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Construction and layout

Laying out and constructing wetlands is not particularly difficult, assuming that you have access to the right types of machinery, skilled and sympathetic operators, and suitable soils or soil-substitutes. Unless the job is straightforward and the soil is a suitably heavy clay, you should make yourself familiar with the methods used to build water-retaining walls in difficult conditions, so that you can personally supervise the more critical stages – particularly compaction.

There are earthmoving operators who have their own theories on how best to finish a dam or wetland, and will take every shortcut possible – even when being paid by the hour, because they only believe in the methods they have always used. This is why one in three Australian farm dams leaks; the figure would probably be higher except that some soils will hold water no matter what you do to them! A further problem is that bulldozers are commonly used in dam construction, and do not compact all soil types adequately.

When you initially look for potential dam sites, aim to find places where a minimum of earthmoving will create a maximal area of wetland – for example, by blocking narrow gullies with extensive, undulating areas behind. However, suitable water retaining soils are also important, and should ideally be under the intended site or reasonably close to it, as shifting earth and clay around unnecessarily is expensive.

A ground survey with just a surveyor's level may be all you need to set out future wetland boundaries, and most earthmoving contractors will have one of these available. However, for very large areas it is sometimes useful to be able to work from an aerial photo initially. These may be available from government authorities, but private pilots sometimes photograph a whole district and then