

## WATERFREE URINAL COMPARATIVE MICROBIAL STUDY

***“Water Free urinal results provided a lower overall incidence of bacteria than for the Flushing urinal”***

REPORT Ref: NAWS/J-12223/0118/AF

### **Background:**

Nijhuis Aquatic Water Services Limited was commissioned by Smarti to undertake a comparative microbial study between Water Free (WF) and Flushing (F) urinals.

The microbiological sampling exercise was conducted over a six-day period with samples obtained from a comparative toilet setting, containing both unit types. Analysis for *Pseudomonas* sp., TVC (22oC), TVC (37oC), E coli, and Total coliforms were performed under subcontract by ALS Environmental Ltd.'s laboratory in Coventry. The primary objective of the survey was to update and replicate in the UK previous comparative studies undertaken elsewhere in the world since 2000.

### **Sampling Location and Positions:**

The trial location was a communal toilet block facility, which serviced the needs for a number of office units, a communal office facility and is also used by mechanics from associated garage businesses. In order to try and provide the best comparative study this common sampling location was used as it has moderately heavy daily use and housed both a Water Free and Flushing urinal.

### **Summary of results:**

- *Pseudomonas*, E coli and Total coliforms had lower incidence in Water Free urinal samples (green boxes) than for the Flushing urinal (red boxes).
- A central premise for the Water Free urinal is that it does not present a moist culture environment for secondary contamination and on-going biofilm formation of bacteria that can result from secondary contamination from toilet generated airborne aerosols.
- Qualitatively the Water Free urinal results provided a lower overall incidence of bacteria than for the Flushing urinal indicating the overall quality maybe somewhat better in the Water Free unit.

END.

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