conviction (a criminal offence tried only by a Magistrates' Court), to imprisonment for a term not exceeding 3 months or to a fine not exceeding £20,000 or to both, or

(b) on conviction on indictment (a criminal offence tried by the Crown Court), to imprisonment for a term not exceeding 2 years or to a fine or to both.

Diagram 2: Example flow chart of one possible enforcement scenario

Please note: The action to be taken and the time frame for completion will be discussed with the farmer and will take account of the severity of the pollution risk, but also the time necessary for making repairs etc.



GENERAL REQUIREMENTS OF THE REGULATIONS FOR CONTROLLED STRUCTURES

LIFE SPAN *(Schedule 1, paragraphs 8 and 9; Schedule 2, paragraph 8; Schedule 3, paragraph 3)*

45. The Regulations require all new, substantially enlarged and substantially reconstructed structures to be constructed with a life span of at least 20 years. This means that the installation, with proper maintenance, is expected to meet the requirements of the Regulations for at least 20 years without causing, or being at risk of causing, pollution.

46. When in use, installations must at all times meet the performance standards laid down; for example, a requirement for impermeable bases must be met whenever a structure that is subject to the Regulations is used. Regular inspection and proper maintenance of structures will ensure that potential defects are found and corrected before problems occur. **Health and safety issues must be considered before any inspection is carried out** (see Paragraph 14).

SAFETY ZONE *(Regulation 3(1)(b); Regulation 7; Schedule 1, paragraph 6; Schedule 2, paragraph 7; Schedule 3, paragraph 7)*

10 metre zone

47. Structures must not be located, and baled or bagged silage must not be stored, within 10 metres of any waterway into which any silage effluent, slurry or agricultural fuel oil could enter. This includes rivers, streams, inland waters (natural and artificial), tidal waters and any passage or channel (natural and artificial) through which water flows. The definition covers channels or beds of waterways which are sometimes dry (e.g. a dry sheugh), as well as perforated drainage pipes. The full definition of “waterway” is given in Part 1, Article 2 (2) of The Water (Northern Ireland) Order 1999.

Impermeable drains and sealed pipes

48. Impermeable drains are acceptable within 10 metres of a storage structure, as long as they do not provide a pathway for pollution to reach a waterway. Similarly, sealed pipes (including sealed pipes transporting slurry) may pass within 10 metres of a waterway as long as they do not provide a pathway for pollution to reach the waterway. It is advisable to have inspection points on any drains that pass below storage structures to enable checks to be carried out

Permeable drains

49. In checking prospective sites for storage structures, farmers are advised to establish whether there are open (i.e. permeable) field drains within the 10 metre safety zone. If so, these should be removed, or made impermeable, before the structure is built.

50. Permeable drains would be acceptable within 10 metres up-slope of a storage structure, where these act to divert shallow sub-surface water flow away from or

around the structure. In this situation, the drain level must be located above the level any tank.

Mitigating circumstances

51. In certain circumstances, and in consultation with the EHS Agricultural Regulations Team, enlargement or reconstruction of an existing tank may be permitted within 10 m of a waterway. One example would be where current storage on the farm is inadequate, but no site is available for building a new store at least 10 m away from any waterway. Any substantial enlargement or reconstruction of this nature must be agreed to, in writing, by EHS, **prior to work beginning**.

NOTICE OF CONSTRUCTION *(Regulation 11)*

Notification of substantive works

52. EHS must be notified **by completion of form** about any new, or substantially enlarged, or substantially reconstructed stores at least 28 days before they are first used. This includes substantial enlargement and substantial reconstruction of exempt structures. Failure to notify EHS is an offence under the Regulations. This notification should be submitted on a form available from the EHS Agricultural Regulations Team (at the telephone number in Appendix 4), and also from local DARD Offices.

53. Notification should be given by the person having custody or control of the substance(s) to be stored in the structure(s). This is normally the occupier of the farm (owner or tenant.).

Certification by an engineer

54. For substantive works, the form requires the engineer who authorised the design of the new structure, or changes to the existing structure, and supervised the construction, installation or alteration, to certify that it has been designed and built to comply with the requirements of the SSAFO Regulations.

55. The engineer must be a qualified, chartered, structural or civil engineer. It is recommended that the farmer should check that the engineer carries professional indemnity insurance. It is the responsibility of the engineer to ensure that the system is designed and constructed /installed to comply the requirements of the Regulations in every respect.

56. The farmer may build the structure as long as the design and materials specified by the engineer have been used and the engineer has carried out a site inspection during the construction phase and on completion of the work.

Proprietary /prefabricated tanks to be assembled on site (substantive work)

57. Work involving the assembly and installation of multi-piece proprietary /prefabricated tanks, such as circular steel or concrete above ground slurry stores, is considered substantive work. Therefore, an engineer will be required to certify that it has been assembled and installed to comply with the requirements of the SSAFO Regulations. Installation of such tanks must be carried out according to the manufacturer's specifications and care must be taken to ensure that all joins and seals are impermeable. A copy of the manufacturer's certificate must also be included with the Notification form. This must state that the tank is designed and constructed to meet British Standard BS 5502: Part 50: 1993, is approved by the manufacturer for the purpose for which it will be used and has (at least) a 20-year life span.

Notification for proprietary /prefabricated single unit tanks

58. If the only work carried out is the installation of a proprietary /prefabricated tank that comes as a complete single unit, e.g. a plastic (GRP) or concrete effluent tank, certification from an engineer will not be required. The farmer must sign the notification form to confirm that the work fully complies with the SSAFO Regulations. A copy of the manufacturer's certificate must be included with the completed form. The manufacturer's certificate must state that the unit is designed and constructed to meet the appropriate British Standard, is approved by the manufacturer for the purpose for which it will be used, has (at least) a 20-year life span, and fully complies with the SSAFO Regulations. Installation of single unit tanks must be carried out according to the manufacturer's specifications and care must be taken to ensure that all joins and seals are impermeable. It is recommended that advice is taken from an engineer on the suitability of the ground conditions for installing a tank.

Second hand tanks

59. If a second-hand, proprietary /prefabricated tank (whether a single unit or multi-piece) is installed, certification by an engineer will be required to confirm that the tank meets the appropriate British Standard, is structurally sound and will last for another 20 years with maintenance.

Construction of agricultural fuel oil storage facilities

Construction of bunds and bases on site (non-proprietary systems)

60. If the bund and base for an agricultural fuel oil storage facility is be constructed on site, certification from an engineer, to confirm that the facility has been designed and built to comply with the SSAFO Regulations, is required.

Installation of proprietary facilities

61. If the only work carried out is the installation of a proprietary agricultural fuel oil storage facility (delivered as a complete single unit, incorporating a bund **and complying fully**

with the Regulations), certification from an engineer will not be required. The farmer must sign the notification form to confirm that the work fully complies with the SSAFO Regulations. A copy of the manufacturer's certificate must be included with the completed form. The manufacturer's certificate must state that the unit is designed and constructed to meet the appropriate British Standard, is approved by the manufacturer for the purpose for which it will be used, has (at least) a 20-year life span, and fully complies with the SSAFO Regulations. Installation of single unit facilities must be carried out according to the manufacturer's specifications.

Notification of minor works

62. For minor works carried out under the SSAFO Regulations, and for enlargement or reconstruction of less than 10% on exempt structures, EHS requests that the farmer completes and signs a Notification form. **Notification of minor works is likely to be necessary for grant claims.** An engineer's signature will not be required for such works. However, it is strongly recommended that an engineer is consulted to ensure that the load bearing capacity and impermeability are not adversely affected by the work and that the structures remain fit for purpose. Such minor works would include:

- Enlargement or reconstruction of exempt structures by less than 10%;
- Installation of pipe-work, channels, and drainage systems;
- Construction of slurry transfer channels, i.e. **not designed for more than two days storage of slurry**; and
- Installation of MDPE below ground pumping mains.

Enlargement or reconstruction of exempt structures by less than 10 %

63. If the only work carried out is the enlargement or reconstruction of an exempt store by less than 10 %, certification from an engineer will not be required. However, such work may have implications for the load bearing capacity or impermeability of the store. In such cases, it is strongly recommended that an engineer is consulted to ensure that these parameters are not adversely affected and that the store remains fit for purpose.

