



YeppoonCentral

shopping centre

Relax, you're at the beach

ZeroFlush Waterless Urinals Condition & Servicing Report

Gary Mays

Aquatemp Environmental Solutions Pty Ltd

26/75 Waterway Drive

Coomera 4209

8 November 2013

Table of Contents

History.....	3
Servicing 2012-13	6
Servicing November 2013	7
Conclusions.....	14
Recommendations	15

History

Yeppoon Central Shopping Centre was opened in March 2008 and had three (3) ZeroFlush waterless urinal ZF201 models installed in the male toilets at the time of construction.

Aquatemp supplied the cleaning contractors on an intermittent basis odour barrier oil and replacement inserts between 2008-12.

In June 2012 centre manager Desley Cowley contacted Aquatemp regarding ongoing problems with odours from the urinals which according to the cleaners had been a problem since the centre had opened. From a perusal of email from the cleaners it appeared they had been undertaking all urinal servicing and were trying to solve the odour issues by a number of methods including urinal odour blockers.

On 11 September 2012 Gary Mays attended on site to upgrade the urinal operating system from the odour barrier oil and insert system to the EnviroSeal system.



The urinals were in an appalling condition with the odour permeating from the male toilets into the surrounding corridor area. All three urinals were blocked to varying degrees and were for all intensive purposes unusable.

As can be seen from the above photo of the RH urinal after removal of the insert there was no odour barrier oil in the urinal and the drain was completely blocked.



Using plastic hose through the drain out let enabled the urine to drain leaving behind a housing full of uric salt that extended completely to the top caking the sides as can be seen in the above photo.

All three urinals were in exactly the same state with solid crusts of uric salt adhering to the ABS plastic housing and to the stainless steel ring at the top. The inserts were completely coated also with their trapping systems almost non-existent.

All three urinals were completely cleaned up as follows:

- drains cleaned and cleared out using a hand held drainage eel and water to ensure that the drains were running freely
- the housing completely scrubbed clean using a hard bristle brush which enabled the uric salt adhesion to be easily removed from the ABS plastic housing plus pouring water down to ensure the salts washed through the drains
- the stainless steel ring was completely cleaned and polished using 3M stainless steel cleaner and polish in conjunction with Scotch-Brite multi-flex abrasive sheets which brought the stainless steel back to a near new condition





All three urinals were then fitted with white EnviroSeal operating systems that utilised BioPur enzyme kits composed of specially formulated bacterial cultures capable of degrading uric acid salts, the leading cause of odours in all urinals.

The enzyme tablets contain powerful biological cleaning agents, proven to maintain clear and odour free urinal traps and drains by degrading the crystalline structure of uric acid salts that can clog the drain system and standard traps. These

enzyme tablets are designed to be safer and less damaging than the conventional pCDB chemicals used in most urinal tablets.

The cleaners were then trained on the BioPur kits with a full demonstration on how to remove the kit and replace the enzyme tablet. Ensuring the enzyme tablet was always in use can help save money by prolonging the use of the EnviroSeal and minimising time for urinal cleaning. Specifically, the BioPur enzymes dispense bacteria, water softening agents into the EnviroSeal System and pipelines each time the urinal is used or cleaned. The unique formula targets and cleans scaling build-ups as it deodorises.

Finally the cleaners were trained on the daily cleaning procedures for the urinals and given Spray & Go cleaner along with printed copies of the procedures and all MSDS sheets.

All three urinals were in perfect condition with no odour emissions and the drains operating perfectly.

Servicing 2012-13

Once the urinals were fitted with the EnviroSeal operating system and servicing and cleaning undertaken as per the simple instructions it was expected that the three urinals would perform as per the design specifications.

Desley Cowley ensured that the cleaners had a constant supply of enzyme tablets and Spray & Go cleaner.

