

NATIONAL RIVERS AUTHORITY

THAMES REGION



NRA

National Rivers Authority
Information Centre
Office

No FILE

POLLUTION PREVENTION GUIDELINES

ABOVE GROUND OIL STORAGE TANKS

These guidelines are produced to assist those responsible for the design, construction, operation and ownership of above ground oil storage tanks. They should be complied with in order to reduce the risk of oil pollution of surface waters or groundwater, sewers and drains. Consultation with your local National Rivers Authority Environmental Quality Office may be advisable, and details of these offices will be found at the end of these guidelines.

1. GENERAL

All tanks, pipework, gauges and structures should be constructed to recognised engineering standards and in accordance with the appropriate British Standard Institution Specification, Codes of Practice or other statutory requirements. The tank contents should be clearly marked on the tank.

2. THE STORAGE TANK

- a. This should be located where it can be inspected externally for corrosion or leaks.
- b. It must be provided with sound foundations to avoid settling.
- c. The vessel should be protected internally and externally against corrosion and marked with the product type and tank capacity.
- d. Water from within a tank should be drawn off to prevent freezing and splitting of the drain/valve during cold weather.
- e. Every part of the tank should be within the bund including valves and filters.

3. BUND

- a. The bund should consist of a base and surrounding walls which must be constructed or lined with a material impermeable to the oil stored.
- b. The bund should not have any damp proof course.

- c. Pipework should not pass through the bund. However, if this is unavoidable, the material used for sealing around the pipe must be resistant to attack by the oil stored.
- d. The capacity of the bund should be at least 10% greater than the capacity of the storage tank or, if more than one tank is involved, the capacity of the largest tank within the bund area. Hydraulically inter-linked tanks should be regarded as a single tank.
- e. There must be no outlet directly connecting the bund to any drain, sewer , watercourse or ground.
- f. Normally rainwater evaporates from within the bund. Should there be a need to remove accumulated rainwater, it can be removed by a manually operated pump discharging through an oil separator of an approved design.

4. THE PIPEWORK

- a. All pipework should be sited above ground where possible in order to facilitate inspection and repair and protected against corrosion. The pipework should be well supported and safeguarded from damage in vulnerable areas.
- b. Separate fill pipes should be provided for each tank unless the tanks are interconnected by a balance pipe of greater flow capacity than the fill pipe.
- c. Fill pipes should be clearly marked with the product type and a tank number where more than one tank is involved.
- d. Fill pipes should be located within the confines of the bund and be fitted with a suitable lockable fill cap with chain.
- e. Air vent pipes should be positioned so they can be seen easily and directed so that any discharge from them (eg. in the event of the tank being overfilled) is directed into the bund.
- f. Where it is unavoidable and a pipeline has to be laid underground it should be placed in a protective sleeve or duct with open grating covers for inspection purposes, or if this is not possible should be of a non-ferrous material.
- g. Underground pipework should also be protected from damage resulting from excessive surface loading.
- h. Remote fill points are not recommended, but where these are unavoidable the surface drainage from such areas should pass through a suitably sized oil separator of an approved design.
- i. Pump sets sited outside the bund should where possible be fitted with a non return/check valve installed in the feed line.

5. TANK CONTENTS MEASUREMENTS

- a. Adequate means of measuring the quantity of oil should be provided.
- b. Dip sticks should be properly calibrated and only used in the tank for which they are intended.
- c. Sight gauge tubes should be well supported and fitted with vandal/tamper proof valves. The valve should automatically be in the off position except when level readings are being taken.
- d. Dial gauges where fitted should be in a prominent position and regularly checked for accuracy.
- e. The use of high oil level audible/visual alarms is recommended.