Installation of pipe-work, channels, and drainage systems

64. If the only work carried out is the installation of pipe-work, channels, or drainage systems, certification from an engineer will not be required. The farmer must sign the notification form to confirm that the work fully complies with the SSAFO Regulations. All installation of pipe-work, inspection chambers *etc* must be carried out according to the manufacturer's specifications and care must be taken to ensure that all joins and seals are impermeable. If channels or drains are cut into a silo floor, care must be taken to ensure that the impermeability of the floor is maintained. If pipe-work or channels are connected to an existing tank, such work may have implications for the load bearing capacity or impermeability of the store. It is recommended that advice is taken from an engineer to ensure that these parameters are not adversely affected by the work. The farmer must ensure that any connected tank remains structurally sound and impermeable when the work has been completed.

Construction of slurry transfer channels

65. If the only work carried out is construction of slurry transfer channels, **not designed for more than two days storage of slurry,** certification from an engineer will not be required. The farmer must sign the notification form to confirm that the work fully complies with the SSAFO Regulations. If the construction of a transfer channel has implications for the load bearing capacity or impermeability of connected tanks, it is recommended that advice is taken from an engineer to ensure that these parameters are not adversely affected by the work. The farmer must ensure that any connected tank remains structurally sound and impermeable when the work has been completed.

Installation of MDPE below ground pumping mains

66. If a below ground pumping main is installed, care must be taken to ensure that all joins and seals are impermeable. It is recommended that the work is carried out by qualified installation specialists and that a copy of the firm's certificate /guarantee relating to the work is included with the Notification form.

Guidance on notification and certification

67. If a farmer is unsure whether their proposal for construction, substantial enlargement or substantial reconstruction of a structure complies the Regulations, they should contact the EHS Agricultural Regulations Team, for guidance (at the telephone number in Appendix 4), at the planning stage, **prior to work beginning.** Similarly, if a farmer is unsure whether their work plans constitute substantive works or minor works, and if their proposals will require certification from an engineer, they should contact the EHS Agricultural Regulations Team, at the planning stage, **prior to work beginning**.

Inspection of notified structures

68. EHS may inspect structures they are notified about, to assess compliance with the SSAFO Regulations. If, after 28 days of receipt of the **completed** notification form, EHS has not inspected the structure(s), the farmer will be issued with a letter by EHS. If, at a later date, an inspection of farm storage takes place and non-compliance with the Regulations is determined, enforcement action may follow.

69. During an inspection a storage audit may be carried out to confirm that the farm has four months' slurry storage capacity and adequate effluent storage (in compliance with the SSAFO Regulations). If storage is found to be inadequate the farmer may be asked to provide additional storage or to demonstrate that they can manage with existing storage without posing a significant risk of pollution. The requirement for four months' storage capacity is currently under review and may be increased as a result of the implementation of other legislation.

SPECIFIC REQUIREMENTS OF THE REGULATIONS FOR SILAGE PRODUCTION & STORAGE *(Regulations 3 and 7 and Schedule 1)*

SILAGE MAKING AND STORAGE AFFECTED BY THE REGULATIONS *(Regulation 3)*

70. The Regulations apply to structures used to make and store silage (including tower silos and earth banked silos) where construction, substantial enlargement or substantial reconstruction was completed after 1 December 2003. All silage stores completed, or substantially altered, after this date must be built in accordance with the construction standards set out in Schedule 1. Baled silage must be stored in accordance with the specifications set out in Regulation 3. Table 2 lists the different methods of silage making and how they are affected by the Regulations.

Table 2: Effect of Regulations on silage making and storage

Method of making silage	Facilities in use before 1 December 2003 [(a)]	Facilities completed after 1 December 2003
Tower Silo	Exempt	Must meet standard in Schedule 1, 1(b) of the Regulations [(b)]
Clamp/bunker/silo	Exempt	Must meet standards in Schedule 1, 1(a) of the Regulations [(c)]
Earth-banked clamp/bunker/silo	Exempt	Must meet standards in Schedule 1, 1(a) of the Regulations [(c)]
Field Clamps	Exempt	Prohibited [(d)]
Baled & wrapped/bagged	Exempt	Must meet standards in Regulation 3(1)(b) of the Regulations [(e)]
Bulk bagged	Exempt	Exempt, subject to meeting standards in Regulation 7 of the Regulations [(f)]

[(a)] See paragraphs 21, 72, 73 & 74 on exempt structures. [(b)] See Paragraph 83. [(c)] See Paragraphs 76 - 82. [(d)] See Paragraph 97. [(e)] See Paragraph 96. [(e)] See Paragraph 75.

Silage made elsewhere

71. The standards in the Regulations also cover the storage of silage made elsewhere. Made silage that is removed from where it was ensiled may be stored as follows:

- In a structure which meets the requirements of Schedule 1;
- in an "exempt" structure (see Paragraph 21); or,
- in wrapped or bagged bales or in Ag-bags located at least 10 metres from any waterway into which silage effluent could enter.

EXEMPTIONS *(Regulations 6 and 7)*

72. Existing silos, which have not been substantially altered after 1 December 2003, are exempt structures under the Regulations (see Paragraph 21), unless the terms of a Notice have not been complied with. They may continue to be used as long as they do not pose a risk of pollution and EHS has not specified any works or precautions to be undertaken.

Earth sumps and soakaways

73. The use of earth sumps and soakaways with exempt silos will be considered by EHS on a case by case basis. Where EHS considers there to be a risk of pollution of groundwater (or surface water) the farmer will be asked to install an acceptable effluent collection and storage system. Pollution of groundwater is an offence under Article 7 of the Water (Northern Ireland) Order 1999 (see Appendix 1).

Existing earth floored silos

74. The continued use of earth floored silos will be considered by EHS on a case by case basis. Where EHS considers there to be a risk of pollution of groundwater (or surface water), the farmer will be asked either to bring the silo up to an acceptable standard, or to discontinue its use.

Bulk bagged silage *(Regulation 7)*

75. Bulk bagged silage refers to non-baled silage made in large bags (Ag-bags). It is exempt from the Regulations as long as certain specifications are met. The bags used to make non-baled silage must meet certain minimum technical standards, i.e. be made of 1000 gauge polyethylene or material of at least equivalent impermeability and durability and be sealed to prevent the escape of silage effluent. They must also incorporate a facility to enable the safe removal of effluent when present. As in the case of silage storage structures, farmers must check their bulk silage bags at regular intervals to ensure that they continue to meet the standards mentioned in this paragraph. Bags that become damaged or unsealed must be repaired or replaced as necessary, in order to retain their exempt status under these Regulations and to prevent the occurrence of a pollution incident. It is recommended that Ag-bags are stored on a firm, level surface. Ag-bags must not be stored within 10 metres of a waterway, and should not be opened or emptied within 10 metres of any waterway or field drain, unless there is no risk of contamination of the waterway.

REQUIREMENTS FOR CONTROLLED SILAGE STORES *(Schedule 1)*

Silo bases *(Schedule 1, paragraphs 2, 4 and 5)*

76. Silage that is not baled or bagged must be made on an impermeable base (meeting British Standard BS 8007: 1987). The base of the silo, where the silo has retaining

walls other than earth, must extend beyond those walls. In all cases the base of the silo must be provided with channels constructed to collect all silage effluent and convey it to a suitably constructed effluent tank.

77. Although not a legal requirement, it is acceptable to place perforated land drainage piping within impermeable channels, in order to drain silage effluent more efficiently to an effluent tank.

78. In order for the base of the silo to remain impermeable, the base should be constructed (although not specified in the Regulations) to have a load bearing capacity at least equal to the maximum loading that will placed on it (as calculated according to British Standard BS 5502: Part 22: 1993). Otherwise the base may crack and lose its structural integrity and impermeability.

79. The base of the silo must be resistant, so far as reasonably practicable, to corrosion by silage and silage effluent.