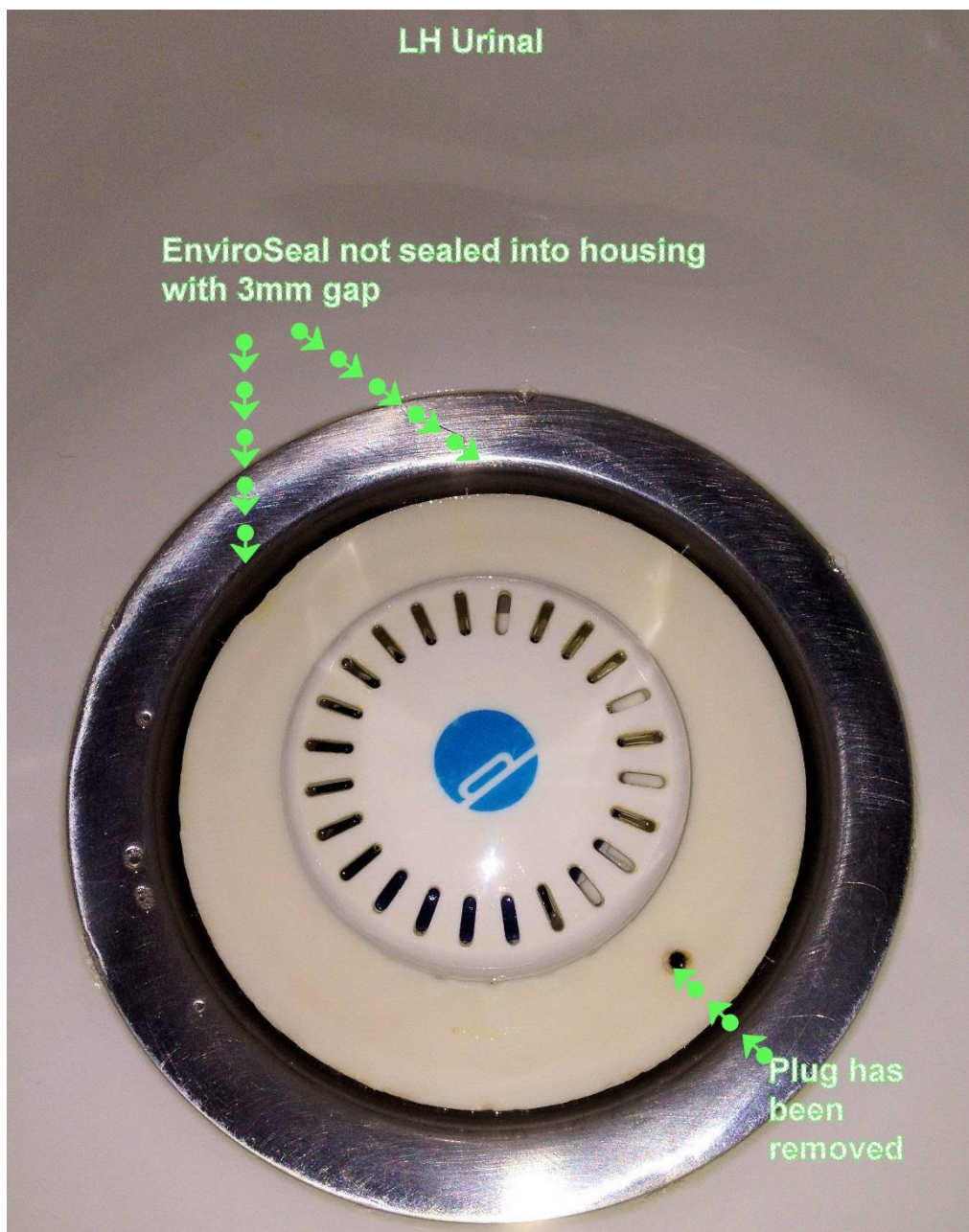
In May 2013 new cleaning contractors were appointed and at the request of Desley Cowley new copies of all procedures were provided plus Gary Mays met with Peter Vournechis the Operations Manager at Trident Cleaning to demonstrate the EnviroSeal operating system and provide a range of spare parts that maybe required.

In September 2013 Aquatemp were advised that there were odour issues again and that Trident were now using a biological cleaner on the urinals to overcome the odours.

