CONTAMINATION AND ITS AVOIDANCE

If contamination of a small private water supply, it is possible that physical problem may have occurred with regard to openings or cracks which develop in part of the abstraction systems, collection chambers or delivery systems, and result in surface water entering the supply. Another cause may be that the soil and rock of the area is not adequately filtering percolating water, and surface bacteria may be travelling deeper than usual. This can occur regularly when heavy persistent rainfall is observed. When this happens it is necessary to either reconstruct or provide a new source of water supply, or treat the water with a fully installed treatment system.

There are several varieties of treatment available, such as – chlorination, filtration, ozone, ultra-violet light and other variations which will ensure a quality disinfected drinking supply.

It is imperative that regular maintenance is carried out on supply systems and collection chambers, as neglect can be the biggest cause of surface water contamination to any supply. If the property has a septic tank system installed it is essential that hazardous chemicals are not allowed to enter.

- Regularly inspect exposed parts of the collection system for problems such as cracked, corroded or damage manhole covers, broken or missing seals
- The area around the inspection chamber should be protected from animals by fences
- The area around the collection chamber should be constructed to allow all surface water to drain away from the abstraction point
- The head of the well or collection chamber should be sealed with a manhole cover or equivalent, to restrict any rainwater or surface water incursion
- The supply system should be disinfected at least once per year
- Avoid using any chemicals or contaminates near to the collection chamber, and avoid spillages of all types

The following pictures illustrate some of the hazards associated with private water supply sources.

Possible source of contamination – Leachate from Silage

The well head in was in a field adjacent to cattle barns with only the wooden pallet as protection from animals walking over the lid.

Figure 30 Vulnerable well abstraction

Vulnerable well abstraction

Cattle Barns

The above pictures illustrate the potential risks of penetration of surface water due to the poor design and maintenance of capping of wells.

Previously well-constructed Abstraction Point

Illustrates an abstraction which was originally well constructed, but the accumulation of vegetation and stored bricks has increased the risk of contamination.

Poorly maintained Enclosure