

GEOFF MILLER
PROPRIETARY LIMITED

Dam Liners

Build your own low cost
permanent water storage



Using our first-grade

**agricultural polyethylene you
can build a waterproof
reservoir at a
surprisingly low cost**

Easy to install and virtually maintenance free, the Miller liner is the answer to leaking dams, porous soil and any possible contamination of stored water due to the leaching of chemicals through ground water.

Each liner is made to suit your needs from the smallest fish pond, to a large commercial reservoir.

How Dam Liner is Packaged

Your dam liner is supplied on a 75mm internal diameter, heavy-duty core. It is heavily protected for transport. An arrow marked on the outer packaging indicates the direction in which the liner will unwind and the "Slit Edge" denotes the side to be closest to the holding trench.

Bank Protection

The liner requires protection where it is exposed above the water-line, otherwise UV sunlight will eventually break down the plastic. It needs to be protected with soil or matting. Where it is not possible to back-fill soil over the liner, we can supply UV stabilised bank protection matting.



Preparation Prior to Installation

- The dam surface must be as smooth as possible. If necessary, a layer of sand can be used to smooth off any really rough patches.
- To hold the liner in place, a "slit" trench must be dug around the perimeter on the very edge of the dam wall, at the top. A 100mm wide x 200mm deep trench is sufficient.
- The dam must be empty. Any water in the dam may cause a surface tension adhesion to the liner, preventing it from opening out fully in one smooth movement.
- Bags, partly filled with soil, are useful to use as weights (see Step 3) have them ready before installation begins.
- Have some water available ready to pump into the dam as soon as the liner is installed. This prevents possible wind damage (Step 6).
- Position unopened liner at point (B) as shown in Step One, ready to roll out. The packaging has an unwind direction arrow and also shows which edge is to be kept closest to the trench.



Installation

Step One

The liner must be centred in relation to the dam. So, before it is rolled out, measure the distance on top of the longest bank and mark the half way position (A).

The opened liner will obviously be longer than the straight-line length on top of the bank, to account for depth of the dam. Refer to your invoice for the actual length of your liner, then halve that measurement and measure back from point (A) to find point (B) where the unwrapped liner must now be positioned, ready to unroll.

In the example shown in Figure 1, that measurement is 28M, half of 56M, the actual length of the liner.

We measured back 28M from centre position (A) to find position (B). Place the unwrapped roll on (B) ready to unroll the liner to its full length. When opened, the liner will now be centred evenly, in relation to the dam, with equal amounts of overhang at each end. Very important!!

Step Two

The roll is also marked on one end with "Slit Edge" which is the location of the open edge (D). This side of the roll MUST be kept as close to the trench as possible, to enable the liner to fold out freely later. See Figure 2. Now carefully unwrap the liner and unroll it in the direction shown by the arrow on the outside wrapping.

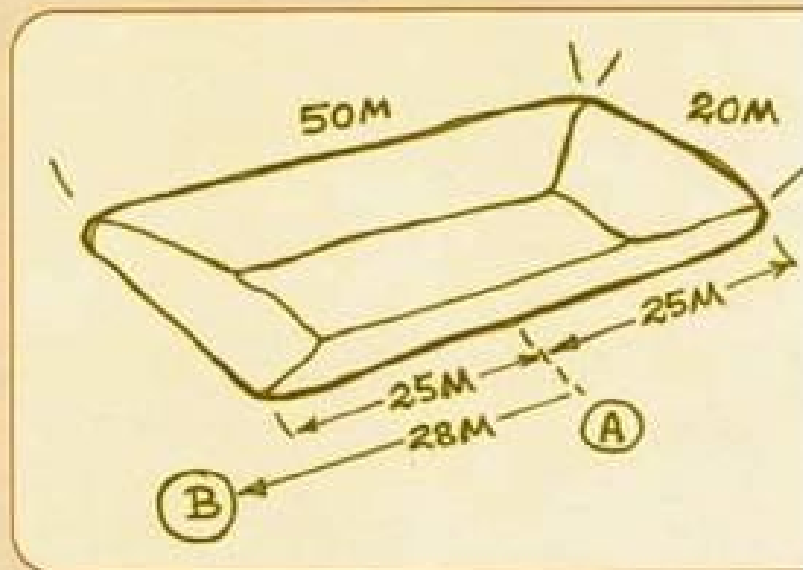


Figure 1
Our example liner is a finished size of 26M x 56M to fit the dam size 20M x 50M and account for the depth of the dam

