

# Protecting the environment

## The essentials for storing solid and liquid fertilisers



### Losses from stored fertiliser may:

- seriously damage water quality
- lead to substantial fines for pollution.

Today, farm storage of fertilisers is covered by Codes of Practice to prevent water pollution. Unless farmers adhere to these codes, enforcement action could be taken or new legislation imposed.<sup>(1)</sup> This leaflet summaries your obligations under the Codes.

Adhering to the codes is not daunting. Often a little time spent on inspection, planning and a small investment in maintenance will avoid large fines, upset neighbours and loss of reputation.

### GENERAL GUIDELINES FOR ALL STORES

- Site all stores as far from watercourses or surface water drains as possible – never less than 10m.
- Site at least 50m from any well, borehole, or aquifer outcrop where risk of groundwater contamination is high.
- Provide secondary containment for storage where contamination risk is high.
- Ensure good well constructed vehicular access.
- Keep an inventory of fertiliser stored – type, volume, delivery.
- Make all storage as secure as possible with consideration given to lighting and fencing.
- Site all stores away from public access to minimise interference or vandalism.
- Ensure operators are trained in use and emergency procedures.
- Obtain Code of Practice for the Prevention of Water Pollution from the Storage and Handling of Fluid and Solid Fertilisers<sup>(2)</sup> – the definitive reference.

### SOLID FERTILISER STORAGE

Solid fertilisers, provided the storage area is well-sited and constructed, are a low risk of watercourses. The main risk occurs in the event of a fire, if contaminated firewater escapes.

#### Permanent stores

##### Siting

- Locate away from heat sources to minimise fire risk.
- Site away from combustible materials eg fuels, oils, hay, straw and wood.
- Ensure sites are level and not prone to flooding.
- Ensure indoor storage is on smooth, firm, dry, impermeable concrete floors.
- Avoid prolonged outdoor storage but where unavoidable ensure it is protected from rain and sunlight with shrink wrapping and/or sheeting.

- Keep storage areas clean and rodent free.
- Handle all bags with care eg fit pipes on sharp forklift tines.
- Re-bag damaged bags immediately.
- Sweep up spillage and dispose of sweepings in slurry pits or spread thinly on growing crops.
- Do not use sawdust as an absorbent.
- Notify the Fire Authority and Health & Safety Executive if 25 tonnes, or more, of ammonium nitrate is stored at any one time.<sup>(3)</sup>
- Develop contingency plans to contain contaminated firewater and prevent entry to drains or watercourses.

#### Temporary field storage

- Do not store within 10m of ditch, watercourse or land drains.
- Return unused bags to a permanent store as soon as possible.

#### Footnote

1. The Anti-Pollution Works Regulations 1999, [www.legislation.gov.uk](http://www.legislation.gov.uk) or from The Stationery Office, 0870 6005522
2. Code of Practice for the Prevention of Water Pollution from the Storage and Handling of Fluid and Solid Fertilisers – free from Agricultural Industries Confederation, 01733 385230 or from website [www.agindustries.org.uk](http://www.agindustries.org.uk) update available in winter 2012
3. The Dangerous Substances (Notification and Marking of Sites) Regulations 1990, [www.legislation.gov.uk](http://www.legislation.gov.uk), The Stationery Office, 0870 6005522

## FLUID FERTILISER STORAGE

Farmers share a duty of care for siting, use and maintenance, even when fertiliser suppliers provide tanks.

### Using tanks

- Ensure tanks, pipework and valves are fit for purpose, ie resistant to corrosion.
- Ensure all tank fittings are tamperproof. Lock all valves shut when not in use.
- Ensure delivery companies are aware of emergency procedures.
- Ensure tank, pipework and valves are in good condition before deliveries are made.
- Check tank has sufficient capacity before delivery.
- Avoid overfilling.