Silo walls *(Schedule 1, paragraphs 6 and 7)*

80. Walls are optional, but where there are walls, they must also be resistant, so far as reasonably practicable, to corrosion by silage and silage effluent. Any retaining walls must be capable of withstanding the minimum loading calculated on the assumptions and in the manner indicated in the current British Standard (BS 5502: Part 22: 1993). A notice displaying the loading capabilities must be displayed on the retaining walls. The maximum load specified must not be exceeded. Farmers will need to seek professional advice in order to ensure that the required standards are met (a chartered structural or civil engineer should be consulted).

81. Where the contents of a silo may be consolidated using a tractor or similar vehicle, a barrier, fence, guard rail or beam of adequate strength must be securely fixed in position at any place from which the vehicle is liable to fall 600 mm or more. (These requirements arise from the Agriculture (Safeguarding of Workplaces) Regulations (Northern Ireland) 1989). A barrier is not normally required on an earth bank silo provided the top of each bank is at least 1 metre wide, and the banks taper off gently (with a slope not greater than 45 degrees from the horizontal) to an unobstructed ground level flat surface.

Earth bank silo walls *(Schedule 1, paragraph 5)*

82. Where a silo has earth bank walls, or is cut into a hillside, the walls must be lined with an impermeable membrane, such as 1000 gauge polyethylene sheeting. The liner must be carried over the edge of the floor onto the concrete floor slab, so as to prevent any seepage of effluent into the earth banks. It is acceptable to place perforated piping on top of the impermeable membrane, or within impermeable transfer channels, in order to aid drainage of silage effluent to an effluent tank. The construction of earth banked silos must ensure that the structure remains impermeable (with maintenance) at least 20 years.

Tower silos

83. Tower silos must be designed and constructed in accordance with the British Standard for cylindrical forage tower silos (BS 5061: 1974).

Silage effluent collection systems *(Schedule 1, paragraph 2)*

84. Effluent collection systems to collect all silage effluent produced are required in **all** circumstances, i.e. the absence of such a collection system in a controlled structure would automatically constitute a breach of the Regulations. They must convey all silage effluent in all its forms (e.g. highly concentrated or diluted by rainwater, etc.) to a collection and containment facility. Collection systems, for controlled structures, are **not permitted** to be fitted, at any time, with overflow or diverter /by-pass facilities connected to a storm drain or waterway. This is because of the risk of contaminated run-off being directed to the storm drain or waterway. This would constitute an unconsented discharge to a waterway which is an offence under Article 9 of the Water (Northern Ireland) Order 1999 (see Appendix 1). Earth sumps and soakaways are **not permitted** for use in connection with a controlled silo because of the risk of groundwater pollution. Pollution of groundwater is an offence under Article 7 of the Water (Northern Ireland) Order 1999 (see Appendix 1).

Channels, drains and pipes *(Schedule 1, paragraphs 4 and 5)*

85. All channels, drains and pipes connected to the silo must be impermeable (concrete channels and drains must meet British Standard BS 8007: 1987) and resistant, so far as reasonably practicable, to corrosion by silage and silage effluent.

Concrete silage effluent tanks *(Schedule 1, paragraphs 4 and 5)*

86. The base and walls of the effluent tank must be impermeable (meeting British Standard BS 8007: 1987) and resistant, so far as reasonably practicable, to corrosion by silage effluent. In order to protect concrete tanks from attack by silage effluent, it is recommended that they be lined with an appropriate product. These linings should be checked at regular intervals and repaired/renewed as necessary. **Health and safety issues must be considered before any inspection is carried out** (see Paragraph 14). If the base of the tank is below ground, the tank must be designed and constructed to meet the current British Standard (BS 5502: Part 22: 1993).

Proprietary /prefabricated single unit silage effluent tanks *(Schedule 1, paragraphs 4 and 5)*

87. A farmer may wish to install a single unit, proprietary /prefabricated effluent tank to collect silage effluent. Such a tank might be pre-cast concrete or other materials such as glass reinforced plastic (GRP). If such a tank is installed, the farmer must ensure that the manufacturer's certificate confirms that:

- the tank is suitable for silage effluent storage;
- the base and walls of the tank are impermeable (meeting British Standard BS 8007: 1987, if concrete) and resistant, so far as reasonably practicable, to corrosion by silage effluent;
- any sealant used in the tank (i.e. between the tank walls and lid) is resistant to corrosion by silage effluent and has a life span of at least 20 years.
- the tank is designed and constructed to meet the current British Standard (BS 5502: Part 22: 1993) (if the base of the tank is below the ground); and
- the tank has a life span of at least 20 years.

88. If the tank will also be used to collect slurry, it must also meet the requirements of BS 5502: Part 50: 1993 and Schedule 2 of the Regulations (see Paragraph 112).

89. Proprietary /prefabricated tanks must be installed according to the manufacturer's specifications. If maintenance is required **health and safety issues must be considered before any inspection is carried out** (see Paragraph 14).

Silage effluent stored in slurry tanks *(Schedule 1, paragraphs 4 and 5; Schedule 2, paragraph 3)*

90. In some instances farmers may wish to store silage effluent and slurry in the same tank. If this method of storage is used then the storage container must be constructed to meet the current British Standard (BS 5502: Part 50: 1993), designed to withstand both types of neat effluent and have sufficient capacity to satisfy the requirements of both Schedules 1 and 2.

Pillow tanks *(Schedule 1, paragraphs 4 and 5)*

91. Interest has been expressed in the use of "pillow" tanks for storing silage effluent. These must meet the requirements of the Regulations with maintenance. They should be set within an excavated pit which is bunded so as to contain effluent in the event of leakage. In areas with highly permeable soils or geology, the use of an impermeable liner will always be necessary.

Sizing of effluent collection tanks *(Schedule 1, paragraph 3)*

92. The minimum capacity of effluent collection systems must correspond to the silo capacity as shown in **Table 3**:

93. In the majority of cases these capacities should provide at least two days storage at peak flow. However, if the effluent tank provides inadequate storage and pollution occurs, this would still be an offence under Article 7 of The Water (Northern Ireland) Order 1999 (see Appendix 1). Effluent tank capacities are unlikely, for example, to be sufficient for 2 days storage for unwilted silage or silage made in an unroofed silo.

Farmers should check and empty their tanks as often as is necessary in the light of their own circumstances and experience.

Table 3: Minimum capacities for silage effluent tanks

Silo Capacity	Minimum Effluent Tank Capacity
Less than 1500 m^3	Not less than 3 m^3 for each 150 m^3 silo capacity or part thereof
1500 m^3 or more	Not less than 30 m^3 plus 1m^3 for every 150 m^3 silo capacity in excess of 1500 m^3

This means, for example, that a 1000 m^3 silo would need effluent tanks with a capacity of at least 21 m^3 (21,000 litres). A 3000 m^3 silo would need to have effluent tank capacity of 40 m^3 (i.e. 30 m^3 + [10 x 1 m^3]), (1 m^3 = 1000 litres). The capacities apply to roofed as well as unroofed silos.

Pumps and sumps *(Schedule 1, paragraph 3)*

94. The Regulations allow the incorporation of a system of pumps and sumps to reduce the capacity of the effluent tank required (as described in Table 3), providing the **prior written agreement of EHS is obtained**. Sizing, pumping and management details should be specified. It would be best practice for such systems to have, at least, the capacity to store the run-off from the silo generated by the maximum rainfall likely to occur within a twelve hour period (12 Hour M5 – this information is available from the Meteorological Office for a fee, see Appendix 4).

95. EHS staff will assess each proposal individually but it is recommended, for best practice purposes, that the **minimum** size of an effluent tank should not be less than 5 m^3 (1100 gallons). The sump should be provided with a duty and standby float-controlled pump arrangement, and an alarm (audible or visible) to warn of pump failure is also recommended. It is, however, acceptable to have a portable stand-by pump, or ready access to a vacuum tanker. A minimum pump rating should be determined depending on circumstances. EHS will also require the farmer to demonstrate that the proposed system is draining to adequate storage provision on the farm and that it is not likely to pose an increased risk of causing pollution. No overflows or diverter /by-pass facilities connected to a storm drain or waterway are permitted on such systems. This is because of the risk of contaminated run-off being directed to the storm drain or waterway. This would constitute an unconsented discharge to a waterway which is an offence under Article 9 of the Water (Northern Ireland) Order 1999 (see Appendix 1).