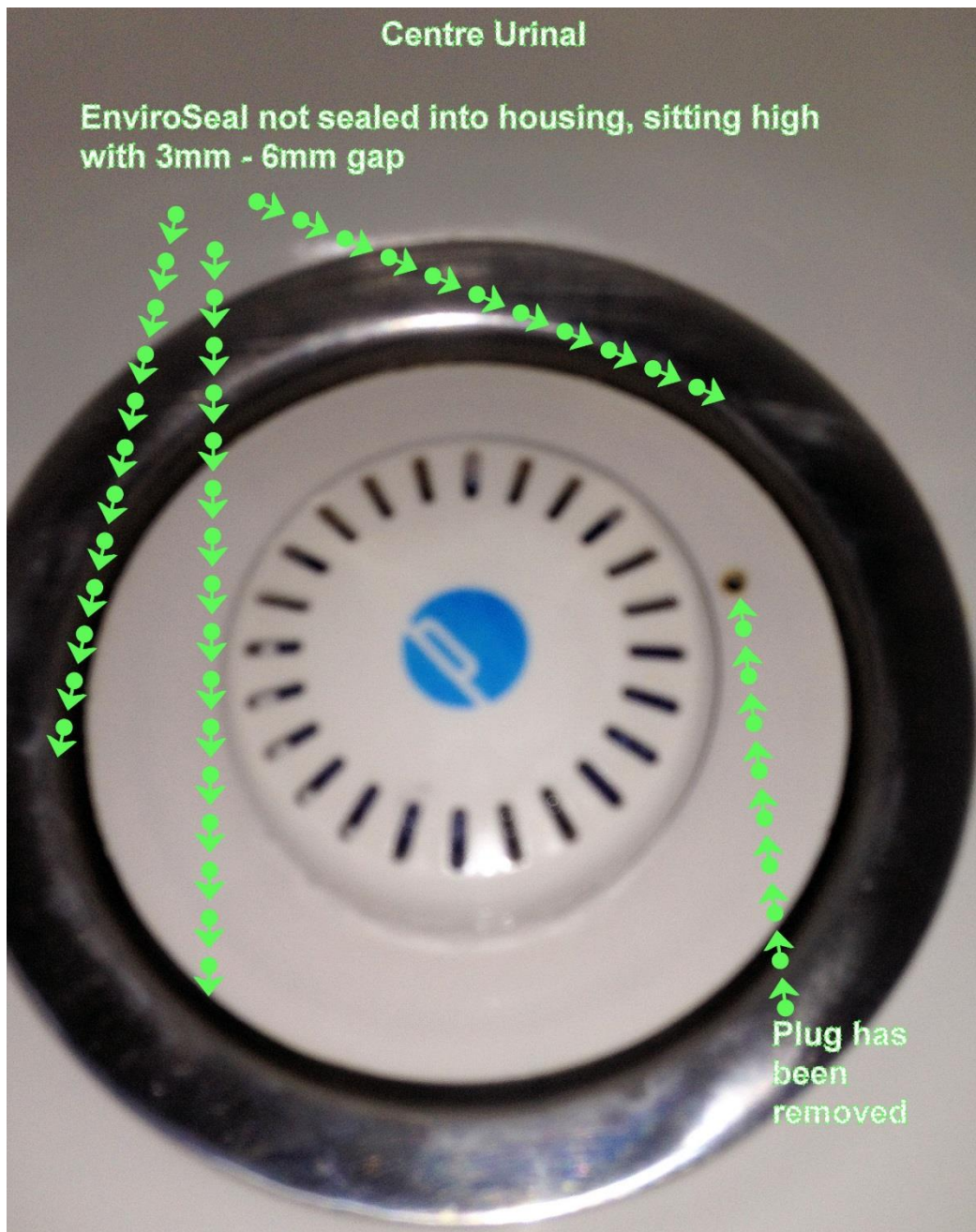
Following discussions with servicing issues and the reappearance of odours it was decided that Gary Mays would again attend on site to carry out a service of the urinals and upgrade the EnviroSeal systems to the latest model.