### Maintaining tanks

- Have tanks, pipework and valves inspected internally and externally, for damage and corrosion at least annually by a suitably qualified technician.
- Carry out any necessary remedial work immediately.
- Undertake additional checks at the start of the season and when deliveries are made to and from the tank<sup>(4)</sup>. If in doubt do not use the tank or bowser.
- Drain down and flush through all pipework at the end of each season.
- Keep a maintenance record.

### Permanent storage

- Conduct an environmental risk assessment<sup>(5)</sup>. Advice is available from the Environment Agency.
- Construct secondary containment where environment assessment shows high risk. Use of reinforced masonry or concrete is recommended and provision should be made for at least 110% of tank capacity. Properly designed and constructed earth embankments may be an acceptable alternative. All pipes, valves and sight gauges should be within the containment area. (NB As a last resort, the Environment Agency can issue a works notice requiring secondary containment in high risk locations<sup>(1)</sup>).
- Tanks must be on a solid, stable concrete base of footing to take the full tank weight.
- Consider additional stabilisation against high winds for GRP tanks.

### Bowsers and mobile tanks

- Temporary storage can pose a significant hazard to watercourses. Thus suitable siting is crucial before filling or dispensing. Transport around the farm needs careful consideration. Roadways and tracks must be able to withstand fully laden bowsers passing over or being parked on them.
- Ensure bowsers and all fittings are fit for purpose and protected from corrosion.

- Ensure bowsers are set down on level, solid ground before delivery is made.
- Provide sufficient support beneath parking legs to carry loaded weight without it sinking into the ground or becoming unstable.
- Ensure all hatches and manholes form a watertight seal when closed.
- Do not move laden bowser unless all hatches, lids and valves are closed and locked.
- Open hatches slightly, when emptying bowsers, to avoid a vacuum which could cause the tank to crumple and collapse.

#### Footnote

(4) Instructions for inspecting condition of fluid fertiliser tanks (free) – Agricultural Industries Confederation 01733 385230 or from website: [www.agindustries.org.uk](http://www.agindustries.org.uk).

(5) Risk assessment guide on siting storage facilities (free) – Agricultural Industries Confederation 01733 385230 or from website: [www.agindustries.org.uk](http://www.agindustries.org.uk).

## FURTHER INFORMATION

*Code of good agricultural practice; Protecting our Water, Soil and Air* Download free from [www.defra.gov.uk/publications](http://www.defra.gov.uk/publications) or hard copy (£12.50) from [www.tso.co.uk](http://www.tso.co.uk)

### The Environment Agency

Pollution Prevention Guidance Notes:

PPG2 – *Above ground oil storage tanks* – for containment wall information

PPG18 – *Pollution prevention measures for the control of spillages and fire fighting runoff* – for more detailed information about storing chemicals.

*Policy and practice for the protection of groundwater*

Ground Water Vulnerability Maps

**Environment Agency –  
24 hour Emergency  
Hotline 0800 807060**

**For non-emergency  
general advice, phone  
03708 506506**



## DEALING WITH SPILLAGES, EMERGENCY PROCEDURES AND STAFF TRAINING

### Dealing with spillages

- Contain any spillage wherever possible.
- Use inert absorbent materials, e.g. sand or earth, for liquid spills (not sawdust).
- Block gullies, drainage systems or other routes to watercourses.
- Do NOT hose down a spillage.

### Emergency procedures

- Identify routes to vulnerable watercourses and groundwater on your farm.
- Establish and test emergency procedures.
- Devise spillage, emergency and firewater procedures to provide containment areas near tanks, bowsers or stores.

- Consider blocking drains and damming watercourses as well as providing drain-blocking mats or drain bungs.
- Use leak-sealing putty on tanks and pipework for temporary repair.
- Inform and train everyone likely to become involved in dealing with a spillage or fire.
- Identify who to contact in the event of a spillage, loss or fire.
- Ensure all have access to important telephone numbers, eg local Environment Agency Office, fertiliser supplier and emergency services.
- Report any significant spillage to the farmer, the supplier and Environment Agency.