BALED SILAGE ***(Regulation 3)***

96. Baled silage refers to that silage wrapped or made in sealed, impermeable plastic membranes or bags. It is not necessary to store baled silage on a specially constructed base. It is recommended that the farmer should choose a level site and make a careful assessment of the potential polluting risk to a waterway. Bales should not be stored or opened within 10 metres of any waterway or field drain, unless there

is no risk of contamination of the waterway. This distance can be reduced if the bales are placed down slope from a waterway. It is permissible for bales to be opened, for feeding purposes, within 10 metres of waterway, if down slope of the waterway. Care must be taken to collect and dispose of any silage effluent without causing pollution.

FIELD SILAGE *(Regulation 3)*

97. The making and storage of silage in a field in a field clamp without a constructed impermeable base and effluent containment system **is prohibited** by the Regulations.

SPECIFIC REQUIREMENTS OF THE REGULATIONS FOR STORAGE OF SLURRY *(Regulation 4 and Schedule 2)*

SLURRY STORES AFFECTED BY THE REGULATIONS *(Regulation 4)*

98. The Regulations apply to slurry storage systems (including earth banked compounds) where construction, substantial enlargement or substantial reconstruction was completed after 1 December 2003. All slurry stores completed, or substantially altered, after this date must be built in accordance with the construction standards set out in Schedule 2.

Middens *(Regulation 2(1))*

99. For the purpose of these Regulations, run-off from solid manure stores, e.g. middens associated with a farmyard, is defined as slurry. Such slurry must be collected and stored in appropriate facilities, either independently or in the main slurry storage system.

Washings from houses *(Regulation 2(1))*

100. Similarly, washings containing manure or poultry litter (e.g. from the cleaning of poultry houses, straw bedded courts, sheds where manure or slurry was produced, etc) is considered slurry under the Regulations. Such slurry must be collected and stored in appropriate facilities, either independently or in the main slurry storage system.

EXEMPTIONS *(Regulation 6)*

101. Existing slurry stores, which have not been substantially altered after 1 December 2003, are exempt structures under the Regulations (see Paragraph 21), unless the terms of a Notice have not been complied with. They may continue to be used as long as they do not pose a risk of pollution and EHS has not specified any works or precautions to be undertaken.

Soakaways for existing middens

102. The use of soakaways with existing middens will be considered by EHS on a case by case basis. Where EHS considers there to be a risk of pollution of groundwater (or surface water) the farmer will be asked to install an acceptable effluent collection and storage system.

Freeboard on exempt structures

103. Freeboard can be defined as the unfilled depth at the top of a slurry or effluent tank or compound. It is recommended, as best practice, that freeboard is maintained on exempt structures. If, following inspection by EHS, lack of sufficient freeboard on an exempt structure is considered a pollution risk, EHS may take steps to remove exemption and impose the appropriate freeboard requirement (see Paragraph 105).

Temporary storage in mobile containers

104. The Regulations do not apply to slurry stored **temporarily** in a mobile container (i.e. a tanker, including vacuum tankers and muck spreaders) with a capacity not larger than 18,000 litres (18 m^3 or 3960 gallons). This temporary exception does not cover tankers used as a permanent or semi-permanent substitute for a slurry storage tank or system, where Schedule 2 requirements will apply.

REQUIREMENTS FOR CONTROLLED SLURRY STORAGE SYSTEMS *(Schedule 2)*

Freeboard *(Schedule 2, paragraphs 6(3) and 11)*

105. Controlled structures are required to maintain a minimum freeboard of 750 mm for earth-banked compounds (whether lined or not) and 300 mm in all other cases. The level of slurry in all structures should be checked regularly and arrangements made for the safe disposal of slurry before the tank is full. Particular care must be taken to ensure that lagoons or stores do not overflow.

Impermeability *(Schedule 2, paragraph 2)*

106. The base and walls (unless a 'weeping wall' design) of slurry storage tanks, the base and walls of any effluent tanks, channels and reception pits, and the walls of any pipes must be impermeable (concrete works must meet British Standard BS 8007: 1987).

'Weeping wall' stores *(Schedule 2, paragraph 9)*

107. For above ground, weeping-wall stores (where the walls of the slurry tank are designed to be permeable), the base must extend beyond the walls and be provided

with impermeable channels to collect any escaped slurry and drain it to an effluent tank.

Resistance to corrosion *(Schedule 2, paragraph 3)*

108. There is a general requirement for the base and walls of slurry storage tanks and any effluent tanks, channels and reception pits, and the walls of any pipes, to be protected against corrosion as set out in the current British Standard (BS 5502: Part 50: 1993).

Loadings *(Schedule 2, paragraph 4)*

109. The base and walls of slurry tanks and any associated reception pits must be capable of withstanding loadings as calculated in the manner specified in British Standard BS 5502: Part 50: 1993. The need to comply with these design requirements means that professional advice will be needed for the design and construction of all slurry installations, including earth-banked compounds.

Earth banked slurry lagoons *(Schedule 2, paragraphs 2, 4 6(3) and 11)*

110. As specified in British Standard BS 5502: Part 50: 1993, the banks (walls) and floors of controlled earth banked slurry lagoons must be designed and constructed to ensure a permeability of less than 10^{-9} m/sec. In practice this means they should either be lined with an impermeable membrane, or else a laboratory or hydro-geological engineer's report should certify that the permeability of the soil is less than 10^{-9} m/sec (to a depth of 1 metre), for satisfactory impermeability without a liner. The soil must also be suitable for forming stable embankments designed to meet loadings as calculated in British Standard BS 5502: Part 50: 1993. Any newly constructed earth banked slurry lagoon is required to maintain a minimum freeboard (unfilled space at top) of 750 mm. Allowance also needs to be made for the volume of rainfall likely to fall into the lagoon area. There are also health and safety considerations; for example, a stock and child-proof fence must be provided with all access points adequately secured.

Circular steel slurry tanks *(Schedule 2, paragraphs 2, 3 and 4)*

111. As with concrete above and below ground slurry tanks, and earth bank lagoons, circular steel slurry tanks should be designed and constructed, as specified in British Standard BS 5502: Part 50: 1993, to be impermeable, resistant to corrosion and capable of withstanding loadings, as calculated in the manner specified in the standard.

Proprietary /prefabricated single unit effluent tanks *(Schedule 2, paragraphs 2, 3 and 4)*

112. A farmer may wish to install a single unit, proprietary /prefabricated effluent tank,

e.g. to collect contaminated run-off from a midden or yard. Such a tank might be pre-cast concrete or other materials such as glass reinforced plastic (GRP). If such a tank is installed, the farmer must ensure that the manufacturer's certificate confirms that:

- the tank is suitable for storage of the effluent to be collected;
- the base and walls of the tank are impermeable (meeting British Standard BS 8007: 1987, if concrete) and protected against corrosion (in accordance with British Standard BS 5502: Part 50: 1993);
- any sealant used in the tank (i.e. between the tank walls and lid) is resistant to corrosion and has a life span of at least 20 years;
- The base and walls of the tank are capable of withstanding loadings as calculated in the manner specified in British Standard BS 5502: Part 50: 1993; and
- the tank has a life span of at least 20 years.

113. Proprietary /prefabricated tanks must be installed according to the manufacturer's specifications. If maintenance is required **health and safety issues must be considered before any inspection is carried out** (see Paragraph 14).

