



## **The Livestock Waste Control Scheme : Guidelines for Wet Muck-out and Hybrid Systems**

### ***INTRODUCTION***

Following the implementation of the Livestock Waste Control Scheme in 1988 and the revised Livestock Waste Control Scheme in 1994, livestock farmers in Livestock Waste Control and Restriction Areas must comply with control requirements in the management and disposal of livestock waste. A wet muck out system or a hybrid system is a possible option for treating wastewater generated from livestock keeping operations. The effectiveness of the wet muck out system or the hybrid system is a very important element in the on-farm management of livestock waste.

These guidelines are prepared with a view to providing livestock farmers and waste treatment system designers with general information on the provision of wet muck out or hybrid systems for the treatment of livestock waste. In general, a hybrid system is the same as wet muck out system, in terms of treatment processes, but a dry muck out operation (see “Guidelines for Dry Muck-Out of Livestock Waste”) is carried out prior to washing or hosing down waste residues to dung channels. A hybrid system is different from a normal dry muck-out operation in that the wastewater generated cannot be disposed of by a septic tank and soakaway system and has to be treated by a wastewater treatment plant. Adopting a hybrid system will lead to a reduction in the scale of the treatment plant that needs to be installed, because there will be less water used, less waste to be treated, and less sludge to be dried. However, the scale of the plant will depend critically upon the degree of dry muck out achieved, and the amount of water used. All wastewater treatment systems for treating livestock waste should be designed to eventually achieve the minimum standard of not exceeding 50mg/L of Biochemical Oxygen Demand and 50mg/L of Suspended Solids. Farmers should seek competent professional advice on the design and operation of these systems.

It should be noted that it is an offence under the Waste Disposal Ordinance (WDO) to discharge substandard effluent at any time. An offence under the WDO may constitute a violation of other legislation (including the Water Pollution Control Ordinance, the Public Health and Municipal Services Ordinance and the Waterworks Ordinance).

The adoption of wet muck out and installation of a wastewater treatment system in a farm is not always suitable. This depends on the following factors:

- (a) Size of farm operation (and the amount of wastewater generated).
- (b) Availability of an ample and reliable electricity supply.
- (c) Availability of land area.
- (d) Availability of competent personnel to operate and maintain the system.
- (e) Loading capacity of the soil to support the heavy water tanks and various waste treatment units.

Before adopting wet muck out or a wastewater treatment system, a responsible farm operator must carefully evaluate the above factors, in particular the loading capacity of the soil. If in any doubt, expert advice from competent bodies and/or consultants should be sought.