



Case Projects

Whitsunday Island QLD

CWT Collection Well System for Remote Restrooms

Dugong Sawmill

The Maritime Park Authority in conjunction with Queensland Department of Environment and Resource Management specified in to their new toilet installations on Whitsunday Island, Collection Well Technology CWT 10000 collection wells. We liaised with Neil Kershaw, the project management team leader, to meld our CWT collection well systems and ancillary components with Marine Parks designed two booth building. Our brief was to supply collection wells and precast lids, the lids having cast in penetrations for Pureablu pedestals, pump out ports, and passive ventilation stacks, delivered to Shute Harbor for shipping to site.

Marine Parks have a proprietary design for a two booth building, with a cast in situ concrete floor, and a CKD building. The challenge was to ship all these components to Whitsunday Island, some 10km off shore from Airlie Beach in the Whitsundays, then land them on the beach and install.

Pureablu organized for the road transport of the collection wells and lids. (4200 kg and 1800 kg respectively) from our Armidale factory, via Brisbane. The collection wells were shipped as a combination, with a temporary prop supporting the lid at mid tank. The six tonne pack was trans-shipped from one truck to another in Brisbane using a 10 tonne container forklift.

The CWT collection wells and all other building components, including premixed aggregate and sand in bulker bags were coordinated to be delivered and consolidated at the Hamilton Island barge loading facility at Shute Harbour.

A Franna crane was used to trans-ship the collection wells from the truck and loaded with the building materials on board the Lady Fraser barge in reverse order to anticipate off loading at Whitsunday Island. A 24 tonne excavator was the brought on board.

Marine Parks staff had excavated the collection well pits in the days prior to barge shipping. About an hour's steaming from Shute Harbour, the barge eased on to the beach at high tide. The location is an idyllic tropical bay on the lee side of Whitsunday Island, with a narrow white beach edged by tropical forest. Waters are a greeny blue over white coral sands. About a dozen yachts and cruisers were moored in this paradise.

Urgent unloading of building materials was commenced, with a tide conditions allowing only three hours window to achieve two sites deliveries.

A rough terrain forklift was used to unload building materials,



whilst the excavator carried the collection well across the beach and in to thick tropical woods and placed in the leveled pit. The lid followed, positioned and sealed. The excavator and loader were then put back on to the barge, and the barge relocated to the second site some 500 metres away.

Frantic works continued as the barge man needed everyone to get done as he was “running out of water” As soon as the loader and excavator were back on board, the barge made a hurried exit to deeper waters.

This entire operation had taken six and half hours from commencement of loading that morning. A remarkable effort.

This operation has opened another opportunity for CWT concrete collection wells. The Marine Parks Authorities policy for non-flush toilet facilities is now to take all human waste off site. Hence the sealed collection wells. Pureblue will be working with the Authority to develop management plans for the sites, in co-operation with an accredited waste contractor. This waste contractor will be briefed on the gear required for the waste removal, seed water placement and general operation of the systems. It is an essential part of the system that seed water is placed in the collection well at the commencement of each management cycle. The waste is kept in suspension in liquid form, allowing the odour management materials to interact with the waste, and making the removal of the waste as a liquid an operation that can be achieved easily in a remote location.

We see the next step in this style of installation is to supply combinations of collection wells and precast concrete floors. These floors will have all the necessary inserts cast in to the concrete slab to attach stainless steel post shoes to connect the prefab building components onto the slab. This will eliminate “site pouring of concrete” from the building procedure...and simplify the whole construction time table and effort. These precast floor components will have less mass than the CWT 10000 collection wells, and therefore present no added difficulty to the barge shipping and on site handling procedures.