Slurry transfer channels

114. Channels for transfer of slurry to tanks or reception pits, i.e. **not designed for more than two days storage of slurry**, must be impermeable and protected against corrosion (in accordance with British Standard BS 5502: Part 50: 1993). As they are not designed to store slurry for long periods of time, it is acceptable for the walls to be constructed either of reinforced shuttered concrete (complying with British Standard BS 8007: 1987) or reinforced block (complying with British Standard BS 5628: Part 2: 1985). Reinforced block must be rendered both internally and externally (to prevent ingress of water). If the channels are more than 1.5 m deep blockwork walls are likely to require reinforcement. It is strongly recommended that an engineer is consulted in such cases. To ensure impermeability and a life span of at least 20 years, it is recommended that the floor should be reinforced, shuttered concrete (complying with British Standard BS 8007: 1987). If the channels are likely to be driven over, their load bearing capability (as calculated in accordance with British Standard BS 5502: Part 50: 1993) must also be considered. Proprietary pre-cast concrete channels (designed to British Standard BS 5502: Part 50: 1993) are also acceptable. Care must be taken to ensure that all joins and seals are impermeable.

Outlet pipes and valves *(Schedule 2, paragraph 10)*

115. Outlet drainage pipes on slurry stores must have two valves in series, each capable of shutting off the flow of slurry and each kept locked shut when not in use. This is required to prevent an overflow in the event of a release of slurry. The requirement for two valves is a safety precaution; the second valve acts as a guard valve against failure of the first. The Regulations do not stipulate a minimum (or maximum) distance between the valves. The design and positioning of the valves must, however, take into

account the possibility that one piece of debris could obstruct both valves if they are positioned too closely together. It is recommended that the valves be at least 1 metre apart. Each valve should be designed so that sufficient force can be exerted to break through accumulations of bedding material that may regularly pass through the system. Other drainage pipes connecting slurry storage tanks do not need to have valves if they drain into another tank which is as large as, or larger, than the first, or where the tops of tanks are at the same level.

Slurry bags *(Schedule 2, paragraphs 2 and 3)*

116. Interest has been expressed in the use of "slurry bags" for storing slurry. These must meet the requirements of the Regulations with maintenance. They should be set within an excavated pit which is bunded so as to contain slurry in the event of leakage. In areas with permeable soils or geology, the use of an impermeable liner will always be necessary.

REQUIRED SLURRY STORAGE CAPACITY *(Schedule 2)*

Required storage capacity *(Schedule 2, paragraph 6)*

117. Where slurry is spread on the land, there is normally a requirement for a minimum of four months' storage capacity for slurry under the Regulations. However, as previously indicated in Paragraph 69, this is currently under review. In some cases more storage will be needed and in others less. For example, farms in some areas, particularly those with above average rainfall, will require considerably more than four months' slurry storage capacity. Although not required by these Regulations, farmers are recommended to provide this extra capacity, to avoid the risk of causing water pollution and of subsequent prosecution under Article 7 of The Water (Northern Ireland) Order 1999 (see Appendix 1). On the other hand, farmers using an extended grazing season system may require less than four months' storage. Farmers may find it useful to take professional advice on their storage requirements. Guidance on the calculation of slurry storage requirements is given in DARD's "Code of Good Agricultural Practice for the Prevention of Pollution of Water", and is also available from DARD Countryside Management Branch (see Appendix 4).

118. If, on inspection, a farm is found to have less than four months' slurry storage, the farmer may be asked to provide additional storage or to demonstrate that they can manage with the existing storage without posing a significant risk of pollution. One way of demonstrating this may be to follow guidance in the DARD "Code of Good Agriculture Practice for the Prevention of Pollution of Water".

Allowance for rainfall catchment and freeboard *(Schedule 2, paragraph 6(3))*

119. Calculation of the minimum size required for any slurry holding structure must include provision for the likely quantities of rainwater falling directly on to the store and on areas which drain into the store. It must also allow for an additional capacity over

and above the expected quantity of slurry by including a minimum freeboard of 750mm for earth-banked compounds (whether lined or not) and 300mm in all other cases.

Required capacity of temporary storage *(Schedule 2, paragraph 5(1))*

120. Temporary slurry storage, such as a reception pit, must be capable of being left for two days without overflowing, for example:

- Channels leading to a sluice should be adequate to store two days' production of slurry.
- Where there is no sluice, and the tops of the channels are the same height as the top of any reception pit, the capacity of the collection channels plus the reception pit should together be sufficient for at least two days' production of slurry.
- Where there is no sluice, and the channels are higher than the reception pit, the capacity of the reception pit alone should be sufficient for at least two days' production of slurry.
- Where there are no channels leading to the reception pit, the reception pit should have the capacity to contain at least two days' production of slurry.
- Where channels discharge directly into a slurry storage tank the channels need not comply with the minimum storage capacity requirement.
- Where the amount of slurry collected is influenced by rainfall, the farmer should take local rainfall data into consideration when calculating the required slurry storage capacity.

121. Calculation of two days' storage should take account of the **maximum** quantity of effluent draining to such in any two day period including any yard areas, middens, pump sumps, dairy washings or parlour drainage. Allowance for rainfall falling directly on stores and on areas which drain into the stores should be calculated using the maximum rainfall likely to occur within a 48 hour period. Calculations must also allow for the maintenance of the specified freeboard.

122. A smaller capacity for temporary storage (sufficient to avoid any significant risk of pollution of a waterway) may be agreed in writing with EHS. However, reception pits that hold more than two days' slurry production would obviously benefit the management of the slurry storage, as they would not need to be emptied so frequently.

Middens and washings from houses *(Schedule 2, paragraph 6)*

123. For middens, farmers must provide storage capacity for the maximum quantity of slurry that is likely to drain/seep from the midden in any continuous four month period. For washings from cleaning poultry houses and sheds that contained solid manure, farmers must provide storage capacity for the maximum volume of washings likely to be generated in any continuous four month period.

SPECIFIC REQUIREMENTS OF THE REGULATIONS FOR AGRICULTURAL FUEL STORES *(Regulation 5 and Schedule 3)*

FUEL STORES AFFECTED BY THE REGULATIONS *(Regulation 5)*

124. The Regulations apply to agricultural fuel oil stores (including storage in drums) where construction, substantial enlargement or substantial reconstruction was completed after 1 December 2003 and the total quantity of fuel stored is more than 1,250 litres. All agricultural fuel oil stores (for storage of more than 1,250 litres) completed, or substantially altered, after this date must be built in accordance with the construction standards set out in Schedule 3. Where some, or all, of the fuel oil that is subject to these Regulations is stored in drums, these must be kept in a storage area which complies with the requirements of Schedule 3.

EXEMPTIONS *(Regulations 5 and 6)*

125. Existing fuel stores, which have not been substantially altered after 1 December 2003, are exempt structures under the Regulations (see Paragraph 21), unless the terms of a Notice have not been complied with. They may continue to be used as long as they do not pose a risk of pollution and EHS has not specified any works or precautions to be undertaken.

Situations outside the scope of the Regulations *(Regulation 5)*

126. The following situations are outside the scope of the Regulations:

- Storage of agricultural fuel oil that never exceeds 1,250 litres;
- Domestic fuel oil stored separately from agricultural fuel oil;
- Underground fuel storage tanks; and
- Temporary storage of fuel oil in a tanker for transport on roads or around the farm.

REQUIREMENTS FOR CONTROLLED FUEL OIL STORAGE AREAS *(Schedule 3)*

Bunding *(Schedule 3, paragraphs 2, 3 and 4)*

127. Fuel stores must be surrounded by barriers (bunds) to stop oil escaping. The bund and the base of the storage area must be impermeable and likely to remain so with proper maintenance for at least 20 years. The bund must have no gaps or holes or drainage outlets.

Bund volume (Schedule 3, paragraph 2)

128. There are different minimum volumes for bunds, depending on whether the fuel oil is stored in drums, barrels or tanks, or some combination of these. Table 4 illustrates these different cases.

Table 4 – Minimum volumes for bunds

Storage Type	Minimum Volume of Bund
Single tanks	110% of the tank.
Several tanks	110% of the capacity of the largest tank; or 25% of the total volume of oil that could be stored at any one time, whichever is greater.
All other cases; e.g. drums, barrels or a combination of these with tanks	110% of the capacity of the largest container or 25% of the total volume of oil that could be stored at any one time in the storage area, whichever is the greater.