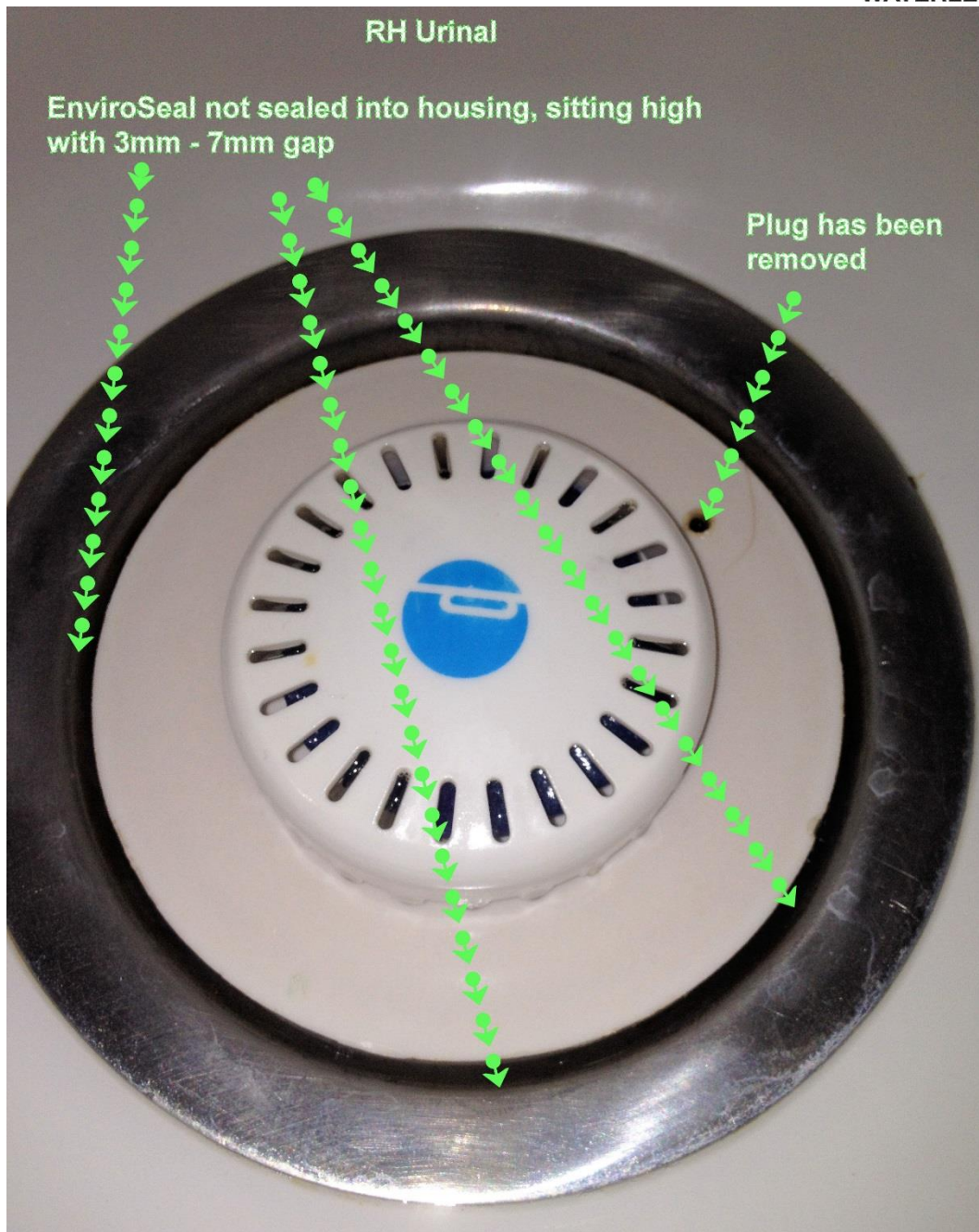
Servicing November 2013

On 7 November 2013 Gary Mays from Aquatemp attended on site to investigate the odour issues, service the urinals and upgrade the EnviroSeal systems. Once again the odours were able to be detected in the corridor outside the male toilets.