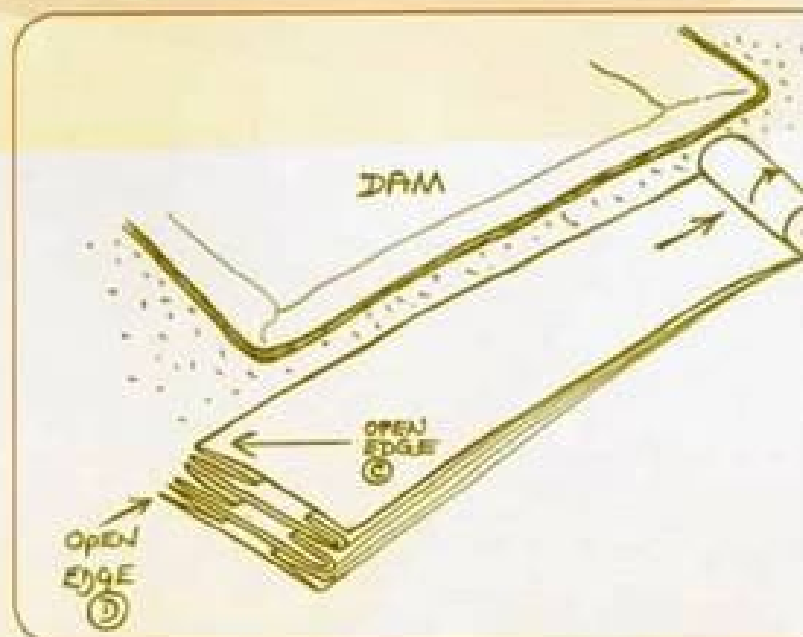


Figure 2

Installation

Step Three

Pull out open edge (D) and tuck it into the trench and hold it in place with a small amount of soil, or weighted bags of soil.

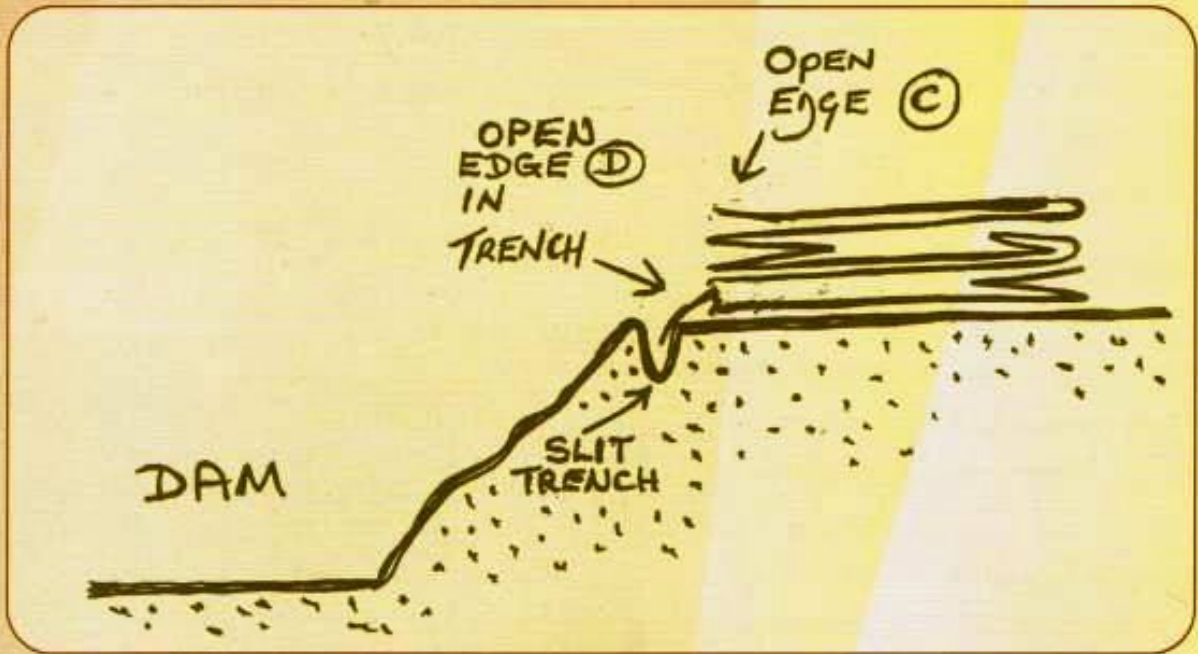


Figure 3 Open edge (D) into trench

Step Four

With open edge (D) held in the trench, the liner is now ready to be opened out in one smooth continuous movement across the dam, by taking hold of open edge (C) See Figures 3 & 4.