Removal of rainwater and spilt fuel from bund

129. Unroofed, bunded, oil storage areas are liable to collect rainwater which will reduce the available storage capacity. As the bund will contain no outlet or drain it will be necessary to have a method of removing rainwater and any spilt oil that collects in the bund. The farmer will be responsible for removing this material and disposing of it safely, without causing pollution and in compliance with relevant waste disposal legislation. Although not required by the Regulations, it is recommended that the storage area is roofed to reduce the volume of rainwater that might collect in the bund.

Health and safety issues

130. Roofing of bunded storage areas should also reduce the risk of children falling into the bunded area and possibly drowning if rainwater has collected in it. Unroofed, bunded, storage areas in which liquid can accumulate and, hence, pose a drowning risk to children must be securely fenced (see Paragraph 14).

Taps and valves *(Schedule 3, paragraph 5)*

131. It is important to ensure that any leak or discharge of oil from any part of the tank, or tap or valve, is trapped within the bund. Hence, when oil is stored in tanks with permanently fixed taps and valves (through which oil could be discharged to the open), the taps and valves must also be located within the bund. All such taps and valves must discharge downwards, and, when not in use, must be switched off and locked shut.

Flexible discharge pipes *(Schedule 3, paragraph 6)*

132. Any flexible discharge pipe that is permanently attached to the tank must be fitted with a nozzle that contains an automatic shut-off device. The pipe must be locked within the bunded area when not in use.

Sight glasses and alarms

133. Although not a requirement of the Regulations, the use of sight glasses on fuel tanks (allowing operators to see the level of oil in the tank) and the use of alarms (to alert operators to possible overfilling) is recommended.

Proprietary facilities

134. There are a number of proprietary fuel oil storage facilities available, incorporating both a storage tank and a bunding system. Some of these may not fully satisfy the requirements of these Regulations; the farmer must ensure that the manufacturer's certificate confirms that the system:

- Is designed and constructed to meet the appropriate British Standard;
- Is approved by the manufacturer for the purpose for which it will be used;
- has (at least) a 20-year life span; and
- fully complies with the SSAFO Regulations.

135. Proprietary systems must be installed according to the manufacturer's specifications. If maintenance is required **health and safety issues must be considered before any inspection is carried out** (see Paragraph 14).

Appendix 1: Relationship of SSAFO Regulations to other legislation

The Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations (Northern Ireland) 2003 were made under the powers conferred on the Department of the Environment by Article 14 of the Water (Northern Ireland) Order 1999. Some activities and drainage arrangements, which may be related to storage structures covered by the SSAFO Regulations, are outside the scope of the Regulations. They do, however, fall under the remit of the Water (Northern Ireland) Order 1999 itself. For instance:

1. The use of diverters

For newly constructed, substantially reconstructed or substantially enlarged silos, and new middens and yards, diverter systems **must not be connected to a waterway.** This would constitute an illegal discharge under Article 9 of the Water (Northern Ireland) Order 1999. Diverter systems which allow diversion away from an effluent (or slurry) tank to a natural treatment system or dirty water tank may be acceptable with prior written approval from EHS so that design, construction and management can be agreed. For example:

1.1. ***For a silo:*** When silage is in the silo, any silage effluent and run-off (including rainwater run-off) must be directed to an effluent tank. When the silo is empty, and has been cleaned, run-off could be diverted to a natural treatment system or dirty water tank. Washings from cleaning the silo must be directed to an effluent tank.

1.2. ***For a midden:*** When there is manure or other material (e.g. old silage) in the midden any run-off must be directed to an effluent tank. When the midden is empty, and has been cleaned, run-off could be diverted to a natural treatment system or dirty water tank. Washings from cleaning the midden must be directed to an effluent tank.

1.3. ***For a frequently used yard:*** When a yard used for large numbers of stock (or as a dedicated livestock yard) is dirty, or livestock are on it, any run-off must be collected and directed to an effluent tank. When the yard is empty, and has been cleaned, run-off could be diverted to a natural treatment system or dirty water tank. Washings from cleaning the yard must be directed to an effluent tank.

PLEASE NOTE:

The use of dirty water tanks and natural treatment systems is subject to future implementation of legislation under the EC Nitrates Directive (91/676/EEC).

All surface water drains near dirty areas must be managed and regularly inspected to prevent contamination by dirty water. Diverters may continue to be used with exempt silos and existing middens and yards, but careful management of such systems is required to ensure that pollution of a waterway does not occur. If a pollution incident does occur, the farmer responsible for managing the diverter may be prosecuted under the Water (Northern Ireland) Order 1999.

2. Cattle walk areas

Impermeable areas where cattle walk frequently should not discharge directly to a waterway: this would constitute an illegal discharge under Article 9 of the Water (Northern Ireland) Order 1999. Instead, the area should be scraped after use to minimise any run-off. Run-off that does occur should either drain to vegetated ground located at least 10 metres from any surface waters, ditches or drains or, alternatively, be channelled to a suitably sized natural treatment system, dirty water tank or existing collection facilities (see note on Page 40).

3. Infrequently used yard areas

Similarly, if a farmer is using the yard for handling a few stock for a short period of time, then any contamination could be scraped up, thus avoiding the need for collection of run-off, provided that the yard is then reasonably clean. Run-off that does occur, when the yard is contaminated, should either drain to vegetated ground located at least 10 metres from any surface waters, ditches or drains or, alternatively, be channelled to a suitably sized natural treatment system, dirty water tank or existing collection facilities (see note on Page 40).

4. Solid manure field heaps

Solid manure field heaps are outside of the scope of the SSAFO Regulations. However, if run-off from such a heap were to cause pollution of a waterway, this would be an offence under Article 7 of the Water (Northern Ireland) Order 1999. Farmers should, therefore, ensure that the risk of such pollution is minimised by careful siting and prompt spreading of field heaps.

5. Dairy washings from parlours

Dairy washings from parlours (not containing excreta) are outside of the scope of the SSAFO Regulations. However, such washings are a highly polluting material and if they were to cause pollution of a waterway, this would be an offence under Article 7 of the Water (Northern Ireland) Order 1999. Farmers should, therefore, ensure that the risk of such pollution is minimised by careful collection, storage and disposal of washings, in line with recommendations in the Code of Good Agricultural Practice for the Prevention of Pollution of Water.

Appendix 2: Summary of relevant standards for controlled structures

Table 4 outlines the standards that must be met for different controlled structures under the Regulations. Where no standards exist, recommendations from EA, SEPA and CIRIA have been followed.

Table 4: Appropriate standards for different structures

Structure /part of structure	Appropriate British Standard (or equivalent)
Tower silo	BS 5061: 1974
Silo base	BS 8007: 1987 and BS 5502: Part 22: 1993
Silo walls	BS 5502: Part 22: 1993
Earth bank silo walls	No applicable standard, but must be lined with an impermeable membrane
Concrete /masonry silage effluent tank	BS 5502: Parts 22 and 50: 1993
Plastic (GRP) effluent tank	BS 5502: Part 50: 1993 for loading capabilities and protection against corrosion. Confirmation from manufacturer for impermeability
Earth banked slurry lagoons	BS 5502: part 50: 1993
Circular steel slurry tanks	BS 5502: part 50: 1993
Concrete and masonry slurry tanks	BS 5502: part 50: 1993
Concrete channels, drains and pipes	BS 8007: 1987
Bunds	Please see DARD Code of Good Agricultural Practice for the Prevention of Pollution of Water

Appendix 3: Alternative applicable standards

In these Regulations, any requirement for a silo, slurry storage system, fuel storage tank or any other product to comply with the specified standard shall be satisfied by compliance with

(a) a relevant standard or code of practice of a national standards body or equivalent body of any EEA State, or

(b) any relevant international standard recognised for use as a standard by any EEA State, or

(c) a technical specification or code of practice which, whether mandatory or not, is recognised for use as a standard by a public authority of any EEA State, in so far as the standard, code of practice, international standard or technical specification in question enables the pollution prevention objectives pursued by the present Regulations to be met in an equivalent manner.

Appendix 4: Sources of information

1. Copies of The Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations (Northern Ireland) 2003 are available from The Stationery Office Ltd. The Regulations can also be downloaded from the web-site stated below.

