

10 Effluent disposal drains (leach and French drains)

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Environmental Health Practitioner Manual: A resource manual for Environmental Health Practitioners working with Aboriginal and Torres Strait Islander Communities

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Effluent disposal drains such as leach drains and French drains are used to get rid of effluent that comes from the septic tanks. It is better to have these disposal systems put in two at one time (dual), so that one can be in use while the other one is rested. Resting one drain system lets oil and grease that has collected in the surrounding soil be broken down. These dual systems also last longer than a single system the same size.

10.1 Leach drains

A **leach drain** is a tube-like structure which is made of concrete or plastic and buried in the ground. There are holes in the sides. Its width can vary and its length depends upon the size of the leach drain being used, the amount of liquid waste to be disposed of, the type of soil (dirt) around it, and how it is built.

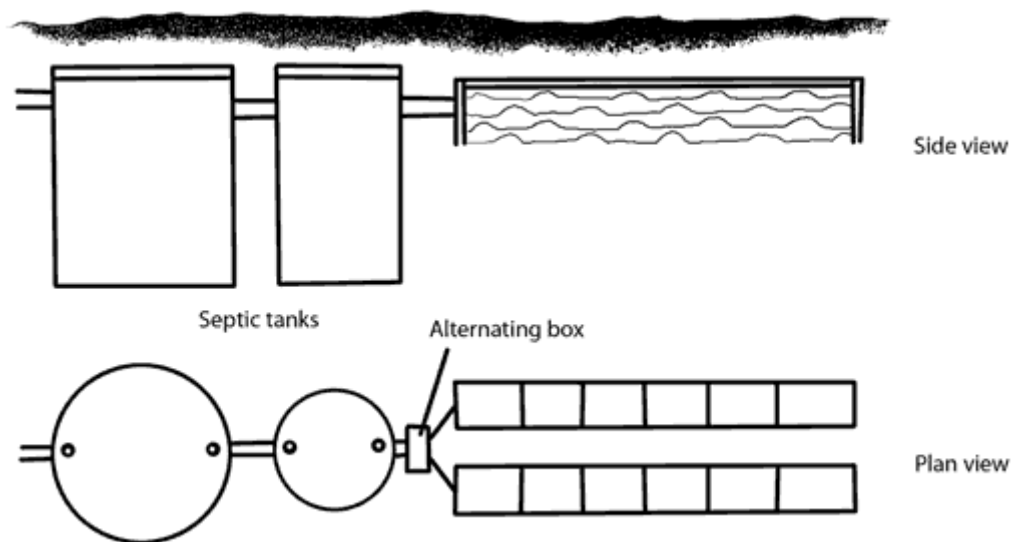


Fig. 2.38: Septic tanks and brick leach drain.

The liquid waste enters the leach drain at one end then slowly seeps down through the open base and out the sides through holes into the surrounding soil.

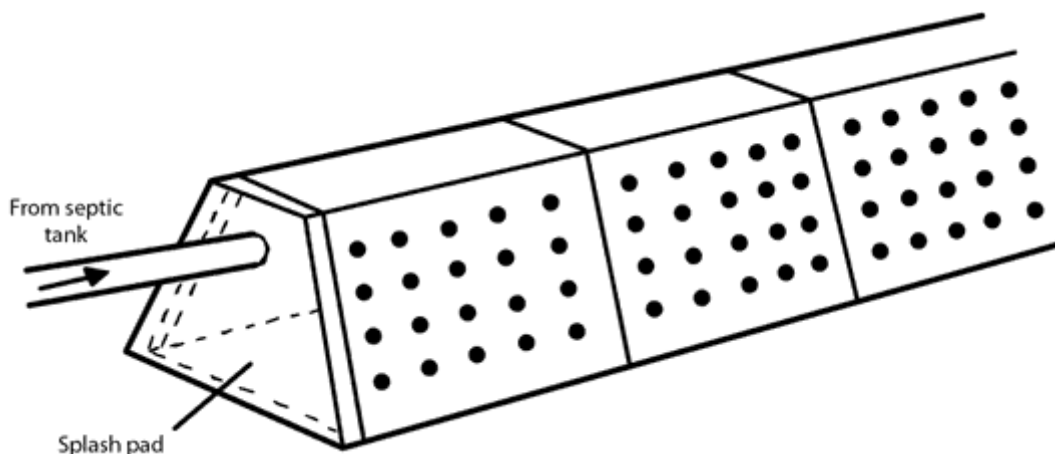


Fig. 2.39: Concrete segment leach drain.