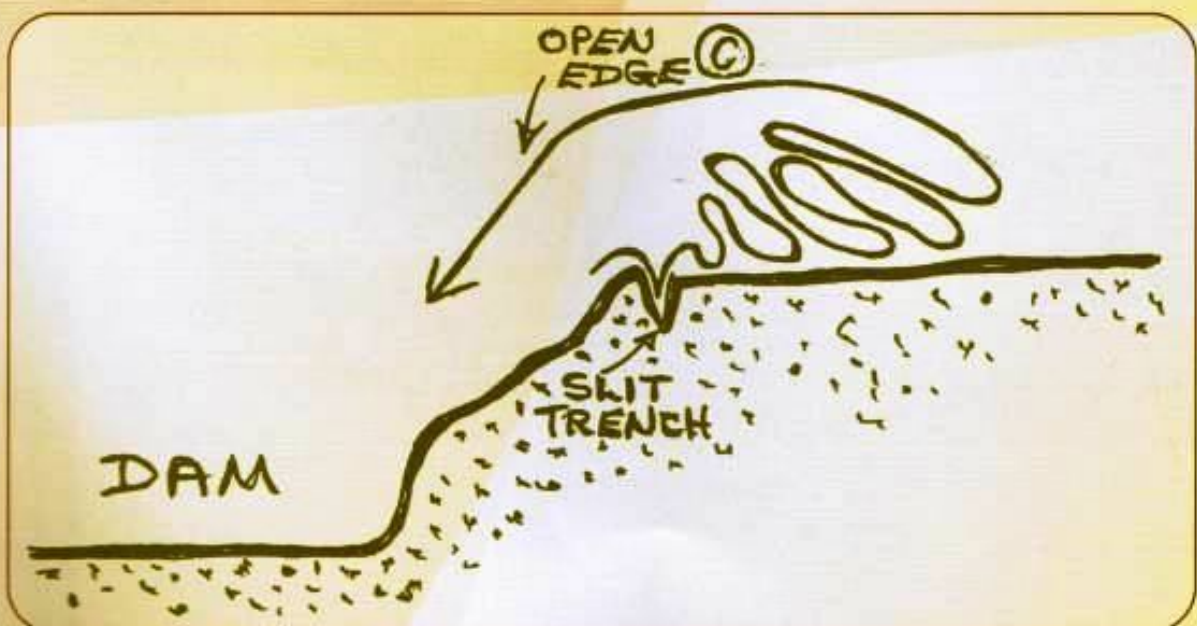


Figure 4 Open edge (C) is ready to be grasped to open the liner out.

Installation

Step Five

Work as a team. Team members should be no more than 8 metres apart along the open edge (C). On one command, everyone should move together in one smooth movement, without pausing, down the wall into the dam, across the bottom and up to the top of the dam wall on the opposite side. The liner will unfold smoothly. If the floor of the dam is damp, be sure to keep the liner moving quickly to prevent surface tension adhesion of the liner to this area, before it is fully opened out.

Step Six

Now that the opened liner is in position, hold it into the trench on all sides, with the bag weights or a small amount of soil. The bank protection mat (if being used) can also be fitted now, before the trench is fully back-filled with soil. Ballast weight can then be slipped into the pocketed hem on the matting, to keep it submerged.

Immediately, begin pumping some water into the dam. This action will secure the liner on the dam floor and protect it from lift by high winds.



Hot weather will soften the liner, so keep animals, especially dogs, out of the dam at this stage, to prevent damage to the liner.

Do

- Ensure that the soil surface of the dam is smooth
- Wait for appropriate weather conditions – no wind - early morning is best
- Have a water source ready to be pumped into the dam
- Have soil bag weights standing by
- Ensure holding trench is dug as close to the edge as possible, prior to liner installation
- Ensure there is an adequate workforce – one person for every 8 metres down the longest side
- Fence off the dam immediately after installation of the liner, to keep animals out



Don't

- Don't unpack the liner using sharp blades, remove packaging carefully to avoid damage to the liner
- Don't open the liner in windy conditions
- Don't try to open the liner without help. Employ others to assist with the final folding out of the liner, which should be opened in one continuous movement
- Don't allow animals to run over the liner



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