Address	The Stationery Office (TSO), PO Box 29, St Crispins, Duke Street, Norwich NR3 1GN
e-mail	Customer.services@tso.co.uk
Website	www.northernireland-legislation.hmso.gov.uk/sr/sr2003/20030319.htm

2. General technical advice on structures covered by these Regulations, including advice on structural specifications and appropriate materials is available from DARD Building Advisors (Organisation Improvement Branch).

Telephone	028 9442 6666
Website	www.dardni.gov.uk

3. General advice on pollution prevention and reduction measures is available from DARD Countryside Management Branch (CMB). The Code of Good Agricultural Practice for the Prevention of Pollution of Water referred to in the Regulations may also be obtained from CMB.

Address	Countryside Management Branch, DARD, Annexe D, Dundonald House, Upper Newtownards Rd., Belfast BT4 3SB
Telephone	028 9052 5041
Website	www.dardni.gov.uk *or* www.ruralni.gov.uk

4. The EHS Agricultural Regulations team may be contacted as follows.

Address	Agricultural Regulations Team, Environment and Heritage Service, Calvert House, 23 Castle Place, Belfast BT1 1FY
Telephone	Tel: 028 90254925 Fax: 028 90254865
Website	www.ehsni.gov.uk

5. Information on health and safety issues concerning agricultural stores can be obtained from The Health and Safety Executive for Northern Ireland.

Address	HSENI, 83 Ladas Drive, Belfast BT6 9FR
Telephone	028 9024 3249
Freephone helpline	0800 0320 121
Website	www.hseni.gov.uk/

6. Information on planning issues involved with construction of agricultural stores can be obtained from Northern Ireland Planning Service.

Address	Planning Service Headquarters, Millennium House, 19-25 Great Victoria Street, Belfast BT2 7BN
Telephone	028 9041 6700
Website	www.planningni.gov.uk/
e-mail	planning.service.hq@nics.gov.uk

7. BS Standards – Copies of the documents published by the British Standards Institute, referred to in the Regulations, may be obtained on request from any of the sales outlets of the British Standards Institute.

Address	Customer Services, British Standards Institute, 389 Chiswick High Road, London W4 4AL
Telephone	020 89969000 Fax: 020 8996 7001
e-mail	info@bsi-global.com

8. Information on rainfall, and other meteorological data, can be obtained from the Met Office.

Address	Met Office, FitzRoy Road, Exeter, Devon, EX1 3PB
Telephone	0870 900 0100 Fax: 0870 900 5050
Website	www.meto.gov.uk
e-mail	enquiries@metoffice.gov.uk

9. Appeals against Notices should be addressed to The Water Appeals Commission. Further information is available as follows.

Address	Water Appeals Commission, Park House, 87-91 Great Victoria Street, Belfast BT2 7AG
Telephone	028 90244710
Website	www.pacni.gov.uk
e-mail	info@pacni.gov.uk

Guidance notes for notification of new /substantially enlarged /substantially reconstructed silos /slurry storage systems /agricultural fuel oil storage systems

Agricultural Regulations Team

ENVIRONMENT AND HERITAGE SERVICE

The Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations (Northern Ireland) 2003

1. The Regulations

The Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations (Northern Ireland) 2003 (known as SSAFO) cover the design, siting, construction, repair and maintenance of silage (and silage effluent), slurry (including contaminated run-off or washings containing any animal excreta) and agricultural fuel oil storage facilities. The powers are in place to help prevent agricultural pollution in Northern Ireland. **The Regulations apply to storage facilities, where construction, substantial enlargement or substantial reconstruction is completed after 1 December 2003.**

Existing, unaltered stores are exempt from the Regulations. However, if, on inspection by a representative of Environment and Heritage Service (EHS), they are found to pose a pollution risk, EHS may require their repair, or improvement. Where necessary, under the Regulations, a Notice can be served requiring works to be carried out. If the terms of a Notice are not complied with, the store covered by that Notice may lose its exempt status and the farmer could be liable to prosecution. Provision is made in the Regulations for appeals should the terms of a Notice be considered unreasonable.

EHS hopes to work constructively with farmers to implement the SSAFO Regulations, in order to prevent pollution from agricultural sources and improve the environment for rural communities in Northern Ireland.

2. When to use this form.

You must tell EHS about any new, substantially reconstructed or substantially enlarged silage, slurry or agricultural fuel oil stores at least **28 days** before first intended use. You should use the accompanying form to do this. If substantive works have been carried out you must ask the engineer who designed the structure, and supervised the construction or installation, to sign the certification section (**Section 4: Certification A**).

3. Notification

Notification should be given by the person having custody or control of the substance(s) to be stored in the structure(s). This is normally the occupier of the farm (owner or tenant).

4. Substantive works - engineer's certification

The engineer who authorised the design of the structure, and supervised its construction, is required to confirm that it has been designed and built to comply with the requirements of the SSAFO Regulations. You must ask the engineer to sign **Section 4: Certification A**.

The engineer must be a qualified structural or civil engineer and a member of a chartered institute. It is recommended that you check that the engineer carries public indemnity insurance. It is the responsibility of the engineer to ensure that the system is designed and constructed to satisfy the requirements of the above Regulations in every respect.

You (the farmer) may build the structure yourself as long as the design and materials specified by the engineer have been used and the engineer has carried out a site inspection during the construction phase and on completion of work.

5. Single unit tanks – certification by farmer

For installation of proprietary /prefabricated single unit tanks you (the farmer) must sign the notification form (**Section 5: Certification B**) to confirm that the work fully complies with the above Regulations. An engineer's signature will not be required for such work. Notification of the

installation of a proprietary /prefabricated tank must be accompanied by a manufacturer's certificate stating that the tank has been designed and constructed to fully comply with the above Regulations. This would include meeting the appropriate British Standard, being approved by the manufacturer for the purpose for which it will be used and having (at least) a 20-year life span. Care must be taken to ensure that any joins are impermeable. You may need to take advice from an engineer on the suitability of the ground conditions for installing a tank.

6. Proprietary agricultural fuel oil storage facilities– certification by farmer

For installation of proprietary agricultural fuel oil storage facilities (delivered as complete single units, incorporating a bund **and complying fully with the Regulations**) you (the farmer) must sign the notification form (**Section 5: Certification B**) to confirm that the work fully complies with the above Regulations. An engineer's signature will not be required for such work. Notification of the installation of a proprietary fuel oil storage facility must be accompanied by a manufacturer's certificate stating that the unit has been designed and constructed to fully comply with the above Regulations. This would include meeting the appropriate British Standard, being approved by the manufacturer for the purpose for which it will be used and having (at least) a 20-year life span.

If a non-proprietary agricultural fuel oil storage facility is constructed on site, an engineer is required to confirm that it has been designed and built to comply with the requirements of the SSAFO Regulations.

7. Minor works – certification by farmer

For minor works carried out under the SSAFO Regulations, and for enlargement or reconstruction of less than 10% on exempt structures, EHS recommends that you (the farmer) complete and sign a Notification form. **Notification of minor works is likely to be necessary for grant claims.** Minor works would include:

- Installation of pipe-work, channels, and drainage systems.
- Construction of slurry transfer channels, i.e. **not designed for more than two days storage of slurry**.
- Installation of MDPE below ground pumping mains
- Enlargement or reconstruction of exempt structures of less than 10%.

In these situations you (the farmer) must sign the notification form (**Section 5: Certification B**) to confirm that the work fully complies with the above Regulations. An engineer's signature will not be required for such works. However, if the work has implications the load bearing capacity or impermeability of existing structures, it is strongly recommended that an engineer is consulted to ensure that these parameters are not adversely affected by the work and that the structures remain fit for purpose.

If a below ground pumping main is installed, it is recommended that the work is carried out by qualified installation specialists and that a copy of the firm's certificate /guarantee relating to the work is included with the Notification form.

All installation of pipe-work, inspection chambers *etc* must be carried out according to the manufacturer's specifications, and, where appropriate, meet the relevant British Standard. Care must be taken to ensure that all joins and seals are impermeable.

If you are unsure if your works will require certification from an engineer, we recommend that you contact the EHS Agricultural Regulations Team at the address /telephone number below, **prior to work beginning**.

