



Chameleon Island

Starting position

Chameleon island is an activity island visited by 100.000 people each year. The island is situated in the lakes part of provincie Fryslân. The primitive facilities needed to be improved. Drinkwater was weekly brought by boat and put in tanks. The waste water coming from the toilet building was collected and purified in a septic tank before discharge to the surrounding water. Remaining waste water was discharged unpurified. Also there was no gas and electricity.

Goal

The ambition in the urban water cycle project is making the whole island self-supporting and create a small-scale water-cycle on the island, consisting of a drinking water system and a waste water system to be used as demonstration project and also we want to give education to the visitors about the different elements of the water cycle.

Results

The service facilities were opened on 22 Juni 2007.

Drinking water system exists of a drinking water purification and a distribution system. The drinking water purification is fed by groundwater with a constant quality.

Research has proved that this groundwater contains too much iron ions and carbon acid. By aerating the water, the iron ions will be oxidized and the carbon acid will be removed. The aerated groundwater is further filtered, to remove the just



“produced” ironflakes. This purified water is stored and distributed to the various draw-off points on the island. Of course the water must comply with the Dutch law. It must be proved by research whether this purification is sufficient or not. If necessary a UV-installation will be used as an extra safety.

waste water system is build to collect the released waste water and to drain it. The waste water is particular coming from the two houseboats, the toilet building and a few draw-off points scattered over the island. As purification system a helofyt filter is in use. The purified water can be recycled as often as possible on the island. The left waste water will be drained of to the surrounding surface water.

As energy source we used solar energy and for periods when this would not be enough we make use of green energy from biodiesel.

Total investments/costs

418.000,- euro

Partners

Provincie Fryslân
Aquario BV
Municipality Boarnsterhim
Vitens

