



## Case Projects

# Kambah Rock Pools ACT

## Retrofit of CWT Collection Well System

### Project Requirements:

Our client, ACT Parks Conservation and Lands (PCL), came to us with a dilemma. An architect designed building had been built some time ago with a large cellar below the booths at Kambah Rock Pool. Kambah Rock Pool is a delightful spot on the Murrumbidgee River west of Canberra. It is used year round. It also has a clothes optional beach. The facility was about 70 metres from the car park with access for pedestrians and service vehicles only. The existing human waste management scheme was three plastic collection boxes, with excess moisture diverted to a collection well for transport off site. As is the problem with any plastic component used in public toilets, vandal attack (fire) eventually destroyed one of the plastic containers. OH&S issues also impacted. PCL staff had to relocate and empty the plastic containers after a composting period. Staff soon got weary of this activity.

PCL officers contacted us, requesting a solution. Our solution was to replace the entire waste management system with a qty three CWT 3000 system. This system uses AS1546.1 (2008) compliant concrete collection wells. These are purpose built for this use. The challenge was to position the collection wells in to the cellar.

### Our Unique Solution:

PCL undertook to remove all the old system, the access window and refurbish and paint the cellar. We then sorted out a technique to get the two tonne collection wells from the car park up the footpath and under the building.

We designed a "wheelbarrow". This was a frame that clamped around the circumference of the collection well. At one end was a set of steel wheels. At the other end, a tow pole with a swivel. The wheelbarrow was to be pushed by a rubber tracked mini excavator. The delivery system worked well. The excavator was able to push the wheelbarrow up the footpath and on to small path in front of the cellar. Then, use it's slewing and travel function, the excavator positioned the collection well partially in to the cellar. At this point the collection wells were chocked, and the wheelbarrow disassembled. Pallet jacks, roller pipes, crowbars and hydraulic jacks and human grunt were then deployed for the final positioning.

The third and last collection well was the most challenging to position. There was minimal clearance between the other two collection wells located on each side of the cellar. Pyramid



building techniques were used ... pipes, levers, ropes, jacks ...even jacking off the concrete cellar roof to tilt the collection well to locate chocks...ancient techniques that worked. The existing passive ventilation system was linked to the collection wells by a PVC manifold. Existing waste plumbing from the sink was connected to one collection well. Down tubes from the pedestals to the collection wells were connected.

PCL then assumed completion of the project. A refurbished window to the cellar was fixed, seed water added to the collection wells, and the facility was ready for use.

### The Future

Australian Highways are dotted with toilet facilities using plastic bodied "alleged" composters. These are all having inappropriate discharges, are smelly, are difficult to manage and present OH&S issues for management. They will have to be upgraded at some stage to comply with environmental laws and offer a respectable user friendly service. This Pureablu/CWT technique will enable these upgrades to be achieved to a reasonable budget.