6. Design specifications of the Regulations.

Design standards for new, substantially reconstructed or substantially enlarged silage, slurry or agricultural fuel oil stores are outlined in Schedules 1, 2 and 3 (respectively) of the SSAFO Regulations. One of the general requirements is that new, substantially reconstructed or substantially enlarged stores must be built to last for at least **20 years with maintenance**. You should also note that **no** new, substantially enlarged or substantially reconstructed silage, slurry or agricultural fuel oil stores **should be within 10 metres of any waterway.** The definition of waterway (under the Water (Northern Ireland) Order 1999) includes surface, storm and field drains.

Further details of design specifications should be obtained from a qualified, chartered, structural or civil engineer. If you have not started construction and are unsure whether your proposal complies with the Regulations, we recommend that you contact the EHS Agricultural Regulations Team, for guidance (at the address /telephone number below), **prior to work beginning**.

General advice on farm storage systems, pollution prevention measures and best practice is available from your local DARD Office and DARD Countryside Management Branch.

A copy of The Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations (Northern Ireland) 2003 can be found on the internet at: www.northernireland-legislation.hmso.gov.uk/sr/sr2003/20030319.htm

7. Substantial enlargement and /or substantial reconstruction.

A store will normally be deemed substantially enlarged if it is enlarged by more than 10 % of original volume. A store will be deemed substantially reconstructed if more than 10 % of its supporting wall(s) and /or base area require reconstruction. In certain circumstances, and in consultation with EHS Agricultural Regulations Team, a greater amount of enlargement or reconstruction may be permitted without a structure losing its exemption. For example, if current storage on the farm was inadequate, but no site was available for building a new store at least 10 m away from any waterway.

If you are unsure if your plans will lead to substantial enlargement and /or substantial reconstruction of your storage structure(s), we recommend that you contact EHS Agricultural Regulations Team at the address /telephone number below, **prior to work beginning**.

8. Do you need more information/ clarification?

- Please contact: Agricultural Regulations Team, Environment and Heritage Service, Calvert House, 23 Castle Place, Belfast, BT1 1FY. Tel: 028 90254925, Fax: 028 90254865
- More information can also be obtained by contacting your local DARD Office or DARD Countryside Management Branch.

9. Please return completed form to:

Agricultural Regulations Team, Environment and Heritage Service, Calvert House, 23 Castle Place, Belfast, BT1 1FY

10. What will happen next?

- EHS Agricultural Regulations Team may contact you (initially by phone) to arrange to inspect the structures you have notified us about, to assess compliance with the SSAFO Regulations. If, after 28 days of receipt of the **completed** Notification form, EHS has not inspected the structure(s), you will be issued with a letter by us. **You may need this correspondence if applying for a grant.** If, at a later date, an inspection of farm storage takes place and non-compliance with the Regulations is determined, enforcement action may follow.
- When an inspection takes place a storage audit may be carried out to confirm that the farm has four months' slurry storage capacity and adequate effluent storage (in compliance with the SSAFO Regulations). If storage is found to be inadequate you may be asked to provide additional storage or to demonstrate that you can manage with your existing storage without posing a significant risk of pollution. The requirement for four months' storage capacity may be increased as a result of the implementation of other legislation.
- The Agricultural Regulations Team may contact you if we need clarification of any information on your form.

Notification of new /substantially enlarged /substantially reconstructed silos /slurry storage systems /agricultural fuel oil storage systems

Agricultural Regulations Team

ENVIRONMENT AND HERITAGE SERVICE

The Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations (Northern Ireland) 2003

1. Notification

Notice is hereby given that, in accordance with the above Regulations, I intend to bring into use a *(please tick as many as appropriate)*:

□ new

□ substantially enlarged

□ substantially reconstructed

structure as a /as part of a:*

□ silage storage system

□ slurry storage system

□ agricultural fuel oil store

It will be used from (*the date of use should be more than 28 days from date of this notification*):

Date / /

I am the person having custody or control of the substance(s) to be stored in the structure(s). (*Normally the occupier of the farm (owner or tenant.)*)

Name

Address

Postcode

Telephone No.

Address of structure (*if different from above*)

Postcode

2. Previous correspondence

If you have already contacted EHS (or we have contacted you), about this proposal, please give details of the most recent correspondence.

Date / / **EHS Reference**

Name of contact (*if known*)

3. Grant applications

Have you made, or intend to make, an application to DARD for grant aid for all or part of this work?
***Yes /No** (*Delete as appropriate)

Name of grant scheme

4. Certification A: Design and construction /installation (*to be completed by a chartered, structural or civil engineer*)

I (*name*)

am a chartered civil /structural engineer and member of (*professional institution*)

Membership number

and confirm I authorised the design and supervised the construction /supervised the installation of the *(please tick as many as appropriate)*:

☐ new

☐ substantially enlarged

☐ substantially reconstructed

structure as a /as part of a:*

☐ silage storage system

☐ slurry storage system

☐ agricultural fuel oil store

being the system specified on this notification.

at (*address of structure)*

Postcode

Irish Grid Reference of structure

To the best of my knowledge, information and belief the system has been designed and constructed /installed to satisfy the requirements of the above Regulations in every respect.

Signature

Date of certification / /

Address (*company /business*)

Postcode

Telephone No.

5. Certification B: Single unit tanks, proprietary agricultural fuel oil storage facilities and minor works only (*may be completed by applicant (farmer)*)

I (*name*)

installed /constructed *(please tick as many as appropriate)*:

☐ a proprietary /prefabricated single unit effluent tank

☐ a proprietary agricultural fuel oil storage facility

☐ pipe-work or other drainage work

☐ slurry transfer channels (not designed for more than two days storage of slurry)

□ an MDPE below ground pumping main

□ or enlarged /reconstructed an exempt store by less than 10 %

as a /as part of a *(please tick as many as appropriate)*:

□ silage storage system

□ slurry storage system

□ agricultural fuel oil store

and confirm that the work fully complies with the above Regulations, and that any tank or pipe-work was installed according to the manufacturer's specifications.

Signature

Date of certification / /

6. Details of your application

Please state size (*feet or metres*) and type (*silage, effluent, slurry, oil*) of all new, substantially enlarged, substantially reconstructed storage structures

Please send us details of your application including:

- brief technical details and /or drawings of the structure (*if available*).
- a copy of the manufacturers' certificate including design specifications for the tank (***necessary for proprietary /prefabricated tanks***).

7. Data Protection

The information provided will be processed by us to deal with your application, monitor compliance with the SSAFO Regulations and for maintaining the relevant public registers.

We may also process and /or disclose it in connection with the following:

- offering /providing you with our literature /services relating to environmental matters
- consulting with the public, public bodies and other organisations (e.g. DARD, FCB) on environmental issues, including cross compliance in respect of support payments
- carrying out statistical analysis, research and development on environmental issues
- providing public register information to enquirers
- investigating possible breaches of environmental law and taking any resulting action
- preventing breaches of environmental law
- assessing customer service satisfaction and improving our service.

We may pass it on to our agents /representatives to do these things on our behalf.

You should ensure that any persons named on this form are informed of the contents of this data protection notice.

8. Checklist and declaration

I am including

□ details of sizes and types of storage structures

□ brief technical details of the structure (*if available*).

□ a copy of the manufacturer's certificate including design specifications for the tank (***necessary for proprietary /prefabricated tanks and agricultural fuel oil storage facilities***).

The information I have given is correct to the best of knowledge.

I have read *'7. Data Protection'*

Signature of applicant (*normally the occupier of the farm (owner or tenant.)*)

Date of notification / /

9. Do you need more information /clarification?

Please contact:

Agricultural Regulations Team, Environment and Heritage Service, Calvert House, 23 Castle Place, Belfast, BT1 1FY Tel: 028 90254925 Fax: 028 90254865

10. Please return completed form to:

Agricultural Regulations Team, Environment and Heritage Service, Calvert House, 23 Castle Place, Belfast, BT1 1FY

11. Please note:

Incomplete forms will not be accepted and may be returned

12. Any other information