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10.2 French (rubble) drains

The French drain is also used to dispose of the liquid waste coming from the septic tank. It is a pipe with holes or slits cut in it, laid on a bed of round rocks. The holes or slits in the pipe face downwards. It is usually about 20 m long but the length depends upon the amount of effluent to be disposed of and the soil type around the drain.

The drain is covered with plastic or some similar material and is then covered with a protective layer of sand or gravel. This helps prevent the pipe holes or the gaps between the rocks from blocking up with the protective sand or gravel.

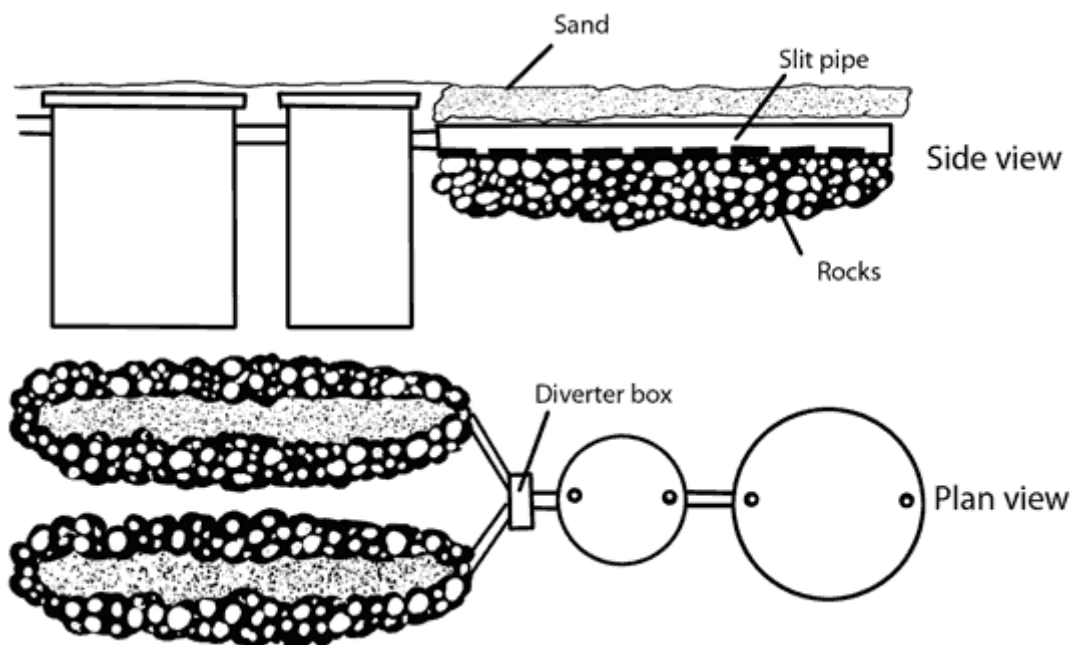


Fig. 2.40: French drain (rubble drain).

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10.3 Leach/french drain maintenance

It is very important to remember that leach and French drains have a limited life (they do not last forever) because the surrounding soil can become clogged with oil and grease.

By using the dual drain systems, only one half of the system is being used at any one time. By alternating the use of these dual systems, the half that is not being used can dry out, the air breaks down the oil and grease so that the drain can be used again once the soil has become unclogged.

It is important to make sure that these alternating drains have their diversion valve switched over regularly so that the drains give a long life use.

By making sure septic tanks are regularly pumped out there is less solids entering the drains and they will have a much longer life.

All leach and French drain sizes are determined by the EHO who follows a set of regulations. These take into account surrounding soil types and the amount of effluent which needs to be disposed of each day. These rules also detail siting and construction requirements.

If there are any enquiries regarding these drains, contact the local EHO or Environmental Health Practitioner.