

22 February 2018

Dear Parents and Guardians

RE: WATER MANAGEMENT PLAN AT THE VINE SCHOOL

At our first meeting of the year, it was wonderful to see the hall packed with parents, eager to meet their children's teachers. There was a wonderful, supportive atmosphere as we listened to Principal Ian Smith's vision for the school in 2018, i.e. to learn gratitude.

This was followed by my report on the school's plan to implement strict water saving measures. For those parents who were not there, this letter will explain how and why we are doing this.

Although the possibility of Day Zero this year now seems unlikely, we have decided to prepare as if it will happen, but in a way that will not result in wasted investment. This enables us to test our plan and make adjustments, to practice habits of water saving, and to do our part in avoiding Day Zero. We therefore assessed our water needs and where we can cut back. We need water to irrigate the field, flush toilets, wash hands, launder towels, clean the building, and for drinking.

The following actions have already been taken:

- Irrigation uses the most water, but fortunately we can use well-point water. We have had to progressively reduce watering times to comply with restrictions; this has left the grass barely alive. We recently applied a hydrating product to hold water in the ground, as we must now reduce watering to just 1 hour, twice a week. To protect the field, we are using the paved play area and the hall for Phys Ed lessons.
- Rain water harvesting. Late last year we ordered 1 x 5000l tank, 8 x 950l tanks, pipes, fittings and a pump, to catch rainwater from our roof. In the January holiday, concrete slabs were cast and trenches dug for the pipes. Gavin Graham and a small team of volunteers gave many hours to installing and connecting everything, and as soon as the electrician and plumber have completed their work, we will use harvested rain water to flush toilets in the main building. We can store a little more than 10 300l of rain water and 10 000l of well-point water. If Day Zero comes, and we continue to minimise toilet flushing, we will have enough to last a few weeks. The well-point water has been tested and found to be usable, with relatively simple treatment, to pipe into the system for flushing toilets. These measures will allow us to maintain hygienic toilet facilities even if there is no municipal water supply.
- Toilet flushing. In July 017 we installed "multi flush" mechanisms in most of the toilets which led to a saving of 10 000 l per month.

As from 1 February we implemented further water-saving measures.

1. Bathrooms: in each toilet block, one toilet has been reserved for flushing (#2); and the remaining toilets are non-flushing toilets (#1). We have placed spray bottles of sanitizing spray in the #1 toilets to spray the toilet bowl after urinating. The sanitiser is a non-toxic, bacteriological product which uses “good” bacteria to attack pathogens and odour. Covered bins are available for used toilet paper, to avoid blockages due to a build-up of toilet paper.

Our students and staff have co-operated well. The #1 toilets are flushed once a day, and the sanitizing spray maintains hygiene and dignity. We have also placed bowls in all the basins to collect water from hand washing. After washing hands, the water is tipped into a grey water bucket for older pupils and staff to flush the #2 toilets. Younger children may simply flush.

2. Laundry: we have chosen to launder hand towels rather than use hand sanitiser which can cause dry, cracked skin. Towels are changed twice a day, and are laundered with a sanitising pro-biotic product. Grey water from the washing machine is used to flush toilets.
3. Cleaning: instead of water, we use a sanitising spray to clean all surfaces. The spray leaves a film of “good bacteria” which maintains hygiene as effectively as water and harsh detergents.
4. Drinking water: if Day Zero comes, we can rely on well-point and rain water for basic hygiene but not for drinking. **Please send one sealed 5l bottle of pure drinking water for each of your children.** The water will be stored in the classrooms as emergency supplies.

In the event that municipal taps are turned off, we will dedicate one of the 5 000 l tanks to store potable water. We would then arrange for a weekly delivery of drinking water which would be enough for all staff and students, as well as allowing staff to take 25l per day, to avoid disruptions to our programme due to queuing for water.

Finally, to help parents to save water at home, we will allow children who have PT lessons during the day to come to school in their PT kit so that you don't need to wash two uniforms.

What has been the outcome? In 2015 and 2016, water consumption averaged 3 250 l per day. In 2017, we ceased to use municipal water for watering or washing bins, and consumption dropped to 2 000 l per day. With the introduction of the multi-flushes, the average use dropped further to 1 600 l per day. Since February 1, our consumption has dropped to less than 800 l per day!

I ended my report with a few words about gratitude, which will be a focus for our school in 2018. The bible tells us to “count it all joy” when we face trials of many kinds, because of the growth in resilient character that they produce. We are also grateful for the volunteers who helped install the rain-water tanks, and the good spirit with which everyone has adapted to the situation.

May God be with you in all the trials that may come in the year that lies ahead,



Susan Keegan
Director