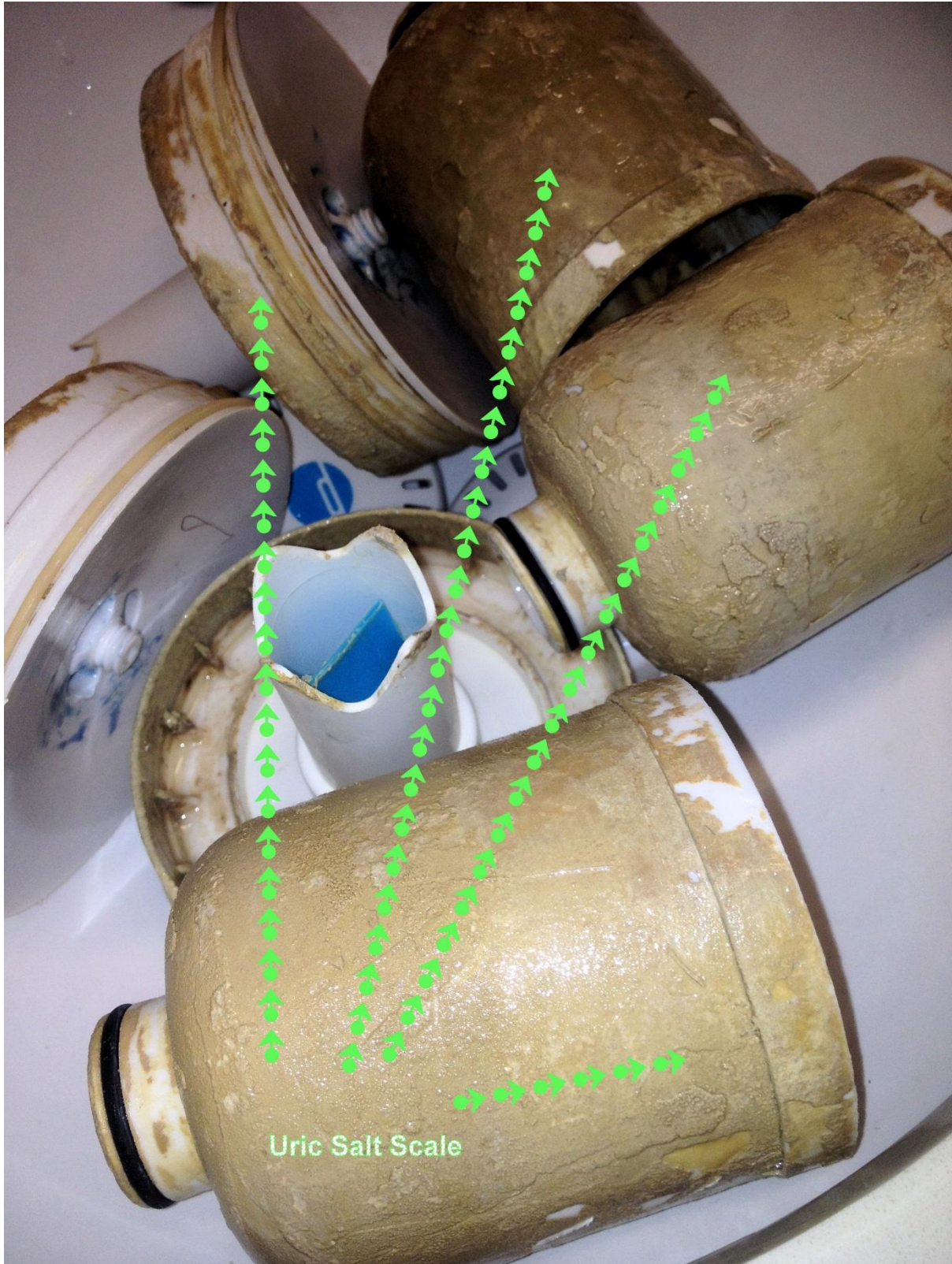
The problems with the odour were obvious as all three urinals were emitting sewer gases into the male toilets as the EnviroSeal units had all been removed at some time and not reassembled correctly. Every urinal was not sealed into the stainless steel ring as per the attached photos plus the top and bottom of the EnviroSeal had been unlocked with the top just sitting in the urinal.





Also every EnviroSeal had obviously been removed from the urinal by pushing out the side plug rather than through the centre access hole under the BioPur kit holder. This resulted in the plugs being lost and had never been replaced.

As a result of all of these issues there was no seal at all allowing urine to fill the urinal housing and then overflow down the drain. This had resulted in uric salt scale adhering to the outside of the EnviroSeal units in the housing which was everywhere and had hardened to such an extent it was extremely difficult to remove as can be seen in the photo below.

