



Vandal Vulnerability

Technical Commentary

Why Some Systems Fail Us & How We Can Get It Right.





Over the years we have seen vandalism that would make you think less of humankind. From axe's through water tanks, to using a crane to pull down a 6 metre tall 300mm diameter pole filled with concrete for a small solar panel. It starts to make you think of what vandalism Australia-wide must cost the government and the Australian people to repair. Assuming that these the local governments maintain their enthusiasm and persistency in repairing these facilities - which in some cases must seem like a cyclical occurrence.

I would like to be able to say that it has never happened to any of our Pureablue built products, alas I cannot. We are lucky however, to hold a culture in our workshop of taking pride in the work we produce, both as individuals and as a group. When a project gets shipped out it is not uncommon to see some of our blokes triple checking truck straps to make sure it will get to site safe and sound.

For this reason it is always regretfully reported when one of 'our' jobs gets vandalised. It does however drive us to develop our products as simple and vandalproof as possible. Without of-course building something as user un-friendly as one might describe as "with a sledgehammer and 10 minutes, you couldn't do more than \$2.50 worth of damage". This we believe we are getting more successful at.

However, sometimes our job is made harder. This predominantly occurs when an architect or a third party is contracted to write specification requirements of facility projects with little or no experience in public toilets and have definitely not been the one's who track how the designs perform over time and go in to repair the vandal damage.

We try our best to advise that some plans are destined for heartbreak but our success is on the lesser side of half.

The most predominant item in recent times has been on-site treatment systems. Without doubt in principle they are a fantastic idea and will help save the planet, however at this present time no commercially available system is hardy enough for public toilet use.

We have spent lots of time and resources partnering with a system manufacturer and have also been involved with the annual on-site treatment academic conference that takes place in Armidale - where we are also

Without doubt in principle they [on-site treatment systems] are a fantastic idea and will help save the planet, however at this present time no commercially available system is hardy enough for public toilet use.

John Willoughby - Managing Director, Pureablue

headquartered. We have installed these systems into toilets only to see them fail. Not just due to vandalism but as an operational system.

You can see the images included with this article of a project where someone lit toilet paper and threw it down the pedestal into the methane filled waste chamber. The plastic tank did not stand a chance.

The other consideration that architects rarely investigate deeply enough is the

OH&S implications for managing an on-site treatment system and working with human waste. Plus which one of your guys is going to volunteer for that, usually fortnightly, job? The maintenance and love required to keep these systems functioning is overwhelming even when people install them in their own domestic applications.

I must also mention a project well known around our office for reverse logic and needless expenditure. This particular site was close to a waterway requiring that it had 'zero discharge to ground' meaning that the out-feed from a composting system was not suitable to filter back into the water table. The



Luckily part of the the tank remained intact, preventing the raw waste from running down the hill.

hardline directive was the system 'must' have a composting system. The end solution was waste fed into the treatment system and then into a separate tank where it was later pumped out and taken to a surge treatment plant. The extra cost of installing a composting system with zero net result was six times the cost of removing the composting stage and having waste go directly into the collection well.

The added complexity composter systems have us that they are designed for a limited usage rate window and if that limit is exceeded by an unexpected influx on a particular weekend, the result is, as you can well imagine, messy. I hope I am not sounding too anti-composting, but I must professionally recommend that until these system became better developed for public facilities, we keep the solutions we put in place simple fool-proof using collection wells



The heat of the fire was enough to make the plastic pedestal a pancake.



Doesn't really need a caption- this is the worst part of the job.

with a pump out strategy in areas that are without water and sewerage services. For the usage rates that are typically involved, it means that a pump out is required once every six months. Not a great deal of hassle or cost.

I urge you to have a look at one of our Project Archive repair jobs we did recently at the Kambah Rock Pools in ACT, replacing a failed composter system with collection wells.

In cases like these, the ultimate solution is to replace the composting system with a collection well, if it is technically possible or, rebuild the entire building.

An under-delivering, over time and budget project that I'm sure no government body wants to have on their hands. Please, listen to someone who knows and genuinely cares.

Author:

John Willoughby

Managing Director - Pureablue

(02) 6772 3810

Copyright Reserved

This specification is the property of Fabranamics (Pureablue) and is subject to return upon demand. It is submitted for use only in connection with proposals or contracts of this organisation. Upon the express condition that it is not to be used directly or indirectly in any way detrimental to the interests of Fabranamics.



54 Seaton St, Armidale NSW 2350

PO Box 5002, Armidale NSW 2350

main 02 6772 3810

fax 02 6772 5723

email info@pureablue.com.au

pureablue.com.au