

THE THREE & OUR COMMITMENT TO THE ENVIRONMENT

At the Three Boutique Hotel we believe we have an important role to play in helping to preserve the environment. This is an area which is ever changing and something we are committed to and are always developing.

As you may or may not be aware, we closed for a complete renovation to the property in July 2010 and reopened in December 2010. One of our biggest obstacles and something critical to the development of the hotel was the electrical needs of the building.

We requested AC for each room and were simply told that it was not possible by the electrical consultant; there just wasn't enough power to operate all of our appliances as we only had an 80amp 3 phase domestic supply. We could increase to 120 amp but this could take years and would cost a huge amount so it wasn't an option. We wanted to be energy conscious and this was the perfect opportunity to commit to it.

For the AC and heating we went with DC inverter air conditioners and heaters which are super quiet and consume a very little amount of power.

http://www.daikin.com/global_ac/products/residential/dcinv/outline.html

The hot water cylinders also traditionally consume a lot of power and the most obvious solution was solar but in a real world situation where you have guests using hot water whenever they want, solar wouldn't work as it only heats the water in the day (sunshine) - so someone having a shower in the evening would use that hot water generated that day and then the element would have to heat the cold water over night in the conventional way... so when the sun comes up in the morning the water is already hot, defeating the purpose of solar.

If you have solar in your home you can use it when you know is the best time you can fit timers for the elements and you know when and when not to use the hot water, if you don't then you end up having a lukewarm shower or else the element heats up the water and the sun end up just keeping it hot during the daylight hours.

We eventually went with heat pumps which basically work like an air conditioner but in reverse, these use 1 part of power to generate 4 parts equivalent of heat, they cost more than solar but use less electricity in the long run (up to 70% less).

<http://www.dhpsa.co.za/domestic.html>

Next year we plan to get solar panels to use in conjunction with the heat pumps creating the ultimate energy saving hot water supply; this will help reduce power consumption even more. (2012 - we now have 4 rooms that use solar/heat pump combination)

Water saving is also important for us so toilets all have economical flushes with low volumes of water used. We didn't like the low flow shower heads so we have balanced the pressure of the water so that the rainforest shower heads still provide a luxurious shower but use about 50% of the water than they would

normally use in a regular pressurized hot water cylinder, thus saving on electricity and water.

We are looking to install rainwater collectors for the approximately 300m² of roof space we have, this will be used for the swimming pool, pool showers and irrigation.

We will be installing energy saving wireless card switches which turns all power off in the room (except bar fridge – yet to be purchased) when you leave the room as well as door and window sensors that turn off the AC or heating when a door or window is opened. The wiring is all configured and in place and we got extra large DB boards to accommodate the necessary hardware for this but due to being over budget on the build we will have to wait until the end of 2012 before the actual devices are installed but this is top of our list.

<http://www.ecowatt.co.za/ecowatt/solutions.html>

The bulbs in the rooms are all energy saving fluorescent with the exception of the down lighters in the ceilings, we felt the quality of the light emitted was poor with fluorescent or LED down lighters so while we still chose to have halogen bulbs they are GU5 35 watt eco bulbs which give off the same light as a regular 50 watt halogen bulb. We have dimmers fitted and spaced them to use as few as possible in each room without detracting from guest comfort. When LED bulbs become more developed and can provide a decent light we will change to them. We have just recently replaced all the public room lights with 20W.

Each room has a floor standing fan as well as the AC in the rooms so guests can choose a more economical way of cooling if they wish.

TV's are Sony's new Bravia flat screens which are energy saving and unlike other TV's do not use power in standby mode.

We line dry linens and towels when possible to cut down on tumble drying.

We use a gas oven and gas hobs for cooking.

We separate our waste and recycle which is a service we have to pay a private company (Abundance Recycling) to collect as currently Cape Town does not have a recycling program.

Currently we use on average between 100 and 120 kilowatts per day which is less than some private homes and although that figure is low for a 15 room hotel it is something we are working on reducing further. We hope by the end of next year to have that average daily figure consistently below 100 kw with the introduction of the solar panels to assist the heat pumps and the introduction of the wireless eco switches in all the rooms.

The long term goal is to produce more power than we consume. We plan to install 35 x 200W solar PV panels and a 5kw wind turbine to generate electricity. These will hopefully be grid tied pending a government legislation change as it is currently still illegal in South Africa to supply power back to the grid. This eliminates the need for large battery banks and effectively uses the power company (Eskom) as one big battery.