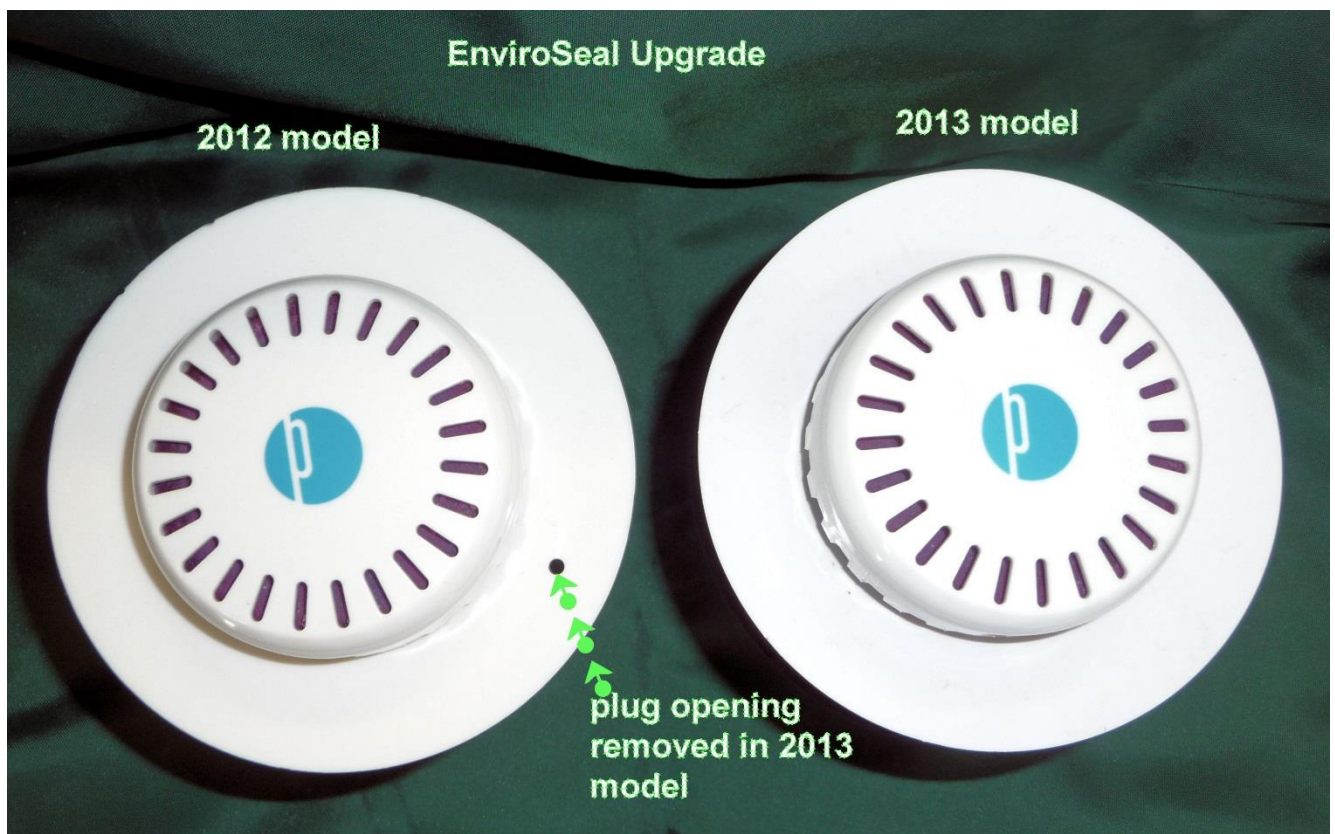


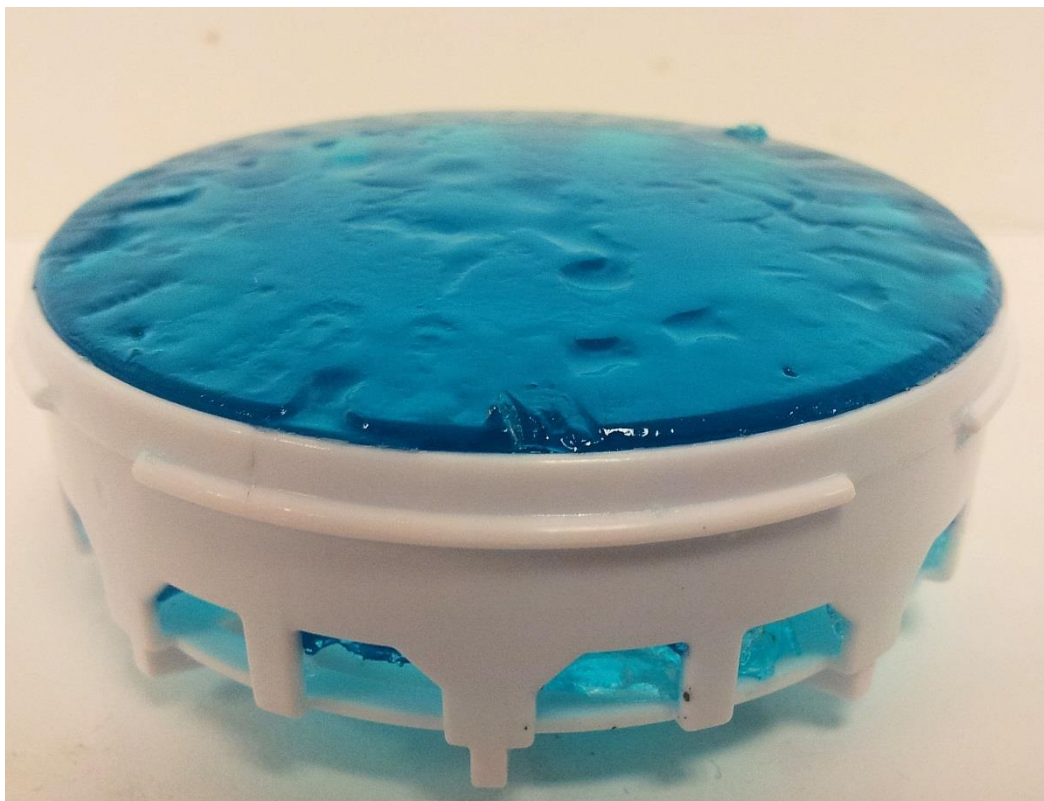
Once again all three urinals were completely cleaned up as follows:

- drains cleaned and cleared out using a hand held drainage eel and water to ensure that the drains were running freely with two large lumps of mortar being removed from the drain on the centre urinal
- the housing completely scrubbed clean using a hard bristle brush which enabled the uric salt adhesion to be easily removed from the