6. VALVES OR COCKS

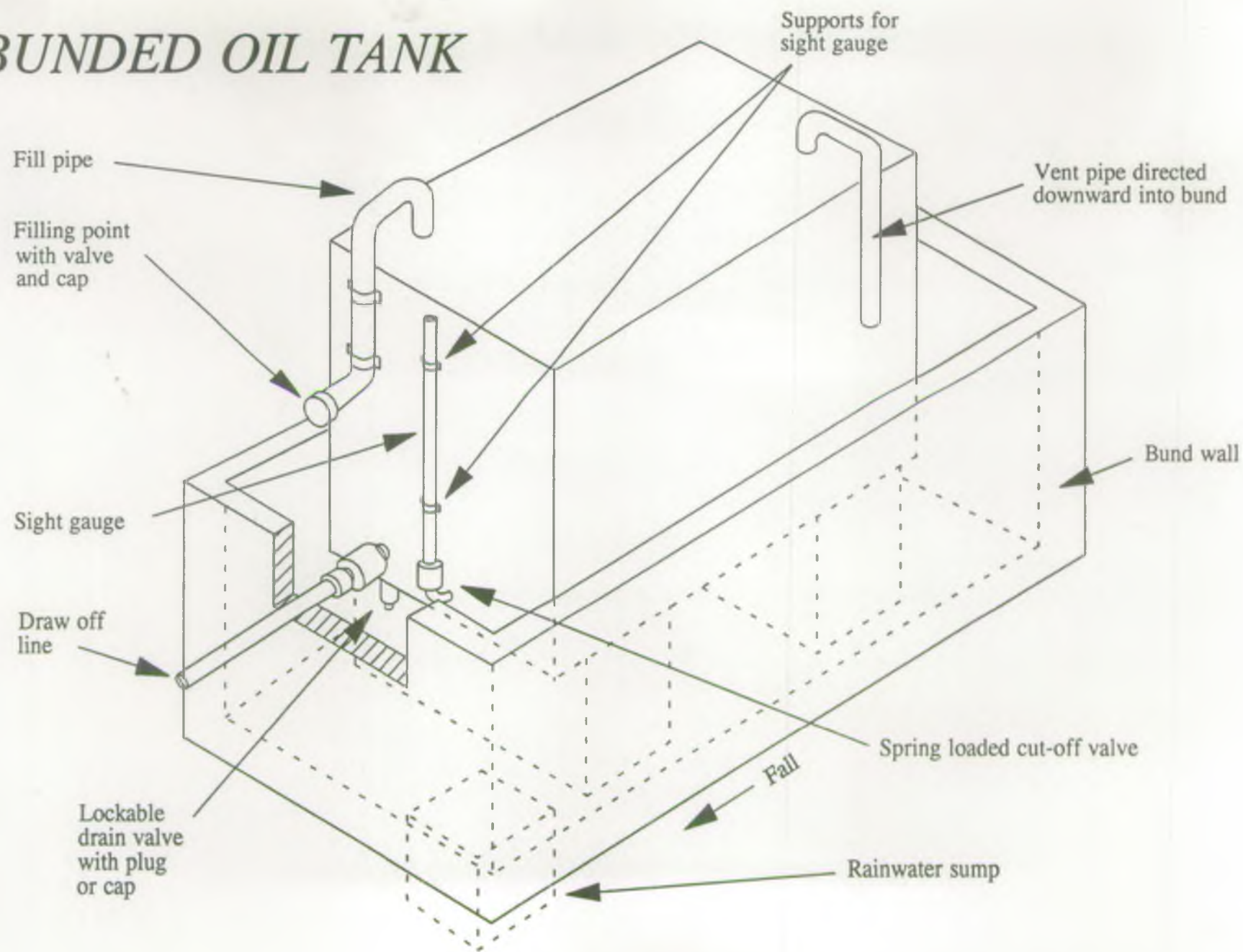
- a. These should be as vandal/tamper proof as possible having lockable or removable hand wheels.
- b. They should be of bronze or steel and arranged so that there can be no discharge outside the bund wall. They should be marked to show whether they are open or closed, and kept locked where not in use and fitted with a blanking cap or plug.
- c. Where appropriate, a notice should be displayed requiring that valves and trigger guns be kept locked when not in use.

The drawing on the reverse gives outline details of a typical storage tank installation.

For further information, please contact your nearest NRA Environmental Quality office at:-

OXFORD	0865 749400
READING	0734 311422
AMERSHAM	0494 722361
GUILDFORD	0483 577655
WALTHAM CROSS	0992 35566
LONDON SE	081 310 5500

BUNDED OIL TANK



NOTE

Flexible pipes must be fitted with automatic closure valve and shall be locked within bund when not in use.