



EQUIPMENT WASH-OFF

Water Management Legislation by Tim Earley

ARE YOU AWARE NEW GROUNDWATER REGULATIONS ARE NOW IN FORCE?

With the extensive list of environmental and water protection regulations, it would not be surprising, if you are unsure of what regulations are in force, how this impacts your golf course and what you need to do to ensure compliance.

As ignorance is no excuse, hopefully the following will make interesting reading. That said, this is at best a simplified overview of complex and changing legislation and does not constitute legal advice!

Environmental protection legislation was issued many years ago and has been progressively added to in the intervening period. The confusion arises in that many of the additional Acts do not replace existing legislation, but merely reinforce it. It is not therefore possible to go to one reference point.

CURRENT WATER MANAGEMENT LEGISLATION

To give a flavour, the primary legislative Acts you are expected to be in compliance with include the Environment Protection Act 1990 and Water Resources Act 1991. These Acts have been regularly added to in recent times. Recent notable additions include the Environment Act 1995, the Groundwater Regulations 1998 and Water Act 2003. In addition

there are a number of European Directives in force (e.g. Groundwater Directive 80/68/EEC), which everyone should be in compliance with. This list certainly makes for good bed-time reading!

WATER FRAMEWORK DIRECTIVE

Current water management legislation is widely acknowledged as patchy and inconsistent, liable to lead to confusion. The new Europe-wide Water Framework Directive intends to resolve this by rationalising and updating existing legislation with consistent legislation for the whole of Europe. Implementation of The Water Framework Directive began in 2006, with enactment of the new legislation currently planned to start in 2009 and completion of implementation by 2015. However, in case anyone thinks they can delay doing anything until 2009, preparation of this new legislation is bringing a new emphasis and increased attention to potentially polluting activities and the current legislation in force will be actively enforced.

Summarising the current position:

ENVIRONMENTAL RISK ASSESSMENT

The Environment Agency require that an Environmental Risk Assessment should be undertaken for every facility regardless of size. Environmental

risk assessment and the management of risk are the bases for preventing pollution of the environment. In particular, when designing new facilities, the Environment Agency stress that emphasis should be placed on hazard prevention rather than risk management. (i.e. avoiding the problem in the first place). This requirement has taken on a new urgency following the recent wide-spread flooding.

The Environmental Risk Assessment should take account of:

Hazard Identification

Polluting materials handled (e.g. fuels, detergents, chemicals etc.)

Possible Scenarios

Consider what could go wrong (e.g. spillages, leaks, vandalism, flood).

Impact of possible Scenarios

The potential scale of the incident and environmental impact (e.g. leak, flood)

Likelihood of Scenario

Occurring How likely an incident is likely to happen (e.g. are you in a flood prone area?)

POLLUTION PREVENTION GUIDELINES

Until the Water Framework Directive is implemented, the current legislation is supported and enforced through a series of Pollution Prevention Guidelines (PPG's), emanating from the Groundwater regulations 1998. Twenty plus guidelines have been issued to date addressing specific activities known to cause pollution.

Several of these PPG guidelines directly impact the operational activities

of golf courses, including refuelling, chemical handling and equipment wash-off:

e.g.

PPG 2 - Fuel Oil Storage (revised Feb 2004)

PPG 7 - Refuelling Facilities (August 2004)

PPG 9 – Pesticide Handling (replaced by DEFRA Code of Practise)

PPG 13 – Vehicle Washing and Cleaning (revised July 2007)

For example, the new regulations require that washing operations must be carried out in a designated, kerbed area which drains to the foul sewer, or A CLOSED LOOP RECYCLING WASH-OFF SYSTEM MUST BE USED. If neither of these options is installed, there is a little-used third option available of installing a sealed collection tank for off-site disposal by waste disposal specialists, but this is not realistic in most cases as it becomes prohibitively expensive every time it rains!

PERSONALLY LIABLE

Regular cleaning of maintenance equipment is essential to ensure the long life of expensive equipment. In addition, chemical sprayers require washing and flushing out after applying pesticides and fungicides. This wash-off water potentially contains a range of serious contaminants, including; oil, petrol, diesel, grease, pesticides, fungicides etc.

It is now a criminal offence to allow certain substances including mineral oils, detergents and chemicals to enter surface drains, watercourses or Soakaways. If you are not complying, you are personally liable for breaking the law, with the threat of a fine of up to £20,000 and imprisonment for a serious infringement! Even if a case does not go to court, the cost of



repairing the damage still has to be met, which could be very expensive (e.g. replacing fish which have been killed).

ENVIRONMENTAL CONCERN

Environmental concern is easy to understand as golf courses routinely handle quantities of 15 litres upwards of concentrated pesticide at a time when filling a chemical sprayer. The Environment Agency advise that as little as 0.5 litres of neat pesticide is sufficient to exceed the permitted limit of the whole of London's water supply! The consequences of an uncontrolled spillage are, therefore, easy to imagine.

These new regulations now strictly control the amount of contaminants in groundwater to levels that are nearly undetectable. The Environment Agency's latest detection equipment can reliably trace the source of pollution to parts per billion. If the club has failed to make proper provision and an accident occurs, the livelihood of the Head Greenkeeper and the reputation of the golf club is potentially being put at risk.

DOES AN OIL/WATER SEPARATOR COMPLY?

No, an Oil/Water separator is not adequate to handle the discharge from the golf course wash-off area, unless this discharge is to the foul. An Oil/Water Separator is designed for the settling of heavy solids and separation of free hydrocarbons, which it does very well. It does not have the technology to remove chemicals, which are routinely used by golf courses or emulsified hydrocarbons (oils) resulting from the addition of detergents during washing or using a pressure washer. It will also not treat another critical pollutant, Biochemical Oxygen Demand (BOD) which is caused by organic substances, including grass clippings washed off the equipment.

ENVIRONMENTAL ACTIVITY CENTRE

A major innovation to guarantee the removal of any risk of groundwater pollution from golf course maintenance activities has been introduced by a company called Waste2Water. A number of other systems are available from alternative suppliers, although Waste2Water claim the advantages of their Above-Ground system include ease of maintenance and, in the event of flooding, there is no risk of release of partially treated contaminants, which could potentially arise with gravity-fed oil water separator/underground systems.

The Environmental Activity Centre simply consists of a concrete wash pad sloping into a collection sump. On the periphery of this area, installation of as many potentially polluting storage/activity areas as possible is recommended. This includes the diesel tank, chemical store, chemical mixing tank, old oil storage etc. At the hub is the Biological Recycling Wastewater Treatment System, which takes care of spillages of oil, petrol, diesel and chemicals etc., converting them to harmless carbon dioxide and water.



CREATING YOUR OWN ENVIRONMENTAL ACTIVITY CENTRE

Creating an Environmental Centre could not be easier. This can be as simple as installing your diesel tank on the edge of the pad with the Recycling Wash-Off System installed at the heart of the operations area, often retro-fitting into an existing area to minimise the budget. The Biological Recycling System removes all contamination risks, reduces water usage by a massive 90% and tidies up one of the worst aspects of golf course maintenance. Three in one can't be bad!

If you would like further information on the Waste2Water System or a copy of the Pollution Prevention Guidelines please call. Tel 01782 373 878 / E-mail: info@waste2water.