ABS plastic housing plus pouring water down to ensure the salts washed through the drains
- the stainless steel ring was completely cleaned and polished using 3M stainless steel cleaner and polish in conjunction with Scotch-Brite multi-flex abrasive sheets which brought the stainless steel back to a near new condition

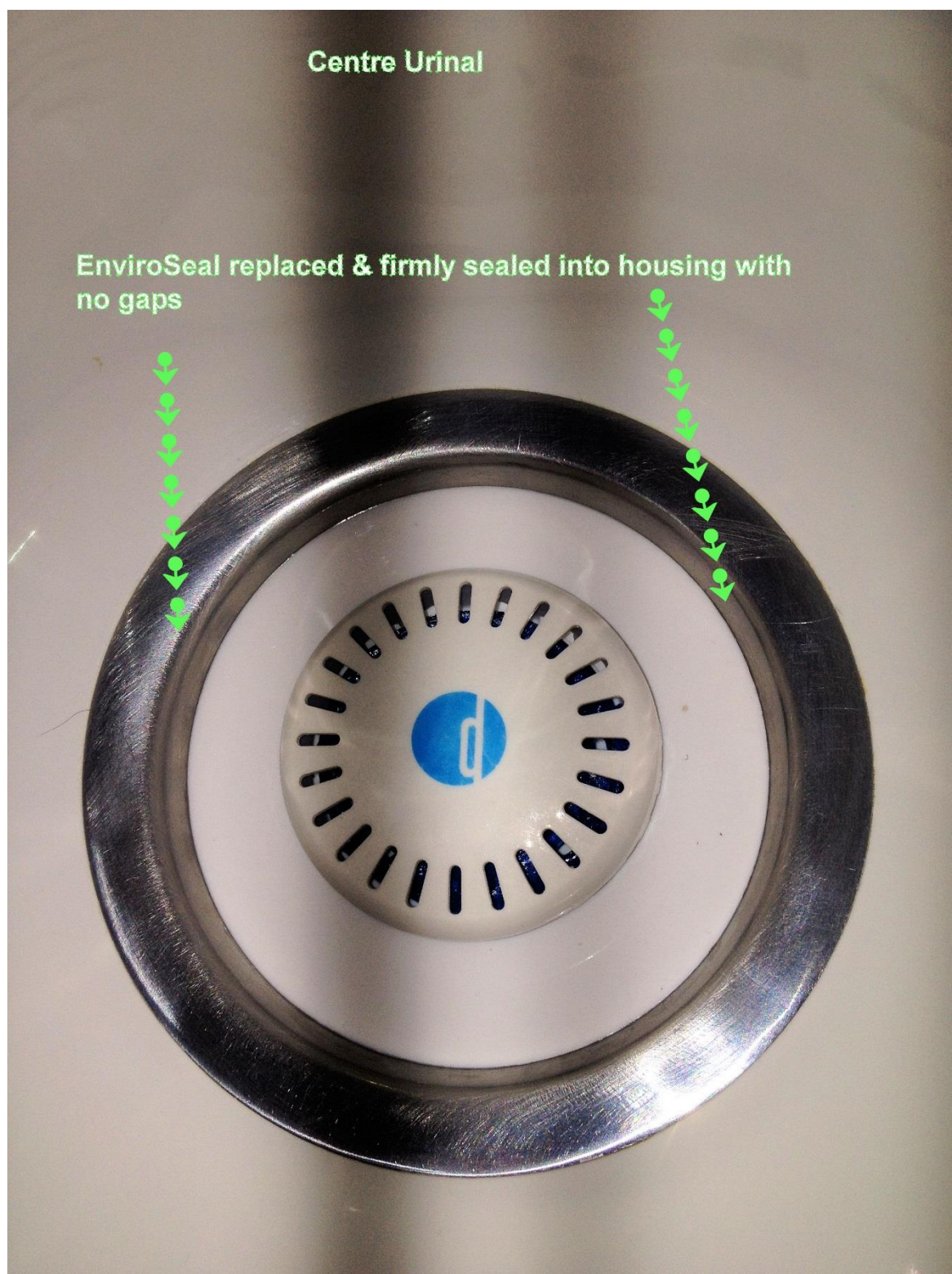
The EnviroSeal units were upgraded to the latest models which had the following upgrades as can be seen in the photos below:

- a new faster draining ElastoSeal trap
- new top sealing system
- no plug opening on top
- BioPur premium gel





All three urinals were fitted with the upgraded models of the white EnviroSeal operating systems that utilise BioPur premium enzyme gel kits composed of specially formulated bacterial cultures capable of degrading uric acid salts, the leading cause of odours in all urinals. The gel formula kits are longer lasting than the previous tablets with changeover required every 2 months or when all of the gel has dissolved.



The urinals were then cleaned completely using Enzyme Wizard surface spray and antimicrobial cloths which left the porcelain surface clean and shining as can be seen below.



The cleaners were then trained on the BioPur kits with a full demonstration on how to remove the kit and replace the enzyme gel. Finally the cleaners were trained on the daily cleaning procedures for the urinals and all three urinals were in perfect condition with no odour emissions and the drains operating perfectly.

Conclusions

Gary Mays from Aquatemp has now attended to these three urinals on two occasions after complaints that they were not performing correctly and odour emissions were a source of constant complaint from shoppers at Yeppoon Central.

On each occasion the problems were entirely as a result of servicing and cleaning not being undertaken as per the manufacturer's recommendations and instructions all of which are available for download from <http://www.aquatemp.com.au/waterless-urinals/downloadable-forms/>

Recommendations

The three urinals are currently working perfectly and it is recommended that the following procedures be adopted for the next 12 months:

- Daily cleaning as per the daily cleaning instructions at <http://www.aquatemp.com.au/wp-content/uploads/2013/03/ZeroFlush-Urinal-EnviroSeal-Daily-Cleaning-Instructions.pdf>
- Replace the premium gel kit from the 12 month of supply left with the cleaners every 2 months with Gary Mays to notify Desley Cowley via email when replacement is due as per the instructions at <http://www.aquatemp.com.au/wp-content/uploads/2013/03/ZeroFlush-Urinal-EnviroSeal-BioPur-Enzyme-Replacement-Instructions.pdf>
- Do not let anyone remove the EnviroSeal units from the urinals as there is no need for them to be removed if the cleaning is being undertaken correctly and the enzyme gels being replaced at intervals not exceeding 2 months
- Do not undertake “deep cleaning” of urinal drains as there is no need for this to occur
- If issues arise with odours or drains blocking immediately contact Aquatemp Environmental Solutions on (07) 5502 3248